



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 24.03.2009
SEC(2009) 376

VOLUME 1 (Part 2)

COMMISSION STAFF WORKING DOCUMENT

accompanying the

**COMMUNICATION FROM THE COMMISSION TO THE COUNCIL, THE
EUROPEAN PARLIAMENT, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

**PROGRESS REPORT ON THE SINGLE EUROPEAN ELECTRONIC
COMMUNICATIONS MARKET (14th REPORT)**

{COM(2009) 140 final}

FIXED VOICE SECTOR

Introduction

The traditional market for fixed voice calls continues to decline. The substitution of services over traditional switched networks by mobile and broadband services (for example, Voice over broadband calls included in bundled offers) are key factors in the evolution of the market.

In this environment of growing competition from other networks, fixed incumbents have still not lost significant market share, and in some cases, have even strengthened their position. However, fixed incumbents' market shares are still, on average, declining slightly, albeit at a slower pace than before (both by retail revenues and volume of traffic).

The market is still very concentrated in some countries. The national fixed calls market is still the least competitive (compared to fixed international calls and calls to mobile networks). Prices are generally stabilizing, although list prices have increased in the local calls market. Nevertheless, consumers are experiencing increased choice as a result of Voice over Broadband offerings and bundled packages. Regarding the fixed interconnection market, wholesale prices have generally stabilised. At the local level, the EU average incumbent fixed interconnection rates have not changed. In the single and double transit level, the EU average fixed interconnection rates have increased slightly.

It remains essential to ensure that alternative operators have access to the necessary wholesale inputs to enable them to offer competing services, and that users' freedom to switch operators is not unduly restricted.

There has been a considerable increase in the number of direct access lines and fixed number portability remains an important contributor to the competitiveness of the market.

Voice over broadband has continued to gain much broader attention this year because of lower prices and the growth of convergent offers. Moreover, bundled offers remain a key element of the fixed electronic communications markets.

The pattern of competition

Market share

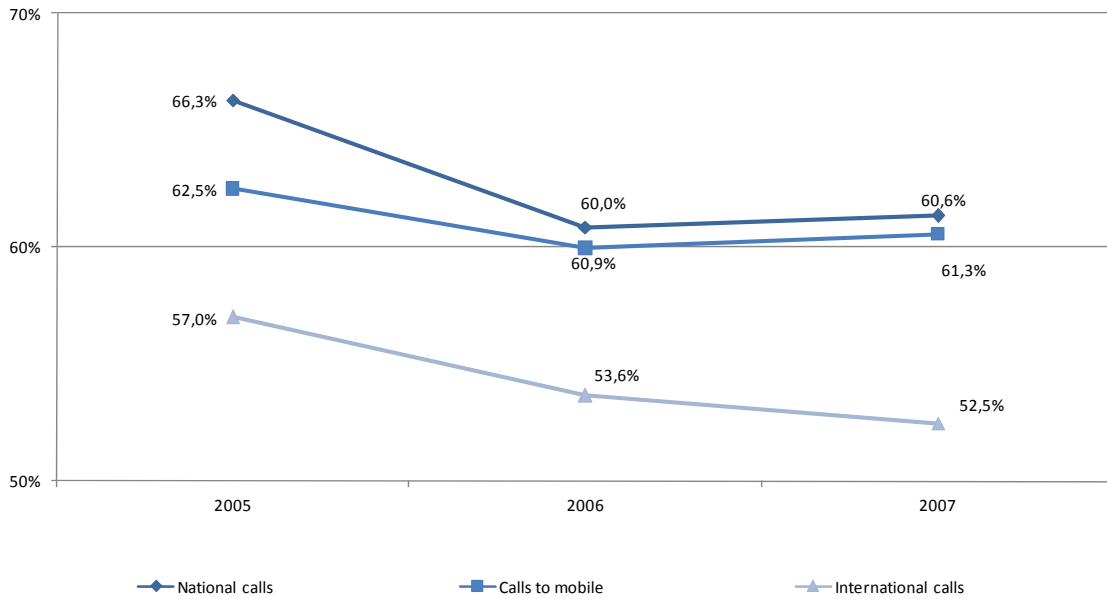
Fixed incumbents' market shares have stabilised in the EU markets overall, both on the basis of retail revenues and by volume of traffic. Slight increases in incumbent's market shares have been noted in the national fixed voice calls market and in the market for calls to mobile. It should also be noted that incumbent operators also generate wholesale revenues in addition to their retail revenues.

By retail revenues, the incumbents' share of the fixed market declined from 66% in 2006 to 64.8% in 2007, and by volume of traffic from 63.7% to 63% respectively.

Depending on the type of call, there have been increases in the incumbent market share by revenues: in the case of national calls, from 60.9% in 2006 to 61.3% in 2007 and in the case of calls to mobile from 60% in 2006 to 60.6% in 2007. In the case of calls to international fixed numbers the incumbents' market share declined from 53.6% in 2006 to 52.5% in 2007. This suggests that the international fixed calls market is the most competitive of the three (national fixed calls, international fixed calls and calls to mobile networks).

Chart 21:

EU incumbents' average market share on the voice telephony market (based on retail revenues)



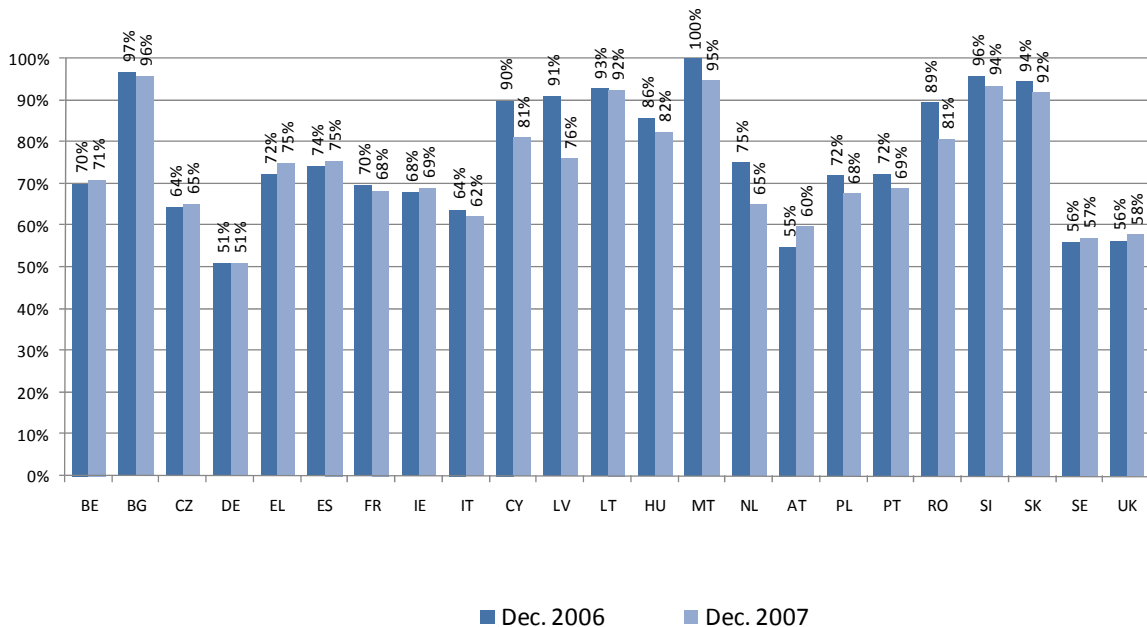
The pattern across the EU remains diverse. The incumbent's market share in the overall fixed voice telephony market still remains particularly high (more than 90%) in Bulgaria, Lithuania, Malta, Slovenia and Slovakia.

In terms of the incumbent's market share in individual Member States, the most significant declines by revenues have occurred in Cyprus (from 90% in 2006 to 81% in 2007), Latvia (from 91% to 76%), and in the Netherlands (from 75% to 65%).

In other countries the incumbent's market share has increased from the previous year, for example, Austria (from 55% to 60%), Belgium (from 70% to 71%), Greece (from 72% to 75%), Ireland (from 68% to 69%), Spain (from 74% to 75%), Sweden (from 56% to 57%) and UK (from 56% to 58%).

Chart 22:

Incumbents' market share in the fixed telephony market (all types of calls by retail revenue)



Fixed Incumbent market share, October 2007 (Data from Denmark and Finland is not available. Data from Luxembourg and Estonia is confidential)

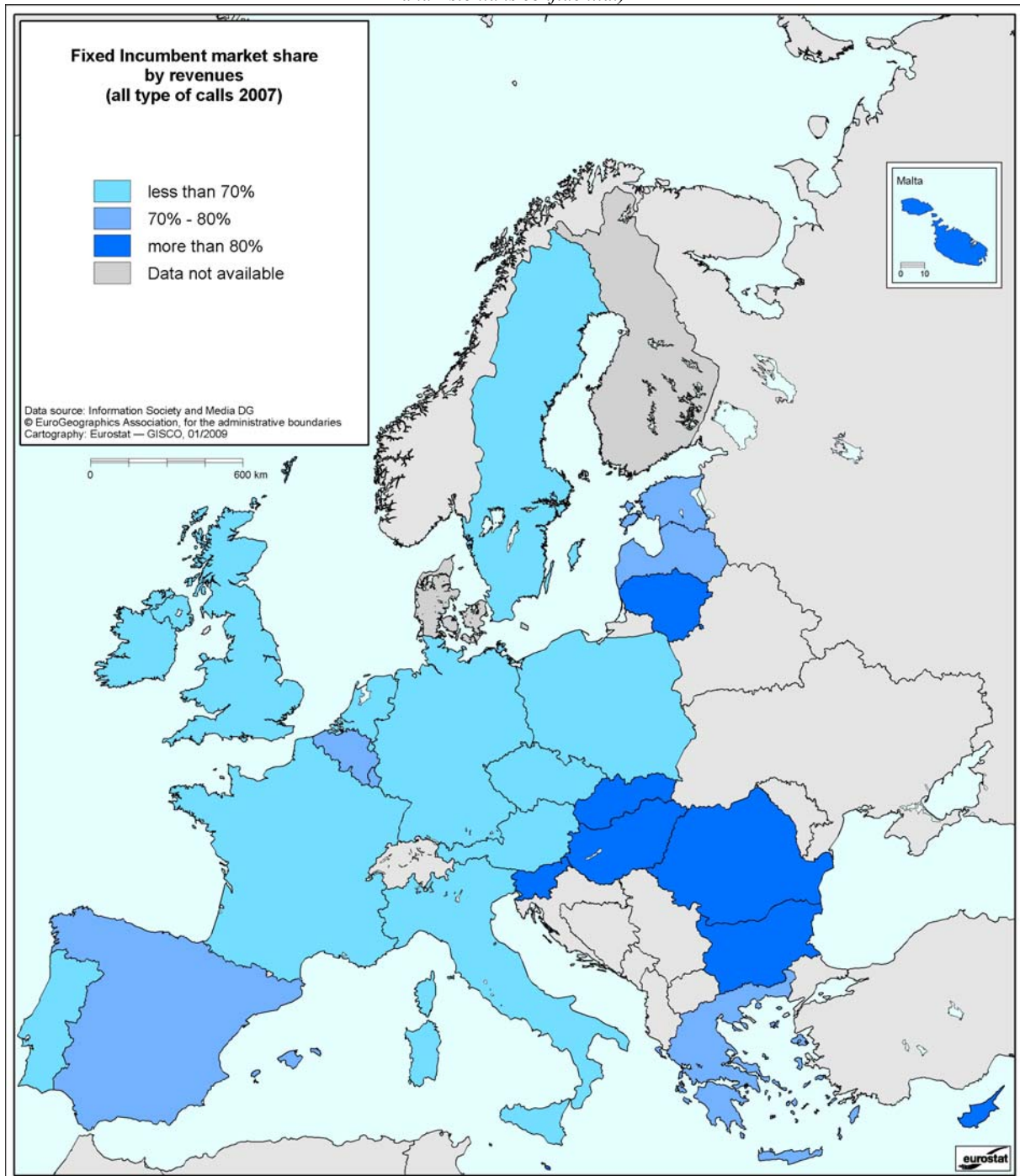
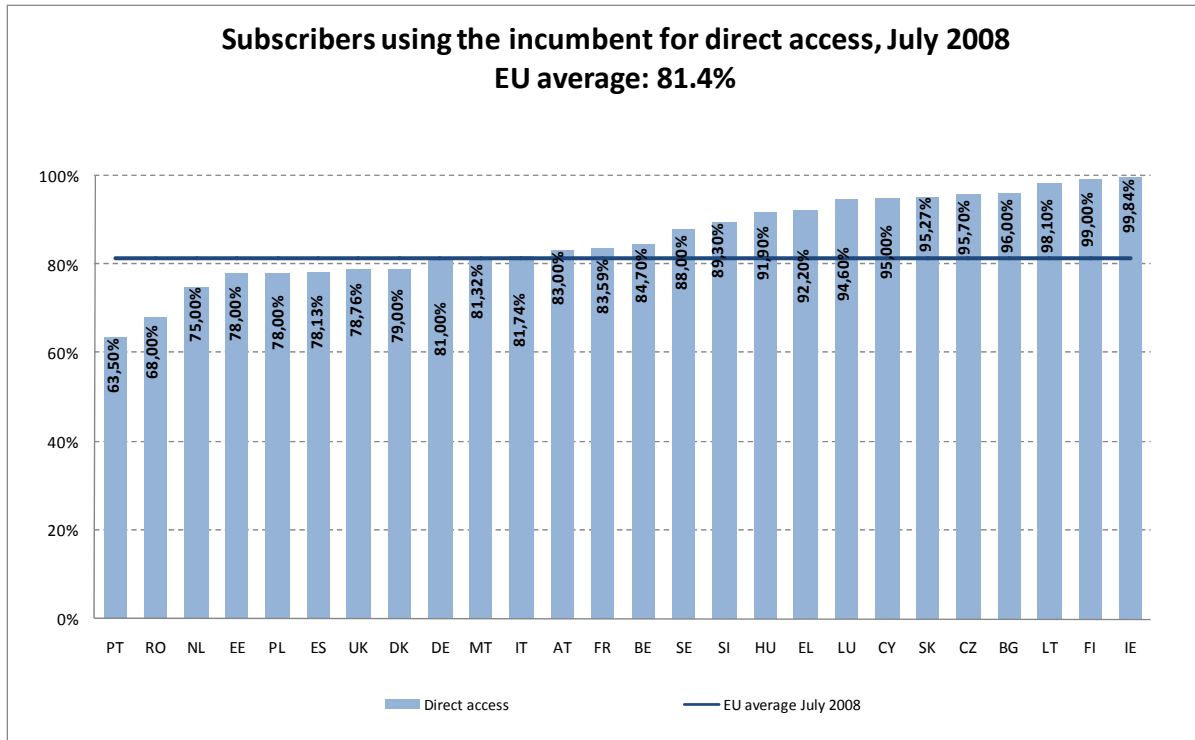


Chart 23:

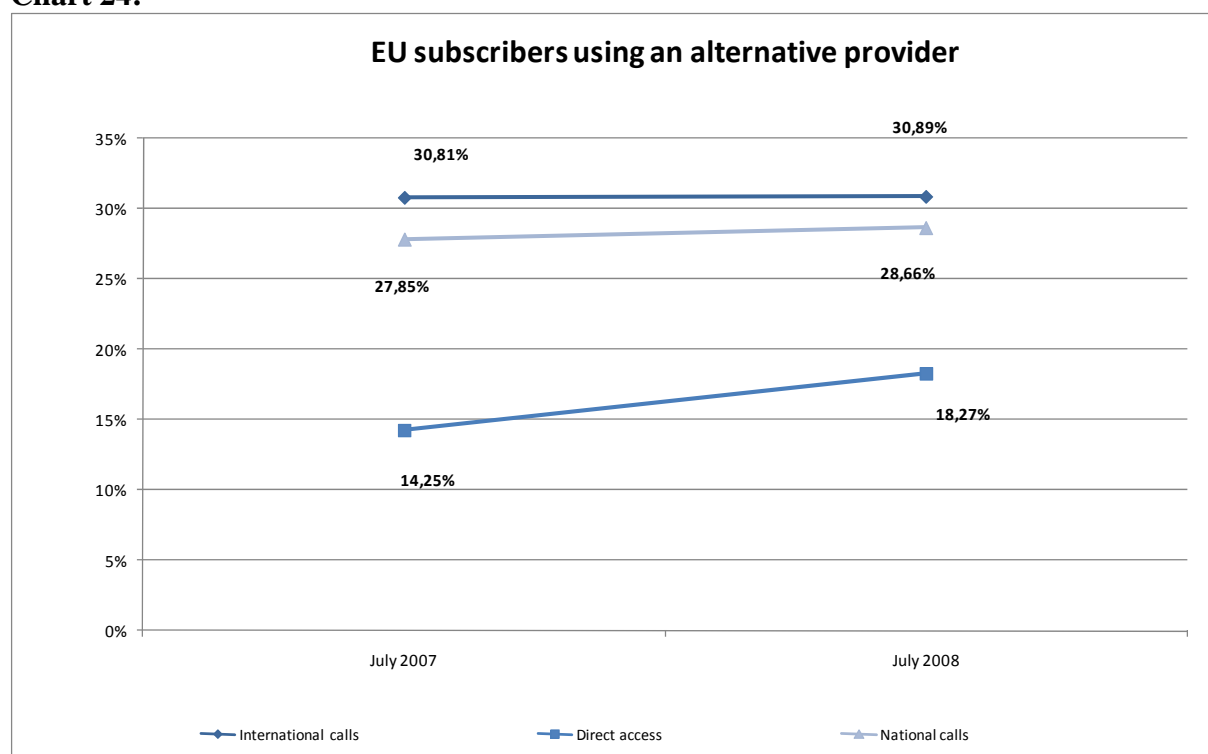


Direct access is one of the key elements for competition on the fixed market. Despite the incumbent's dominance in the access market, direct access from alternative operators continued to grow strongly, up by 5 percentage points from July 2007 to July 2008 and reaching 19.6% of European subscribers.

While still relatively low, the increased availability of alternative network solutions (cable, unbundled lines, and fibre) is increasing choice in direct access.

On the other hand, in July 2008, 81.4% of fixed subscribers in the EU relied on the incumbent's infrastructure for such direct access. This represents a decline from the previous year's figure of 85.75% which is still very high even though it has been declining slowly over the years. Despite these developments, competition in the fixed voice market remains largely based on indirect access using wholesale products such as carrier pre-selection and carrier selection, although local loop unbundling is now replacing these solutions in many cases.

Chart 24:

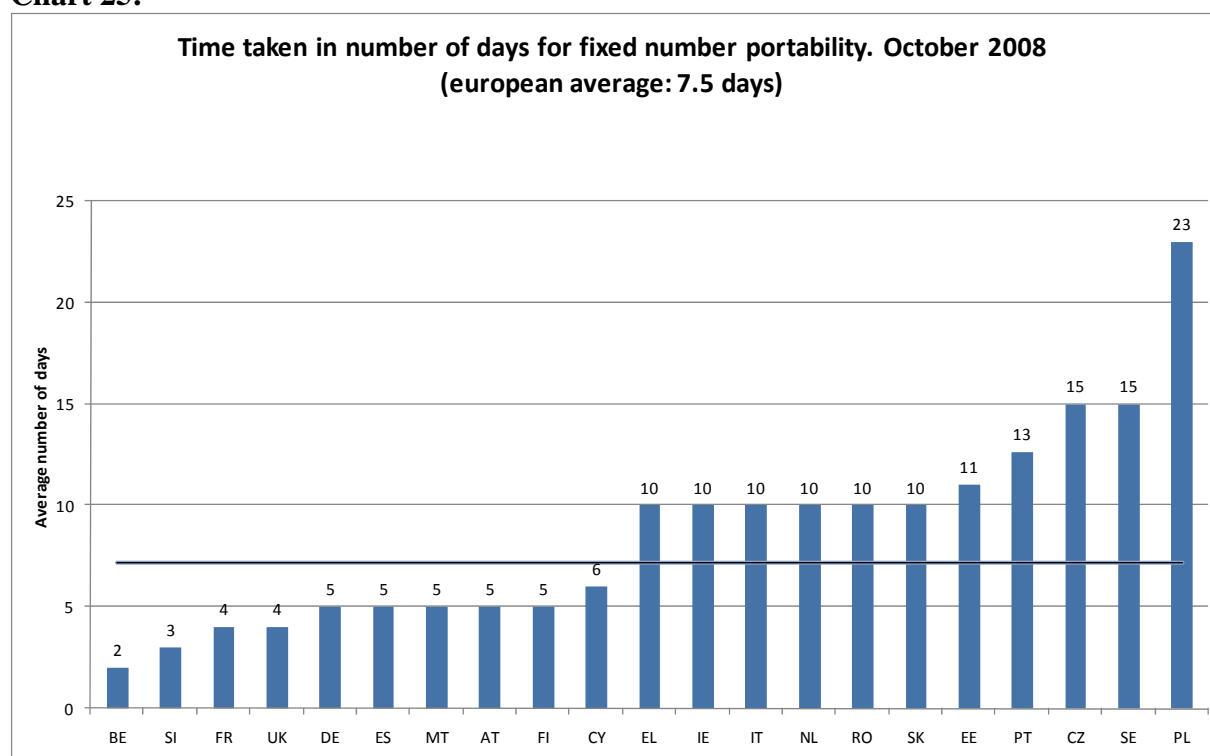


The number of EU subscribers using services of alternative fixed operators has continued to increase during the reporting year in the national fixed calls segment. More subscribers are opting for alternative operators for national calls (1.9% increase). However, for international calls, the figure has stabilised at around 30% which is a slight decrease on the previous year.

As mentioned in previous Reports, the market is still very concentrated in some Member States. This may be the result of new entrants focusing their business on specific segments in the market, and thus having a limited impact on the overall level of competition. Using the Herfindahl Index by retail revenues (sum of the square roots of the market shares of the operators in the market) to assess the concentration, the countries with the highest concentration in some or all of its segments (8,000 points) are Bulgaria, Cyprus, Latvia, Lithuania, Malta, Slovenia, Slovakia and Finland.

Fixed number portability remains a very important contributor to the competitiveness of the market. It is now operational in all Member States, except in Bulgaria (implementation required by January 2009 under the Accession Treaty). Strong growth in the number of ported numbers has been recorded again in Denmark, Greece, Spain, France and the Netherlands. Cyprus, Austria and Finland apply the highest wholesale prices for porting numbers.

Chart 25:



(Data from Denmark and Luxembourg not available)

The average time needed for porting a fixed number is 7.5 days (less than the 8.5 needed for a mobile phone) in October 2008 and down from 7.8 days in October 2007.

Since the introduction of fixed portability, a total of almost 24 million subscribers have ported their numbers as of October 2008, a 26% increase on the previous year (19 million at October 2007 and 15 million in 2006).

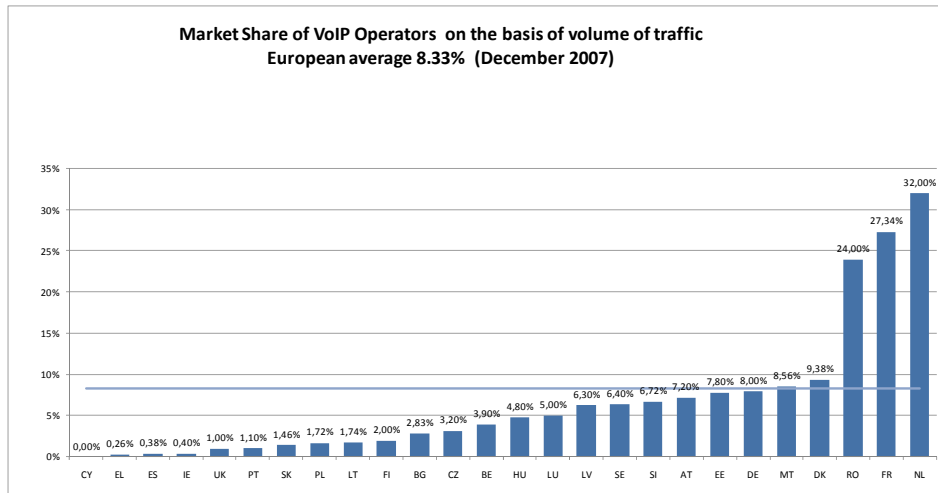
VoIP and fixed to mobile substitution

VoIP continues to replace traditional fixed voice telephony. VoIP¹ originated calls represented 8.13% of the traffic in the fixed sector in the EU.

The leading countries in managed VoIP voice calls are the Netherlands (32% are IP originated calls) France (27%) and Romania (24%). In Denmark, Germany, Estonia, Latvia, Luxembourg, Malta, Austria, Slovenia and Sweden managed VoIP originated calls account for at least 5% of the market.

¹ The figures consider only managed VoIP equivalent to public available telephony services (PATS) using Internet protocol technology where the operator controls the quality of the service provided through a VoIP network. It should be mentioned that P2P (peer-to-peer) software for VoIP is not taken into account in these figures so the phenomenon is likely to be underestimated.

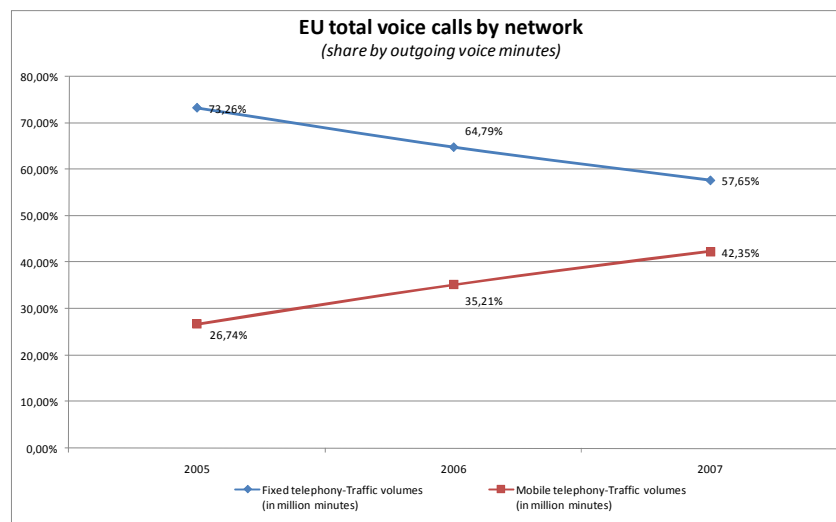
Chart 26:



12.25% of the European population now subscribe to bundled offers which is an increase of 33.3% on the previous year. The volume of mobile voice traffic has continued to catch-up with fixed voice traffic although at a slower pace than previously. While fixed network voice traffic accounted for 64.8% of overall traffic in 2006, it fell to 57.6% in 2007.

Countries with a higher proportion of mobile traffic are Finland (76.4%) and Slovakia (73.7%).

Chart 27:



Pricing

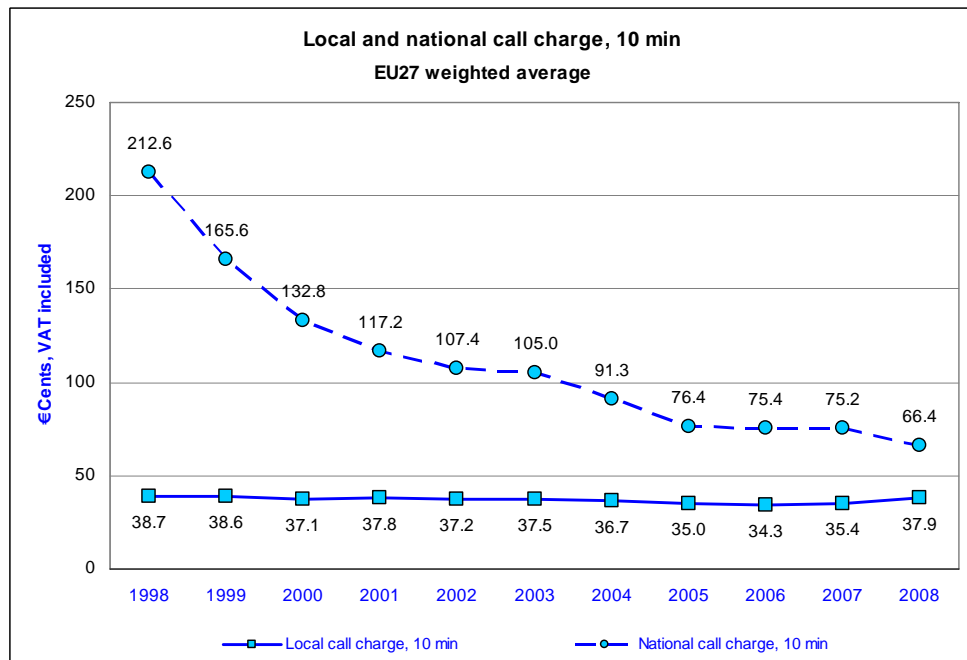
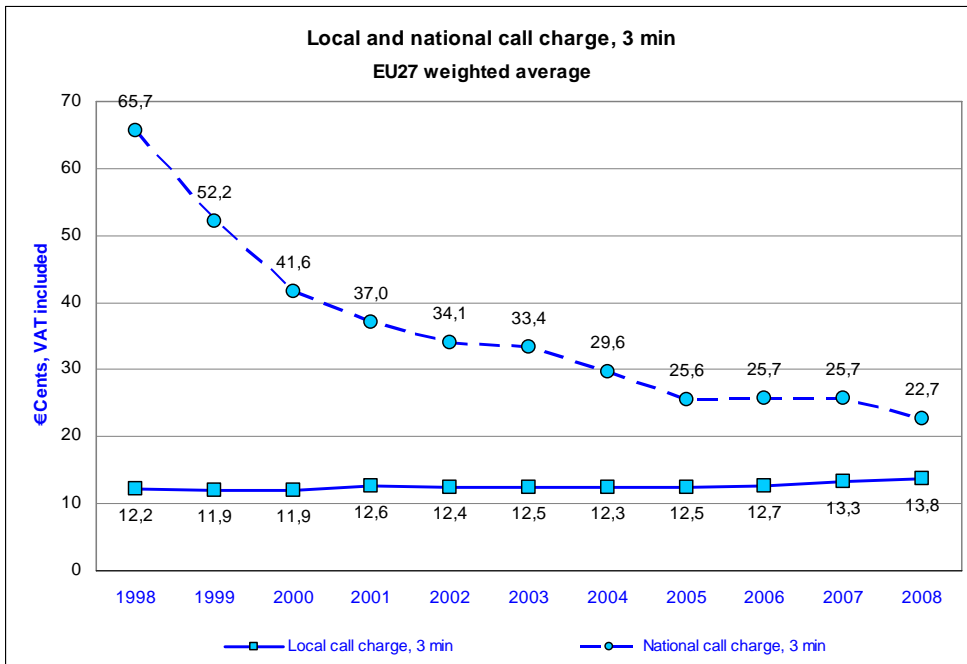
Fixed telephony tariffs have again fallen in the national calls market. In 2008, the trend towards a steeper decline in tariffs recommenced after having stabilised in the previous years. On the other hand, local call tariffs have again increased slightly.

Prices for both 3-minute and 10-minute national calls have declined at the highest rate since 2004: an annual 11.7% decrease for both a 3-minute call and a 10-minute call.

As stated above, prices for local calls have increased slightly: 3.8% for a 3-minute call and 7.1% for a 10-minute call. The reasons for this may be attributed to the slight increase in local interconnect costs and in the relatively lower level of competition in this segment compared to other segments of the market (for example international and calls to mobile).

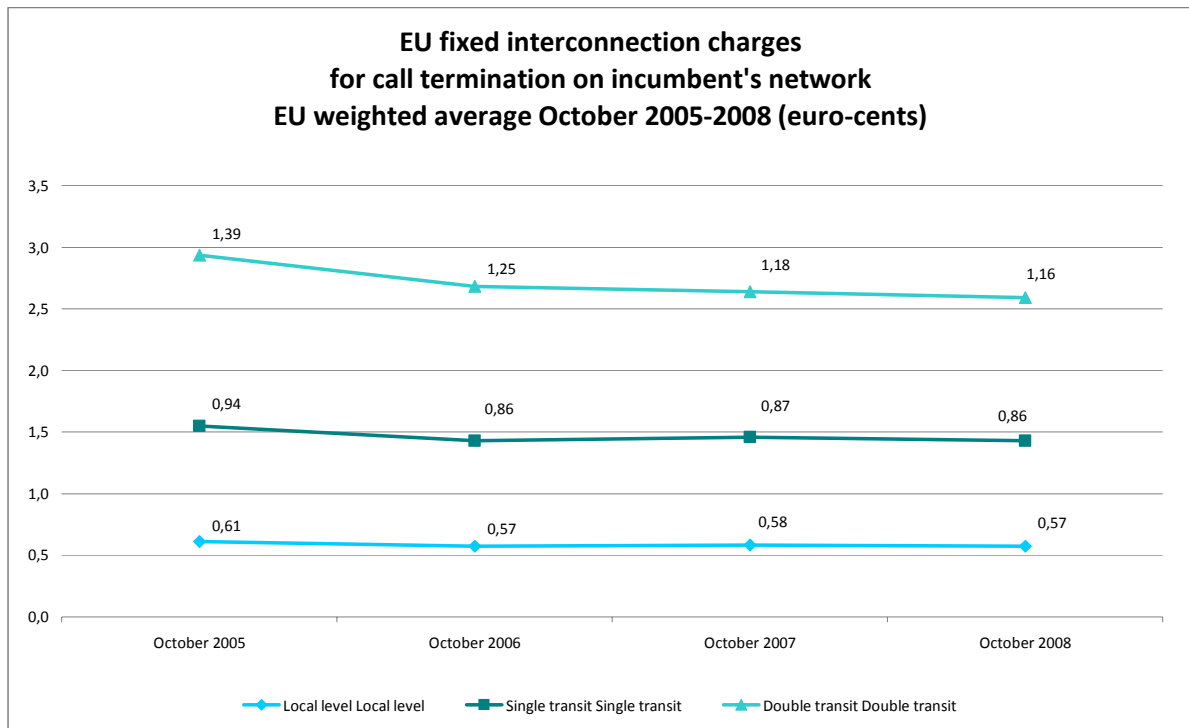
Nevertheless the changes in both the local level and in the single transit level are not considerable and, in any case, consumers are using these services less and are increasingly availing themselves of bundled offers which include Voice over Broadband.

Chart 28:



Interconnection

Chart 29:



EU average fixed incumbent interconnection rates are stabilising at all levels. However, slight decreases on last year's prices have been noted at every level. Regulatory measures taken by NRAs following market analysis in the fixed interconnection market (cost accounting systems and glide paths) have led to reductions again in interconnection prices.

EU average fixed interconnection charges for call termination on the incumbents' networks have fallen only slightly: down 1.7% on the local level, 2% less on the single transit and down 1.5% on the double transit level. The countries with the lowest charges are again Sweden, United Kingdom and Cyprus.

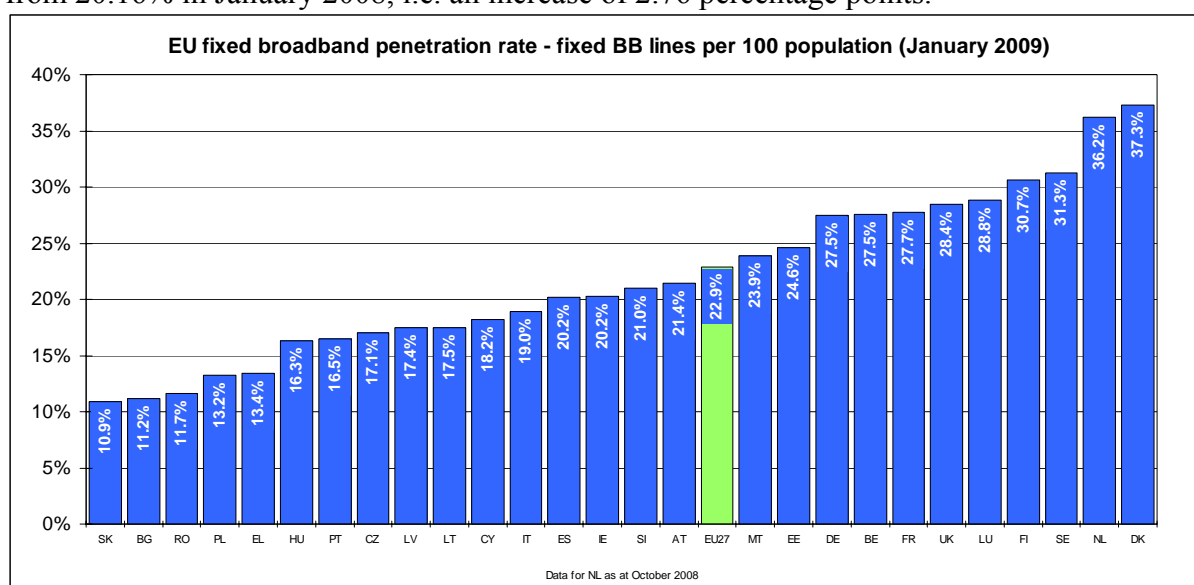
BROADBAND

Introduction

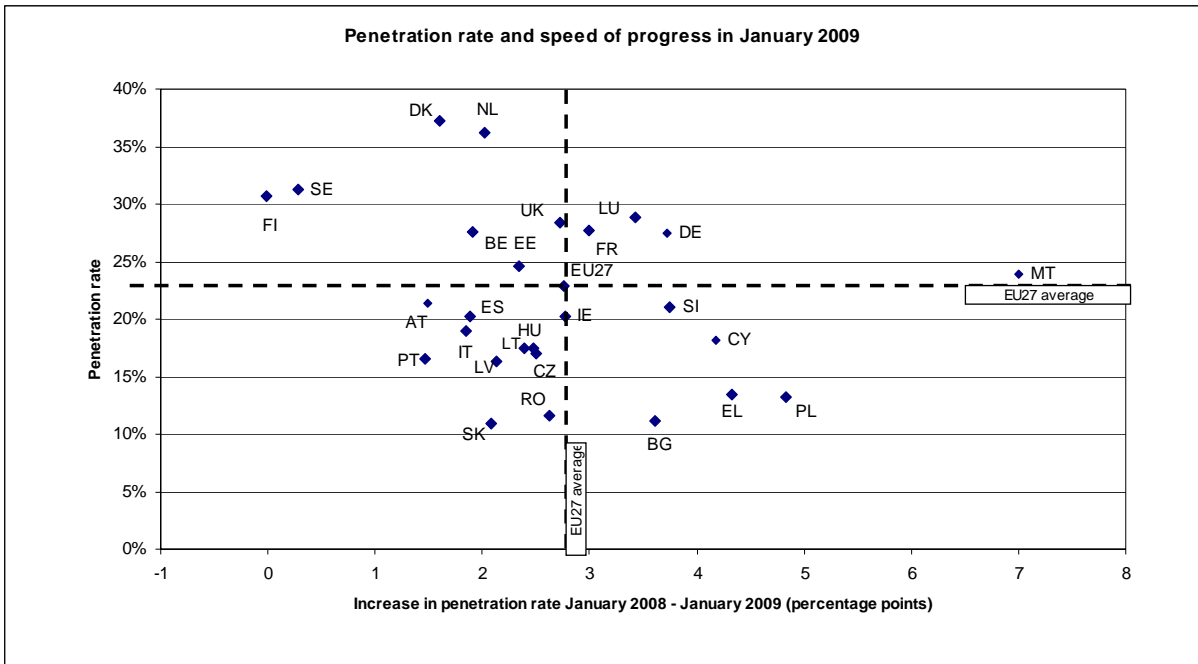
Broadband connections continued to grow in 2008, with the top EU countries remaining world leaders in broadband penetration. There were 14 million fixed broadband lines added in one year, which indicates a decrease in the rate of growth. The gap between the best and the worst EU performers is narrowing. Three quarters of broadband lines in the EU have download speeds of 2 millions of bits per second (Mbps) and above, a speed that can support TV over the Internet, for example. Mobile broadband is starting to take off, with 13.0% penetration.

Fixed broadband

Broadband penetration in Europe continues to grow, and increased to 22.92% in January 2009 from 20.16% in January 2008, i.e. an increase of 2.76 percentage points.



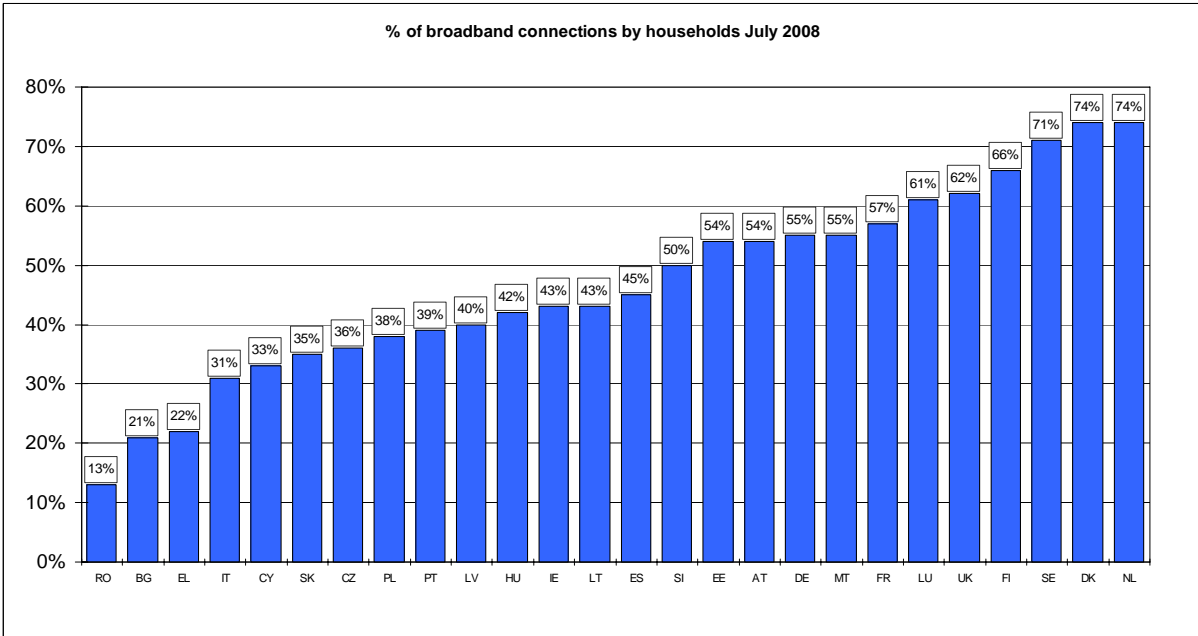
The increase in the total number of broadband fixed access lines is less than previous years, a 14.3% increase between January 2008 and January 2009, compared to an increase of 24.6% in the previous year. On 1 January 2009 there were over 114 million fixed broadband lines in the EU, of which 14 million lines have been added since January 2008 (more than 19 million lines had been added in the previous year), which is 15 081 added lines per day less than the January 2007-January 2008 figure, which stood at 53 955 lines per day.



The rate of growth was highest in Malta (7.0 lines per 100 inhabitants), Poland (4.8 per 100 inhabitants), Greece (4.3 per 100 inhabitants) and Cyprus (4.2 per 100 inhabitants), and lowest in Finland (zero growth) and Sweden (0.3 per 100 inhabitants). Six other Member States exceeded the EU average growth, which stood at 2.8 percentage points.

The gap between EU countries is narrowing, with the difference between the EU Member States with the highest and those with the lowest penetration having decreased from 28.1 percentage points in January 2008 to 26.3 percentage points in January 2009.

As the graph below demonstrates, the penetration rankings are different for some Member States, if broadband connections by households are compared. This is primarily due to varying household sizes across the EU.

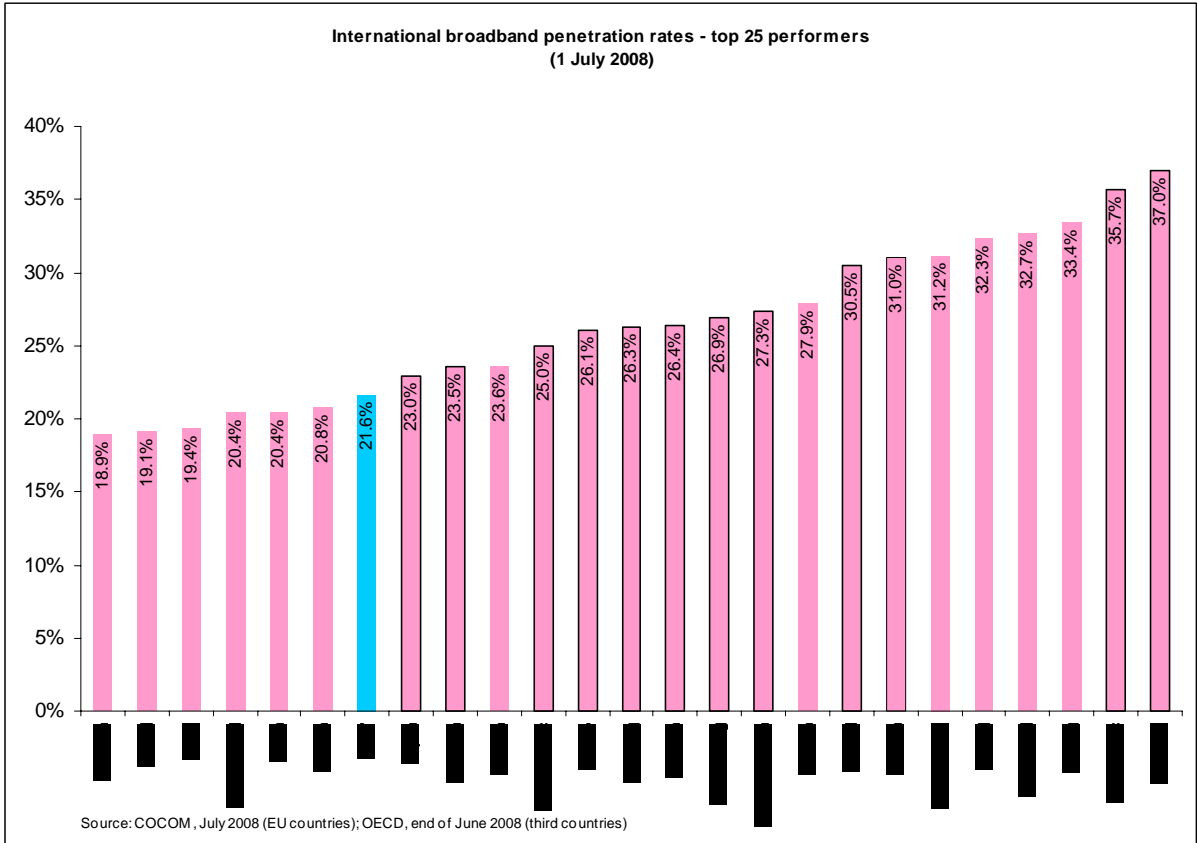


Source: Eurostat, Internet usage in 2008 – Households and Individuals survey, data for BE not available

Using this measurement Hungary, Slovakia, Poland, Lithuania, Malta and Portugal in particular show significantly improved rankings. However, Italy and Cyprus lose several places compared to the position using penetration/100 population rankings.

International Comparison

The EU is the largest broadband market among world economies. With 107 million lines in July 2008, the EU had 32 million more fixed broadband lines than the United States. Moreover, Denmark and the Netherlands continue to be the world leaders in broadband, with penetration over 35%. Nine EU countries are above the United States, where the penetration stands at 25% (Denmark, the Netherlands, Sweden, Finland, the United Kingdom, Luxembourg, Belgium, Germany and France). The EU, despite lower figures for a number of Member States, appears to be quickly catching up with Japan and Australia, given that the gap between Australia and the EU and between Japan and the EU narrowed, respectively, from 4.5 and 3.1 percentage points in 2007 to 1.9 and 1.4 percentage points respectively, in 2008.



The EU, on average, performed better than a year ago and had higher growth than other comparable world economies, excluding Canada, which also performed better than in 2007.

Comparable third countries & the EU	Broadband penetration rate (July 2008)	Annual increase in penetration rate July 2007-July 2008 (% points)	Annual increase in penetration rate July 2006-July 2007 (% points)
Norway	33.4%	3.0	5.4
Switzerland	32.7%	2.0	4.5
Iceland	32.3%	2.5	3.3
Korea	31.2%	1.3	3.5
Canada	27.9%	3.2	3.1
United States	25.0%	3.1	4.2
Australia	23.5%	1.3	5.7
Japan	23.0%	1.7	2.3
EU	21.6%	3.4	3.3
New Zealand	20.4%	4.1	4.9
Turkey	6.8%	1.7	2.2

Source - third countries: OECD, data as at end of June 2008; EU: COCOM, data as of July 2008

Digital Subscriber Line (DSL) is the main broadband technology in the EU, with nearly 86 million lines. However, DSL growth continues to fall rapidly, slowing by 10.8 percentage points compared to the July 2007 growth rate, to the benefit of other fixed broadband technologies like cable, fibre to the home (FTTH) and wireless local loops (WLL). DSL is also a prevalent technology platform in the other developed European countries as well as Australia and New Zealand. Northern America (i.e. United States and Canada) is the leading continent in terms of cable connections per 100/population (both with 53%), whereas the two largest developed Asian economies (i.e. Japan and South Korea) have the highest rates of broadband connections over high-speed fibre networks (45% and 39% respectively).

Market developments

DSL technology

DSL appears to be gradually losing its status as the preferred broadband access platform for new customers.

Broadband technologies share	DSL	Cable	Fibre	WLL	Satellite	Leased lines	PLC	Other
2009 January	79.4%	15.3%	1.4%	1.1%	0.1%	0.2%	0.0%	2.5%
2008 January	79.9%	15.3%	1.3%	1.1%	0.1%	0.1%	0.0%	2.2%
2007 January	80.8%	15.5%	1.1%	0.8%	0.2%	0.2%	0.0%	1.3%
2006 January	81.3%	16.0%	1.0%	0.6%	0.3%	0.3%	0.0%	0.5%

Moreover, in the period January 2008-January 2009, 72.7% of the new broadband lines were by means of DSL technologies, while 27.3% of connections used other type of technologies, which is a decrease for DSL of 5.7 percentage points compared to a year ago, mainly to the benefit of high-capacity fibre and wireless offers. Alternative operators attracted more new subscribers than did the incumbents (the incumbents' DSL lines increased by 13.2% in the last twelve months, while the competitors' DSL connections rosed by 15.1%).

Other technologies

At EU level, annual growth for cable connections was 15.7% on 1 January 2009, compared to 21.0% on 1 January 2008. In the group of countries with at least one-third of cable presence in terms of connections, cable gained ground in Malta, Hungary, Belgium and Portugal, whereas in the Netherlands and Austria its relative position decreased. Take-up of FTTH connections on an annual basis remained significant at 26.2% whereas wireless local loop (WLL) connections grew at a slower rate (12.4%) than a year ago.

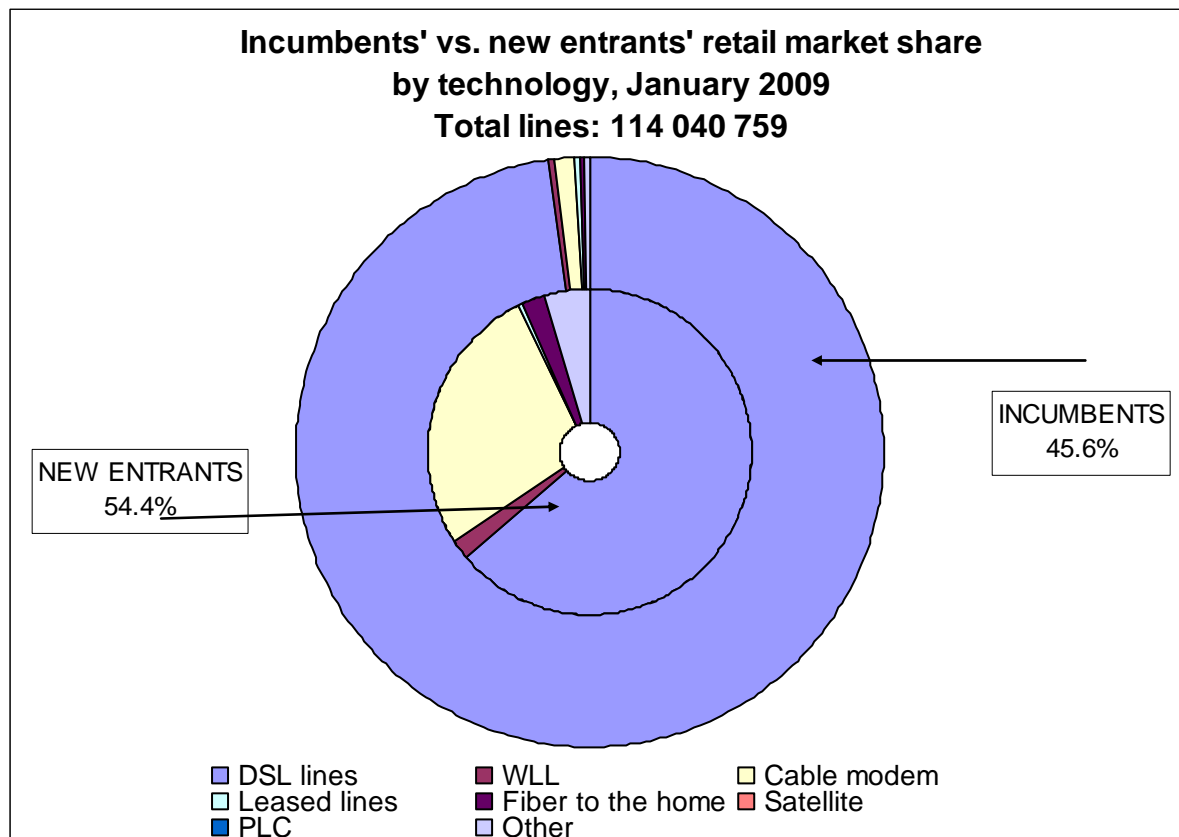
During 2008 the share of connections represented by FTTH increased in those countries which were already leading in this area. In contrast, with the exception of the Czech Republic, the relative share of the best performers in terms of WLL connections, declined during 2008.

Leaders in FTTH	LT	EE	SE	SK	SI
Share in fixed BB	26.7%	20.6%	18.5%	11.3%	10.5%
Leaders in WLL	CZ	SK	IE	LT	HU
Share in fixed BB	35.0%	13.9%	12.8%	10.0%	5.3%

Ethernet remains an important access vehicle for the countries of northern and eastern Europe, whereas municipal broadband networks are showing an increased presence, predominantly in Sweden and the Netherlands. In Denmark, fibre is mainly supplied by power utilities.

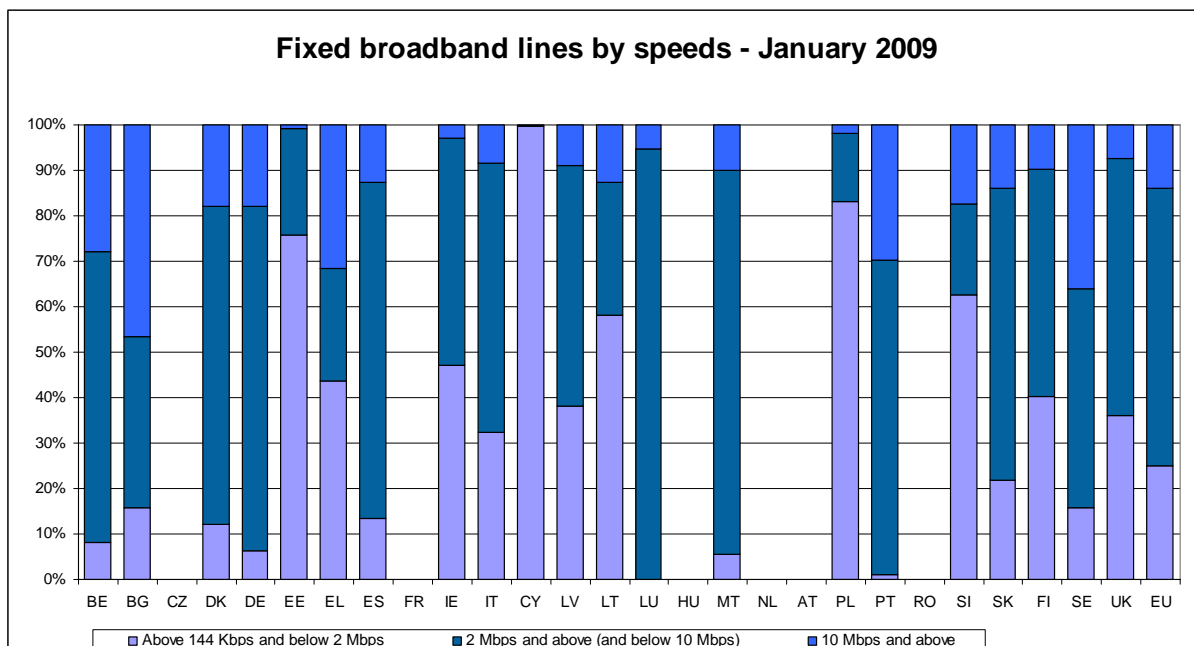
Market share

At EU level, the incumbents' broadband market share (excluding resale) continues to decline, and in January 2009 stood at 45.6% compared to 46.0% in January 2008 and 46.8 in January 2007.



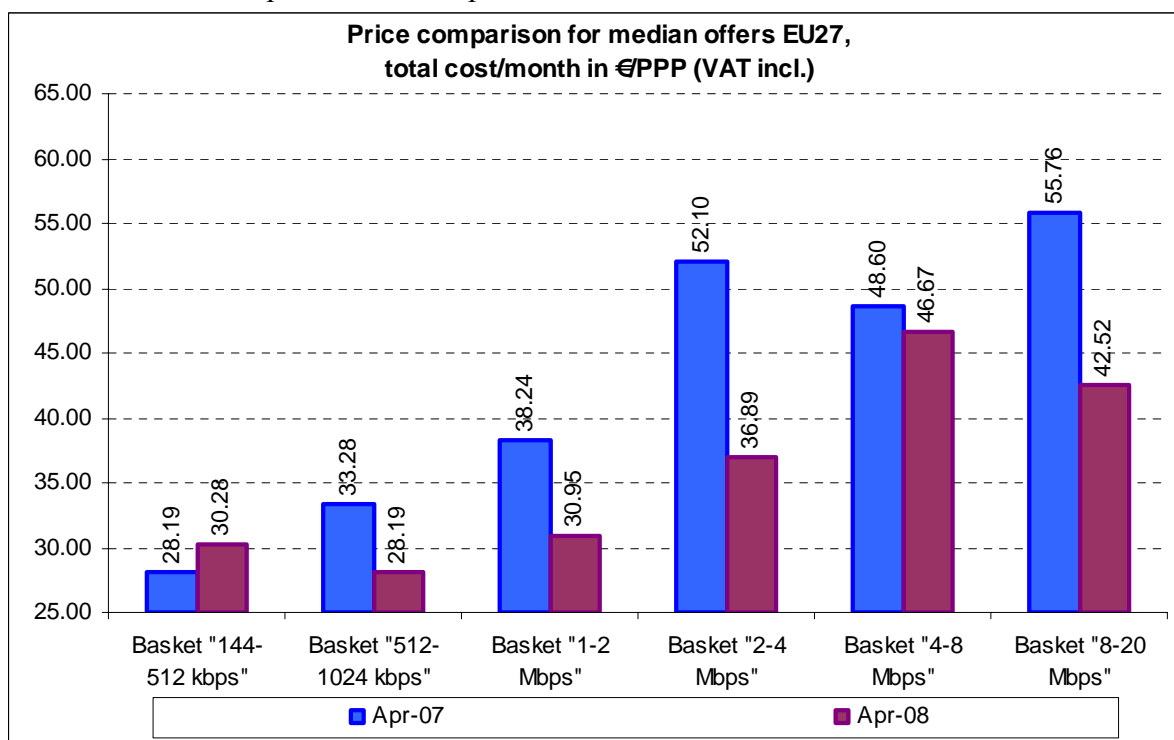
Broadband speeds and retail prices

About three quarters (74.9%) of fixed broadband lines in the EU are in the range of 2 Mbps and above (60.8% between 2Mbps and 10 Mbps, and 14.1% above 10 Mbps). Greater data transmission speeds generally provide customers with more and better choice at a lower price per megabit. Fast connections (up to 100 Mbps or beyond), such as provided by fibre and some cable, only cover 1.4% of European Internet subscribers. Sweden, Portugal, Belgium, Bulgaria and Greece have a large proportion of connections with speeds of 10 Mbps and over, whereas Cyprus, Estonia, Poland and Ireland appear to have a low number of high-speed connections.



Speeds are counted as the maximum capacity of the lines as advertised by the operators and internet service providers and may substantially deviate from actual speeds at the point of connection. In principle, the longer the distance between homes and phone exchanges, the slower the broadband connection. Speeds also worsen if a lot of people use broadband networks.

According to a recent Commission study on broadband Internet access cost², prices for broadband subscriptions, with the exception of the lowest speed basket, on average decreased in the EU between April 2007 and April 2008.



A few Member States, on the other hand, experienced an increase in prices as shown in the Table below:

"144-512 kbps" basket	"512-1024 kbps" basket	"1-2 Mbps" basket	"2-4 Mbps" basket	"4-8 Mbps" basket	"8-20 Mbps" basket
Bulgaria, Cyprus, Estonia,	Austria, Estonia, Ireland, Italy, Romania	Finland, Germany, Ireland, Italy,	Finland, Germany, Ireland, Italy,	Ireland, Latvia, Poland, Portugal and	the Czech Republic, France and

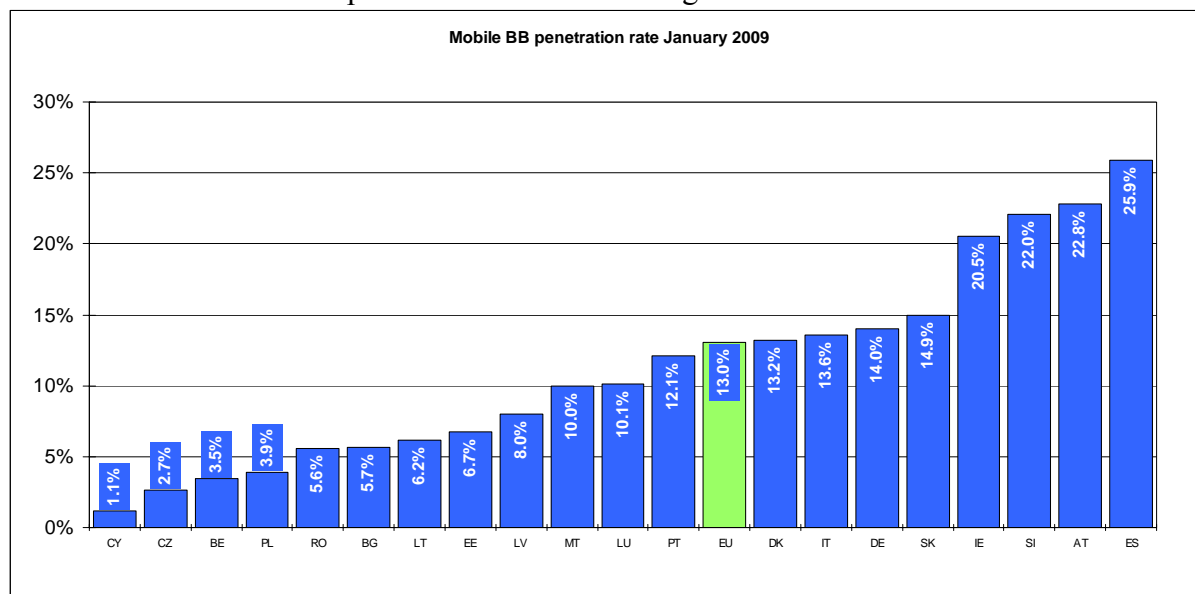
² BIAC - First half of 2008, Final report, December 2008, Van Dijk Management Consultants

Ireland, Denmark and Poland	and Slovenia	Malta, Poland, Slovakia and Spain	Malta, Poland, Slovakia and Spain	Romania	Sweden
-----------------------------	--------------	-----------------------------------	-----------------------------------	---------	--------

In general, download speeds, as well as "bit-cap" rates have increased over the same period.

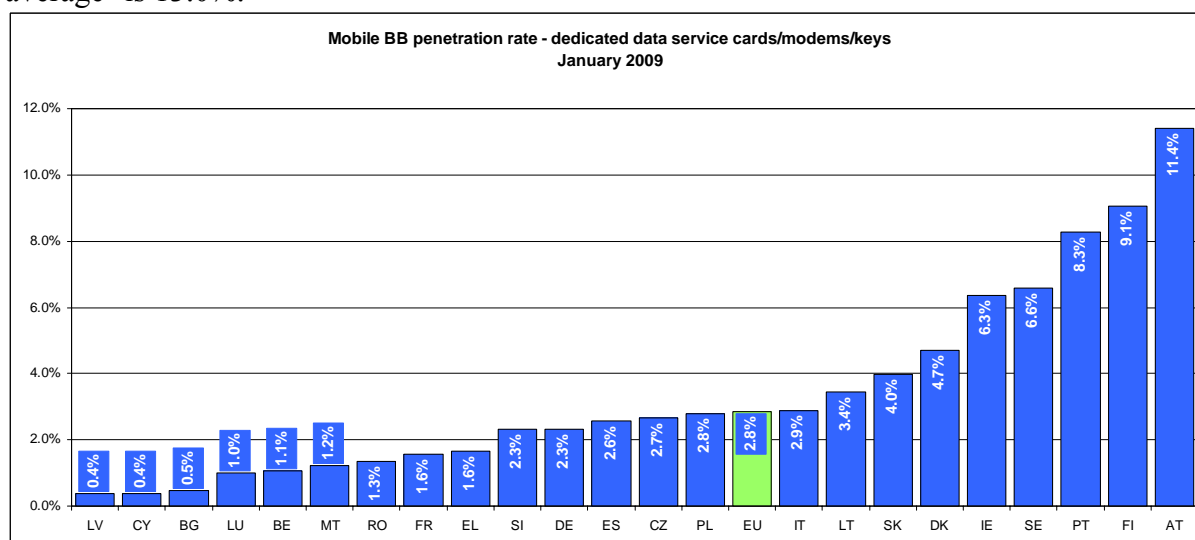
Mobile broadband

There were at least 42.0 million mobile broadband subscribers in the EU on 1 January 2009 (not including Greece, France, Hungary, the Netherlands, Finland, Sweden and the United Kingdom). Mobile broadband subscriptions are becoming a viable alternative to fixed broadband in a number of countries, due to a significant uptake in data-cards, USB keys, and Internet-enabled 3G-equivalent smart phones even though mobile technologies generally allow lower transmission speeds than wired technologies.



Data is missing in part for some Member States, while some countries failed to provide any data. EL and SE are not included since data provided was not in accordance with the agreed methodology.

The mobile broadband penetration rate, which measures the proportion of the total population actively using mobile broadband, is still very low in some countries (e.g. Cyprus, the Czech Republic). Spain, Austria, Slovenia and Ireland have penetration rates above 20%. The EU average³ is 13.0%.



Data is missing for EE, HU, NL and the UK.

³ Because of missing or non-comparable data, EL, FR, HU, NL, FI, SE and the UK are not included in the calculation of the average.

The number of mobile broadband connections using only dedicated data cards/modems/keys, typically allowing mobile Internet via laptops, is significantly lower (between 0.4% in Latvia to 11.4% in Austria). The EU average⁴ is 2.8%.

Drivers for increased mobile broadband usage include the emergence of new platforms, resulting from increased competition, as well as tariff structures that are becoming in some cases more attractive than fixed DSL offers. Some operators have also redefined their offerings in order to create value added for the customers, *inter alia* providing bundles with gaming and video-entertainment solutions.

Bridging the digital divide

A growing number of public consultations and strategies on the future of broadband (e.g. in France, Finland, Sweden and Slovenia), portray mobile and wireless technologies, including satellite, as solutions that are capable of bridging the broadband gap between urban and rural areas. This is important, in particular for those countries where DSL and/or cable coverage remain low (e.g. Bulgaria, Romania, Poland and Slovakia).

Moreover, the adoption and in particular the implementation of the strategies is also relevant for countries where fixed-to-mobile substitution is gaining momentum (e.g. Finland and Sweden), and where the importance of wireless is increasing.

A number of countries appear to have recognised the challenge and, continuing the trends evident in 2006 and 2007, activities have been reported in Sweden and Poland, with a launch of 450MHz services, and in Lithuania with operations set up in the 3.5GHz band. Also, tendering procedures have been initiated in Poland for the 3.6-3.8GHz, 2GHz and 2.5-2.7GHz bands. However, these activities principally target urban areas, which have registered significant growth in terms of population coverage (98% EU coverage for DSL and 53% EU coverage for cable in 2007 compared to 94% and 49% in 2006 respectively). Similarly, national coverage and coverage of rural areas increased compared to the figures at the end of 2006. The DSL rural gap narrowed from 18 percentage points one year ago to 13 percentage points at the end of 2007, while the cable rural gap widened slightly from 28.2 to 29.4 percentage points over the same period.

The table below shows the difference between national broadband coverage and broadband coverage in rural areas for DSL and cable respectively, the two most prominent technologies in the EU.

Broadband coverage across the EU – gaps between national coverage and coverage in rural areas for the two most prominent technologies in the EU	DSL rural coverage	DSL rural gap with national coverage in percentage points	cable rural coverage	cable rural gap with national coverage in percentage points
Austria	80.6%	11.4	18.0%	21.0
Belgium	100.0%	0.0	50.0%	38.0
Bulgaria	0.0%	N/A	0.0%	Not applicable
Cyprus	0.0%	79.6	0.0%	27.6
Czech Republic	75.0%	10.0	N/A	Not applicable
Denmark	100.0%	0.0	34.0%	26.0
Estonia	73.0%	12.0	N/A	Not applicable
Finland	91.0%	5.0	N/A	Not applicable
France	96.7%	1.8	1.1%	24.9
Germany	87.5%	8.2	4.0%	43.0

⁴ EE, HU, NL and the UK did not provide data and are not included in the calculation of the average.

Greece	50.0%	36.3	0.0%	Not applicable
Hungary	80.0%	11.0	59.0%	14.0
Ireland	73.3%	15.9	15.0%	12.2
Italy	81.7%	12.3	0.0%	Not applicable
Latvia	65.0%	22.0	5.0%	60.0
Lithuania	67.5%	20.4	3.4%	53.7
Luxembourg	100.0%	0.0	50.0%	21.0
Malta	0.0%	99.0	0.0%	95.0
Netherlands	99.0%	0.0	43.0%	49.0
Poland	42.5%	21.5	0.0%	25.4
Portugal	86.0%	9.0	50.0%	35.0
Romania	0.0%	N/A	25.0%	10.7
Slovakia	38.5%	35.4	0.2%	23.8
Slovenia	85.5%	6.7	30.0%	24.0
Spain	88.0%	3.0	12.0%	39.0
Sweden	90.0%	7.8	17.0%	31.3
UK	96.1%	3.5	17.6%	30.5
EU25⁵	79.5%	13.0	9.9%⁶	29.4⁷

Source: IDATE, 2008, Broadband coverage in Europe – data refer to the end of 2007; N/A – not available

Ireland completed a competitive tendering process aimed at extending broadband access to the remaining portion of the population that is not covered by the existing broadband infrastructure. In December 2008, the contract for the delivery of the scheme was awarded to a mobile operator.

However, the deployment of mobile/wireless networks in the EU is uneven. Even in the case of UMTS networks (where coverage ranges from 30% in the case of Estonia to 90% in the case of Denmark, Luxembourg and the United Kingdom), coverage does not yet compare to DSL, which has an average of 90% population coverage in most countries. Furthermore, technological and other challenges remain to be addressed by wireless solutions e.g. lower speeds (the fastest HSDPA technology reaching a maximum of 7Mbps), reduced indoor coverage and usually higher monthly subscriptions.

Alternatively, as explored by some Member States (e.g. Ireland, Lithuania, Sweden), heavy-cost fibre/MAN networks, that rely on strong financial support from state budgets, may help resolve the digital divide. However, these projects tend to target areas with higher population coverage and sometimes, as is the case with Sweden, provide competition at the retail level, without having offered access at the wholesale level.

Competition and regulation

Effective competition has been instrumental in the development of broadband markets. Member States have continued to perform well, where competitive conditions, building on either the existence of alternative platforms or early market liberalisation, have been in place for a relatively long time (e.g. Denmark, the Netherlands, and the United Kingdom). It is, however, worthwhile noting that factors other than competition have an impact on the uptake of broadband services, and have led to a situation where overall patterns of broadband development in the European Union are becoming increasingly fragmented. These include factors ranging from historical legacies to demand-side issues such as income and also to supply-side related factors such as levels of urbanisation and government support.

⁵ BG and RO excluded

⁶ CZ, EE, FI not included in the average

⁷ CZ, EE not included in the average

Timely, sufficiently detailed, forward-looking regulation favouring access to legacy networks has also contributed to positive developments (e.g. in Belgium, the Netherlands, Slovenia and the United Kingdom). This has helped put in place the conditions which support investment, and, in the long term, facilitate innovation by the industry. Good relations between market players, and their willingness to cooperate, have also played their part in several Member States (e.g. in Sweden and the United Kingdom), in particular by allowing timely customer migration processes and not favouring their incumbents' retail arms.

Certain NRAs (in Malta, Portugal and the United Kingdom) have been able to roll-back regulation, by withdrawing obligations imposed on parts of their national territories.

However, given persistent difficulties in ensuring effective non-discrimination, a number of NRAs have examined the possibilities for remedies beyond the boundaries of the existing regulatory toolbox. Building partly on the proposal in the Commission review on functional separation, and the UK experience with measures aimed at ensuring equivalence of input in relation to the access to wholesale products, in 2008 Sweden adopted specific legislation enabling the regulator to impose functional separation on the incumbent fixed operator. In reaction, the incumbent undertook voluntary commitments that would increase transparency in relation to how its networks and services are run. In Italy, in late 2008, the regulator approved a set of undertakings proposed by the fixed incumbent that would integrate and strengthen the existing non-discrimination obligations in the provision of wholesale access network services. In Poland, while the regulator decided to launch proceedings aimed at functional separation of the incumbent following the results of an extensive study on the costs and benefits of such a solution, alternative solutions were under discussion with the incumbent.

In Slovenia, the regulator has enforced a number of subsequent decisions, thus ensuring compliance with the equality-of-treatment obligations stemming from the first round of market analyses. In Portugal, the NRA implemented so called "use it or lose it" solution, which aims to deal with scarce resources, and attempts to address the issue of limited collocation space in local exchanges.

On the other hand, in several Member States, wholesale broadband products have not developed to a meaningful extent. In some countries, despite regulation of bitstream/wholesale broadband access, there was almost no progress (e.g. Estonia, Sweden, Slovakia, and Cyprus), or the process was slow (e.g. Austria, Latvia, and Belgium), partly because the regulated offers were introduced with significant delays, remedies were suspended or the profit margins (based on the retail-minus model) did not appear to be sufficient. In Poland, take-up of wholesale broadband products was slow, since the current regulated pricing schemes do not reflect the patterns of the ladder of investment.

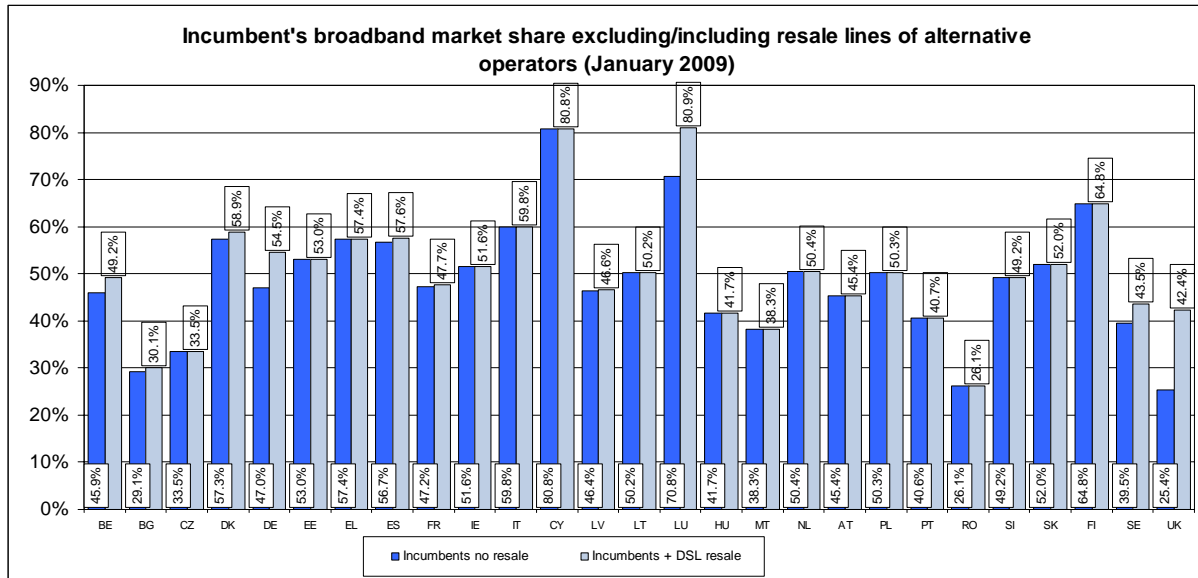
Other reasons for the ineffectiveness or absence of wholesale broadband products include the lack of quantifiable service level agreements (SLAs) requiring key performance indicators and penalty-enforcement regimes, or simply the incapacity of alternative operators to replicate or differentiate the offers of SMP operators (e.g. in Austria and Slovenia). The lack of access to information about available collocation sites, local loops/sub-loops, continued to delay the implementation of remedies (e.g. in Germany, Portugal, Slovenia, and Sweden). This latter point has gained in importance as many fixed incumbent operators in particular are programming the upgrade of, or indeed are already upgrading, DSL networks into fibre networks, which may have profound consequences on the access strategies of alternative operators.

In the majority of Member States access to fibre and Ethernet (FTTx/ETTx) and ancillary infrastructure (i.e. ducts) remains unregulated. In a number of countries (e.g. in Italy, and Sweden), future regulation of fibre has been delayed. Some other Member States started consultations on next generation networks access (e.g. in Germany, Hungary, Austria and Portugal). In the Netherlands, on the other hand, access to fibre is entirely regulated and in Belgium, the NRA has regulated fibre-to-the-curb. In France the NRA has regulated the

access to the ducts. In Spain, in addition to the access obligation to the passive infrastructure of the incumbent, the NRA has imposed bitstream access to the fibre network for speeds up to 30 Mbps. In these two countries symmetric obligations have been proposed, whereby any given operator that has already deployed fibre in-building wirings must provide access to it as a general rule.

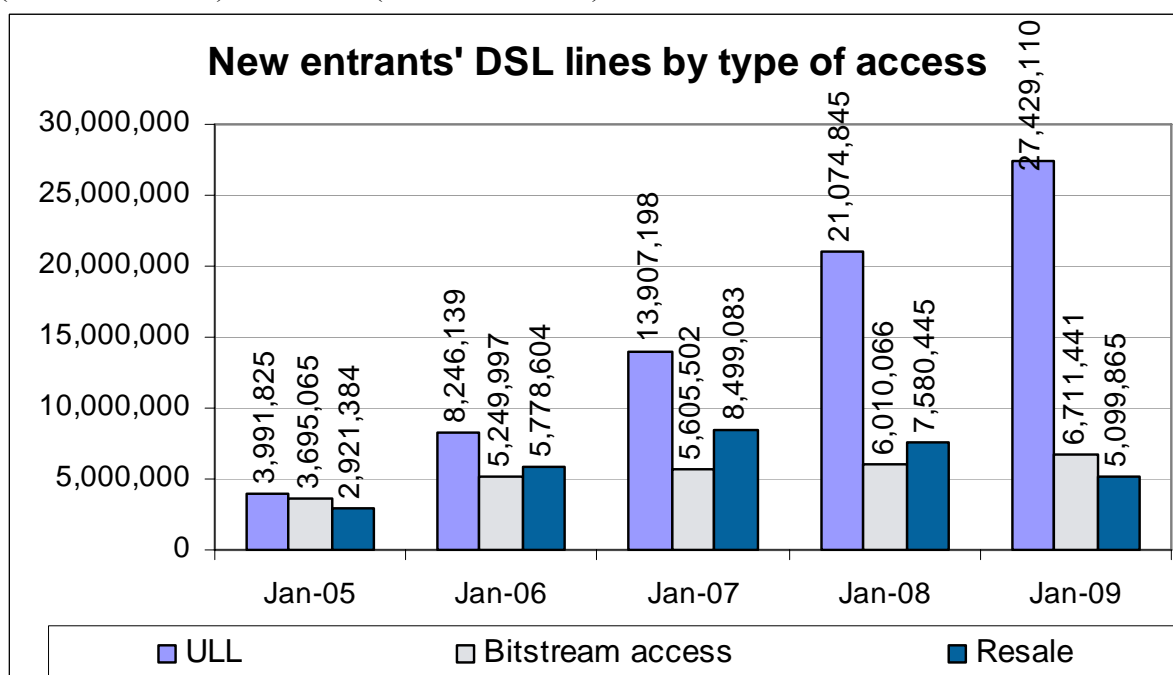
Market developments

Market shares of the incumbent operators continue to fluctuate significantly from one Member State to another, ranging from 25.4% (incumbent's market share without resale) in the case of the United Kingdom to 80.8% in the case of Cyprus.



Wholesale access to the incumbents' networks

Competitive trends are evident from the take-up of unbundled local loop products, reflecting growing infrastructure-based competition. These continue to grow at a high rate, largely as a result of effective regulation in the past couple of years. On average, 69.3% (27.4 million lines) of all alternative operators' DSL lines are either fully or partially unbundled, compared to 60.1% in January 2008 and 49.2% in January 2007. This is at the expense of other important types of wholesale access for alternative operators, whose share of bitstream access (6.7 million lines) and resale (5.1 million lines) continues to fall.



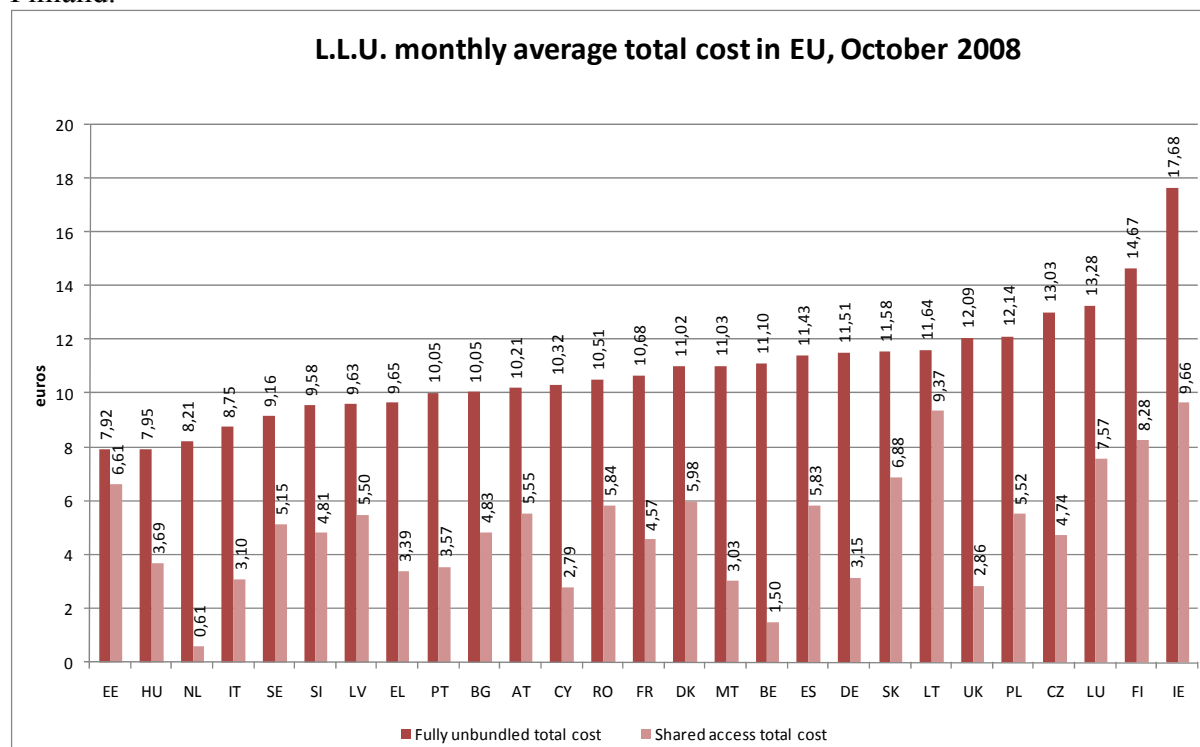
In addition to the above, in January 2009, alternative operators also directly owned 355 326 DSL lines.

LLU pricing

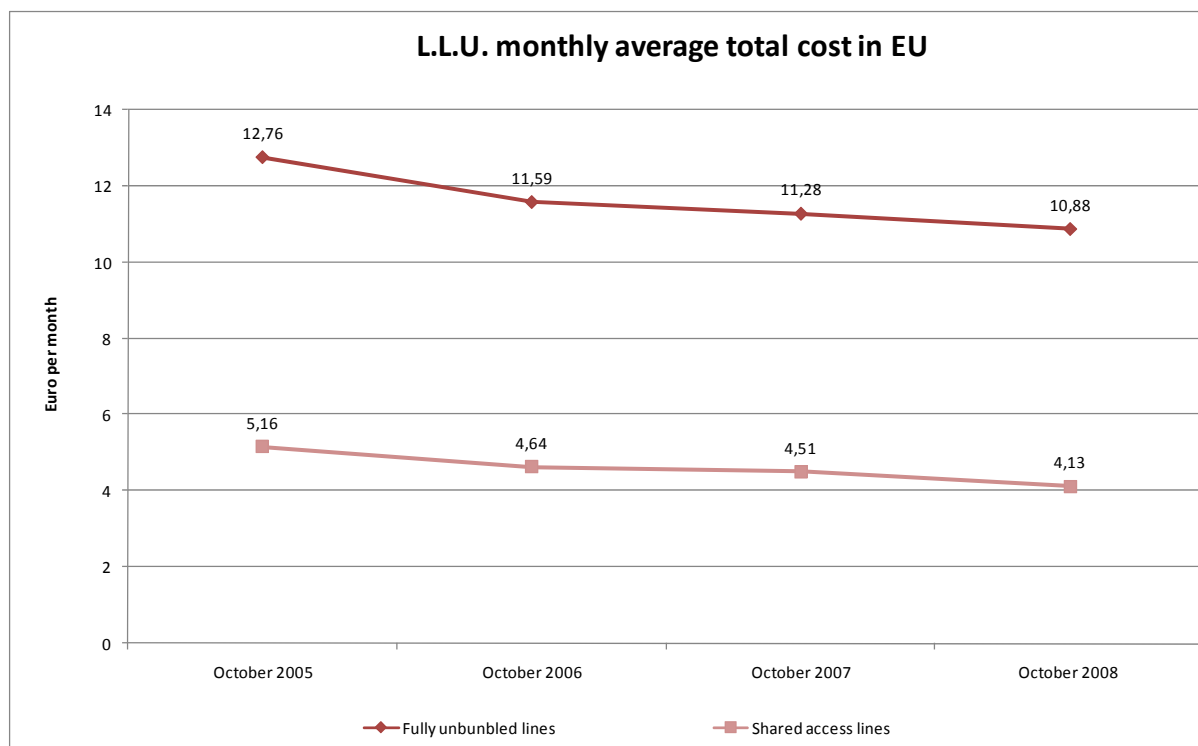
Regulatory intervention, combined with the growing effectiveness of competition, has succeeded in bringing local loop prices down to very low levels in some Member States. For example, in the case of shared access, in the Netherlands the price of monthly rental is €0.19, which compares to the highest charge of €9.42 in Bulgaria. Other countries, e.g. Austria, changed their cost-calculation methodologies (e.g. from a fully allocated/distributed cost (FAC/FDC) to a long run incremental cost (LRIC)). However, low prices have not always resulted in higher take-up of wholesale broadband lines, as the national regulatory authorities either failed to enforce target levels, with decisions frequently being postponed or hindered by systematic appeals, or failed to sanction discriminatory pricing policies by the incumbent operators. In a few instances, Member States were slow to introduce new pricing schemes, e.g. Estonia.

In its comments on a recent Italian notification under the Article 7 process, the Commission pointed to the need for greater dialogue between NRAs with the aim of improving the consistency of approach to costing methodologies across the EU.

The monthly average total cost for fully unbundled local loop significantly decreased in Bulgaria, Hungary, Estonia, the Czech Republic and Slovakia, whereas in Denmark, Greece, Ireland and the United Kingdom it increased slightly. In the Netherlands and Belgium, the two countries which already enjoy low price levels, and in Bulgaria, Slovakia and Hungary, the monthly average total cost for shared access decreased considerably, while in Denmark, Greece, France, Ireland and Finland the average cost increased, with prices continuing to remain high in Lithuania and Ireland. Despite being regulated, monthly rental fees increased in Denmark, Greece, and Ireland in the case of full unbundling of local loop and shared access, and in the United Kingdom in the case of full unbundling. Likewise, connection fees for both full unbundling and shared access increased in Denmark and Italy, while connection fees for shared access only increased in Bulgaria, Denmark, Italy, Greece, France and Finland.



On average, the weighted monthly average total cost, compared to October 2007, fell by €0.40 in the case of full unbundling, and by €0.38 in the case of shared access, indicating that price regulation has generally led to bigger decreases, in relative terms, in the case of partially unbundled local loops.



TECHNOLOGY TRENDS

Wired technologies

The electronic communications sector is characterised by rapid technological advances, which present new challenges for the market and for regulatory approaches. In most Member States, operators are upgrading existing infrastructures (such as the Docsis 3.0 upgrade in the case of cable infrastructures) and deploying new networks (with different solutions as VDSL or FTTH) in order to be able to carry higher data rates and to supply converged products in a more cost efficient manner.

Next Generation Networks (NGNs) allow more efficient provision of multiple services over the same infrastructure. This trend constitutes a major challenge for stakeholders and regulators, with interconnection being one of the key issues. The development of new higher-capacity access networks based wholly or partly on fibre optic cable is welcome in the context of facilitating innovation and long-term consumer welfare. New broadband applications and services increasingly require higher bandwidths. Next generation communication networks will allow more efficient provision of multiple/converged services over a single infrastructure. There is a clear trend towards bundled services, where operators offer a variety of services for a single global price. Moreover, over the last few years, greater use of mobile services has brought about a trend towards fixed to mobile substitution. Fixed voice traffic accounted for 58.2% of all voice traffic in 2006, compared to 60.4% one year earlier.

New DSL solutions such as VDSL are being increasingly deployed. However, alternative operators have mainly led investment in the other two main wired platforms currently used, namely cable and, to a lesser extent, FTTH (Fibre to the Home).

As stated previously, in Germany Deutsche Telekom proposed an approximately 3 billion € investment to roll out very high-speed DSL. In the UK, BT has recently (15 July 2008) announced a GBP 1.5bn fibre plan to give 30% of homes access to fibre in the UK.

Docsis 3.0 (version 3 of Data Over Cable Service Interface Specification) represents a major challenge for the cable operators. This upgrade enables cable operators to deliver high-speed broadband (with a maximum downstream speed of 200 Mbps in the case of four channels). There are currently upgrading investment plans with this technology for Belgium (2008), Sweden (2008), Spain (2009) and Portugal (2010).

Alongside the increased availability of broadband, fixed Voice over IP, whether provided through managed networks by operators, or through unmanaged networks by using computer application programmes, are experiencing significant growth, mostly in the business segment but also in the residential segment. Both alternative operators and incumbent operators have extended the offer of fixed Voice over Broadband services, whilst mobile Voice over broadband solutions services are still at a very early stage.

Currently, usage of VoIP is still limited but growing in several Member States (the Managed Voice over Broadband EU average is estimated at 8%). Voice Over broadband by telecom operators for example, represents 32% of the overall fixed traffic in the Netherlands and 27% in France. Managed Voice over IP represents 5% or more of the fixed voice market in eleven Member States.

Wireless technologies

The role of radio spectrum in the electronic communications market has significantly increased, and the Commission, in previous Communications as well as in the current review, has stressed the need to develop the European dimension and to coordinate approaches to spectrum policy.

On the one hand, wireless technologies have the advantage of being relatively easy to deploy, which can be especially attractive as a way of extending services to remote and sparsely populated areas, and of offering mobility in certain cases. On the other hand, these technologies are affected by spectrum scarcity and strongly depend on national spectrum policy, European common approach becomes therefore more and more essential (as in this case, for satellite services) if they are to realise their full potential.

WLL represents an interesting network alternative in several Member States. It accounts for 35% of the overall retail broadband lines in the Czech Republic, mainly based on Wi-Fi and 15.7% in Slovakia. The Standard IEEE 802.16 was heavily promoted in 2008.

In the last few years most 3G mobile operators have upgraded their mobile networks with HSDPA, which will allow higher speed data transfers. The Commission has proposed to amend the GSM Directive (COM2008(762)) to allow the introduction of new wireless systems, starting with the 3G (UMTS) technology and later other technologies such as LTE, in the GSM bands. This proposal still needs to be adopted by the European Parliament and the Council before becoming a law. LTE (Long Term Evolution) is expected to be the next innovative step on the GSM/UMTS networks and provide higher speeds for mobile broadband with lower cost and a more efficient use of spectrum resources.

LTE (Long Term Evolution) provides an interesting opportunity for mobile operators to increase their Average Revenues per User (ARPU). The Third Generation Partnership Project (3GPP) has stabilised the technical specifications for LTE. It is expected that in 2010 the first LTE (Global Mobile Broadband networks) will be commercialised while in 2011 this technology will be deployed on a global scale.

In several Member States (e.g. France, Lithuania, Sweden, Czech Republic, Ireland, Slovenia, United Kingdom), the standard MPEG-4 was adopted to achieve a more efficient compression of digital TV signals. This represents a 30%-40% gain in capacity.

REGULATORY DEVELOPMENTS

INSTITUTIONAL FRAMEWORK

Independence of national regulatory authorities

Effective and independent national regulatory authorities are a prerequisite for ensuring fair and effective regulation of the electronic communications markets. NRAs should be independent from any organisation providing electronic communications networks and services. Moreover, NRAs should be able to exercise their powers impartially and transparently.

The Commission has opened infringement proceedings in several cases to ensure these principles. In Luxembourg, an infringement proceeding opened in January 2008 prompted the adoption of a decree putting in place a new administrative structure in order to ensure effective separation between regulation and other functions relating to the ownership or control of electronic communications undertakings. The Commission's objections against Bulgaria on the other hand, with regard to a similar issue, were addressed by the chairman of a state body responsible for electronic communications resigning from the incumbent's board. In Lithuania and Latvia, it appeared that the Ministry, which carries out certain regulatory tasks, is also involved in activities associated with ownership and control of providers of electronic communications services. In both cases, the Commission started infringement proceedings.

Poland was referred to the Court in July 2008, because, following legislative amendments introduced in 2006, the head of the NRA has no longer fixed term of office, and can be dismissed by the Prime minister without giving reasons. In Romania, the president of the NRA was removed, on various grounds, including violations of the Electronic Communications Act, before the end of his mandate. Although this decision was suspended by a national court, he was not reinstated in his position as the Romanian Government decided to restructure the NRA. The chairman of the Slovak NRA was also removed, allegedly because of the NRA's failure to ensure a timely and appropriate transition to digital broadcasting. Since this kind of government intervention might have serious implications for the independence of the regulator, the Commission services are examining these matters closely.

Finally, the Commission was able to close the infringement proceeding launched in 2007 against Bulgaria, following the completion of the nominations to the NRA board, which included the new chairman. In that Member State, regulatory work appears to become more effective with the NRA's board being fully staffed.

Powers and resources of national regulatory authorities

In general, the national regulatory authorities have been attributed the appropriate legal powers to carry out their tasks of market regulation and consumer protection.

Over the last year, additional tasks have been attributed to the NRA, for example in Malta (national measures in relation to e-inclusion and e-business), the Netherlands (monitoring of obligations of premium rate number owners), Hungary (registration of broadcasting services) and Romania (Internet security and management of domain names).

Consultation and cooperation between the specific regulatory authority for electronic communications and the authority in charge of competition law remains indispensable. These powers can be, however, further merged into one entity. In Estonia for example, one multi-industry regulator was charged in 2008 with issuing ex-ante regulation while also applying general competition law.

Available resources, both human and financial, continue to be a matter of concern. In Bulgaria, this problem has been addressed by a consolidation of the budget and, in spite of

cuts in other State bodies, the number of staff has been maintained for the necessary market review exercise. In some cases, the NRA continues to be part of the ministry leading sometimes to insufficient financial or human resources (Poland).

Limited powers for enforcement of ex-ante regulation have remained an issue of importance for certain NRAs. In this regard, low maximum levels of administrative fines, as in Estonia, could put at risk the effectiveness of regulation. In contrast, significant fines were imposed by NRAs in some Member States, which might reinforce their effectiveness (e.g. Belgium, Netherlands). In other Member States, national regulators have started to adopt new approaches with regard to the monitoring and enforcement of regulatory obligations. The Dutch NRA reviewed its sanction policy by providing for a scheme of higher or lower fines according to the aggravating or attenuating circumstances of the case. At the same time and to prevent future infringements of the electronic communications legislation, it concluded with the incumbent a compliance charter, which includes measurable performance indicators and a specific timetable to be transposed into the undertaking's business practice. In Cyprus, the NRA decided that fines imposed on the state-owned incumbent operator should be paid to the complaining operator and not to the treasury. In the Netherlands, the amount of the fine has also been related, in some cases, to the incumbent's willingness to compensate the prejudiced operators.

In some cases finally, the confidentiality of market data provided to the NRA can also put at risk effective intervention of the NRA, both at the level of decision-making and at the level of appeal, where data could not be produced before the Court (Latvia, Finland, Estonia).

Dispute resolution

National regulatory authorities must be able, when so requested, to issue binding decisions to resolve disputes among operators. Disputes have to be settled within the shortest timeframe, and in any case within four months.

The Swedish NRA appears to have a limited authority when settling disputes regarding terms and conditions of interconnection agreements, which are subject to negotiations between the undertakings. For that reason, the Commission decided, in September 2008, to initiate an infringement proceeding against Sweden.

For an efficient dispute resolution process, clear procedural rules, good expertise and stringent time limits are needed. In Belgium, disputes are reported not to be addressed in a timely and efficient manner, which causes operators to simply avoid submitting disputes. Legal or regulatory initiatives have already been undertaken to remedy this situation. A draft law was presented in Latvia to amend the dispute resolution procedures while the NRA in the United Kingdom is expected to issue new guidelines on dispute resolution. The Italian NRA on the other hand has already approved a new regulation that allows complainants to request interim measures, while the NRA is allowed to open an investigation in case of a suspected infringement. The Maltese NRA has been working to clarify the distinction between disputes and allegations of breach.

On the other hand, solutions given to these disputes exclusively apply to the parties concerned. They do not replace general ex-ante obligations or remedies, when these have not been sufficiently detailed in the original market decisions. Difficulties of this type have been reported in Austria and Poland, where several remedies, e.g. relating to the setting of regulated prices, have been specified only following dispute resolution procedures. This would lead to delays in the regulatory process and would also bring uncertainty in the market.

Appeals

Under the EU regulatory framework, any user or undertaking who is affected by a decision of the national regulatory authority has the right of appeal against the decision to an appeal body that is independent of the parties involved. This right to an effective judicial review, as laid down in Article 4 of the Framework Directive, is granted to anyone who is "affected" by that decision.

Preliminary rulings were sought from the Court of Justice for the interpretation of these provisions. In the Austrian case *Tele2 Telecommunications*, the Court declared that the terms user ‘affected’ or undertaking ‘affected’ are applicable not only to a (former) SMP undertaking which is subject to an NRA decision taken in the context of a market analysis and which is the addressee of that decision, but also to any user and undertaking in competition with such an undertaking. While the latter are not themselves addressees of that decision, their rights are adversely affected by it, so they should be granted the right of appeal against the NRA decision.⁸ In a preliminary ruling concerning the interpretation of Regulation (EC) No 2887/2000 on unbundled access to the local loop, the Court also decided by analogy that an NRA decision concerning unbundled access to the local loop may also be challenged by a third party, which is eligible for unbundled access to a local loop.⁹

In Sweden it appears that stricter conditions to appeal against NRA decisions apply to third parties. While the Commission is looking into this matter, the authorities are considering amendments to broaden the right of appeal.

In a number of Member States, systematic appeals continue to represent a major source of legal uncertainty (Belgium, Hungary, Portugal, Romania, Sweden). In some Member States, efforts have been made, for example with regard to judicial organisation, to shorten the timeframe needed to handle court cases (Greece, Poland). Increasing concerns, however, have been expressed in a number of Member States on the follow-up to be given by NRAs to court decisions. As an illustration, certain annulment decisions may have retroactive effects, lifting regulatory obligations for the period at issue, while the NRA itself, as an administrative body, is not necessarily empowered to adopt new remedies with retroactivity (Belgium and Austria). This is further contributing to legal uncertainty.

IMPLEMENTATION OF REGULATORY MEASURES

Decision making

Market analysis

Following the adoption of the revised Commission Recommendation on relevant markets of 17 December 2007, NRAs were active in carrying out market reviews in 2008, leading to progress on the second round of market analysis. In some cases the third round of market analysis has already started (e.g. Finland, Austria, Hungary). Following some recent notifications with the exception of Poland, Bulgaria and Romania all Member States have now completed the first round of market analyses.

As for Bulgaria and Romania, there was no significant progress during 2008 in relation to market analysis. Whilst some national consultations have taken place, the Romanian NRA has only notified to the Commission its first market analysis in May 2008, concerning the market for voice call termination on fixed networks. The Bulgarian NRA only started notifying to the Commission at the end of December 2008.

Remedies

Inconsistencies in the approach to remedies continue to be a problem, and in many Member States effective implementation and enforcement of remedies was lacking, with failure to apply remedies properly or in a timely manner.

In addition, during the Community consultation process, the Commission has noted that there seems to be a tendency by NRAs to deal with problematic issues in the context of the remedies where there are no binding oversight powers of the Commission. In particular, in one case (Spain) the market definition was changed to meet Commission concerns but the remedies imposed in that market produced the same outcome as if the market definition had

⁸ Judgment of 21 February 2008, C-426/05, *Tele2 Telecommunications*, Rec.2008, p. I-685.

⁹ Judgment of 24 April 2008, C-55/06, *Arcor*, not yet published.

not been changed. The Commission's proposals to reform the EU's regulatory framework would avoid such a situation by allowing it to act also when remedies proposed by a national regulator threaten to hamper the efficient functioning of the single market.

In its revised Recommendation on relevant markets, the Commission limited the number of markets susceptible to ex ante regulation from 18 to 7. Following the market analyses conducted by NRAs, deregulation took place in certain markets.

Regulation was withdrawn by many NRAs from the retail calls markets (for example Germany, Spain, France or the Netherlands) as well as from the wholesale transit market and the market for wholesale trunk segments of leased lines (e.g. Denmark).

Furthermore, during 2008 deregulation or also more focused regulation took place in specific geographic areas; in particular, some NRAs withdrew or are in the process of withdrawing all or certain obligations imposed in the wholesale broadband access market in some areas, either by defining different geographic markets (e.g. UK and Portugal) or by proposing to impose different remedies in different geographic areas (e.g. Austria). In addition, the UK also deregulated some areas in certain product markets of the terminating segments of leased lines by defining different geographic markets.

In certain cases NRAs have continued to regulate some of the markets which were removed from the Recommendation. In these cases NRAs should clearly show that the so-called three criteria for ex ante regulation developed in the Recommendation on relevant markets are met. This was for example the case in the UK, where the markets for the minimum set of leased lines and for wholesale trunk segments of leased lines were regulated, as well as in Belgium, where the NRA proposed to continue to regulate the retail calls markets.

Effective implementation and enforcement of remedies remained a key regulatory challenge for NRAs. Experience in this area shows the importance of not only imposing the appropriate obligations but also ensuring that the implementation of these obligations is effective to enable competition to develop. The delays in the effective implementation of the imposed obligations affect the ability of operators to compete in this dynamic sector. For example, there have been significant delays in the approval of reference offers with respect to several key access products whilst these offers are essential to establish concrete economic and technical conditions applying to these products. In Germany, the bitstream products were finally made available. Also, naked DSL was made available in Spain and Slovenia, and WLR offers were finally approved in certain countries (e.g. Greece and Luxembourg).

In some other cases, problems such as the lack of implementation of the imposed remedies, inappropriate technical or economic conditions for the available access products, or inconsistency between the conditions for different access products led to low take up of these access products and to difficulties for alternative operators to compete. Such problems were reported for example in Bulgaria, Slovakia, Hungary, Cyprus, Sweden or Latvia. Accordingly, NRAs concentrated their efforts on implementing the details of the remedies imposed (e.g. Estonia, the Netherlands), for example by detailing the ancillary provisions for LLU services such as collocation (e.g. Greece), or by imposing the publication of key performance indicators (e.g. Belgium) or by means of Service Level Agreements and Service Level Guarantees to be respected (e.g. UK).

Although price control obligations have been widely imposed, the methods for controlling prices vary significantly from one country to another, leading to divergences in the level of charges for comparable services across the EU. Some NRAs still rely on retail minus methodologies (e.g. Cyprus, Slovenia) while some others have opted for cost orientation. Even where cost orientation is applied, different costing models have been adopted such as forward looking Long run average incremental costs (LRAIC) (e.g. Ireland or Italy), bottom up LRAIC (e.g. Greece, Hungary), a hybrid LRAIC (e.g. Lithuania for fixed termination rates) or, the Finnish NRA has developed a special cost accounting model. Furthermore, some NRAs have not been able to implement the imposed cost orientation obligations and rely in the meantime on other methods such as benchmarking (e.g. Portugal, Poland). In

Estonia, the NRA has given the option to the SMP operator to define the further details of the remedies imposed, such as cost based pricing and the choice of an appropriate cost accounting model. This approach has created regulatory uncertainty in the market.

In a number of countries, effective implementation and enforcement continued to be hindered by numerous and lengthy dispute resolution or appeal procedures which caused significant uncertainty in the markets (e.g. Belgium, Sweden, Austria).

Following a trend similar to 2007, some Member States have considered the possibility and even started the initial stages of some form of separation of the SMP operator. This has been done to address the difficulty in ensuring timely and effective application of the non-discrimination obligation, particularly as regards the relative treatment of the SMP operator's own downstream business and alternative operators. In Sweden, a law was adopted that enables the NRA to impose functional separation on the incumbent operator upon approval by the Commission. Similar discussions are also taking place in Italy, and the Commission services are looking closely at how these arrangements would be implemented and their compatibility with the Regulatory Framework. Some reflections on these issues have also taken place in Poland.

The inconsistencies in the approach to remedies across the EU are further elaborated in the broadband, mobile and fixed sections below.

Consultation with stakeholders

The EU Regulatory framework for electronic communications requires interested parties to be consulted by NRAs when they adopt important decisions such as the market analyses.

The consultation of interested parties was generally followed. NRAs launched a number of public consultations in 2008 in relation to market analysis and other implementation issues. Furthermore, in certain countries a public consultation was launched during the reporting year in the context of the process of defining a regulatory approach for Next Generation Access Networks or establishing regulatory guidelines for their deployment (e.g. Spain, Belgium, Ireland, Poland, Hungary, Portugal and France). Some other countries have not started the public debate in relation to NGAs yet.

However, in some cases operators regretted the lack of transparency by the NRA and complained about not being consulted in connection with the adoption of new important legislation or regulation – e.g. in Italy as regards the NRA's approval of the LLU reference offer for 2008, in Poland in relation to the establishment of the mobile termination rates (MTR) glide path or in Hungary as regards the process for awarding the fourth 3G licence.

Broadband Implementation

SMP continued to be found in most of the wholesale physical infrastructure access markets and in the wholesale broadband access markets. NRAs generally imposed the full set of remedies in these two key markets and continued to apply the range of remedies which had been previously imposed while also taking certain further regulatory steps. The imposed remedies included cost orientation, accounting separation, non-discrimination, transparency and access obligations. The Maltese NRA found the wholesale broadband access market to be competitive and removed all existing obligations, while the UK, and Portuguese NRAs withdrew or are in the process of withdrawing existing regulation, or introduced more targeted regulation, in the wholesale broadband access market in certain geographic areas thus reflecting the development of different competitive conditions (competitive entry and population density in exchange areas).

However, late implementation of the remedies in some cases has remained an issue; in Germany, the bitstream products and the relevant reference offers were finally made available to alternative operators, even though operators consider that some issues remain in relation to the quality and price levels. Other wholesale products such as naked DSL were made available in Spain and Slovenia in 2008.

As regards the various methodologies employed to implement price obligations, the retail-minus approach and the cost orientation principle continued to be the most common. The costing models applied differed from country to country. In spite of the fact that in Slovakia price regulation was not imposed for LLU access the incumbent reduced prices as a result of continuous pressure from the NRA. The Czech NRA still did not impose any price obligation in the wholesale broadband access market which has raised concerns for alternative operators. The behaviour of market players has also been influenced by factors other than price. The availability of the relevant information has a significant impact on the planning activities of operators. In this respect, an obligation to publish information regularly was imposed on incumbents in some Member States, sometimes as part of the reference unbundling offer (e.g. Sweden). Moreover, alternative operators have alleged discriminatory treatment or unavailability of information by incumbents in some cases (e.g. Slovenia, Portugal, Poland). In certain cases the NRAs have addressed these problems by an intense monitoring and enforcement of the non-discrimination obligation.

The issue of migration between operators and between different wholesale products is still a point of regulatory concern in several Member States. These migration procedures should facilitate the progress in the ladder of investment and the move towards more advanced forms of access by alternative operators. In some Member States (e.g. in Italy, Ireland) migration procedures have already started to be implemented whereas in other Member States they are still to be discussed (e.g. Germany, UK, Belgium).

Finally, NRAs are also facing an important challenge regarding the regulatory treatment of bundled offers, which are becoming increasingly available and popular in most Member States, as well as ensuring that these offers do not hinder the ability of operators to compete. Some NRAs are examining the replicability of the offers through margin squeeze tests (e.g. Austria, Italy) and alternative operators have indicated that it is becoming increasingly difficult to compete with the bundled offers of the incumbent operator. This issue was raised in Austria, Estonia, Latvia, Czech Republic, Malta, Hungary and Luxembourg.

Next Generation Access Networks (NGAs)

While operators in some countries are planning or already deploying fibre in their access networks, investment in NGAs in other countries appears to be rather limited. The issue of NGAs remains a regulatory challenge. While many NRAs have started to reflect on the regulatory treatment of NGA, some others are only at a very early stage of the discussion. At the current stage of NGA deployment it is of the utmost importance to guarantee transparency in order to promote investment in new networks by all market players, as well as to ensure certainty and predictability for alternative operators in relation to the migration processes. Some NRAs adopted general guidelines on NGAs, such as Spain, Portugal and Malta. In addition, the Swedish NRA published a strategy on regulation of dark fibre concluding that there was no justification for defining a specific market for dark fibre. Different approaches have been adopted in relation to NGAs. The Belgian NRA extended the remedies imposed in the wholesale broadband access market to VDSL whilst the Dutch NRA regulated fibre connections in the markets for wholesale physical infrastructure access and wholesale broadband access. In Spain, in addition to the access obligation to the passive infrastructure of the incumbent, the NRA has imposed bitstream access to the fibre network for speeds up to 30 Mbps. In France an obligation on access to passive infrastructure was imposed, but no remedies were imposed on fibre networks in the markets for wholesale physical infrastructure access and wholesale broadband access on the incumbent operator. However, in the two latter countries, a symmetric obligation on all operators to grant access to the in-house fibre wiring was imposed. In Spain, this obligation was imposed by the NRA whilst in France this obligation was imposed by law.

Access to the incumbent's physical infrastructure is of the utmost importance in the context of NGA deployment. In Portugal, under national law, the incumbent operator as the beneficiary

of a concession was obliged to provide a reference offer for access to ducts and associated infrastructure (known as ORAC). This offer is currently available and used by several undertakings, even though improvement has been requested in relation to Service Level Agreements and information on duct availability. Access to the incumbent's ducts has been mandated in Germany, Estonia and more recently in Spain and France. In Germany this obligation was imposed in 2007 but no agreement on access to ducts has been concluded yet. These differing approaches show that there is a need for a consistent and transparent framework for NGA development. In order to address these issues the Commission is preparing a Recommendation on regulated access to Next Generation Access Networks, which will focus on regulatory remedies and update some of the principles already contained in the regulatory framework with respect to the new context of NGAs.

Mobile Implementation

Operators have been designated with SMP in the mobile termination markets constituted by their respective networks. This has been the case not only for mobile network operators, but also for mobile virtual network operators, which were in some cases notified by the NRAs as having SMP (e.g. Spain or Denmark). Most of the NRAs imposed cost oriented prices with glide paths to reduce the MTRs with several drops per year. MTRs nevertheless vary largely from one country to another mainly due to the existing differences in the adopted cost methodologies or models. Differences also persist across the EU as to the symmetric or asymmetric regulation of the MTRs. In some Member States price regulation was not imposed at all leaving MTRs to be negotiated commercially (e.g. in Slovakia).

Mobile operators continued expanding their 3G networks and new 3G licences have been granted or are in the process of being granted in some Member States (e.g. Luxembourg, Hungary, France). In Luxembourg, a 3G licence was attributed to each of the two initial applications who will share the frequency bands. In Slovenia, the UMTS licence was granted free of charge, which raised concerns among other licence holders that had previously paid a significant amount for their licences. In France and Italy, the government announced the launch of a call for tenders for allocating 3G frequencies.

The Roaming Regulation has been duly applied in all Member States and operators have reduced their roaming prices accordingly, including the second round of price reductions in August 2008. However, the vast majority of operators set their roaming prices at, or close to, the maximum levels permitted by the Regulation. In the Czech Republic only one of the operators used the reference exchange rate published by the Official Journal on 30 July 2008 as required by the Regulation. Some Member States have not yet implemented or notified to the Commission the necessary provisions for imposing penalties on operators not respecting the Roaming Regulation (Bulgaria, Germany, Latvia, Austria and Poland).

On 23 September 2008, the Commission adopted the proposal for extending the duration and scope of the Roaming Regulation. The Roaming Regulation contained a review clause, requiring the Commission to analyse, before the end of 2008, the developments of prices for voice roaming calls as well as the developments of SMS and data roaming services, in order to propose any amendment to the Regulation. The Commission proposes to amend the Roaming Regulation in several respects. It extends the Regulation for three more years and sets new price caps during the extended period both for wholesale and retail voice roaming. It introduces a principle of per second billing for all roaming calls while allowing for a minimum charging interval of up to 30 seconds for calls made at retail level. The amending regulation further sets ceiling prices for SMS roaming at both wholesale and retail level and contains similar transparency provisions to those already in place for voice roaming. As regards data roaming the proposal sets a limit for wholesale charges and provides for anti-'bill shock' transparency measures.

Fixed Implementation

The trend towards deregulation of the fixed markets continued in 2008. Following market analysis several NRAs removed regulation of the retail fixed calls markets (e.g. Germany, France, Spain, Czech Republic, Ireland, the Netherlands). However, in the Netherlands the existing regulation in the retail markets for non residential customers will not be withdrawn until the relevant wholesale remedies have been effectively implemented. In Belgium, regulation on the retail calls market will be maintained, and this for a period of one year. In Denmark remedies in the market for wholesale trunk segments of leased lines market were revoked as effective competition had been found in the market.

In some Member States new reference interconnection offers (RIOs) were published (e.g. Lithuania, Poland) whereas in others the existing RIOs were amended (Malta, Portugal). Carrier selection (CS) and carrier pre-selection services (CPS) available in all Member States represent an important initial option for alternative operators to provide voice telephony services, even though in some countries they are progressively losing relevance (e.g. Germany, Portugal) towards more advanced forms of access. However, in Bulgaria CS/CPS are available only for international and long-distance calls but still not for local calls. In other Member States, these services still need to be taken up (e.g. Slovakia).

Obligations to provide wholesale line rental (WLR) which allows alternative operators to provide their customers with a single bill have been imposed in several Member States. In particular, Luxembourg and Greece finally approved the WLR offer from the incumbent. However, the take up of WLR varied significantly across the EU. While it was significantly used in some Member States (e.g. Poland or the Netherlands), it was used only to a limited extent in some others (e.g. Spain or Austria, Czech Republic, Cyprus, Portugal). In some countries this might be partly due to technical difficulties, or in other cases due to lack of market interest. For example, in Lithuania the facility for automatic activation of lines was not made available and clients were thus required to enter activation codes manually, or in Luxembourg operators claim that there is an insufficient retail margin.

As regards the markets for fixed call termination-, several remedies have been imposed, including some form of price regulation. Various cost accounting methodologies or models were applied by Member States and, similarly to the mobile call termination markets, the level of fixed termination rates varies significantly across the EU. In Lithuania the regulated fixed termination rates were not imposed on alternative operators, but these were obliged to reduce their termination rates on the basis of interconnection agreements with the incumbent. In some countries alternative operators have been subject to a glide path towards an efficient rate (e.g. Ireland, Italy).

In the light of the differing approaches towards fixed and mobile termination rates, the Commission is preparing a Recommendation on harmonized regulatory treatment of termination rates in the EU which will be based on the costs of an efficient operator.

Broadcasting Implementation

Regulation of broadcasting markets

Contrary to the 2003 Commission Recommendation on relevant markets, the December 2007 Recommendation does not list broadcasting transmission services as a market susceptible to ex ante regulation. Nevertheless SMP designations made under the old Recommendation, and obligations consequently imposed would continue to apply until they have lapsed, or were withdrawn by decision of the competent NRA. In several Member States, remedies have been further elaborated and imposed under old market decisions (France, Lithuania, Hungary, Portugal).

NRAs which consider imposing ex ante regulation on the broadcast transmission markets are thus obliged to carry out an assessment with regard to the need for *ex-ante* regulation by applying the three criteria test. Some NRAs launched consultations and notified broadcasting transmission markets to the Commission. The Maltese NRA did not find evidence of

ineffective competition, and decided to withdraw all existing regulation. In contrast, the Finnish NRA adopted regulatory measures for both defined markets with regard to national digital terrestrial broadcasting transmission services and analogue terrestrial radio transmission services. The UK regulator proposed, after consultation, to regulate the wholesale transmission of designated premium channels, while the French regulator consulted market players on the opportunity of extending current regulation and possible measures to be imposed on the SMP operator. The Dutch regulator, finally, was expected to propose to continue with wholesale regulation on the market for broadcasting transmission services and access to the transmission platform of cable operators.

Digital switchover

In its Communications of 17 September 2003¹⁰ and 24 May 2005¹¹, the Commission invited Member States to establish switchover strategies, and to switch off analogue broadcasting at the latest in 2012. Member States have generally been actively preparing this process. Switch-off of analogue terrestrial broadcasting had been already completed before the end of 2008 in Luxemburg, the Netherlands, Finland, Sweden and Germany. Regional switch-off took place in 2008 in Flanders (Belgium). In most large Member States, digital terrestrial broadcasting is being introduced in a gradual way by regions, organising analogue-digital simulcast for the transitional period (e.g. France, United Kingdom, Italy, Spain). In many other Member States, digital terrestrial broadcasting is first introduced in densely populated areas and subsequently extended to more rural areas (e.g. Hungary, Lithuania, Slovakia). Some Member States have advanced the switchover date (to end October 2009 in Denmark, to 2010 in Estonia, Spain and Malta and to mid 2011 in Cyprus). Yet in Lithuania switch-off has been made conditional, in 2012, upon coverage of at least 90% of households. Finally, Poland announced that it would switch off only in 2014, but an earlier date might be possible according to the market situation.

In the meantime, some Member States have further elaborated their national plans or strategies for analogue switch-off. Other Member States, like Poland and Romania still seem to lack a formal strategy for the switchover.

Several Member States have taken measures to promote the adoption of digital television. In Estonia, the government waived licence fees for broadcasters that have started digital transmission in due time. In France a specific fund was created for supporting households with low income in the switchover process, whilst the Slovak Ministry of Telecommunications was preparing a proposal for subsidising digital equipment. Information campaigns on the benefits of digital switchover were launched in Denmark and the Czech Republic.

In the meantime, governments are preparing new legislation with regard to the necessary procedures for the granting of digital terrestrial television broadcast licences. National regulatory authorities are consulting market players and in many cases, they have already prepared tenders or auctions for the allocation of multiplex capacity (e.g. Denmark, Ireland, Cyprus, and Hungary). In Portugal, the incumbent has already been granted a frequency right of use with national scope and should start broadcasting the digital free-to-air channels by August 2009. In Latvia, the government issued regulations on the procedure for the introduction of digital terrestrial television. With regard to the operation of digital terrestrial broadcast networks, most Member States have already completed the authorisation process under electronic communications law.

With regard to the Italian system for awarding frequencies for broadcasting, the Court ruled in January 2008 that the Electronic Communications Framework precludes national legislation

¹⁰ Communication of 17 September 2003 on the transition from analogue to digital broadcasting (from digital 'switchover' to analogue 'switch-off') (COM(2003)541 final).

¹¹ Communication of 24 May 2005 on accelerating the transition from analogue to digital broadcasting (COM(2005)204).

which leads to the granting of exclusive frequencies, without any time limitation, to a limited number of existing operators, not taking into account objective, transparent, non-discriminatory and proportionate criteria.¹²

It should be recalled that pursuant to Article 5(2), second paragraph, of the Authorisation Directive, without prejudice to specific criteria and procedures adopted by Member States to grant rights of use of radio frequencies to providers of radio or television broadcast content services with a view to pursuing general interest objectives in conformity with Community law, such rights of use shall be granted through open, transparent and non-discriminatory procedures. Pursuant to Article 7(3) of the Authorisation Directive, selection criteria must be objectively justified, non-discriminatory, proportionate and transparent. The Commission is monitoring legal and procedural arrangements during the transition towards full implementation of digital television against these requirements.

¹² Judgment of 31 January 2008, C-380/05, *Centro Europa 7*, Rec. 2008, p. I-349.

THE CONSUMER INTEREST

Tariff transparency and quality of service

Ensuring transparent tariffs and up-to-date information on standard terms and conditions is one of the cornerstones of the consumer protection measures enshrined in the Universal Service Directive. The measures on transparency are complimented by further requirements relating to information on quality of service and contractual terms.

At the national level, many Member States have recognised the increasing need to improve transparency. It is a crucial part of the EU framework and a key amendment under the review proposals, enabling further consumers to optimise their choices and thus benefit fully from competition established in the electronic communications market. In France, for example, several user-oriented legislative measures were taken to improve tariff transparency and quality of service.

End-users should have access to information which would allow them to make an independent and comparable evaluation of services offered in the telecommunications market. The Directive therefore encourages the provision of information that could be used for development of evaluation mechanisms enabling cost comparisons of alternative usage patterns.

In this context, various web-based price comparison tools have been developed in an increasing number of Member States. Where such tools exist, there is a notable trend in 2008 to widen the scope of these dedicated on-line tools to cover additional platforms as well as bundled offers. This trend is driven by demand for increased transparency and comparability as more and more offers and services are placed on the market, creating often a maze of complicated tariff plans and service options for consumers. On average one in four European consumers find it difficult to compare offers in the telecommunications market.¹³

In most cases it is the regulators themselves who have undertaken the role of providing this service. Such is the case in Sweden, Lithuania, Ireland, Portugal and Denmark, for example. In Estonia, the usage of online tools by consumers to compare tariffs is increasing while new functionalities are added regularly, such as for example an interface with a numbering management database. The Slovenian regulator has also increased the scope of its web-based price comparison platform and has undertaken further steps to increase public awareness of the service. The Belgian NRA continues its efforts to build a tariff simulator encompassing broadband, fixed and mobile services, including bundled offers, and the Polish and Romanian NRAs have initiated the process to build a similar service. In the UK, the NRA runs a scheme which grants accreditation to price comparison websites developed in the market. Two accreditations were granted so far.

Applicable prices and tariffs are not the only information items sought when comparing various offers. Similar online tools have been developed for indicators of quality of service. The Spanish and Portuguese regulators publish quality of service parameter comparisons on their web sites, while both the fixed and mobile players in the UK run voluntary industry schemes for online comparison of quality of service information. A web-based tool for comparing quality of service parameters is being implemented in Belgium.

Transparency of information relating to broadband speeds as well as maintaining the quality of broadband services appears to be an issue of growing concern for consumers and for NRAs. An increasing level of consumer concern has been noted with regard to transparency of DSL speeds and related contractual obligations. Several Member States have taken steps to ensure that customers are granted safeguards for broadband speed delivery. Codes of practice, voluntary agreements with industry and various measures on quality of services introduced in Hungary, Greece, Latvia, France, and Spain entail concrete improvements regarding

¹³ Flash Eurobarometer 243 (2008).

broadband speeds. For example, Hungary has introduced an obligation to deliver at least 80% of broadband speed indicated in contracts. A similar proposal is in the process of being adopted in Spain.

Ensuring transparency for calls to non-geographic numbers and premium-rate services continues to be a challenge in many Member States. Such appears to be the case in the UK, where the NRA has carried out several public consultations to tackle transparency issues with regard to various number ranges. New rules on billing transparency for premium-rate services were introduced in Italy, and measures on excessive pricing issues with respect to these services were set in the Netherlands. In France, calls to hotlines may no longer be premium-rated, and the Greek NRA issued a new code of practice for premium-rate service providers. Spain adopted new transparency and user protection measures for data premium services. Despite numerous steps taken to enhance transparency and quality of service, the deficiencies identified in this respect continue to attract the attention of many NRA and consumer protection institutions. As noted for example in Poland and Malta, there is a wide room for improvement to facilitate an environment in the telecommunications market which would deliver the level of transparency desired by consumers and end-users.

Universal Service

Universal service is a minimum set of services which should be available to all-end-users at an affordable price and specified quality, independently of the geographical location within a Member State. The Universal Service Directive defines universal service around four specific elements: access at a fixed location that enables making and receiving local, national and international telephone calls, fax communications, and functional Internet access; availability of at least one comprehensive directory and directory enquiry service comprising all fixed and mobile subscribers who wish to be included; availability of public payphones; and specific measures ensuring access and affordability of publicly available telephone services to users with disabilities, special needs, and those on low incomes.

The framework allows for a technologically neutral provision of access at a fixed location. In this respect, Finland and Slovenia, for example, have started applying wireless solutions for remote areas where a traditional fixed network is not available or is being shut down.

The Commission carried out a regular periodic review of the scope of universal service and issued a Communication on the issue in September 2008. While modifications to the current scope were not recommended at this stage, the Communication opens a wide forward-looking EU public debate on the future of universal service, most notably with respect to broadband services.

Several Member States have limited the scope of the current universal service obligations as some universal service elements are being delivered by the market under normal commercial conditions without the necessity to designate specific undertaking(s). Germany, Luxembourg, and most recently Sweden have decided not to designate any universal service providers. Further to reductions in the scope of designated universal service obligations noted in the previous reporting period, several other Member States have followed with a similar approach in 2008. Hungary has changed the scope of designations in particular by removal of the provision of access at a fixed location and a reduction in the number of public payphones, and Latvia has proposed not to include the access at a fixed location in future designations. Slovakia modified the obligation to provide public payphones in larger cities by reducing their number. Denmark has not included the provision of payphones in the recent designations, while the provision of directory services is only intended to be designated for certain defined groups of disabled users. In the Czech Republic, the provision of a comprehensive directory and directory enquiry service has been taken out of the scope universal service designations, and the obligation to offer special tariffs no longer includes special prices for low income recipients.

On the other hand, some Member States have added additional mandatory services within the scope of universal service. Such is the case in Denmark, where the provision of ISDN services, leased lines and maritime emergency services has been included in the scope of designations and the incumbent was designated as a provider for these services in 2008. The Spanish Parliament approved a law which paves the way for the future inclusion of broadband services in the scope of universal service already in 2007. Despite these legislative changes, the universal service obligations currently in place in Spain do not yet entail the provision of broadband services. The Finnish Government adopted at the end of 2008 a new national broadband strategy where internet connections of on average of 1Mbps would be defined as a universal service. The respective national legislation is under preparation. In France, the Government has announced a goal of ensuring broadband coverage for all of the territory by 2010 intending to launch a designating call for tender in 2009. In this context, it should be noted that no compensation mechanism involving specific undertakings may be imposed with respect to additional mandatory services which are not within the scope of universal service as defined by the Universal Service Directive.

The following Member States have carried out new designations for some or all elements of universal service during 2008: Czech Republic, Hungary, Finland, Spain, Cyprus, and Denmark. Portugal has launched a public consultation for a new designation procedure. Preparations for new designations are ongoing also in France, Greece and Malta. The Commission notes that in 2008 there were still a number of Member States where universal service was provided on the basis of a transitional regime, for example Greece, Italy, Spain, Bulgaria, the Netherlands, Portugal and Belgium (for elements other than social tariffs). In such instances the universal service providers have not yet been designated on the basis of the rules transposing the requirements of the 2002 regulatory framework.

As regards designation procedures applied throughout the EU, it is left to the discretion of Member States to determine the most efficient and appropriate mechanism of selection of undertakings to supply universal service, provided that the requirements of the framework are respected. In June 2008, the European Court of Justice issued an important judgement with regard to France where only those undertakings able to provide universal service in the whole of the national territory could have been designated. The Court supported the Commission's view that Member States have an obligation to ensure the provision of universal service in a cost efficient manner, whilst respecting the principles of objectivity, non-discrimination and minimum market distortion. In this regard, the mechanism used to designate operators for the provision of universal service must not a priori exclude any undertakings, and the conditions of the designation procedure must allow for evaluation of all offers of interested parties to provide particular elements in the whole or part of the national territory. The French law has been amended accordingly.

The designated undertakings may be compensated for the specific net cost incurred, in accordance with the rules enshrined in the Universal Service Directive. The designated undertaking may receive compensation via public funds or a sector-specific fund made of contributions from market players.

Finland continues to be the only Member State where a financing mechanism is envisaged from public funds only. In Latvia, public financing of universal service is envisaged for a transitional period from a decision on activation of the compensation mechanism in 2007 until a sector-specific fund is set up. In 2008, the Czech Republic proposed a change of compensation mechanism to public financing only; the proposal is yet to pass through the Parliament.

In 2008, several NRAs have dealt with requests for compensation received from designated undertakings. The Slovak, Polish, and Irish regulators are yet to take a decision whether the requests received will lead to an activation of the compensation mechanism. In majority of those Member States where a decision to activate the compensation mechanism has already been taken, namely Italy, Czech Republic, France, Romania, Belgium (social tariffs only),

Spain, and Latvia, effective compensation faces long delays due to administrative procedures, appeals and court proceedings. As regards the financing mechanism applied, issues have been raised with respect to full compliance with the requirements of the framework in relation to the Czech Republic, France and Romania. The Commission services are looking into the matter.

Infringement proceedings were pending in 2008 against Belgium, Portugal and Spain for non-compliance with the EU rules on universal service designation and financing mechanism.

Directory services and directory enquiry services

Comprehensive directory information and directory enquiry services constitute an important access tool for consumers using publicly available telephone services. The availability of at least one comprehensive directory and directory enquiry service is a part of the universal service elements mandated by the framework. All subscribers have a right to be listed, subject to personal data protection rules defined by the ePrivacy Directive.

The experience with implementation of comprehensive directories and directory enquiry services indicates that the establishment of such services including both the fixed and mobile subscribers who have consented to be listed has not been an easy task in many Member States. The Commission has opened a total of 11 infringement proceedings in this regard. Currently, all of the infringement proceedings have been closed as the services became available with the exception of Portugal, where the case was pending before ECJ at the end of the reporting period.

In addition to Portugal, comprehensive directories and directory services are still not available in Romania and Bulgaria. The necessary legislation has been adopted in Bulgaria, but the Bulgarian authorities are yet to set a timeline for implementation. The Romanian authorities have already initiated the process for designation of comprehensive directory and directory enquiry provider(s), which is expected to be completed in 2009. The Commission services are closely monitoring developments in order to ensure that principles set by the Universal Service Directive are duly observed.

Besides the provision of comprehensive facilities, there is a wide range of alternative directories and directory enquiry services providers established across the EU Member States. In some countries, competition with respect to directory enquiry services is limited to the provider of the comprehensive service and other network operators, mostly mobile, offering directory enquiry service with listings of their own subscribers, (e.g. Slovakia, Czech Republic). In several Member States, competition has developed with numerous service providers (e.g. United Kingdom, Germany, France, Spain, Netherlands, Italy), using mostly the new codes of 118xxx range for directory enquiry services, and some offering also other value added services such as for example call completion by SMS. On the other hand, it appears that traditional directory enquiry services providers are facing challenges as the market changes with an increasing use of internet and a decreasing number of fixed lines. There are also other contact identifiers such as e-mail addresses and URL addresses that enable consumers to satisfy their need for contact and communication.

Service providers from several Member States have noted concerns as to accessibility of data of mobile subscribers. The principle of the framework, whereby subscribers' data are listed in a directory upon their consent, applies both to subscribers of fixed and mobile communications. There are significant differences amongst the Member States concerning the inclusion of mobile numbers in directory enquiry databases: it may be considered that a greater interest in privacy supports an increase of the number of unlisted subscribers, both for fixed and mobile networks, but mobile phone users may be more sensitive to privacy in some Member States. The increased proportion of end-users with only a mobile phone may also facilitate the trend whereby an increasing proportion of voice telephony end-users choose not to be registered in directories. While the EU framework ensures that service providers have access to subscriber data of individual telephony providers, there is also demand for

aggregated data of subscribers on the side of directory enquiry services. Such an aggregated database is available to service providers for example in Spain, Ireland and Italy. Concerns of service providers have also been noted with respect to retention rates applied by mobile network operators for calls made to directory enquiry services. These rates are predominantly negotiated on a commercial basis as the mobile wholesale origination market has been found to be competitive. In general, retail prices for directory enquiry services are considered to be high. In this respect, it is important to facilitate appropriate tariff transparency for end-users so that they are aware in advance of the applicable charges with respect to directory enquiry services and other value-added services. Several Member States have taken legislative measures to address the market for directories and directory enquiry services. France introduced a legislative package aimed at consumers which tackles also the issue of high retail prices for directory enquiry services. Any calls to directory enquiry services in France originated in a mobile network are thus to be charged as regular national calls, in addition to the price for the provided directory service. Moreover, customers are to be informed of the price before their call is completed to a required number. The Greek NRA issued a regulation detailing the format of the subscribers' directories, as well as the procedures and the cost for a distribution of subscribers' data amongst operators. In the UK, the NRA has proposed to repeal the obligation of the universal service provider to make available its comprehensive subscriber database to other directory enquiry services on reasonable terms, as it has found the obligation unlawful. The decision has been overturned by the national appeal body but may still be subject to further appeals.

Disabled and social needs

Pursuant to provisions on universal service enshrined in the Universal Service Directive, Member States are encouraged to take specific measures for disabled end-users, on the basis of their national conditions, in order to ensure access to and affordability of publicly available telephone services equivalent to those enjoyed by other end-users, including access to emergency services, directory enquiry services and directories. Member States are also encouraged to take other specific measures which would allow people with disabilities to take advantage of the choice of providers and services available to majority of end-users. The majority of Member States have included special measures towards users with disabilities and special needs in the current scope of designated universal service elements. These measures usually entail special tariff plans and prices, discounts for connection and call making, and obligations concerning the provision of public payphones with specific requirements for usage by disabled users. In some countries, adapted terminals have been made available at an affordable rate.

Apart from the provisions targeted at users with disabilities already applicable in the market since the previous reporting period, only a few Member States have taken new steps in this direction during 2008. Greece, for example, adopted a decision ensuring access and affordability of publicly available telephone services to disabled users. Slovenia, has established a special working inter-service group including representatives of disabled users to provide guidance on how to further improve services and equal access for disabled users. New universal service designations for special tariffs for users with disabilities were carried out in the Czech Republic.

Overall, the heterogeneity of the specific measures employed across the Member States remains, and the depth and scope of their impact on this specific group of end-users varies. There is still ample scope and potential to make the EU society more inclusive.

Number portability

The possibility for subscribers to retain their numbers independently of undertakings providing the service is one of the key facilitators of consumer choice. It enables the development of effective competition to be fostered, especially in relation to new entrants in the market. The NRAs are to ensure that pricing is carried out on cost oriented terms.

As number portability became available in Romania and Bulgaria (mobiles) in 2008, it is now available for both mobile and fixed users in all Member States with the exception of Bulgaria, where an exemption has been granted in the accession agreement with respect to fixed services until January 2009. Further improvements of accessibility have been implemented in several Member States. In Slovakia, an automated mobile number portability solution is available for the new mobile entrant since May 2008. Mobile number portability has become available for pre-paid mobile users in Latvia, and in Italy it is now possible to port between fixed alternative operators.

The EU framework is not prescriptive as to the details of implementation on a national level. Hence the solutions used for managing the national number portability system vary among Member States, ranging from bilateral agreements, a central database managed by the NRA, or a central database managed by one of the major players. An intention to shift to a central database has been noted in the UK and Poland so as to ensure direct routing of calls to ported numbers. Nevertheless, following an appeal, the proposed changes to the porting system in the UK, if any, may be implemented only at a later stage.

The fixed number portability continues to be increasingly successful in France, Spain, Netherlands, Greece, and Czech Republic. The mobile number portability reached the highest proportion over mobile subscribers in Finland (68.7% of subscribers), Denmark (40%), Spain (35.5%), Sweden (29.2%), and Ireland (24.6%). This facility, on the other hand, appears to be of very moderate usage in Germany, Latvia, Cyprus, Slovenia, and Slovakia. The prices applied for number portability vary to a great extent. While no wholesale charge is being applied for example in Estonia, and Spain (mobiles), and in Germany (fixed), these charges are as high as €50 for the fixed number portability in Slovakia and €45 for the mobile number portability in Malta. Wholesale prices are often decided by the NRA via disputes. Several NRAs have taken more general measures to reduce the applicable wholesale prices. For example, a public consultation has been launched in Ireland with a view to capping the charges, and the Italian regulator has proposed to cancel the wholesale charges. In Belgium, the wholesale price for fixed number portability has been significantly reduced following a decision from the NRA. Further reduction of the wholesale prices has been decided by the Portuguese NRA. As regards the retail prices applied to consumers, these contrast in a similar manner from zero charge in Latvia, Lithuania, Greece, and in Czech Republic, Spain and Ireland (mobiles) to high retail charges for up to €33 in Slovakia (fixed) and €30 in Germany (mobile). In this respect, it should be noted that it is the task of the NRA to ensure that any direct charges to subscribers do not act as a disincentive to using this facility.

The time aspect continues to be of crucial importance. In fact, at least six Member States (UK, Portugal, Spain, Slovakia, Italy, Poland) have proposed to shorten the time taken to port numbers down to 1-5 days, responding to the need to facilitate a swift handling of this tool of consumer choice, so that long delays in the procedure do not undermine the potential full benefit for end-users. The average time needed to port numbers between operators is 7.5 days for the fixed portability and 8.5 days for the mobile portability. It may actually take only one day to port a mobile number between providers in Malta and Ireland. This figure contrasts sharply with 38 days in Poland. The Commission notes that lengthy and cumbersome procedures discourage subscribers from using the facility and switch providers.

The Netherlands has been active in introducing measures in support of consumers with respect to switching of internet providers. The Dutch NRA, after negotiations with the sector, set up a voluntary uniform switching system with clear rules. Long delays for switching of broadband providers are a source of concern in Germany. France introduced an additional voluntary consumer protection measure which grants compensation to users suffering from an unsolicited change of operator.

A number of Member States have included VoIP and MVNO in their porting systems. In Belgium, both VoIP and MVNO offer number portability. In Sweden it is possible to port fixed numbers into VoIP services. Spain and Ireland have extended the mobile number

portability to MVNO. It appears that there are porting obligations for VoIP services in other Member States, but the existing obligations vary to a great extent, depending on their classification, use of numbers (geographic or non-geographic), and nature (non-nomadic or nomadic).

Out-of-court dispute resolution

The Universal Service Directive ensures that consumers and end-users have a simple, inexpensive and transparent out-of-court procedure available for dealing with unresolved disputes as an alternative to a formal and often lengthy court proceeding.

In most of the Member States, such procedures are provided by the NRA, while in some countries (e.g. Hungary, France, Latvia, Italy, Poland, United Kingdom, Spain, Portugal, Romania) several bodies are responsible for procedures involving consumer protection applicable also for consumers in the telecommunications market. In the latter instances, there is an increased need for solid cooperation between various authorities so as to streamline the process, ensure consumers are given sufficient information on available course of action and avoid wasting resources through duplication of tasks. Most notably, the need for coordinated action has been stressed in Hungary and Spain in order to ensure legal certainty, as well as in Austria, where various authorities are reported to have given contradictory decisions on the same issue.

The vast majority of the complaints involve prices, incorrect billing, and quality of service. An increasing number of consumer complaints has been noted in many Member States. Contracts remain a source of concern for consumers, mostly with respect to contract termination rules but increasingly also regarding non-compliance with the national legislative requirements. In Hungary, following a comprehensive survey carried out by the NRA, 21 electronic communications providers were fined for an omission of several obligatory elements in individual subscriber contracts. Broadband services are starting to be a source of an increasing number of complaints, especially in Germany, Greece, Poland and Austria. Grievances against inadvertent roaming, unsolicited mail, SMS, marketing activities, usage of pre-paid cards and high data roaming charges are becoming common. A high number of frauds related to use of premium-rate services have been reported in Italy, where the NRA reacted with several consumer protection measures.

A number of other measures aimed at facilitating consumers with processing of complaints and eliminating their source have been introduced across the EU. The UK regulator proposes to simplify the complaints handling procedures of operators by adopting a single complaints code of practice. In Poland, the NRA organised a helpful service in the form of a consumer information call centre. A special online complaint form on call prices and queuing is available on a joint consumer information portal in the Netherlands. Italy introduced a measure where customer care centres of operators are to be free-of-charge. In a similar manner, the legislation in France now stipulates that calls to consumer hotlines cannot be premium-rated. In Spain, such calls cannot be charged more than regular telephony tariffs. In addition, for on-net calls, consumers cannot be charged for the time spent on consumer hotlines while being on hold.

European emergency number 112

The single European emergency number 112 can now be dialled to contact emergency services from fixed and mobile phones free of charge from anywhere in the EU. Following the launch of infringement proceedings by the European Commission in October 2007, Bulgaria started taking steps to introduce 112. The Commission verified the information provided by the Bulgarian authorities, according to which 112 is functional in this country nation-wide as from 30 September 2008, and this allowed the Commission to close the infringement case in early 2009.

However, there are still some areas for improvement in relation to 112, such as the provision of caller location information for 112 calls from mobile phones, the handling of calls or raising awareness. The Universal Service Directive requires that Member States ensure that operators provide emergency services with information to locate people calling 112 from fixed or mobile phones. Caller location information for 112 calls is still not provided in three Member States (Italy, Lithuania and the Netherlands), while the Commission closed infringement proceedings against Latvia and Poland during 2008 and against Slovakia and Romania in early 2009 after the situation having been remedied by national authorities.

By early 2009, the Court ruled on four infringement cases regarding lack of provision of caller location information for 112 calls in Slovakia¹⁴, Lithuania¹⁵, the Netherlands¹⁶ and Italy¹⁷, finding that the Member States have failed to fulfil the obligations under Article 26(3) of the Universal Service Directive. With the exception of Slovakia, compliance with the Court's decisions is still outstanding.

Provisions under EU legislation also require Member States to make sure that 112 calls are answered and handled efficiently. In this regard, in September 2008 the Commission launched infringement proceedings against Italy for not having ensured that the handling and answering of 112 calls is as effective as for calls made to other national emergency numbers. Some problems in transferring 112 calls to the appropriate emergency service have also been reported in Belgium.

Moreover, the Commission has received a number of complaints regarding the treatment of 112 calls in different languages. The availability for operators to answer 112 calls in more than one language is essential for the efficient functioning of the emergency response, especially when called by citizens travelling to other EU countries. However, it depends very much on the situation in each specific country and region, as responsibility for the organisation of the emergency services overall and language capabilities in particular rests with the Member States. The Commission is actively promoting best practice amongst Member States concerning this issue and all other issues related to the good functioning of 112. The Commission is also following the implementation of the EU provisions related to 112 through the Communications Committee¹⁸.

Some Member States are considering an overall reorganisation for streamlining their 112 emergency systems (such as Belgium, Ireland, Italy and Portugal) or the existence of other national emergency numbers alongside 112 (such as Estonia). Other countries are paying attention to improvement of the 112 service on certain areas, such as accuracy of caller location information (Bulgaria, Portugal or Slovakia), quality of emergency response (Slovenia), access via SMS (Sweden) and provision of access and caller location by VoIP providers (the United Kingdom). The high percentage of hoax calls continue to be an area of concern, and Member States have adopted a wide range of approaches, from imposing fines in the majority of Member States to sending several warning SMS (Romania) or the possibility of rejecting calls (Czech Republic) from numbers that have repeatedly made hoax calls.

Member States must also ensure that citizens are kept informed about the existence and purpose of the single European emergency number 112. However, only 24% of EU citizens

¹⁴ Judgement of the Court of 25 July 2008 (C-493/07).

¹⁵ Judgement of the Court of 11 September 2008 (C-274/07).

¹⁶ Judgement of the Court of 9 October 2008 (C-230/07).

¹⁷ Judgement of the Court of 15 January 2009 (C-539/07)

¹⁸ http://circa.europa.eu/Public/irc/infso/cocom1/library?l=public_documents_2008/cocom08-37_questionnaire/_EN_1.0_&a=d

could spontaneously identify 112 as the number to call for emergency services from anywhere in the EU and only 21% had received information about 112 in the last year¹⁹. During the last year, the Commission has taken a more active role in relation to raising awareness of 112. In June 2008, the Commission launched a website²⁰ dedicated to 112 that provides information in all EU official languages. In order to further boost the knowledge and importance of 112, 11 February was declared as the European 112 day and the Commission will further continue to promote the single European emergency number 112.

HORIZONTAL REGULATION

Must carry

Pursuant to Article 31 of the Universal Service Directive, Member States may impose reasonable "must-carry" obligations for the transmission of specified broadcast channels and services on the network operators under their jurisdiction, for legitimate public policy reasons. However, such obligations should only be imposed where they are strictly necessary to meet clearly defined general interest objectives, and should be proportionate and transparent, and subject to periodic review. Furthermore, these obligations shall only be imposed where a significant number of end-users use these networks as their principal means to receive radio and television broadcasts.

In Finland, a new Media Act entered into force in January 2008, further limiting must-carry obligations. The Commission was consequently able to close the pending infringement proceeding. In the Netherlands, where an infringement is pending, a new Media Act was adopted in December 2008, maintaining current must-carry obligations for analogue cable transmission, as long as it keeps a significant audience, while reducing these obligations for digital cable transmission. The Commission services are looking into the new legislation. The Commission pursued furthermore two infringement proceedings against Germany and Belgium. In the latter case, the Commission considered that the amended 2007 legislation for the bilingual region of Brussels-Capital did not yet meet the requirements of transparency and proportionality and further sent reasoned opinions in May and December 2008. With regard to the original version of the same law, the Court already interpreted Article 49 of the EC Treaty (free movement of services) in 2007, ruling that this provision does not preclude any must-carry legislation, provided that such rules are proportionate and based on a transparent procedure, with objective and non-discriminatory criteria known in advance.²¹

In parallel with the Commission's proceeding against Germany, a German national court made a reference for a preliminary ruling to the Court of Justice with regard to the must carry legislation for the Land of Lower Saxony. On 22 December 2008 the Court ruled that Article 31(1) of the Universal Service Directive does not preclude national legislation, which requires a cable operator to provide access to its analogue cable network to television channels and services that are already broadcast under DVB-T, even if this results in the utilisation of more than half of the channels available. In the event of a shortage of channels available, this legislation might provide for an order of priority of applicants which results in full utilisation of the channels available on that network. The Court stated, however, that these obligations should not give rise to unreasonable economic consequences, to be established by the national judge.²²

Several Member States have already amended, or are reviewing, their media legislation and the applicable must-carry rules to address technological issues such as the digital switchover and mobile television. New must-carry obligations appear to have been imposed on digital

¹⁹ Eurobarometer survey on 112, February 2009

²⁰ <http://ec.europa.eu/112>

²¹ Judgment of 13 December 2007, C-250/06, United Pan-Europe Communications and Others, [2007] ECR I-11135).

²² Judgment of 22 December 2008, C-336/07, Kabel Deutschland Vertrieb und Service, not yet published.

terrestrial television platforms in Ireland, Malta and Portugal, while must-carry rules seem also to have been adopted for mobile television in the Czech Republic, France, Lithuania, Austria and Slovenia. In its Communication of 10 December 2008²³, the Commission stressed that mobile TV is still in its start-up phase, and that must-carry rules should not be imposed on mobile TV at this stage.

ePrivacy

The ePrivacy Directive²⁴ particularises and complements and supplements the general Data Protection Directive²⁵ in the area of electronic communications. It provides for basic obligations to ensure the security and confidentiality of communications over EU electronic communications networks, and gives consumers a set of tools to protect their privacy and personal data. The ePrivacy Directive is currently being revised as part of the regulatory framework for electronic communications proposed by the Commission in November 2007.

Implementation and enforcement

Effective enforcement of privacy requirements over electronic communications, in particular over the Internet, remains a challenge for competent national authorities, not least due to the cross-border nature of the Internet. In May 2008, the Commission organised an expert level meeting with OPTA, ENISA and representatives of the Russian Federation to discuss best practices and exchange information on measures against spam and malware. The Dutch regulator OPTA organised trainings for anti-spam enforcement agencies and civil servants from Europe and third countries. In order to improve international cooperation on spam, spyware and malware, the European Contact Network of Spam Enforcement Authorities (CNSA), for which the Commission provides the secretariat, and the London Action Plan (LAP) organised specific sessions on online investigation techniques for enforcement authorities on the occasion of the 4th joint conference organised in cooperation with the German association of ISPs in October 2008.

As last year, the Dutch OPTA's enforcement efforts should be singled out. As an illustration, in April 2008, OPTA imposed a fine of over €500 000 on a Dutch company for sending unsolicited messages containing offers for working from home. Further enforcement decisions by OPTA included fines amounting to more than €100 000 on two distributors of adware and spyware through messaging software. In February 2008, OPTA laid down specific enforcement policy rules for spam cases (e.g. priority setting, aggravating and attenuating circumstances, impact on users) and sanctioning policy rules.

In Romania, the NRA and the data protection authority (DPA) signed a protocol aimed at enhancing the protection of personal data specifically over electronic communications.

Enforcement policies over the Internet regarding interests other than privacy raised the issue of the complex balance between privacy and these other interests on several occasions in 2008. The Finnish Act on the Protection of Privacy in Electronic Communications was being amended to enable employers to examine the traffic data of employees' e-mail messages in cases of alleged breaches of business secrets. In Sweden, a law was adopted in 2008 which provides for the wiretapping, for national security reasons, of all ongoing cross-border traffic. This new legislation raised concerns among many market players. In France, a draft law to fight online piracy has raised concerns among Internet access providers. Upon request of an

²³ Communication of 10 December 2008 on the Legal Framework for Mobile TV Networks and Services: Best Practice for Authorisation – The EU Model (COM(2008) 845 final).

²⁴ Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (OJ L 201, 31.07.2002, p. 37).

²⁵ Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data (OJ L. 281, 23.11.1995, p. 31).

administrative authority, internet providers would have to investigate websites consulted by specific subscribers and possibly terminate subscription contracts.

Confidentiality and security of communications

The confidentiality and the security of electronic communications have come to the forefront on several occasions in 2008. In the UK in particular, 2008 was marked by controversial discussions surrounding the deployment by given Internet service providers (ISPs) of targeted advertising technologies. The Commission received a great number of submissions from interested parties alleging that the UK authorities, including the police and the data protection authority, had not adequately followed-up the complaints about trials of such a technology conducted by the UK fixed incumbent in 2006 and 2007 without informing customers affected nor obtaining their consent. In September 2008 the fixed incumbent launched a new invitation-based trial, which brought about a number of new reports to the Commission, concerning in particular the way in which user consent to use traffic data and communications content for marketing was being obtained and the alleged lack of data protection safeguards built in the system. The Commission services are looking into the matter.

As a result of theft and misuse of personal data involving e.g. the fixed incumbent operator, the German government adopted in December 2008 a draft new law on data protection which would *inter alia* prohibit the circulation of any personal data without the explicit approval of the person concerned. The draft law would notably oblige data controllers, including providers of electronic communications services, to notify data protection breaches to the competent authority and to the individuals concerned or to the general public. In addition, internet sales with major companies may not depend on the customer's agreement that his or her personal details be further used for marketing purposes. By a decision of September 2008, the Italian data protection authority prevented alternative operators from using a database acquired from third parties and including contact details for marketing purposes insofar as the data were collected without a specific consent to use them for such activities.

The Finnish regulator's e-mail regulation has been revised in order to ensure information security and the functionality of email services. Developments concern in particular the protection of connections between the customer and server, the management of e-mail addresses and the filtering of harmful e-mail traffic. For instance, the regulation provides that an e-mail service provider must provide subscribers as a basic option with a protected connection between the subscriber and the e-mail box, and between the customer and the outgoing email server.

Finally, some Member States are taking organisational measures to ensure the integrity and security of electronic communications. The Lithuanian regulator's computer emergency response team (CERT) was reorganised into a national electronic communications network and information security investigation service (CERT-LT). Following a security breach in the Maltese government's IT system, Malta has announced plans to set up a National Information Security Agency, which would address both national security threats and day-to-day information security concerns.

Data retention for law enforcement purposes

The 2006 Data Retention Directive²⁶ aims to harmonise the national data retention measures derogating from the e-Privacy Directive and obliges Member States to ensure the retention of specific data on electronic communications for a period of between six months and two years. The ECJ was expected to decide on the Irish request for annulment of this Directive in early 2009. In December 2008, the following Member States had not communicated transposition

²⁶ Directive 2006/24/EC of the European Parliament and of the Council of 15 March 2006 on the retention of data generated or processed in connection with the provision of publicly available electronic communications services or of public communications networks and amending Directive 2002/58/EC, (OJ L 105, 13.4.2006, p. 54)

measures: Austria, Sweden, the Netherlands, Greece, Ireland and Poland. The Commission services are looking into transposition measures of several other Member States. It should also be noted that the Directive provided for the possibility for Member States to postpone its application to Internet access, e-mail and Internet telephony until 2009. This option has been used by 18 Member States.

In the meantime, the Commission established in March 2008 the Platform on Electronic Data Retention for the Investigation, Detection and Prosecution of Serious Crime called upon in the Data Retention Directive. The underlying Decision is applicable until end December 2012 and includes representatives of Member States' law enforcement authorities, data protection authorities, Members of the European Parliament, and the industry²⁷. The platform, which held its first meeting in November 2008, should serve to e.g. share best practice on data retention, encourage common application, identify difficulties related to the technical and practical implementation of the Directive, and assist in the evaluation of the application and its impact on economic operators and consumers.

Administrative Charges

The EU regulatory framework expressly restricts the amount of administrative charges that may be imposed by national regulatory authorities to the administrative costs resulting from their regulatory work, such as management, control and enforcement of the general authorisation scheme and of rights of use. Appropriate adjustments also need to be made in the light of the difference between the total sum of the charges and the administrative costs. Systems for administrative charges should not distort competition or create barriers to market entry. The European Court of Justice has consistently maintained that administrative costs must relate to the types of regulatory work expressly indicated in the framework²⁸. On the other hand, it appears that a tax on mobile and personal communications infrastructures used to carry on activities provided for in licences and authorisations, which applies without distinction to national providers of services and to those of other Member States and affects in the same way the provision of services within one Member State and the provision of services between Member States does not fall within the scope of application of the rules on administrative charges²⁹.

Overall it appears that these provisions were complied with to a large extent, by the relevant authorities of Member States in 2008.

Nevertheless, some issues were reported as regards the limitation of administrative charges to administrative costs. In Bulgaria, the administrative charges are not reflected in the yearly overview of the fees and charges collected, and the relevant reference in the NRA's annual report does not seem to allow a verification if any adjustment of the administrative charges is necessary. The surpluses in administrative charges collected by the NRAs in Spain and Belgium were transferred to the respective state treasuries. The Latvian regulatory authority continued not to distinguish, in its annual accounts, between the administrative costs relating to the regulation of the electronic communications activities and the costs relating to the regulation of postal, energy and railway sectors. The Commission services are looking into these issues.

On the other hand, reductions of administrative charges by national regulatory authorities were reported in Latvia, Luxembourg and Hungary (in the latter case, only in relation to UMTS networks and only as regards the variable part which depends on the number of carriers on the network). These reductions contrast with the imposition in some Member States of specific taxes on the revenues of providers of electronic communications networks and services or, in some cases, the revenues of mobile operators, in particular. In France, a

²⁷ Commission Decision 2008/324/EC of 25 March 2008, OJ L 111, 23.4.2008

²⁸ See in particular joined cases i-21 Germany GmbH (C-392/04) and Arcor AG & Co. KG (C-422/04) and joined cases Albacom SpA (C-292/01) and Infostrada SpA (C-293/01).

²⁹ See in particular joined cases Mobistar SA (C-544/03) and Belgacom Mobile SA (C-545/03).

draft law reforming the public television system was presented to the Parliament at the end of the year. Among other measures, it proposed the imposition of a new charge on telecoms operators and Internet providers, in order to compensate for the suppression of advertising in public television. That charge could reach 0.9% of the undertakings' turnover.

Rights Of Way

The right to install facilities should be granted in a timely, non-discriminatory and transparent manner, and any conditions attached should be non-discriminatory and transparent. NRAs should encourage voluntary agreements in the area of facility sharing. Compulsory facility or property sharing may be imposed in cases where operators are deprived of access to viable alternatives, because of the need to protect the environment, public health, public security or meet town and country planning objectives. Effective mechanisms should exist to allow undertakings to appeal to an independent body, against decisions on the granting of Rights of Way. Charges for Rights of Way shall reflect the need to ensure the optimal use of resources, and shall be objectively justified, transparent, non-discriminatory and proportionate. In cases where public or local authorities retain ownership or control of undertakings operating electronic communications networks and/or services, there shall be effective structural separation between the function of granting Rights of Way, and the function associated with ownership or control.

In a number of Member States there have been difficulties with the implementation of the EU regulatory framework.

In some Member States municipalities are acting more or less independently from the State in accordance with national institutional arrangements, which makes enforcement of structural separation within municipalities particularly challenging. In Luxembourg, for example, a municipality controls a cable network, and is simultaneously charged with granting Rights of Way, apparently without any effective separation between the two functions. Difficulties in obtaining Rights of Way have been reported. The Commission services are looking into the matter.

Network deployment is difficult e.g. in Spain, Hungary, Romania, Greece, Cyprus, and in particular, roll-out of mobile networks has encountered difficulties.

In some cases it is the lack of important secondary legislation that makes network deployment difficult and cumbersome (Greece and Bulgaria). In Romania the lack of an appropriate regulatory framework for granting Rights of Way has led to cumbersome and lengthy procedures and alleged discriminatory practices. In Latvia, recent amendments to the Electronic Communications Law have modified the role of the regulator but the effects of the amendments are yet to be seen. In Poland and Malta the process of granting Rights of Way is cumbersome, and in the case of Poland and Cyprus also long.

In some cases relevant authorities have refused to grant Rights of Way for mobile networks (Hungary) and fixed networks (Cyprus). In Greece relevant legislation is now in place, but installation of antennas is still a long and difficult process, due the legislation not being applied, and due to obligatory environmental studies. Also in Cyprus mobile network operators have experienced difficulties in obtaining necessary permits for the roll-out of their networks. This has resulted in the matter being referred to the European Court of Justice in October 2008.

Access to ducts has been problematic in Portugal, due to alleged discrimination by the incumbent as regards service level agreements and insufficient information on duct availability. In Estonia, access to ducts appears to be a significant problem, since existing ducts are full or have very limited capacities, and the building of new ducts is complicated due to restrictions by local administrative rules. In Bulgaria certain alternative operators have illegally accessed the incumbent's ducts, or illegally deployed their cables in the private domain.

In a number of Member States (Italy, Malta and Spain) high fees and associated costs for Rights of Ways, is a matter of concern for industry. In Spain a number of local authorities impose a tax equivalent to 1.5 % of gross revenue on mobile operators for the use of installed facilities. In Italy the competent authority charges fees (1000 euros per km) which are considered as excessive by operators, and also in Romania fees are calculated on discretionary basis. In Lithuania, there is a formal dispute regarding the incumbent's tariffs for duct access.

SPECTRUM MANAGEMENT

In 2008, radio spectrum continued to drive important developments in electronic communications, either in support of existing wireless services or in terms of new wireless networks.

Digital dividend

As the process of switchover from analogue to digital television gains momentum, further spectrum capacity becomes or will become available, thereby creating genuine opportunities for innovative communication services, for the benefit of European consumers and businesses. In 2008, Finland decided to allocate released frequencies for mobile broadband services (790-862 MHz) and new high-definition TV channels (one multiplexer in the 470-790 MHz bands). The French government announced the planned use of the 790-862 MHz spectrum for the deployment of very high speed broadband networks and mobile broadband. The UK consulted on auctioning parts of the digital dividend (550-630 MHz and 790-854 MHz bands) on a service-neutral basis.

On the other hand, several Member States (Estonia, Spain, Latvia, Lithuania, Malta, the Netherlands, Denmark) indicated their intentions to keep all or most of the digital dividend for broadcasting applications, including, in some cases, mobile TV.

Finally, decisions on the use of the digital dividend remain to be taken in many Member States, including Belgium, Bulgaria, the Czech Republic, Germany, Ireland, Greece, Italy, Austria, Poland, Portugal and Slovakia. Most of these Member States either launched, or were planning, public consultations on the subject in 2008.

Spectrum liberalisation and secondary trading

In 2008, further Member States took steps for the introduction of market-based approaches into their spectrum management practices. A draft Frequency Act allowing secondary trading and technologically neutral use of spectrum was presented to the Danish Parliament. A similar legislative instrument was being discussed in the Netherlands. The Greek Ministry of Transport and Communications adopted a regulation allowing partial spectrum trading. The Portuguese national regulatory authority started implementing a gradual introduction of technological neutrality in its recent spectrum assignments.

In November 2008, the Commission proposed³⁰ to update and simplify the GSM Directive to allow the introduction of new mobile services, starting with UMTS services, in the 900 MHz bands. Several Member States took concrete regulatory action to allow the use of 900 MHz and 1800 MHz frequency bands for services relying on technologies other than GSM. In particular, such decisions were adopted in Spain, France, Italy and Portugal. Relevant public consultations were launched in Sweden, Ireland, Greece and Romania.

Implementation of spectrum decisions

The Commission services gather, in the Radio Spectrum Committee, information provided by Member States on how spectrum harmonisation decisions are implemented at national level. This information is published on the 'Europa' website³¹. The situation summarised in the following paragraphs is based on this information, as well as on information from relevant authorities in the Member States in the context of the preparation of this Report.

Generally speaking, Commission radio spectrum harmonisation decisions adopted until 2007 were implemented in most Member States, except for Decision 2007/344/EC on harmonised

³⁰ See COM(2008)762, Proposal for a Directive of the European Parliament and of the Council amending Council Directive 87/372/EEC on the frequency bands to be reserved for the coordinated introduction of public pan-European cellular digital land-based mobile communications in the Community.

³¹ See http://ec.europa.eu/information_society/policy/radio_spectrum/ref_documents/index_en.htm

availability of information regarding spectrum use within the Community, the implementation of which was still to be completed in many Member States. The process of verification of the state of implementation of the decisions adopted in 2008 was on-going in the framework of the Radio Spectrum Committee.

The 2004 and 2005 Commission radio spectrum harmonisation decisions³² (dealing with short-range radars, radio local area networks, hearing aids, social alarms, meter reading systems, tracing and asset tracking systems, paging systems and private mobile radio communications) had been implemented by all Member States, except that Bulgaria was yet to implement Decision 2005/928/EC.

The 2006 decisions, including 2006/771/EC of 9 November 2006 on the harmonisation of the radio spectrum for use by short-range devices (SRD) and 2006/804/EC of 23 November 2006 on harmonisation of the radio spectrum for radio frequency identification (RFID) devices operating in the ultra high frequency (UHF) band, had been implemented in most Member States, except for Belgium in the case of Decision 2006/771/EC and Latvia in the case of both Decisions.

In 2007 the Commission adopted the following spectrum harmonisation decisions: 2007/90/EC of 12 February 2007 amending EC Decision 2005/513/EC of 11 July 2005 on 5 GHz WAS/RLAN, 2007/98/EC of 14 February 2007 on the harmonised use of radio spectrum in the 2 GHz frequency bands for the implementation of systems providing mobile satellite services (MSS), 2007/131/EC of 21 February 2007 on allowing the use of the radio spectrum for equipment using ultra-wideband technology in a harmonised manner in the Community (UWB) and 2007/344/EC of 16 May 2007 on harmonised availability of information regarding spectrum use within the Community. The implementation of Decision 2007/90/EC was lacking in Latvia and Slovakia. A similar situation could be observed for Decision 2007/98/EC in Hungary, and for Decision 2007/131/EC, in Bulgaria and Romania. Latvia did not provide information as regards the implementation of Decisions 2007/98/EC and 2007/131/EC. Decision 2007/344/EC on harmonised availability of information regarding spectrum use within the Community had not been completely implemented in as many as 20 Member States.

In 2008, the Commission adopted the following six spectrum harmonisation decisions: 2008/294/EC of 7 April 2008 on harmonised conditions of spectrum use for the operation of mobile communication services on aircraft (MCA services) in the Community, 2008/411/EC of 21 May 2008 on the harmonisation of the 3400 - 3800 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community, 2008/432/EC of 23 May 2008 amending Commission Decision 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices (SRD), 2008/477/EC of 13 June 2008 on the harmonisation of the 2500-2690 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community, 2008/671/EC of 5 August 2008 on the harmonised use of radio spectrum in the 5875 - 5905 MHz frequency band for safety related applications of Intelligent Transport Systems (ITS) and 2008/673/EC of 13 August 2008 amending Decision 2005/928/EC on the harmonisation of the 169,4-169,8125 MHz frequency band in the Community.

The Commission services will continue to closely monitor the completion of the implementation of all the Commission radio spectrum harmonisation decisions.

³²

Commission Decision 2005/928/EC of 20 December 2005 on the harmonisation of the 169,4-169,8125 MHz frequency band in the Community (frequency band originally designated for the ERMES paging system); Commission Decision 2005/513/EC of 11 July 2005 on the harmonised use of radio spectrum in the 5 GHz frequency band for implementation of Wireless Access Systems including Radio Local Area Networks (WAS/RLANs); Commission Decision 2005/50/EC of 17 January 2005 on the harmonisation of the 24 GHz range radio spectrum band for the time-limited use by automotive short-range radar equipment in the Community; and Commission Decision 2004/545/EC of 26 July 2004 on the harmonisation of radio spectrum in the 79 GHz range for the use of automotive short-range radar equipment in the Community.

Assignment of spectrum

In 2008, new mobile 3G individual rights of use were either assigned, or planned for the near future, in Belgium, France, Italy, Romania and Slovenia. In particular, a fourth UMTS licence was expected to be made available in 2009 by means of an auction in Belgium. In France, after the unsuccessful 2007 assignment process concerning the fourth 3G licence, the regulator conducted a public consultation and recommended to keep part of the spectrum for new entrants. In the French Digital Plan, the government announced the launch of a call for tenders for 3G frequencies in the first semester of 2009. In Italy, 15 MHz of available spectrum will be assigned on a national basis through a competitive selection procedure. The tender procedure for the CDMA technology in 410-415/420-425 MHz bands was subject to discussions between the NRA and the Competition Council in Romania. In Slovenia, the regulator intends to award one more UMTS licence early in 2009.

Several Member States (including Portugal, Germany, Italy, Latvia, Romania, Sweden and Ireland) launched or completed assignment procedures in the 3.4-3.8 GHz, 2.5-2.6 GHz and 25-26 GHz frequency bands aiming at a range of applications, notably wireless broadband access and 4G mobile services.

Irish and Polish authorities were contemplating assignment of spectrum to providers of mobile TV services. UK completed the assignment of 1452-1492 MHz spectrum that is planned to be used for mobile TV services. A call for tenders to provide these services was also launched in France.

The Irish national regulatory authority outlined its approach to the award of new 900 MHz and 1800 MHz rights of use, following the expiry of current mobile licences in these bands. Italy took regulatory steps to make 900 / 1800 MHz spectrum available for the assignment to new entrants into the mobile market. Redistribution of 900 MHz frequencies is also planned in Sweden. Hungary launched a tender for several mobile rights of use in the 900 / 1800 / 2100 MHz and 450 MHz frequency bands, attracting some criticism as regards transparency of the process. Poland completed the assignment of 900 MHz spectrum to two new mobile network operators. Portugal launched a tender to select, on a technologically neutral basis, a provider of mobile services in the 450-470 MHz frequency band. In contrast, an auction of 1800 MHz radio frequencies in Bulgaria and the tender procedure in relation to the 450 MHz band in Austria were not successful, due to lack of interest.

At EU level, the European Parliament and the Council adopted on 30 June 2008 Decision No 626/2008/EC on the selection and authorisation of systems providing mobile satellite services (MSS)³³, setting out a transparent and legally binding framework for the coordinated selection and authorisation of pan-European MSS systems. This was followed by a call for applications for pan-European systems providing mobile satellite services (MSS), published by the Commission on 7 August 2008³⁴. The Commission decided on 11 December 2008 that the four applications submitted are admissible. The assessment of these applications is on-going.

On 7 April 2008, the Commission adopted a Recommendation on authorisation of mobile communication services on aircraft (MCA services) in the European Community, which is expected to contribute to smooth deployment of these innovative mobile services³⁵. Several airlines were carrying out trials of MCA services in 2008.

³³ OJ L 172, 2.7.2008, p. 15.

³⁴ OJ C 201, 7.8.2008, p. 4.

³⁵ OJ L 98, 10.4.2008, p. 24.

MONITORING AND ENFORCEMENT

Enforcing effective implementation of the regulatory framework for electronic communications continued to be a priority in 2008. The Commission has opened some 160 infringement proceedings under Article 226 of the Treaty from the date of application of the new regulatory framework until the end of the reporting year. In more than 100 cases this was due to failures to implement the regulatory framework correctly. While all EU 27 Member States have been concerned by enforcement action, a significant number of issues have been settled since.

Overall, during 2008 the Commission opened six new proceedings, while seven pending cases were taken to the second phase with the sending of a reasoned opinion to the Member States concerned. Moreover, the Commission decided to refer six cases to the Court of Justice in 2008. At the same time, the Commission decided to close thirteen proceedings following action by the Member States.

Finally, although all 27 Member States had completed formal transposition of the regulatory framework in 2007, there were still 28 proceedings for incorrect implementation pending at the end of 2008.

New proceedings opened in 2008 focused on the independence and effectiveness of the telecom regulators in Luxembourg, Latvia, Lithuania and Sweden. Furthermore, the Commission started to verify the compliance of restructuring measures taken in 2008 and which could have had an impact on the independence of the regulatory authorities in Romania and Slovakia. As regards consumer issues, a new infringement proceeding was launched due to the Commission's concerns related to the handling of the single European emergency number 112 in Italy.

Out of the six cases which the Commission decided to refer to the Court of Justice in 2008 two concerned the non-availability of caller location information for calls to emergency number 112 (Bulgaria, and Romania), and one concerned the independence of the national regulatory authority (Poland). Universal service issues in relation to the designation of the universal service provider and the financing mechanism were also high on the Commission's agenda given its negative impact for consumers, and thus infringement proceedings continued against several Member States. Portugal and Spain were sent reasoned opinions, whereas Belgium was referred to the Court of Justice. Finally, Poland and Cyprus were referred to the Court for persistent deficiencies relating to, respectively, broadband retail regulation and rights of way regime for mobile operators.

The Commission welcomed the progress made by Member States and continued to apply its policy of closing cases as soon as the problems were resolved. In 2008, thus, a total of thirteen cases were closed following progress in the implementation process. Amongst these, two cases were closed following the introduction of effective caller location information for 112 in Latvia and Poland. Following consistent action of the Commission, the single European emergency number 112 is now available in all Member States, though there is still work to be done to ensure the proper functioning of the European Emergency number on issues such as the availability of caller location information. All but one case concerning the completion of the first round of market reviews could be closed, as the problems have been rectified (Belgium, Malta). A case against Bulgaria relating to the independence and functioning of the national regulator, and a case against Slovakia relating to the separation of regulatory functions were also closed, as the issues raised by the Commission were resolved.

Comprehensive directory inquiry services were made available at the beginning of 2008 in Poland, and the relevant case was subsequently closed by the Commission. One case concerning must-carry was closed (Finland). Finally, a case against France regarding an improper universal service designation mechanism was closed, as France changed its legislation, following the European Court of Justice ruling. The rest of cases that were closed

concerned non-conformity issues in several other Member States (Germany, Latvia, and Finland).

However, not all Member States have complied with the regulatory framework in due course, and as of early 2009 the Court of Justice ruled on four 112 cases, finding breaches of the EU law since caller location information was only partially available in Slovakia, Lithuania, the Netherlands and Italy. Whilst the Slovakian case has been solved in the meantime, the Commission is closely following these cases, in order to ensure full respect of the judgments as required under Article 228 of the Treaty.

The Commission has continued to issue press releases at each stage of the proceedings opened. These are available at the implementation and enforcement website of the Information Society and Media Directorate General³⁶, together with overview tables for all cases, which are updated regularly.

In line with the Commission Communication on better monitoring of the application of Community law³⁷, the Commission services have also focused on preventing infringement proceedings, by providing general guidance on transposition requirements via the Communications Committee, and by using intensive bilateral contacts with the relevant national authorities.

³⁶ http://ec.europa.eu/information_society/policy/ecomms/implementation_enforcement/index_en.htm
³⁷ COM(2002) 725, of 11 December 2002.

ANNEX 1

IMPLEMENTATION IN THE MEMBER STATES

BELGIUM

INTRODUCTION

Competition between platforms has remained vigorous in Belgium despite consolidation among both broadband and broadcasting operators. However, Belgium no longer belongs to the top EU performers in broadband penetration. Mobile services are further expanding and consumers are expected to benefit from a possible additional licence in the course of 2009. Further regulation and continued efforts to implement and enforce the regulation already in place seems necessary to preserve competition in the fixed telephony and DSL markets at a time when the fixed incumbent is consolidating its position and is rapidly moving to the complete roll-out of a next-generation network. The regulator has started a new round of market analyses. Amendments to the electronic communications legislation, planned for early 2009, are expected to strengthen the regulator's enforcement powers.

REGULATORY ENVIRONMENT

Main regulatory developments

The Belgian legal framework has not changed considerably over the past year. On the basis of the cooperation agreement between the federal State and the (linguistic) communities, the national regulatory authority, the Institut belge des services postaux et des télécommunications/Belgisch Instituut voor postdiensten en telecommunicatie (IBPT/BIPT) was able to carry out the analysis of the markets for wholesale broadband access and wholesale (physical) network infrastructure access, thereby completing the first round of market analyses in January 2008. This allowed the Commission to close the relevant infringement proceeding. These decisions were complemented by an additional decision regarding the impact of next generation networks and next generation access (NGN-NGA) on the broadband access markets. In the context of the roll-out of NGN, the regulator responded to requests to define the migration conditions in the transition period as well as to ensure continued enforcement of the current obligations.

The Belgian authorities regard the legislative and regulatory framework as sufficiently robust and almost complete. They are nevertheless considering how to reinforce the regulatory authorities, by improving the sanction mechanism, streamlining the procedures and consolidating the powers of the NRA and the competition authority. A bill amending the Electronic Communications Act of 2005 and the IBPT/BIPT statute and procedure acts of 2003 is currently under advisory scrutiny by the Supreme Administrative Court. Competition in the mobile market should be strengthened by a fourth UMTS licence in 2009. This new draft legislation is expected to be tabled in Parliament by early 2009.

Several infringement proceedings regarding the universal service obligations and the must-carry rules are still pending. Belgium was referred to the European Court of Justice in January 2008 for not fulfilling its obligations under the Universal Service Directive with regard to the calculation of net cost and the determination of the unfair burden.

Organisation of the NRA

Under the current institutional arrangements of the federal State, the national regulator (IBPT/BIPT) and the regional regulators cooperate in regulatory matters that concern infrastructures common to telecommunications and broadcasting. The cooperation agreement, concluded in 2007, has been used on several occasions and has enabled the NRA to adopt some long-overdue decisions concerning, for example, the broadband markets.

Few changes are reported with regard to the human and financial resources of the NRA.

Operators doubt whether the regulator is properly staffed to deal with the growing need for

economic regulation. The 2007 accounts continue to show a surplus, which has been returned to the State treasury according to the applicable legal provisions.

As to enforcement, IBPT/BIPT is confronted with a long procedure entailing several steps (preliminary formal notice and formal notice) before it can impose a fine. In 2008 this procedure was applied several times to the incumbent, for instance for not publishing the requested key performance indicators (KPIs) or for not providing the requested regulated products (such as the bitstream reference offers for ADSL2+ and VDSL2 and the wholesale prices for Ethernet leased lines). On one occasion this led to the imposition of an administrative fine of €3 million on the incumbent, which had been complying only partially and consistently late with its obligation to reflect wholesale price decreases (the lowering of mobile termination rates) in retail prices. The incumbent's appeal against the decision, however, resulted in automatic suspension of the fine in accordance with Belgian law. While alternative operators welcomed this intervention, they regretted that the NRA used its powers only for retail issues. For instance, they point to delays in implementation of the broadband access reference offers for ADSL2+ and for VDSL2, when the incumbent is already able to offer these technologies at retail level.

Dispute settlement procedures before the Competition Council remain an issue. These are hardly used, because of time-consuming procedures and uncertain results. Nevertheless, generally speaking, cooperation between the Competition Council and the regulator seems good.

Decision-making

IBPT/BIPT finalised the first round of market analyses with the long-awaited adoption of the remedies related to the wholesale markets for local loop unbundling and bitstream access. An additional decision on NGN/NGA networks was adopted in November 2008. These decisions are of limited validity as IBPT/BIPT is required to further cooperate with the regional regulatory authorities on regulation of converging networks. IBPT/BIPT is committed to carrying out new analyses in 2009 but is expected to maintain the imposed remedies until the definitive adoption of new decisions.

The new round of market analyses on the basis of the revised Recommendation on relevant markets started in September 2008 with the notification and adoption of two decisions (November 2008) regarding the retail telephony markets (not listed among the relevant markets). Other market analyses are scheduled for 2009.

IBPT/BIPT spent a considerable amount of time on reviewing wholesale access products while new reference offers were being created for ADSL2+, VDSL2 and Ethernet. It also introduced corrective measures, in several market decisions, with regard to the incumbent's obligation to publish key performance indicators (KPIs), as the fixed access market decision had been annulled on this element in 2007. In the same way the NRA promptly adopted, in April 2008, a new decision on mobile termination rates, after the market decision concerned had been suspended by the appeal court.

Ensuring the effective availability of remedies remains a challenge. NRA decisions are systematically appealed by the incumbent and most of the appeals are still pending before the Court. Moreover, when decisions are annulled by the Court, in some cases for purely formal reasons, IBPT/BIPT is not allowed to restore them retroactively, according to settled case-law.

In addition to the regulated wholesale offers, IBPT/BIPT also applies margin squeeze tests. In August 2008, it ended an internal inquiry into the tariffs of wholesale Ethernet leased lines. Market players were asked for their views on whether the prices as communicated by the incumbent would lead to a price squeeze. The incumbent reduced its tariffs in the course of the inquiry.

MARKET AND REGULATORY DEVELOPMENTS

The total turnover of the Belgian telecommunications sector stood at €9.83 billion on 31

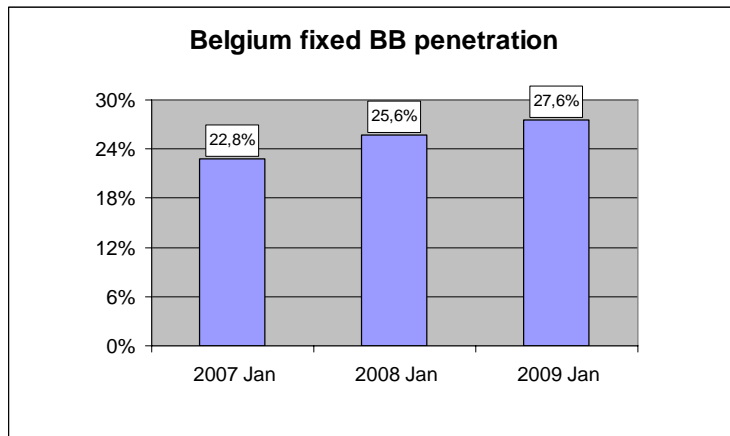
December 2007, whereas the revenues from fixed markets were €5.64 billion, and the revenues from mobile markets were €4.18 billion. The total value of tangible investments by alternative operators in fixed telephony networks was €0.46 billion. Mobile operators invested €0.34 billion. The incumbent fixed network operator invested €0.39 billion in its fixed infrastructure in 2007. Most of these turnover and investment figures are slightly higher than the 2006 figures. The investment over revenues ratio in the telecom sector was 12.3%, close to the European average.

The NRA finally started to debate NGN-NGA with the public consultation of January 2008. The first specific regulation on NGN-NGA was issued in November 2008 with the aim of clarifying the existing obligations in terms of access, non-discrimination, transparency and cost-orientation during the transition period. Alternative operators, emphasising the already very advanced roll-out of the VDSL2 network, requested the NRA to widen its initial remedies to Ethernet backhaul and dark fibre access, which were indeed included in the NGN-NGA decision.

In the meantime, consolidation has taken place among cable companies as well as DSL operators. In November 2008, the fixed incumbent was allowed by the competition authority to take over the third DSL provider. In order to keep competition of alternative operators alive and to remove the competitive overlap resulting from the acquisition, it was required to divest itself of the newly acquired fibre network. At the same time, it was imposed a number of conditions in the retail market. Competition between the incumbent's and the cable operators' networks, however, is steadily increasing in terms of product performance. The broadband retail market remains however characterised by an overall lack of price competition. In the mobile telephony market, there was much talk about the arrival of a new entrant using the fourth 3G licence, which was not granted in 2000.

Broadband

Market situation



Although still above average, Belgium's European ranking has been falling for the past few years (now in eight place) with 27.6% penetration at 1 January 2009, compared to 25.6% at 1 January 2008. The pace of growth is decreasing (below 2 percentage points).

The total number of broadband lines reached more than 2.9 million in January 2009, compared to 2.7 million in

January 2008. 58% of these lines are provided by DSL operators. The incumbent's market share has slightly increased to 46%. Almost all the other lines are provided by the cable operators, whose joint market share has increased from 39% to almost 41%. Fibre to the home lines remain marginal. Fibre to the curb already reaches a very high coverage rate of more than 60% of population. With almost 4 users per 100 population, Belgium has one of the lowest penetration rates of mobile broadband in the European Union.

Operators have continued migrating from resale to bitstream and unbundling, although the latter form of access remains modest (respectively 55% and 17% of new entrants' DSL lines). With 2% of all broadband lines, LLU penetration is also very limited from a European perspective, in spite of prices for shared access that are amongst the lowest in Europe (while prices remain stable or are decreasing).

The speed of fixed broadband connections is generally very high: nearly 28% of all lines offer high speeds (above 10 Mbps), while 64% of the lines are medium-speed connections (between 2 and 10 Mbps).

Broadband coverage is very high in rural areas, 100% for DSL and 50% for cable, in 2007. For the latter transmission platform, there remains however a gap of 38% with regard to national coverage average.

Regulatory issues

The market analyses relating to the markets for physical network infrastructure access (LLU) and for wholesale broadband (bitstream) access were adopted in January 2008. Operators were pleased that the regulator finally succeeded, in July 2008, after a long period of enforcement action, in imposing a first bitstream reference offer for ADSL2+.

This intervention nevertheless came at a time when the incumbent was already rolling out a VDSL2 network and offering retail services based on this technology. The incumbent has further indicated its intention of closing down more than 60 main exchanges from 2011-2012. This would concern exchanges with co-location facilities, where alternative operators are present with a considerable number of unbundled and bitstream lines. Moreover, the incumbent's core network is expected to migrate from ATM to Ethernet at the same time. The uncertainty that accompanies the migration process negatively affects LLU investments and prevents alternative operators from climbing up the ladder of investment.

A study commissioned by the NRA showed that in Belgium the business case for sub-loop unbundling (SLU) in the current market conditions is clearly not as economically feasible as for LLU. A viable case could only be constructed if several conditions with respect to regulation of backhaul and co-location were met, in addition to alternative operators being able to substantially increase market share. Access to the largest local exchanges representing the densest population of Belgium and additional revenue would also be essential.

As to VDSL2, the incumbent launched a retail offer in April 2008 (including High Definition television) based on this technology and, in July 2008, made a first commercial wholesale offer for resale. The NRA reminded the incumbent again of its obligation, pursuant to the broadband markets decision of January 2008, to provide a VDSL2 bitstream reference offer. After a preliminary formal notice, the incumbent finally published a reference offer, which is currently submitted to consultation.

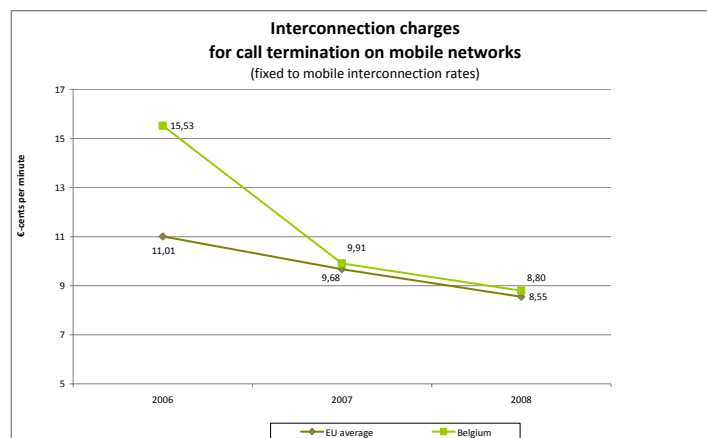
Consequently, operators feel apprehensive about the incumbent's intentions and about future competition opportunities. They urge the regulator to manage the overall process of transition and to define rules for migration. They express the need for transparency. Information on roll-out of the VDSL network, phasing out of exchanges, migration paths, etc., as well as enforcement of the non-discrimination obligation would be absolutely essential.

The provisions in the service level agreements (SLAs) continue to concern alternative operators despite the fact that deadlines for provisioning and fault repair were further shortened in 2008 following a glide path. They are expected to be reviewed again in early 2009 in order to achieve reasonable and measurable SLA deadlines, reasonable forecasting conditions and indisputable compensation rules. The operational processes in the incumbent's wholesale division will need to be audited in 2009, and the NRA's policy would then be based on the results of the audit report.

Mobile markets

Market situation

The penetration rate in terms of active subscribers increased significantly to 102%, compared to 94% in 2007. This is still well below the European average of 119%. Growth in minutes amounted to 15% (compared to a 21% rise in 2006), while prices are further decreasing. The second and the third operator are gaining a slightly bigger market share, of respectively 33% and 23% (based on subscribers). The number of post-paid customers has risen to 45% (compared to 44% in 2007). Mobile virtual network operators have increased their presence with a market share of 2.3%, compared to less than 1% in 2007 (in minutes).



Regulatory issues

Mobile termination rates have steadily fallen and progressed towards symmetry since 2006, according to a glide path fixed by the NRA. The mobile operators have, however, appealed two successive IBPT/BIPT decisions, the first of August 2006 and the second of December 2007. In April 2008, the Court of Appeal held that the NRA had insufficiently substantiated its choices with regard to the cost-orientation method adopted in the second decision, and decided to suspend the effects of that decision.

Awaiting further judgements on the merits of the case, the NRA withdrew the second decision and adopted a new decision on 29 April 2008. Current termination rates are extracted from the first (August 2006) decision, which provides for cost-oriented rates based on a top-down model and following a glide path. The final steps were applied in May and July 2008, reintroducing higher and more asymmetric rates, compared to the initial intentions of the regulator. IBPT/BIPT is expected to carry out a new market analysis in 2009, and is currently developing a bottom-up model which is due to be finalised in the first half of 2009.

Roaming

While some operators have set voice roaming prices at the maximum level indicated by the Regulation (September 2008), one network operator and some virtual operators are offering lower tariffs.

The Belgian mobile operators generally charge very high prices for sending SMS whilst roaming (from €0.25 up to €0.70), which are the highest rates in the EU.

Fixed

Market situation

The number of PSTN lines, and the volume of fixed traffic, has continued to decrease (4.5% by number of minutes), although the number of "mobile only" households seems to have stabilised (32% by end 2007). Traffic volumes of fixed and mobile telephony are almost converging, in line with the European average. The incumbent's market share is slightly increasing by revenues (up to 70.8%), but decreasing in volume (from 68% down to 67%). The incumbent's dominance is noticeable in both the residential and the business markets (respectively more than 60% and 70% in market share). Cable telephony is growing (with a market share of 12%) while managed VoIP (voice over broadband) telephony provided by DSL operators is not really taking off (with a market share of only 3.6%). Flat-rate packages, bundles and the introduction of naked ADSL offers could have contributed to the current trends.

Only one competitor had a market share of more than 10%, whereas three others barely achieved a market share of 3% each. The market for international telephony is subject to slightly more competition, where two competitors have achieved a market share of 8% each.

Regulatory issues

The fixed telephony incumbent is under an obligation, as an SMP operator, according to the retail market decisions of 2006, not to charge excessive retail tariffs and also to reflect wholesale price changes in its customer prices. Despite decreasing mobile termination rates throughout 2007 and 2008 the incumbent did not consistently adapt its fixed-to-mobile retail tariffs. The regulator undertook successive enforcement steps, which finally led, in July 2008, to the imposition of a €3 million fine for late and incomplete implementation of regulatory obligations.

Although the fixed retail telephone service markets (for both business and residential customers) are not part of the 2007 Recommendation on relevant markets, IBPT/BIPT undertook an analysis of these markets, carrying out the three-criteria test. It concluded that these markets were not effectively competitive, found dominance of the incumbent and thereby established the necessity of regulation. The decision, which was subsequently adopted in November 2008, has a validity of one year. The NRA committed itself to reviewing these

markets within one year, and will re-examine the effects of the corrective measures for the wholesale markets.

As to wholesale interconnection charges, the NRA adopted new tariffs for the period 2008-2010. Faced with declining traffic volumes and transition to NGN, the NRA decided to maintain the current wholesale prices of most products, with the purpose of stabilising prices, and only to subject carrier (pre)selection activation fees to price indexation. These activation fees are, however, decreasing due to the exclusion of some non-recurring costs which occurred in past years.

Broadcasting

Market situation

Cable TV remains the most used platform for viewing broadcasts: more than 90% of households are connected. The incumbent's IPTV platform achieves a market share of more than 8%. Only 2.3% of the Belgian population avail themselves of bundled offers which include broadcasting services. This is due to the fact that bundled packs (including IPTV) are just starting to be introduced.

The cable sector is moving closer to consolidation, with the formation of mainly one cable company in the north and one for the south of the country (with a third one in Brussels).

As to terrestrial networks, in the Flemish Region the analogue switch-off took place in November 2008. In Brussels and in the Walloon Region, switch-off is expected to take place by the end of 2011.

Regulatory issues

In September and October 2008, linguistic community regulators, which are competent for broadcasting, jointly launched a consultation on the market for broadcasting transmission networks and services. Interestingly, these regulators launched the same consultation for the markets of LLU (physical network infrastructure) access and bitstream (wholesale broadband access), although they have common competence for these markets with IBPT/BIPT, the national regulator.

Horizontal regulation

Spectrum management

As the time of digital switch-over varies across the linguistic communities of the country, coordination will be necessary for any decision on the attribution of the digital dividend. In October 2007, the Flemish Community established its digital frequencies plan for broadcasting network providers. The Flemish governmental decree was challenged before the Supreme Administrative Court by the national regulatory authority, which claims that it has jurisdiction over the management of some of these frequencies.

A fourth UMTS licence is expected to be made available in 2009 by means of an auction. Procedures for the granting of authorisations for mobile data traffic in the 2.6 and 3.6 GHz bands are also under preparation.

Implementation of spectrum decisions

Belgium has implemented the Commission's spectrum harmonisation decisions, except Decisions 2006/771/EC on the harmonisation of the radio spectrum for use by short-range devices and 2007/344/EC on harmonised availability of information regarding spectrum use within the Community. The authorities claim that the major part of Decision 2006/771/EC has already been transposed in the current interface versions and is applied in practice.

THE CONSUMER INTEREST

Tariff transparency and quality of service

IBPT/BIPT has continued to develop a "tariff simulator" jointly with the sector. This web-based tool for comparison of broadband and mobile and fixed telephony prices, in development since 2006, is currently being tested by the operators, and will soon be made available to the public. Tariff comparison for bundled products will also become available. Pursuant to the national law, all operators of electronic communications services are obliged to provide quality of service indicators to the NRA, and to publish them on their website. Since mid-2008 this obligation has been implemented by an IBPT/BIPT decision. Indicators include connection times, defect rates, fault repair time and, for mobile networks, data such as dropped calls rate.

Universal service

The Commission has opened infringement proceedings against Belgium on the costing and the financing of the Belgian universal service obligations, and in particular the social tariffs. In Belgium, all operators offering public telephony services to consumers are required to offer social tariffs. In this system, the net cost of universal service is calculated as any loss of revenue resulting from the granting of social discounts. Any net cost so calculated, which is incurred by an operator, has to be considered as an unfair burden.

The Commission considers that the provisions in the Belgian Electronic Communications Act with regard to calculation of net cost and determination of the unfair burden infringe the Universal Service Directive. It decided to refer the Belgian State to the European Court of Justice in January 2008.

Number portability

Wholesale prices for porting geographic and non-geographic numbers other than mobile numbers were considerably reduced by an NRA decision of April 2008. The cumulative amount of ported mobile numbers increased by more than 500 000 over the last year. More than 21% of the total mobile numbers are ported numbers.

A draft royal decree, lifting all restrictions on the porting of VoB numbers, was put to public consultation. This should be a significant move towards enhancing competition.

Consumer complaints

The Belgian Ombudsman for telecommunications has been dealing with a growing number of complaints (up by 10% in 2007 and by more than 100% since 2003). It also assessed the way in which the specific consumer protection provisions of the national law are functioning in practice (obligation to provide social tariffs, to provide specific tariff information on tariff packages, anti-slamming provision, etc.).

On the other hand, the Ombudsman has also been focusing on consumer complaints regarding SMS premium rate services, where operators are requested to better apply the guidelines established by self-regulation. The government intends to adopt an "ethical code" which will impose firm obligations on service providers and ease consumer complaint resolution.

European emergency number 112

Belgium is passing from a manual to an automated "pull" system for mobile caller localisation. The new system is expected to become operational in 2009.

There have been some complaints about the failure to pass 112 calls to the police services, which can also be reached by another emergency number. This system should, however, function correctly by the existence of a "hot" line between emergency services. This will be completely resolved through the introduction of centralised Public Safety Answering Points.

116

A royal decree assigning number 116 000 to Child Focus (hotline for reporting missing children) is under preparation. This number will be one of the emergency numbers, to be carried free of charge by the operators.

Must-carry

The Commission launched an infringement proceeding against Belgium for its must-carry legislation in the bilingual region of Brussels-Capital. It considers that the amended legislation of 2007 does not conform to the Universal Service Directive and accordingly sent two reasoned opinions to the Belgian authorities, in May and December 2008.

Data protection

The sector was consulted on draft texts for further transposition of the Data Retention Directive in Belgian law. Operators were in particular requested to give a cost evaluation for fulfilment of their obligations with regard to data retention, in the hypothetical cases of fixing the retention period at respectively, 6, 12 or 24 months.

BULGARIA

INTRODUCTION

The mobile market is the most dynamic market in Bulgaria, with a high and increasing penetration rate, and three competing operators. In contrast, the fixed market is characterised by limited competition and the clear dominance of the incumbent. In the absence of regulatory measures following a market analysis, fixed alternative operators have, so far, not been able to develop their services significantly. Broadband penetration has increased but remains the lowest in the EU and, despite platform competition, it is still difficult for alternative operators to enter the DSL broadband market.

The Bulgarian authorities have endeavoured to ensure full independence and effectiveness of the Bulgarian regulator, to make the single European emergency call number 112 available nationwide and to implement mobile number portability. Regulatory activity has increased markedly, but its practical impact on the market seems to have been limited so far. The first market analyses, the main instrument for improving competition and increasing consumer benefits, were only notified at the end of 2008.

REGULATORY ENVIRONMENT

Main regulatory developments

Important secondary legislation such as the methodology for market analysis, and ordinances on numbering allocation, on quality requirements for universal service, on access and interconnection and on conditions for the provision of directory and telephone enquiry services was adopted in 2008. Geographic and non-geographic number portability, and carrier-selection and pre-selection were also developed through secondary legislation.

Several amendments to the Law on Electronic Communications (Закон за електронните съобщения, LEC) were still pending before the Parliament when this Report was drafted. Some of these amendments address the need to reinforce the independence and effectiveness of the Communications Regulation Commission (Комисия за регулиране на съобщенията, CRC), such as the competence with regard to approval of the market analysis methodology, more budgetary autonomy, a clearer distribution of responsibilities for scarce resources management, and new provisions providing for administrative sanctions. Other amendments have to do with strengthening the powers of the CRC Chairperson, proposing an extension of the Chairperson's mandate from five to six years and boosting his budgetary and human resources-related powers. Finally, other amendments address additional issues, such as the roaming regulation.

The methodology on rules and procedures for the analysis of markets was only adopted in March 2008. Bulgaria notified to the Commission the first market analyses, on wholesale fixed telephony and on mobile call termination, at the end of 2008. A public consultation on the fixed retail calls markets, and another one on the physical network infrastructure access (LLU) and the wholesale broadband access markets, were launched in December 2008. It is hoped that the adoption of the market analyses and the consequent implementation of regulatory measures will contribute to improving competition on all markets concerned.

Organisation of the NRA

Given the progress made in terms of the regulator's effectiveness and independence, the Commission closed in June 2008 the infringement proceeding which had been opened against Bulgaria. Firstly, the nominations to the CRC board were completed in December 2007. Secondly, the Chairperson of the State Agency for Information Technology and Communications (the executive power's body responsible for electronic communications) resigned from his post as a member of the incumbent's board at the end of 2007.

Financial and human resources of CRC have been reinforced. The CRC's budget proposal for 2009 has been approved by the Ministry of Finance on the basis of CRC's expected revenues and expenditure. The number of CRC staff will be maintained, unlike other State administrative bodies, not least for carrying out market analyses and putting in place effective monitoring mechanisms and remedies. It would seem that reinforcement of human resources could be of great help in overcoming the regulator's difficulties and catching up with the delays.

Decision-making

Generally speaking, CRC's effectiveness has improved after the completion of the nominations to the CRC board, in December 2007. The decision-making process has speeded up, allowing important regulatory decisions to be taken such as on number portability, and various contributions to draft secondary legislation have been made.

Nevertheless, significant delays were observed in important measures, the main one being market analyses. One reason for the delay in starting the market reviews appeared to be the long procedure for approval of the methodology by the Council of Ministers. A draft amendment to the LEC proposing to allocate this power to CRC was presented before the Parliament.

An amendment to the LEC pending before the Parliament would allow CRC to impose administrative sanctions on undertakings, in order to reinforce its effectiveness.

Finally, it should be noted that part of the secondary legislation (e.g. regarding numbering) was issued by the State Agency for Information Technology and Communications (the executive power's body responsible for conducting state policy on electronic communications and media) and by the Council of Ministers (e.g. the market analysis methodology). Some of these aspects should fall under the responsibility of the national regulatory authority, CRC, which is the only NRA notified to the Commission. An amendment to the LEC has been proposed in order to clarify the attribution of competences and give full powers to CRC on these matters.

CRC decisions related to market analyses, remedies and settlement of disputes between operators stand while appeals are pending, unless decided otherwise by the Court, according to the LEC. No CRC regulatory decisions have been appealed this year. In the event that the planned market analysis decisions are challenged before the Supreme Administrative Court by some stakeholders, the CRC decisions will stand pending the appeal, and CRC will be able to implement them immediately, according to the LEC.

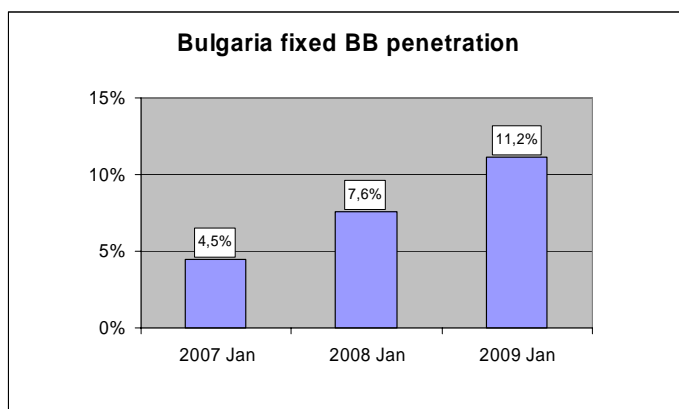
MARKET AND REGULATORY DEVELOPMENTS

The total electronic communications turnover in Bulgaria has increased by 10.78% from the previous year (around €1 715 million at the end of 2007 compared to €1 548 million at the end of 2006), mainly due to increased revenues in the mobile sector, which accounted for €1 046 million (compared to €918 million in the previous year). The fixed sector has seen its revenues fall from €399 million to €370 million. The total value of investments followed the same trends and increased to 31.4% in 2007, which is the highest in the EU (EU average is 11.5%), reaching €538 million. €312 million came from mobile players and only €22 million investment came from fixed alternative operators, which already shows the strong position of the incumbent in the fixed market.

About 1% of the population subscribed to bundled offers, most of them double play (cable TV coupled with Internet access). The number of double play offers has however decreased, from 40 to 35, most likely to the benefit of triple play offers (cable TV, voice and data), which have increased from three to eight as of July 2008. No significant improvements have been detected from either a competition or a user perspective in the broadband and fixed markets. Finally, the merger of the incumbent and the third mobile operator, which is its mobile arm, in September 2008, has been controversial among alternative operators, which accused the incumbent of cross-subsidising. The incumbent previously controlled 100% of its mobile arm's shares. CRC allowed the transfer of the mobile licences to the incumbent in August 2008. According to the case law of the Supreme Administrative Court, CRC has no power to force an undertaking to create a new legal entity as a precondition for allocating its licences, since CRC is statutorily provided with sufficient regulatory instruments to ensure fair competition, other than imposing such obligations. Even if some control measures are already imposed on the incumbent, rapid implementation of the necessary measures following the market analyses is essential in order to guarantee competition.

Broadband

Market situation



The market situation for broadband remains stable. The broadband penetration rate in Bulgaria (11.2% in January 2009, compared to 7.6% in January 2008) is still far below the EU-27 average (22.9% in January 2008), remaining one of the lowest in the EU, although it has moved one post from its last position in the previous year.

Bulgaria's total number of broadband lines increased to 853 089 in January 2009, compared to 580 226 in January 2008, mainly because of the local area networks (LANs) offers. The broadband market is characterised by platform competition between LANs, cable operators, satellite and the fixed incumbent (through DSL). 70% of broadband lines were non-DSL, mainly owned by LANs (57% of the broadband lines), while the incumbent had 29% of the broadband lines by January 2009.

Mobile broadband is starting developing with a penetration rate of 5.7% compared to 13% EU average, based on general usage, and of 0.5% compared to 2.8% (EU average), based on data cards, in January 2009. Nevertheless, there is no competition on DSL. The incumbent still held 97% of the market in January 2009, compared to 99% in January 2008. The share of DSL slightly increased (30% of the total fixed broadband lines in January 2009, compared to 28.2% in January 2008). It seems that, as a result of the changes in the market conditions for alternative DSL operators, the two unbundled lines through shared access are not available

any more. So far, only one DSL offer in the market comes from an alternative operator, through bitstream, available only on the business market. It seems difficult for alternative operators to enter the DSL broadband market, due to high prices and access conditions.

Regulatory issues

The incumbent reviewed and reduced the prices of bitstream following a CRC decision, which imposed price restrictions in November 2007.

Nevertheless, in the absence of an effective market analysis (a public consultation was launched in December 2008), alternative operators still claim the existence of a price-squeeze effect with regard to the wholesale reference offer and the incumbent's retail offer, and also have concerns about the slow delivery conditions.

As a result, despite the signature of eight bitstream agreements, in May 2008, competition has not been brought to the market through this solution. Similarly, three LLU agreements have been signed with the incumbent but, so far, there are no broadband offers on the market based on them. According to CRC, operators are not inclined to use the incumbent's offer for unbundled access. Alternative operators claim that there is a problem as regards price squeeze and conditions of the reference unbundling offer.

An amendment to modify the definition of the local loop in the LEC, only covering the twisted metal pair, was ultimately not presented to the Bulgarian Parliament. This could hinder the imposition of access obligations to other types of networks by the regulator in the future, should market developments need it.

Mobile

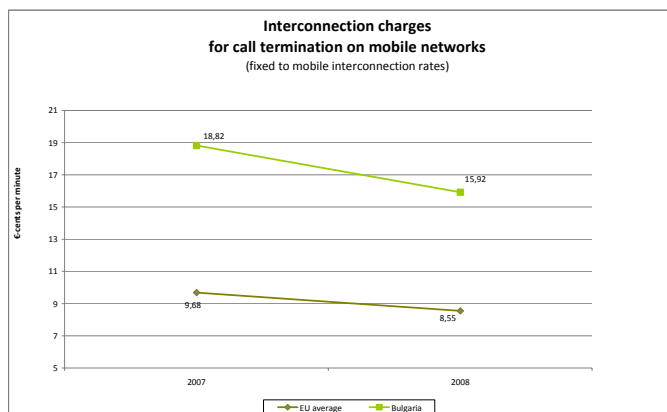
Market situation

The mobile market continued to represent the most dynamic market in Bulgaria. The mobile penetration rate remains one of the highest in the EU, 137% compared to the EU-27 average of 118.9% in October 2008, and has significantly increased from 123.4% in October 2007. The distribution of pre-paid and post-paid users was 51% and 49% respectively. The three mobile operators offer 2G, 2.5G and 3G services, and mobile broadband had a penetration rate of 1.7% (per 100 population) by October 2008. So far, mobile virtual network operators (MVNOs) have not expressed their interest in entering the market. The market share of the dominant operator has fallen from 51.04% in October 2007 to 49.47% in October 2008 (in terms of number of subscribers) to the benefit of the third one, whose share has increased from 10.03% to 12.25% in the same period, while the second operator maintained its position (38.28% in October 2008 compared to 38.78% in October 2007).

The Bulgarian authorities launched an auction procedure in June 2008 for the allocation of 1800 MHz frequencies, which failed, as the only applicant did not provide all the requested information. The EDGE coverage of the three mobile operators reaches 90% of the population. Finally, following the movements in the Greek market, where the German incumbent acquired 20% of the Greek incumbent's share in March 2008, the German undertaking took control over 25% shares of the second Bulgarian mobile operator, which was owned by the Greek incumbent.

Regulatory issues

In the absence of a market analysis in 2008, a glide path approved by CRC at the beginning of 2008, based on an agreement with the operators, made it possible to reduce fixed-to-mobile termination rates from €0.188 in October 2007 to €0.159 in 2008. This was still almost double



the EU average on mobile termination rates, which stood at €0.0855 in October 2008. Mindful of this gap and the consequent need for a more significant reduction, CRC analysed the mobile call termination market accordingly and submitted its market analysis to the Commission by the end of 2008.

Some operators opposed CRC's initial regulatory proposals, which included a significant cut in mobile termination rates and asymmetry for the third operator during the public consultation, as well as a glide path for aligning fixed-to-mobile to mobile-to-mobile termination rates. The market analysis was notified to the Commission by the end of 2008. It proposed a less ambitious cut in mobile termination rates and symmetry for all operators. The alignment of fixed-to-mobile and mobile-to-mobile termination rates was to be achieved by July 2009. The termination rates are proposed to be reduced through a glide path ending in July 2010 at the level of €0.076. The Commission services were analysing this notification when this Report was drafted.

Roaming

The second mobile operator has allowed its pre-paid users to make outgoing roaming calls only since August 2008. The first operator offers different roaming packages and special tariffs. The charging method used by all mobile operators for roaming is on a per-minute basis. Bulgaria had not yet adopted, when this Report was drafted, the necessary provisions allowing the imposition of fines on operators who do not comply with the Roaming Regulation. An amendment to LEC on this issue was presented to the Parliament. The Commission services are looking into this matter.

Fixed

Market situation

The fixed market has not experienced any significant improvements since last year and presents the same features of monopoly. The lack of competition seems mainly due to the problems encountered by operators for interconnection and high termination rates. Even if there were 18 operators reported as offering services in this market, and 13 operators as offering VoIP services by July 2008, the incumbent still had 95.78% of the market share in terms of revenue by January 2008, slightly down compared to [97%] on January 2007. The market share of VoIP was [2.86%] by January 2008.

Carrier selection (CS) and carrier pre-selection (CPS) were available for international and long-distance but still not for local calls for most of 2008, and only one operator provided CPS. The CRC decision adding calls to mobile networks to CS and CPS was confirmed by the Supreme Administrative Court, but so far this service has not been made available. By July 2008, 4% of subscribers were using alternative operators for national calls, while 3.8% were using them for international calls, owing to the fact that they have been reported as having lower prices than the incumbent.

Regulatory issues

Secondary legislation on the provision of and conditions for carrier selection (CS) and carrier pre-selection (CPS) was adopted in November 2008, introducing the opportunity to use CS for local calls. A draft Ordinance for interconnection was expected to complete the implementation of effective interconnection and access.

The lack of secondary regulation for interconnection has been an obstacle for the development of services to users and competition in Bulgaria in 2008. All alternative operators have in fact reported problems in reaching interconnection agreements with the incumbent regarding the provision of CS for calls to mobile networks, even after the CRC decision on the reference interconnection offer, appealed by the incumbent, was confirmed by the Court in February 2008.

The market analysis on wholesale fixed telephony, notified to the Commission by the end of 2008, proposed a reduction of the fixed termination rates through a glide path ending in July 2010. Alignment of mobile-to-fixed and fixed-to-fixed termination rates was to be achieved

by 1 July 2009. Further reductions of the fixed termination rates are proposed through a glide path ending in July 2010. The Commission services were analysing this notification when this Report was drafted.

Broadcasting

Market situation

Cable operators and satellite operators respectively provided 1.22 million and 232 722 households with TV services in January 2008³⁸. The plan for the deployment of digital terrestrial television (DTTV) in Bulgaria was approved by the Council of Ministers in January 2008. However, the deployment of DTTV has been delayed. The planned channels for six national and 27 regional digital broadcasters will not be allocated until the revised Radio and Television Act is enacted. Moreover, a large part of the spectrum needed is currently used for security and defence purposes. Cable operators are nevertheless investing in digitalising their own channels.

The future use of the digital dividend generated by the switch-off of analogue broadcasting has still not yet been decided. The government is studying the possible future use of the 782-862 MHz band for wireless broadband applications once this band is released from the current defence purposes, which is not expected before 2015.

³⁸

Data on analogue and digital terrestrial TV not available.

Regulatory issues

The Radio and Television Act should have been amended six months after the issuing of LEC, in November 2007, in order to ensure its compliance with the latter. Nevertheless, the new Law was still pending by the end of 2008.

Although the allocation of analogue TV frequencies was permitted until the end of 2008, a licensing proceeding launched in 2006 was finally set aside, since the preference was to wait for the pending Radio and Television Act and keep those frequencies for the digital switch-over.

Horizontal regulation

Implementation of spectrum decisions

Following the unsuccessful assignment procedure for 1800MHz frequencies launched in June 2008, another auction procedure, through secret bidding, was launched in November 2008. That second procedure also failed and CRC announced the annulment of the auction in December 2008, due to the lack of applications. In contrast, as regards 900MHz, preference was given to the distribution of the remaining spectrum among the existing mobile operators, on the grounds of their needs for more spectrum to modernise and develop their existing networks. This additional allocation seems to give those operators a considerable amount of that range of spectrum.

Bulgarian authorities have requested a derogation to Decision 2008/477/EC on harmonisation of the 2500-2690MHz frequency band for a transitional period until 31 December 2010, on the grounds of current national security use of this band. The ex-ERMES Decision (Decision 2005/928/EC) has not yet been implemented, as the radio frequency band 169.4-169.8125 MHz is currently still needed for national security purposes. The implementation of the Decision on availability of information regarding spectrum use (Decision 2007/344/EC) is still in progress. An amendment to secondary legislation was adopted in order to allow the implementation of Decision 2008/294/EC (MCA), and amendments in order to allow the implementation of Decisions 2008/432/EC (amending 2006/771/EC (SRD)) and 2008/671/EC (ITS) were still pending.

There are five WiMAX licences issued in the band 3400-3600 MHz, some of them offering fixed and Internet services.

Administrative charges

The Law on Electronic Communications establishes that the management of administrative charges falls under the responsibility of CRC, but it excludes those charges from the obligation for CRC to publish a statement on its income and expenditure from fees for right of use and fines. This provision raises concerns as to its compatibility with the EU Regulatory Framework, which requires explicitly the publication of a yearly overview of administrative costs and charges collected by the regulators, in order to verify if an adjustment of the charges is necessary. A reference to the collected administrative charges, as part of the regulator's revenues, is included in the CRC's annual report, which does not seem to allow that verification. The Commission services are looking into this matter.

Rights of way and facility sharing

Secondary legislation on rights of way, covering the dimensions, location and special regime for exercising the relevant rights, is still lacking. Also, a significant number of LANs and some other operators reportedly illegally access the incumbent's ducts or deploy their cables in the private domain (overhead cables between buildings). So far, no measures have been taken to overcome this situation, as half of the broadband connections are provided in Bulgaria by LAN operators and Bulgarian authorities appear to fear a negative impact that could lead to a decrease in the number of citizens with broadband access.

Nevertheless, a pending amendment of LEC would include the imposition of sizeable fines for network deployment in the air and the strengthening of CRC's powers related to the control over these networks. Those practices may be indirectly favoured by the absence of effective access solutions (such as bitstream, LLU and ducts access), which would allow operators to improve their offers to users.

Authorisations

It seems that a significant number of LANs are still operating without prior notification, which is contrary to the LEC. One of the reasons might be the fact that the previous Telecommunications Act, repealed by LEC, did not require Internet service providers to notify CRC, as is now the case under LEC. Clarification of the situation and increased control of the legal situation of LANs and their activities would bring fairer competitive conditions to the market. This could also have a positive impact on the control of some illegal content downloading and the payment of copyright by LANs.

THE CONSUMER INTEREST

Universal service

The universal service provider has not yet been designated in compliance with the current EU Regulatory Framework. In the meantime, the incumbent operator has the obligation (included in its 2005 licence) to provide universal service, according to the national legislation.

Nevertheless, as no date has been announced for the new designation, the Commission services are looking into the matter.

The LEC establishes a condition for requesting the universal service compensation fund, when examining whether the net cost represents an unfair burden on the universal service provider. Under this condition the retail revenues of the universal service provider should be less than 80% of the total revenues of public telephone services. So far the incumbent has never applied for the compensation fund.

Directory services and directory enquiry services

The comprehensive directory and directory enquiry services, which have to be provided by the incumbent, are still not available in Bulgaria. The electronic format of the incumbent's directory for 2009 was approved by CRC in December 2008. As for the directory enquiry services, it seems that the incumbent only provides information to its own customers. The Commission services are looking into this matter.

An ordinance published in January 2008 transposed the provision of the EU Regulatory Framework that allows undertakings to provide directory and directory enquiry services, based on the transfer of databases in a fair, objective, cost-oriented and non-discriminatory manner.

Nevertheless, it would seem that, besides the non comprehensive directory enquiry service provided by the incumbent, only one mobile operator provides a directory enquiry service but only to its own subscribers. No significant improvements have been noted since last year in relation to the problems of interconnection between operators, which do not give access to these services in their networks.

Emergency services (112)

Due to the lack of availability of the single European emergency number 112, an infringement proceeding was opened against Bulgaria by the Commission in October 2007. As a result of the significant efforts undertaken by the Bulgarian authorities, 112 was made available in the whole of the national territory, for both fixed and mobile users, from October 2008. Six 112 territorial centres handle the calls and refer the caller location information to the appropriate service using the "push" method.

The provided caller location information relating to mobile users is currently the mobile network cell from which the call is made. An amendment to ECA has been proposed in order to increase the accuracy of the caller location to 100 metres in towns and one kilometre in rural areas. Mobile operators strongly oppose this draft measure, as they would bear the cost of installation and maintenance of the equipment. This amendment was still under discussion with the Bulgarian Parliament when this Report was drafted.

Another amendment under discussion with the Bulgarian Parliament proposed the imposition of severe fines for making hoax calls to 112, which seem to represent a very high share of the total calls to 112 (85-95%). A Law on the detailed implementation of the 112 national emergency system was adopted in November 2008.

Number portability

Mobile number portability has been available in Bulgaria since April 2008. However, only 13 180 mobile numbers had been ported by October 2008, which represents 0.13% of the total number of subscribers. This low figure seems to be partly due to the two-stop-shop system, which obliges users to go first to their own operator and then to the porting one, and hence makes the procedure cumbersome and slow, especially since the ten-day deadline, stipulated in national law, for porting the number runs only once the new operator has received the portability request.

As for fixed number portability, the Bulgarian authorities, in their Act of Accession, were allowed to postpone its implementation until January 2009. Nevertheless, the functional specifications for fixed number portability, prepared by CRC, also establish the two-stop-shop system and set a deadline of 25 days for porting the number. Furthermore, it seems that the technical conditions should be submitted to bilateral negotiation between operators, which may create additional difficulties. By the end of 2008, fixed operators had not come to an agreement on the conditions needed to implement fixed number portability. Functional specifications for non-geographic numbers have been prepared and adopted by CRC.

Must-carry

Must-carry rules apply so far on analogue broadcasted public channels. An amendment to the LEC has been proposed for establishing these obligations also on digital public television. Four channels are proposed to be designated as nationwide and should therefore be carried.

Consumer complaints and out-of-court dispute resolution

The number of consumer complaints increased significantly in 2008, with 400 complaints sent to the regulator, mainly concerning billing and quality of service. According to LEC, CRC is responsible for dealing with disputes between operators and consumers when there is a potential breach of the Law by undertakings as regards the general conditions for relations with the customers of electronic communications services and the content of these general conditions. CRC also examines any complaints related to electronic communications services from end-users.

Data protection

A new Ordinance on data retention was issued in Bulgaria in January 2008, setting out the procedures and information to be stored for the purposes of national security and the fight

against crime. The data must be kept for 12 months. In December 2008, the Supreme Administrative Court annulled the provisions of the Ordinance laying down the rules for access to the retained data by the relevant authorities. The Supreme Administrative Court considered in particular that the provisions lacked clarity on how to guarantee the right to privacy. The retention obligation as such is, however, not affected by the Court's decision.

CZECH REPUBLIC

INTRODUCTION

Dynamic platform competition continues to be the main characteristic of the Czech broadband market. The take-up of broadband services has slowed down, while the incumbent's position in the DSL sector has been strengthened. Mobile operators are stepping up their efforts to deliver converged fixed and mobile services. Low fixed penetration underpins the increasing fixed-to-mobile substitution with the vast majority of total outgoing traffic carried over mobiles.

The second round of market reviews has started with the wholesale broadband access market, where a new set of obligations was imposed on the SMP player. The regulation in place in particular for the LLU market and bitstream access so far does not appear to address the competition deficits fully and effectively. The NRA's efforts were also directed at redressing problems in the telecommunications market by means of modifications to price caps imposed after the first round of market reviews. The digital switchover process continues with parallel analogue and digital broadcasting in several regions.

REGULATORY ENVIRONMENT

Main regulatory developments

The Czech regulator Český telekomunikační úřad, ČTÚ, completed its second review of the wholesale broadband market by imposing relevant remedies on this market in October 2008. ČTÚ initiated the three-criteria test for those markets which have been excluded from the new Recommendation on relevant markets. Additional decisions on remedy measures taken by ČTÚ in 2008 relate to modifications of price regulation obligations which had been imposed on the telecommunications market on the basis of the first round of the market review process.

Several legislative changes to the Czech national framework for electronic communications were introduced in 2008. An amendment to the Electronic Communication Act aiming at completing the transposition of the Data Retention Directive came into force in September 2008. The amendment also introduces the possibility of imposing sanctions for infringement of the Roaming Regulation.

A government decree on universal service special tariffs was adopted. This decree, based on previous amendment of the Electronic Communication Act, effective from 1 January 2008, reduces the scope of special discounts by limiting them to disabled users and excluding provision of special prices for low-income recipients.

The Ministry of Industry and Trade approved an amendment to the national numbering plan in summer 2008. A ČTÚ decree on the method of assessing the coverage of terrestrial digital broadcasting was adopted. In May 2008, the Government adopted a decree on the technical plan for transition from analogue to digital TV, setting the date of 11 November 2011 for the analogue switch-off. An amendment to the government decree on radio frequency fees introduces future increases in analogue frequency fees.

Further amendment of the Electronic Communication Act is under preparation. The draft proposal gives the NRA the power to withdraw a frequency assignment in cases where operators do not use the assigned spectrum within a specified time period. The draft furthermore proposes to change the compensation mechanism for universal service to public financing systems only.

Organisation of the NRA

With a new appointment to the Board in 2008, the Board of ČTÚ now has all five chairs filled. Members of the Board are appointed by the government upon proposal of the Minister

of Industry and Trade for a period of five years on a rotational basis with one new selection each year. The Chairman of the Board is appointed for a maximum of three years. The NRA has been granted sufficient regulatory powers by legislation and continues to carry out its duties in an independent manner.

A monthly report issued by the NRA continues to channel information regularly to all stakeholders. While mobile operators express appreciation of the NRA's regulatory responsiveness to issues arising in the market, ČTÚ is criticised for lacking the initiative to address issues of concern raised by fixed alternative players.

Decision-making

In the course of the reporting period 2008, ČTÚ concluded the second round of the market review process for four markets, namely the wholesale broadband access market and the fixed retail markets for both residential and non-residential local and/or national telephony, and the residential international telephony market. More progress is therefore needed to complete the second round of market reviews. Naked DSL was newly imposed in relation to the wholesale broadband market. Additional remedies imposed on this market during 2008 provide for more details of the existing obligations, especially with regard to migration of customers to bitstream.

The remaining obligations on significant market power (SMP) operators which were adopted by ČTÚ during 2008 relate to price regulation remedies which had already been previously imposed on the basis of the first round of market reviews. ČTÚ imposed on two occasions new price caps for the wholesale unbundled access (LLU) market.

Further reductions in price caps were imposed in relation to the fixed call origination and termination markets. ČTÚ withdrew the price regulation obligations from the fixed retail access market for residential customers, despite the Commission's comments that lifting of price regulation would be premature at this stage. In order to create greater stability on the mobile market, the NRA proposes to apply a glide path for the mobile termination price caps. The three-criteria test was performed with regard to three former retail markets and, as a result, ex-ante regulation was lifted in November 2008 from the former market for fixed residential local and/or national telephony. The NRA expressed its intention to finalise the three-criteria test for the remaining former retail markets soon afterwards.

MARKET AND REGULATORY DEVELOPMENTS

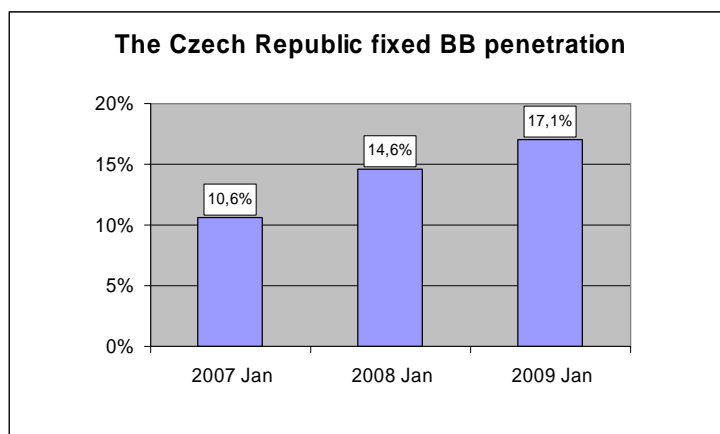
Turnover and investment figures have increased in comparison with 2006. The total turnover of the telecommunications sector was €5.1 billion as of 31 December 2007. The revenue from the fixed market was €1.7 billion, whereas the revenue from the mobile market reached €3.0 billion. The revenue from the telecommunications market overall increased by 16.7% compared to 2006, totalling 4% of the national GDP in 2007. The total value of tangible investments was €564.5 million, of which €335.7 million came from mobile operators, €115.8 million from fixed alternative operators, and €113 million from the incumbent operator.

There is a growing tendency in the market to offer bundled services and converged fixed-mobile offers. The incumbent first introduced a converged fixed voice, mobile voice and ADSL offer (Duo Mobil) in 2007; the need to provide a competitive offer induced the other mobile players to follow the trend of convergence. Their converged offers are brought together mainly in cooperation with fixed alternative operators via LLU and partly also via the incumbent's wholesale DSL offer. These offers are mostly tailor-made with a focus on business customers. The smallest GSM operator, for example, acquired a local fixed operator in order to reinforce its one-net offer of fixed voice, mobile voice and DSL services. The capacity of fixed alternative players to replicate such offers, however, is rather limited. Cable operators have increased the number of triple-play offers for broadband, TV and fixed voice telephony. The incumbent's triple-play product is a bundle of mobile voice services, broadband and IPTV.

Development of 3G infrastructure has been limited. There are three main mobile players present although the smallest GSM operator's 3G roll-out is still in a testing phase without commercial launch of the service. Nationwide 3G coverage has not been achieved yet by any of the players. With regard to technology, the incumbent uses HSDPA (High Speed Downlink Packet Access) and CDMA (Code Division Multiple Access), the latter allowing for almost nationwide broadband access in rural areas; the other mobile operator offers services via UMTS TDD (Universal Mobile Telecommunications System using Time Division Duplexing) but has announced its intention to extend its UMTS operation. The newest market entrant uses CDMA technology allowing for voice and data services with a special handset. Investments in next generation networks (NGN) infrastructure have been minimal. At present, fibre is deployed on a small scale mainly by new entrants, targeting mostly 'greenfield' areas.

Broadband

Market situation



The fixed broadband penetration rate increased from 14.65% in January 2008 to 17.1% in July 2008. The fixed broadband penetration rate is below the EU average of 22.9% and remains well behind the top performers in the European ranking of fixed broadband penetration. Mobile broadband penetration for dedicated data services reached 2.7% in January 2009. Mobile players generally consider mobile

broadband to be a complementary product to the fixed broadband services.

The Czech fixed broadband market continues to be characterised by extensive inter-platform competition. The new entrants' 66.5% market share by fixed retail access lines remains stable and relies mainly on infrastructure other than DSL to provide broadband access. The prevailing platforms such as DSL technology (39.4% of total fixed retail lines), WLL (Wireless Local Loops) (35%), and cable (21.6%) exert strong competitive pressures. Such a market situation provides consumers with more and better choice at lower prices.

WLL and cable retail prices are reported to have fallen; DSL retail prices remain stable despite the incumbent's continuing efforts to upgrade its fixed network to double speed levels. DSL remains the single most important technology underpinning broadband services.

However, its retail prices are well above those of cable and WLL providers, partly due to inclusion of the line rental fee in the final retail price. The market players note an increasing drive for granularity of the market, i.e. need to develop diversified approaches to meet the requirements of different types of customers and business cases.

The upward trend in broadband subscriptions is most notable for WLL followed by DSL and cable. WLL broadband services are offered by a multitude of operators. Subscriber gains are also noted with respect to smaller cable operators. Although the cable platform has a significant position on the market, cable networks are generally limited to densely populated areas. Such a geographical constraint poses a limitation on broadband subscriber growth for individual cable operators. DSL showed a smaller net gain than WLL, but its position on the market remains stable.

The incumbent's market share by retail lines in the DSL segment increased slightly from 82.9% to 85% in January 2009. This figure leads to an overall 33.5% market share of the incumbent operator on the total fixed broadband market. The bitstream access product which is actually taken up on the market is not based on the bitstream remedy reference offer. The

three largest fixed alternative players have left the residential segment of the ADSL market as the current wholesale DSL prices and the financial impact of distribution networks are not regarded as leaving a sufficient profit margin. Voluntary wholesale line rental (WLR) is offered by the incumbent. So far, no commercial contract has been concluded, although negotiations are ongoing with one alternative player and a testing phase has been initiated. New entrants were interested in using this facility mainly in connection with ADSL provision, but as things stand no further interest has been expressed. Developments with respect to growth of unbundled lines are marginal.

The average national DSL coverage stood at 85% in 2007, and DSL coverage in rural areas reached 75% the same year. The average national cable coverage is 40%. However, in the context of broadband coverage it should be noted that broadband access in rural areas is also available via other technological means, for example CDMA services.

Regulatory issues

ČTÚ has concluded the second round of review of the wholesale broadband access market. The results were notified to the Commission in September 2008. The incumbent operator is designated as having SMP in this market. The consequential SMP obligations entered into force in November 2008. The decision on remedy measures meets a long-standing demand of alternative players (fixed and mobile) for the naked DSL facility. Additional remedies imposed on this market provide for more details of the existing obligations, including a Service Level Agreement (SLA), precise regulation of data limits and definition of conditions for changing operator. Operators are allowed to migrate customers into bitstream in bulk. For alternative operators this should resolve one of the major concerns related to bitstream i.e. reduce the current levels of fees to be paid for migration of each individual customer. Price regulation is not imposed, despite the fact that wholesale prices are of great concern to alternative operators. The NRA concluded that there was no price squeeze; in fact, the results of the price squeeze test showed that the margin was higher than three years ago. ČTÚ notes that price regulation would not be justified since the margin between the incumbent's wholesale and retail prices is satisfactory, and the obligations of non-discrimination and accounting separation are considered sufficient to exclude any cross-subsidisation. A dedicated channel enabling alternative operators to provide IPTV is not included in the set of remedies, although the alternative players were requesting such a wholesale product. In its comments, the Commission reminded the NRA to include FTTx/ETTx (Fibre to the x/Ethernet to the x) products in the market definition. Even though such inclusion would not be likely to change the outcome of the analysis at the moment, ČTÚ is invited to monitor closely the fibre roll-out and review the market as soon as any further deployment of NGN infrastructure risks bringing about a competitive change in the market. The NRA has not yet formulated its regulatory position on the future of NGN access.

A new set of reduced price caps was set for the LLU market in June 2008, reducing mainly monthly rental and also some one-off prices. However, despite the price drops, LLU prices remain higher than the EU average. The new price caps were based on an updated WACC. An amending price decision was issued and entered into force in December 2008. This second price drop primarily has the effect of reducing one-off prices. The NRA intends to launch a new market review for the LLU market in 2009.

Alternative operators are concerned about the proper functioning of IT systems for LLU and the fact that it is difficult to ensure the quality of LLU when penalty charges are not available. An administrative procedure on modification of RUO has been initiated by ČTÚ in this respect. At present, the reference offers (Reference Unbundling Offer — RUO and Reference Bitstream Offer — RBO) do not include penalties, hence any issues in this context are dealt with by means of disputes. These are often complicated disputes on technical details and collocation and the NRA may be unable to resolve them within the time limit of four months laid down in the EU framework.

The overall impact of regulation imposed on broadband-related markets prior to the latest remedies appears to be limited. Despite continuous price drops, the number of unbundled lines remains very low, and market players do not seem willing to invest further in LLU. The bitstream wholesale product based on the incumbent's RBO is not having a real impact on the market as it is not being taken up by the main alternative players. Three major alternative players actually left the residential DSL market in 2007 and 2008, arguing that the wholesale price does not permit sufficient profit margin. The NRA notes that the regulated DSL segment of the market is becoming increasingly difficult to compete in, mainly due to competitive advantages of other unregulated platforms. ČTÚ considers the continuing fixed market consolidation to be one of the reasons for low LLU/bitstream take-up. However, it expects further DSL growth triggered by the new redesigned remedies as well as by finalisation of the speed upgrade on the incumbent's network.

Mobile markets

Market situation

The market shares of the three main competitors remain relatively stable. Mobile penetration is high at 131%. There are continuing signs of fixed to mobile substitution with decreasing volumes of traffic over fixed networks and increasing volumes over mobile networks.

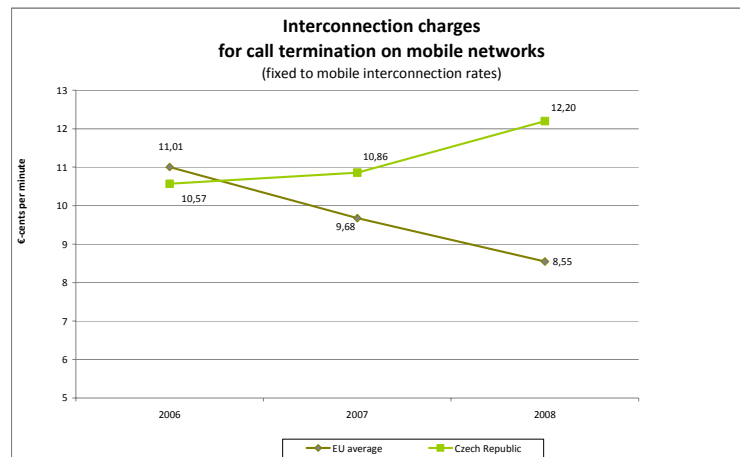
The average retail mobile price per minute was, at €0.15, slightly above the EU average of €0.14 for 2007. 53% of mobile subscribers opt for pre-paid services. In June 2008, the smallest GSM player equalised the price conditions for both pre- and post-paid customers. This player is yet to launch 3G services commercially. Its negotiations to secure 3G network-sharing have not delivered results. The new entrant, providing services over CDMA, offers mobile voice services since July 2008. Its service is considered relatively inexpensive, yet the number of subscribers is very low due to a variety of service constraints, such as the need to have one special handset only, unavailability of roaming services and limited coverage.

Regulatory issues

No regulation is imposed on the mobile access market as it is deemed to be effectively competitive. There is no MVNO agreement signed. Fixed alternative operators note difficulties in gaining access to mobile origination. However, since the regulator has not received any official request to resolve a dispute in this respect, the extent of real MVNO pent-up demand remains questionable.

A full set of remedies has been imposed on the mobile termination market where all three GSM operators were found to have SMP on their own networks. Nevertheless, the mobile termination rates seem high and, at €0.0122, are well above the EU average of €0.0855, and even show an increase in comparison with 2007. This increase appears to be linked to

exchange rate fluctuations. The NRA proposes to further adjust the price caps for mobile termination rates which had been set on the basis of the first round of the market analysis process. In order to increase market stability, ČTÚ intends to introduce a glide path for mobile termination based on historic costs by two price drops per year. Mobile players appear to be content with this approach. The proposed measure was notified in November 2008.



Commenting on this, the Commission asked ČTÚ to reconsider the proposed historic costs approach in view of applying forward-looking rates of effective operator. However, the new rates applicable from January 2009 are based on the regulator's original approach. ČTÚ has initiated a data collection exercise for a new review of the mobile termination market.

Roaming regulation

All three GSM operators signalled compliance with the annual price caps reductions. However, it appears that only one of the operators used the reference exchange rate published in the Official Journal of the EU on 30 July 2008 as required by the Roaming Regulation. The operators' compliance with the obligations is under scrutiny by the NRA. In October 2008, the smallest operator introduced packages with reduced prices for data roaming. In the Czech Republic, the wholesale roaming price is based on per-second billing, whereas the retail roaming price charged to consumers is based on per-minute billing. National legislation does not require operators to charge consumers per second. The possibility for the NRA to impose penalties in relation to infringements against the Roaming Regulation has been introduced in national primary law.

Fixed market

Market situation

The fixed line penetration rate is one of the lowest in the EU at 31% of households and 20% of the population as of July 2008³⁹. The volume of outgoing calls from fixed lines continues to drop. The incumbent reports a persisting annual churn of fixed lines and expects a further reduction of the total number of fixed lines once DSL service and fixed line provision become unbundled.

The fixed market is undergoing continuous consolidation. The fixed alternative players have maintained a stable market share by retail revenue of 35%. They compete predominantly in the business segment of the market via carrier selection and carrier pre-selection (CS/CPS) and appear to be most successful in providing international calls, with their market share by retail revenue having risen from 60% in December 2006 to 63.5% in December 2007. A marginal 4.3% of subscribers use a provider other than the incumbent for direct access to fixed telephony. Voice over cable is being offered by a growing number of smaller operators, but VoIP (voice over IP) take-up is still limited and its impact on the fixed voice market remains minimal. Cable operators' voice services are usually taken up within bundled offers of TV and/or Broadband.

Mobile operators are striving to establish themselves in the fixed market. Fixed alternative operators are not able to compete with the converged fixed-mobile offers of mobile players. The WLR facility offered voluntarily by the incumbent since December 2007 has not been implemented in practice. The negotiations are ongoing and a testing phase has been initiated with one alternative operator.

Regulatory issues

As regards retail access markets, the NRA removed the obligation for cost orientation and prohibition of cross-financing from the former fixed retail access market for residential customers in April 2008. The withdrawal of price regulation in the retail access market relies mainly on sufficiency of wholesale remedies. The Commission commented that in this particular case the removal of price regulation was premature. Fixed alternative players have not raised concerns in this respect. The three-criteria test was performed on both fixed residential and non-residential local and/or national telephony markets, and on the market for fixed residential international telephony. As a result, ex-ante regulation has been lifted from the market for fixed residential local and/or national telephony since November 2008, and the other two markets followed at the beginning of 2009.

With respect to wholesale fixed markets, the NRA has proposed to set new price caps for fixed origination and termination fees at the first transit exchange. The modification of the price control obligation became effective in November 2008. The interconnection charges currently applicable remain well above the EU average.

Fixed alternative operators note that differences in regulation of the fixed and mobile termination rates, where fixed-to-mobile interconnection prices remain significantly higher

³⁹ Data provided by the fixed incumbent operator.

than fixed-to-fixed interconnection prices, accommodate the process of fixed to mobile substitution.

Broadcasting

Market situation

In the TV broadcasting market, terrestrial transmission provides services to 14.5% of households over population, with the estimated share for digital transmission and analogue transmission amounting to 4.8% and 9.6% households over population respectively. Cable TV (9.6% of subscribers over population) and satellite TV (7.71%) appear to hold almost equally strong positions on the market. The market share of the IPTV platform is marginal despite relatively significant growth in the number of subscribers.

A consolidation process is ongoing in the cable market. The biggest cable operator covers an estimated 70% of the cable TV market. Two new players have entered the market for digital terrestrial TV broadcasting. Apart from the incumbent, IPTV is also offered by two other local operators.

Two regions (Domažlicko and Ústecko) tested the analogue switch-off in 2007 and have since been in a phase of parallel analogue and digital broadcasting. Another four regions started parallel broadcasting at the end of October 2008. Such parallel broadcasting is to be accompanied by a six-month information campaign to inform citizens about the details of digital switchover as well as the timing of the switch-off for particular analogue transmitters. The switch-off is to take place after the information campaign is finished. Since mobile phones and other devices equipped with DVB-T (Digital Video Broadcasting-Terrestrial) receivers entered the Czech market, the interest of two mobile operators in implementing mobile TV over DVB-H (Digital Video Broadcasting-Handheld), indicated in the past, has diminished.

Regulatory issues

A national coordination group has been formed by the Government to coordinate the process of digitalisation, assisted by an advisory body that includes representatives of the Ministries, ČTÚ and the Broadcasting Council.

The November 2007 Amendment of the Radio and Broadcasting Act introduces the facility of additional compensation digital licences for two major commercial TV stations. The Amendment creates a possibility for launching six new digital channels. In August 2008, after a long period of resistance to the digital switchover process, the commercial TV channels announced their support for the technical plan for digital switchover. Opposition by the commercial channels to digitalisation was considered to be the biggest obstacle to successful completion of the process.

The NRA has not yet set a time frame for a tender with respect to mobile TV frequencies.

Horizontal regulation

Spectrum management

The draft amendment of the Electronic Communications Act proposes to reinforce the powers of the NRA in frequency management. ČTÚ would be allowed to withdraw frequencies if operators do not use the assigned spectrum within a specific time period. This issue had previously posed a problem with certain operators, since the current legislation allows for withdrawal of the individual rights to frequencies but omits withdrawal of the general right. The NRA may re-assign and split up the withdrawn frequencies.

ČTÚ intends to assign the remaining free frequencies in the 900 MHz spectrum band. In ČTÚ's opinion, the spectrum available is not deemed sufficient to allow for establishment of a fourth mobile player, hence the regulator signalled that the frequencies will most likely be assigned to the existing players by means of a tender.

In September 2008, the regulator initiated a broad national public debate on the future use of the digital dividend spectrum.

Numbering

ČTÚ indicated a further change to the national numbering plan to facilitate usage of mobile numbers for fixed-mobile lines using a combination of fixed wireless and mobile services on one handset. In this respect, the NRA notes a convergence of technologies and a continuous reduction of differences between mobile and fixed services. According to ČTÚ, the use of numbers should not be restrictive.

The fixed alternative operators express concerns about the regulator's approach and note that such usage of mobile numbers is already being applied in practice for large-traffic customers by all three mobile operators. They stress that since mobile origination is not regulated, CS/CPS services are not available, charging of fixed to mobile termination rates disadvantages the fixed competitors and, in addition, number portability is not allowed between fixed and mobile networks. To avoid any distortion of competition the ČTÚ is currently examining the basic principles of providing services at a fixed location via mobile network operators, including in relation to number portability.

116

The EU harmonised number 116 111, reserved for child helplines, has been assigned to the incumbent. The service is already operational.

Implementation of spectrum decisions

The Czech Republic has implemented the Commission's decisions on radio spectrum harmonisation (Decisions 2005/513/EC, 2005/928/EC, 2006/771/EC, 2006/804/EC, 2007/131/EC, 2004/545/EC, 2005/50/EC, 2007/90/EC and 2007/98/EC). Implementation of Decision 2007/344/EC on the harmonised availability of information regarding spectrum use, which ensures accessibility of the radio interface specifications in the EFIS database, is under way.

THE CONSUMER INTEREST

Tariff transparency and quality of service

Premium-rate services are self-regulated through binding contracts amongst the association of mobile providers, the association of fixed providers, and content providers. Special working groups regularly renew and update the ethical codex. Billing details for premium-rate services are dealt with by service providers; originating operators provide for transfer of payments from customers. New services such as public transportation tickets via SMS are negotiated at the technical level via this self-regulatory platform. Overall, this cooperation appears to be effective. Both the NRA and industry note that the self-regulation in place reinforces tariff transparency and lessens the number of consumer complaints. An interactive web-based price comparison tool is not available in the market.

Universal service

A draft proposal for changing overall the compensation mechanism for universal service to public funding has been prepared. The current financing system allows for public funding only with respect to measures for disabled users.

The incumbent and the smallest mobile operator were again designated for the element of special social tariffs for disabled users on the basis of the new Government Decree of 2008. The decree specifies the reduction of the scope for the element of special tariffs, which was introduced by primary legislation at the beginning of 2008, by excluding the provision of special prices for low-income recipients. Nevertheless, in addition to the requirements set out in the designation, the smallest operator decided to maintain the original wider scope of special discounts. The third mobile player did not apply for a designation to provide social tariffs. However, it continues to offer on a voluntary basis more generous discounts than those provided for by the current universal service obligation. The scope of designated elements has been further reduced by the NRA's decision not to designate a universal service provider for

the provision of comprehensive directories and directory enquiry services. The last designations expire at the end of December 2008, and it is expected that these services will continue to be provided by the market without a need for imposing obligations. The net cost calculations have been finalised for 2001-2005. While the respective decisions remain effective, they have been appealed in court by two mobile operators. The incumbent's appeals against net cost calculations are also pending in court. All of the decisions on contributions for these years have been adopted, and contributors' payments have been made except for those companies which no longer exist. The draft proposal resolves this situation by allowing substitute payment from the state budget. The net cost calculation for 2006 is at a final stage, and ČTÚ's decisions on individual contributions are to follow. It should be noted that the total net cost of each designated undertaking is to take account of all profits from any of the partial services provided by that undertaking, which currently does not appear to be the case for provision of directories and directory enquiry services. Operators express concerns that the net cost calculations for 2004-2005, which are based on the legislation preceding the current Electronic Communications Act, do not take account of intangible benefits. The Commission services will look into this matter. ČTÚ reviewed the necessity of reimposing the obligation to provide directories and directory enquiry services within the context of universal service. Taking into account the fact that these services are available on a commercial basis, it was decided not to reinstate the obligations.

Number portability

The average time for fixed number portability indicated by alternative operators is 15 days from a consumer's perspective. It is felt necessary by alternative providers to shorten the time taken for LLU customers. The disputed cost-oriented wholesale price has been set by the NRA. The retail price charged by the biggest operators to a consumer is zero or a symbolic 1 CZK. Fixed number portability is managed by an organisation within the association of fixed players. Market data confirm increased usage of this important tool for consumer choice. The mobile operators have indicated an average total mobile portability time of 13-14 days for post-paid and 10 days for pre-paid from a consumer's perspective (5 days between operators). The NRA's decisions on disputes concerning the wholesale prices for mobile number portability came into force in July 2008. The prices set by ČTÚ are asymmetric and cost-oriented; two operators have appealed the decisions to an administrative court. The facility is currently working but the porting parties do not effectively pay the wholesale charges. The time limit set by the legislation concerns the procedure between operators — there is no limit with regard to consumers. Again, the retail price is zero or a symbolic 1 CZK. Usage of mobile number portability increased in 2008, yet it does not appear to have a significant impact on the market dynamics.

Consumer complaints

Consumer disputes involve mostly issues relating to unpaid invoices. ČTÚ, which provides an out-of-court dispute resolution mechanism for customers, notes that few complaints have been received with respect to other issues such as quality of service or universal service provision. The courts have confirmed the NRA's finding as regards almost all the disputes brought before them.

European emergency number 112

The proposed amendment to the Electronic Communications Act is intended to address the problem of the high number of hoax calls received by all emergency service numbers (approximately 70% of all calls). The draft amendment introduces the definition of an emergency hoax call — a call made not for the purpose of announcing events where life, health, property or public order are in danger. Equipment allowing for rejection of hoax calls could be introduced once a hoax caller is identified. The Commission notes that strict

application of such a blocking procedure would deny access to emergency services for those callers who have called emergency services by mistake. In such an event, ČTÚ has the possibility to act upon a request and unblock the user's device.

An information campaign for 112 is ongoing on the public transportation systems and payphones in the main cities. Information on 112 is included in school curriculum.

Discussions are taking place on the possible provision of caller location information by VoIP providers which are not classified as PATS providers.

Must-carry

The latest amendment to the Radio and Broadcasting Act, effective from 1 January 2008, provisionally widens the scope of must-carry obligations for cable re-transmitters and mobile TV operators to all nationwide digital channels not protected by conditional access. The respective must-carry provisions were adopted as a transitional measure with the objective of facilitating the process of national switchover from analogue to digital terrestrial broadcasting, and of imposing obligations which should expire on the date of completion of the digital switchover or in any case on 31 December 2011.

Data protection

An amendment to the Electronic Communications Act aiming at transposition of the Data Retention Directive came into force in September 2008.

DENMARK

INTRODUCTION

Denmark continues to be the leading country in broadband penetration. During the reporting year, the Danish telecoms market has shown positive trends, with investments rising and the number of subscribers increasing, especially in the mobile and broadband markets. Retail broadband prices fell while the demand for faster broadband speeds increased. Danish consumers are increasingly using mobile services, with the data market significantly increasing on mobile networks.

The Danish legislation on electronic communications seems to provide sufficient incentives for effective competition and investments. Legislation was adopted in December 2008 to address the issue of 'double coverage' for the incumbent's copper infrastructure. The Danish national regulator completed the first round of market analysis and deregulated the wholesale market of the terminating segments of leased lines. It has been examining the possibility of a 'margin squeeze' between wholesale and retail broadband prices.

REGULATORY ENVIRONMENT

Main regulatory developments

As part of the Danish government's globalisation strategy, the Danish national regulator IT-og Telestyrelsen (National IT and Telecom Agency – NITA) had carried out a strategic review in 2006-2007, which demonstrated that the existing Danish legislation provided sufficient incentives for the electronic communications operators to compete in the market, to make investments, and to develop innovative services to end-users. Yet, it had highlighted certain fields where adjustments could be made to improve the framework, related to promoting broadband competition and facilitating IP telephony and 3G penetration. It also identified challenges in relation to effective enforcement of the current regulation, and ensuring predictability and transparency in regulating the market. The corresponding legislation was adopted by the Danish Parliament in December 2008.

A new Frequency Act that is being drafted will seek to address issues such as the implementation of secondary trading of parts of licences, the technologically neutral use of frequencies, and introduction of a ban on hoarding and anti-competitive behaviour. In April 2008, the Danish Consumer Ombudsman issued revised guidelines on the marketing of electronic communications services so as to provide consumers with accurate information on, for example, prices and speeds.

Organisation of the NRA

NITA has 300 employees, of whom around 100 are professionals in telecoms regulatory issues. Danish legislation provides for adequate restrictions and procedural safeguards, which secure the independence of the national authority.

Alternative fixed operators however feel that NITA has not always been pro-active particularly in resolving disputes, leaving the Telecommunications Complaint Board to deal with them. Even when that mechanism of dispute settlement is activated, market players consider the process to be sometimes long and inconclusive with cases being sent back and forth from NITA to the Complaints Board. Some electronic communications providers have also criticised NITA's work for lacking transparency. They note that NITA is a strong authority which is not subject to checks by the Ministry of Science, Technology and Innovation.

Decision-making

By early 2008, NITA had concluded the first round of market analyses and issued 28 decisions in total. Retail markets have been almost all deregulated except for the retail market of minimum set of leased lines. During 2008, NITA deregulated the wholesale market of transit services in the public telephone network provided at fixed locations. It also rolled back regulation from the wholesale market of trunk segments of leased lines, and withdrew the imposed market remedies.

Eight of these decisions have been appealed to the Telecommunications Complaints Board by the operators affected. Decisions on four markets (call origination on the public telephone network provided at a fixed location, wholesale unbundled access, wholesale broadband access, and wholesale terminating segments of leased lines) were upheld by the Telecommunications Complaints Board regarding the primary issues, but were overturned regarding minor elements. The decision on access and call origination on public mobile telephone networks was annulled. Regarding NITA's decisions on the market for mobile call termination, the Telecommunications Complaints Board upheld decisions on three operators but remitted decisions on two operators to NITA for renewed consideration.

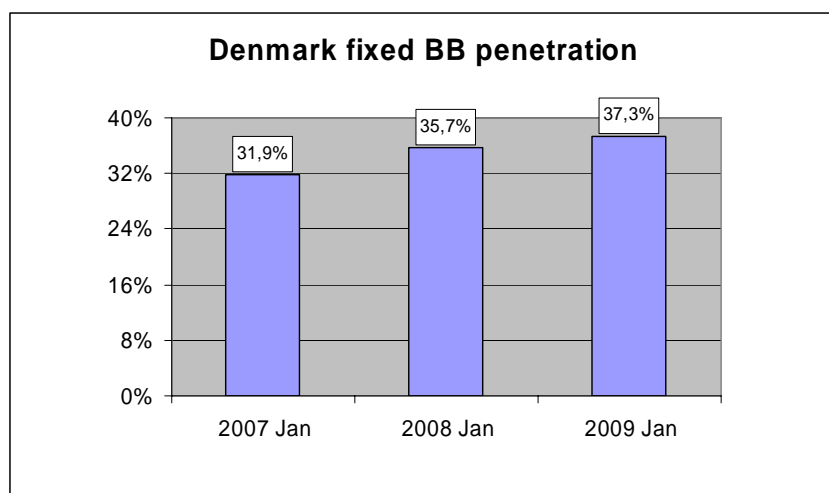
At the end of 2007, NITA initiated the process for the second round of market analyses following publication of the new EC Recommendation on relevant products and service markets. It carried out national consultations on market definitions and collected data for the retail market of minimum set of leased lines and the wholesale market of terminating segments of leased lines. NITA notified the Commission of its draft decisions on physical network infrastructure access (LLU) and wholesale broadband access in December 2008. It also planned to initiate its analysis of voice call termination on individual mobile networks by the end of 2008.

In general, during 2008 the vast majority of NITA's decisions were upheld. Eighteen relevant decisions were made by the Telecommunications Complaints Board, two cases were partly overturned (one of them being partly remitted to NITA for renewed consideration), and one decision was overruled in its entirety.

MARKET AND REGULATORY DEVELOPMENTS

The total revenues in the telecommunications sector stood at €5.97 billion in 2007, of which the fixed market amounted to €1.2 billion and the mobile market to €2.3 billion. In total, the incumbent invested €0.48 billion in the fixed telephony networks, while the alternative operators spent €0.74 billion. Mobile operators' investments amounted to €0.75 billion.

Danish power companies have been investing massively in deploying fibre networks as an alternative infrastructure in Denmark. To date, these networks cover mainly urban areas, but also have considerable coverage in rural areas, having already reached 400 000 households in total. It is anticipated that the total number of Danish households (2.5 million households and half a million enterprises) will be reached in eight years' time. The Danish incumbent continued with the upgrading of its access network through fibre-provisioned street cabinets. In July 2008, 7.39% of the Danish population were using bundled services (406 040 subscribers). The vast majority of these subscribers (88.1%) use quadruple-play services including broadband, voice telephony, IPTV, and mobile telephony, while the remainder (11.9%) use triple-play services.



Broadband

Market situation

Denmark leads the broadband penetration table among EU countries with a 37.3% penetration rate, the EU average being

22.9% (January 2009). According to OECD statistics of July 2008, Denmark is also the world-leader in broadband penetration. Broadband coverage has reached 100% of the Danish population. Market players believe that one of the reasons why broadband penetration in Denmark is so high is that Denmark, as a small country, is easy to cover. A tax incentive scheme introduced three years ago to increase broadband uptake has also had a positive influence.

The Danish broadband market is close to saturation. While the incumbent continues to be the dominating copper network and cable provider, its broadband market share fell from 58.8% in January 2008 to 57% in January 2009. During the same period, the market share of alternative providers was growing, reaching 43% in January 2009 compared to 41.2% a year ago.

The deployment of alternative platforms in Denmark has been accelerating in general, but at different speeds and in different parts of the country. Available broadband products include DSL, cable modem, fibre, LAN, and wireless broadband. Power companies have been massively investing in the roll-out of fibre to the home (FTTH) networks, already playing a significant role in infrastructure competition. The number of fibre subscriptions increased by 23.2% percentage points within a year (87 991 fibre lines in January 2009), amounting to 4.3% of all broadband connections.

The ADSL platform remains the major technology for broadband lines, contributing around 60.7% of the broadband connections in January 2009. 39.2% of all broadband subscriptions were based on alternative infrastructure other than DSL. Platforms other than cable networks and DSL grew from 10.8% in January 2008 to 12.8% in January 2009. 18.56% of alternative providers' retail broadband lines were based on xDSL technology while 22.51% of their lines were based on other network platforms.

The number of fully unbundled Local Loop Unbundled (LLU) lines has continued to increase, rising from 171 774 in January 2008 to 236 149 in January 2009. During the same period, the number of shared access lines also increased from 59 407 to 66 852.

Yet, wholesale broadband access prices for fully unbundled lines and for shared access have both increased by about 5.5% over the past year, mainly due to increasing interest rates and cost of labour. This development may also be due to the calculation of prices based on the LRAIC pricing model. Interestingly, the monthly average cost per fully unbundled loop in Denmark (€11.02) was almost equal to the EU average of €10.88 while the monthly average cost per shared access (€5.98) was well above the EU average of €4.13.

Broadband speeds are increasingly driven by consumer demand. In January 2009, out of the 2 040 700 broadband lines, 12.2% had broadband speeds above 144kbit/s and below 2 Mbit/s, 70% between 2 Mbit/s and 10Mbit/s, and 17.8% 10Mbit/s and above. Also, in January 2009, 13.2% of the total number of mobile subscribers was actively using mobile broadband, compared to the EU average of 13%. If the penetration rate of mobile active users accessing advanced data services via dedicated data modems/cards/keys per population is measured, then the mobile broadband penetration rate in Denmark is considerably higher than the EU average of 2.8%, amounting to 4.7% (January 2009).

Regulatory issues

At the time of drafting this report, the Danish national regulator had finalised its draft decisions on the physical network infrastructure access market (LLU) and the wholesale broadband access market. NITA notified these two draft decisions in December 2008. The increases in wholesale prices for local loop unbundling (full and shared access lines) are being reviewed by NITA. Along with the Danish National Competition Authority, NITA is also examining the possibility of a 'margin squeeze' between wholesale and retail broadband prices.

A public consultation held in autumn 2007 on the existing LRAIC fixed model demonstrated that in view of the significant technological developments in the market (roll-out of fibre optic networks, and the upgrading of the incumbent's copper network), a revision of the model was

necessary. NITA is currently working on this revision. LRAIC prices for 2010 are to be determined on the basis of the revised model.

One important issue in the broadband market is the ongoing upgrade of the incumbent's copper access network. In several areas, the incumbent's network development creates challenges in relation to the competitive conditions among electronic communications providers as these providers base themselves on the previous structure of the incumbent's network. Alternative operators take the view that insufficient information was given by the incumbent on its roll-out plans. Created to address this issue, the Cable Management Forum (which meets once or twice per year) provides alternative operators with a platform to receive information on the incumbent's plans for rolling out its network. In its draft decisions on the physical network infrastructure access market (LLU), NITA has addressed the regulatory challenges arising from the incumbent's network roll-out.

The issue of double coverage obtained by the incumbent for its copper network infrastructure has been given particular attention. The situation arises when the same copper line is used both for an ordinary telephone connection (PSTN) and for a broadband connection (DSL). Thus, the incumbent has its cost covered twice, i.e. by the telephone connection and by the shared access to the copper line for broadband.

The legislation adopted in December 2008 (entry into force on 1 January 2009) provides that the costs related to the infrastructure are to be covered equally by the users of the infrastructure (according to a '50/50' principle between PSTN and DSL). DSL usage would get the same discount in case both services are used on the same line. The wholesale price of an interconnection product should reflect whether electronic communications service providers are using the same electronic communications network at the same time.

Arising from the issue of double coverage was the issue of whether the transmission of information on the use of the copper network constituted a breach of Section 64 of the Danish Telecommunications Act, which transposes Article 4(3) of Directive 2002/19/EC (Access Directive). The legislation adopted includes amendments to Section 64 of the Danish Telecommunications Act ensuring that electronic communication service providers, when receiving information on the use of a wholesale product, may not use this information for other purposes than billing the customer. Electronic communication service providers have the possibility, if they so wish, to pass on the benefit of savings at wholesale level to the relevant individual customers.

Energy companies currently deploying fibre-to-the-home networks have expressed concern about difficulties in attracting customers onto their own network because of various local district plans, issued by municipalities, which include in many cases a mandatory membership and payment to a local cable-TV network.

An interesting way for the Danish government to promote broadband uptake has been a tax incentive introduced three years ago whereby employers pay for their staff's broadband connections, if the employees are working from home. In doing so, both employers and employees get a direct deduction on their taxable income. This measure has been popular among employers.

Mobile markets

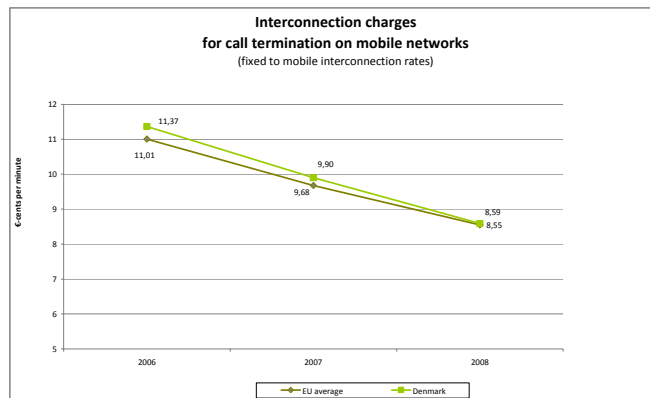
Market situation

The mobile telephony market is characterised by keen competition at the retail level. Most importantly, over the reporting year there have been positive developments in 3G services, driven by data services, and in the uptake of mobile broadband (13.2% in January 2009). In the meantime, the SMS market continued to increase.

Four providers are operating their own mobile networks and offer commercial services. Three of these operators have both UMTS and GSM/DCS licences, while one operator has only a UMTS licence. Other service providers as well as an MVNO buy access to the networks of

these providers. One operator is offering mobile broadband services using their 450 MHz licence.

Mobile penetration reached 120% in October 2008 (up from 113.9% in 2007) with 7.1 million subscriptions, above the EU average of 119%. The market share of the incumbent's mobile subsidiary in terms of subscribers was 32.8% in October 2008, showing a decrease from the 39.96% market share in October 2007. Its market share is under the EU average of the leading mobile operator (38.3% in October 2008). In contrast, the market share of the second operator



increased to 21.5% from 19.8% a year ago. A significant increase in the market share of the third and fourth operators has been witnessed over the past year, from 40.2% to 45.7%. The number of prepaid customers in Denmark decreased sharply within a year, from 42% in October 2007 to 14% in October 2008. This change makes Denmark the second country in the EU with the lowest number of prepaid customers.

Mobile termination rates in Denmark, at €0.0859 in October 2008, were almost equal to the EU average (€0.0855), after having decreased from €0.0990 in October 2007. On retail level, the average revenue per minute reached €0.27 at the end of October 2008, while the EU average was €0.22.

Regulatory issues

Following the analysis of the wholesale market for voice call termination on individual mobile networks in February 2006, NITA imposed on the existing three mobile providers at the time asymmetric termination rates based on the 'best-practice approach', which were to be reduced gradually. That analysis excluded 3G networks. In March 2008, NITA notified the Commission of draft measures for amending the price control obligation, proposing a cost model based on LRAIC (applicable from 1 January 2009 with new prices) taking 3G spectrum costs into account also. It proposed additionally to impose asymmetric termination rates on all mobile operators including the new 3G mobile provider. In October 2008, NITA designated one MVNO as having SMP in the respective market. To that end, the MVNO was subjected to price regulation based on a 'best-practice' approach, with a glide path to run until May 2009. A new LRAIC mobile model, put into consultation in spring 2008, is expected to be used as of 2010. NITA has recently announced that it aims at setting all mobile termination rates at a symmetric level in 2011.

NITA is planning to start the second round of market analyses on the market for voice call termination on individual mobile networks in 2009. Further consideration will be given to whether SMS services should be included in the market definition.

Discussions were held as to whether a prolongation of the six-month commitment period between electronic communications providers and customers (not including business customers) would be welcome. The situation in the end remained unchanged due to lack of support from the market.

Roaming

The Roaming Regulation was introduced on time in Denmark. Following its implementation, Danish consumers experienced a price reduction of about 50% by the end of August for making or receiving calls while roaming (NITA's statistics).

One main concern on the implementation of the Roaming Regulation was per minute or per second billing. Certain market players appear to charge per minute, after the first minute, instead of per second. Some operators also claimed that the time between the adoption of the regulation and its implementation was too short.

The Danish Ministry of Science, Technology and Innovation submitted a comprehensive and detailed analysis of the prices and costs for SMS, MMS and data roaming services in its answer to the Public Consultation on the review of the Roaming Regulation. The study was carried out by NITA.

Overall, the analysis showed that the prices for sending an SMS or an MMS, and for using other data services when located in another EU country are very high, in relation to national prices and the real cost of providing the services, both at the wholesale and at the retail level.

Fixed

Market situation

The Danish incumbent continued to be the largest provider for telephony over the fixed network in 2008 even though its market share slightly declined this year. Its market share (for all types of calls) by minutes of traffic was 64% in October 2007 compared to 65% the previous year. Danish subscribers still choose the incumbent for direct access in 81.6% of cases, but that is less than the EU average of 84.6%.

In total, there were 68 fixed operators, offering public voice telephony services, of which 25 were VoIP operators (their market share on the basis of volume of traffic being equal to 9.38%). There were 28 alternative operators using fully unbundled local loops and 8 using shared access lines.

Regulatory issues

NITA's final decision on the analysis of the market for wholesale trunk segments of leased lines suggested that there was no SMP in the market, and the remedies were therefore revoked. The decision also highlighted the technology-neutral transmission between the centrals. Market players generally welcomed the results of the market analysis, which indicated that there was competition in the market. However, they noted that in practice this means that there is no regulation to guarantee their presence in the centrals other than bilateral agreements on LLU and internal cabling between the electronic communications operators and the incumbent. The incumbent confirmed that access to the sub-loops was ensured for alternative operators, and pointed out that the general rules of coverage were given at the Cable Management Forum. For their part, the alternative operators claimed that the insecurity created with the deregulation of this market could affect their future investments. They also raised concerns regarding whether the incumbent would decide to increase costs in the local exchanges as these costs would now be market-based. The Danish regulator seemed determined to initiate a new market analysis should major changes in the situation justify it, or to take up any possible price increase with the National Competition Authority.

Broadcasting

Market situation

Cable is the leading television platform in Denmark with a penetration of over 61% of all households. 38% of households rely on the terrestrial platform for their primary television reception (17% of households have analogue terrestrial and 21% have access to digital terrestrial). The coverage of IPTV network reached 30 000 households in June 2008.

In August 2008, one national multiplexer for DTT was available, broadcasting four channels.

Regulatory issues

The digital switchover in Denmark is set for 1 November 2009. The switch-off process will be completed on a single day and will affect all viewers simultaneously. Already, DKK 50 million (€6.7 million) has been budgeted for an information campaign to be led by the Radio and Television Board.

Denmark has allocated frequencies for establishing eight nationwide multiplexers for digital terrestrial TV. Two multiplexers have been allocated to public service TV. These include the present nationwide transmitter for digital TV, which is already in operation in Denmark. Four out of these eight multiplexers have been allocated by beauty contest to a commercial

gatekeeper. The gatekeeper is due to launch its services on 1 November 2009 at the latest. The gatekeeper will use one multiplexer for mobile TV (DVB-H) from 1 November 2010. The use of two multiplexers is to be kept for an 'innovation reserve' (the actual use of which would be subject to a political agreement), so as to ensure that Denmark will be well prepared to meet technological changes. As for the last two multiplexers, it is not yet decided whether the remaining digital dividend will benefit broadcasters or telecom operators.

Horizontal regulation

Spectrum management

A new Frequency Act, under preparation at the time of drafting this report, is intended to replace the existing Act on Radio Frequencies, and secondary legislation (Executive Orders) is to be revised where necessary. The general aims of the Act will be the implementation of secondary trading on parts of licences, the implementation of technologically neutral use of frequencies, and provision for a ban on hoarding and anti-competitive behaviour. The new Act is expected to be passed by mid-2009 and to enter into force on 1 January 2010.

Denmark has implemented all the Commission Decisions on spectrum harmonisation.

Specifically, the last two EC harmonisation Decisions adopted in August 2008, namely the amended Decision 2005/928/EC on the harmonisation of the 169,4-169,8125 MHz frequency band and the Decision 2008/671/EC on the harmonised use of spectrum in the 5875-5905 MHz band for safety-related applications of Intelligent Transport Systems, are implemented in Danish law by an Executive Order adopted recently, which was to enter into force on 1 January 2009.

The process to amend the GSM-directive is expected to pave the way for all spectrum in the 900/1800 MHz bands to be made available on a technology-neutral basis. In the meantime NITA has encouraged the operators to start considering how to effectively re-use the 900 MHz and 1800 MHz spectrum bands without distorting competition.

In September 2008, Denmark issued a licence for GSM-R (which is the frequency for railroad, railnet in Denmark). Also, the 2,5GHz band will be up for auction at the end of 2009, under technologically neutral conditions (for example for 3G or WiMAX services).

THE CONSUMER INTEREST

Tariff transparency and quality of service

The Danish NRA hosts on its website an online interactive guide to electronic communications products. Market players update this site whenever they are launching new offers or products. NITA validates these updates quarterly.

Universal service

A new Danish Executive Order on Universal Service was adopted on 26 June 2008, introducing a new regime for designation of the universal service provider(s) in Denmark. The new Executive Order revised an earlier Executive Order which expired on 31 December 2007 and which prolonged the 'ten-year agreement' between the Danish incumbent and NITA by one year. Adopted in 1997, this agreement provided that the Danish incumbent was to be the universal service provider for the period 1998-2007.

The new regime provides for four 'packages' of services under the universal service umbrella, some of which are additional services not included in the Universal Service Directive 2002/22/EC. The services include: (1) PSTN and ISDN; (2) leased lines; (3) directory services; (4) maritime distress and safety communications services. A call for expressions of interest was published. For the PSTN and ISDN package and for leased lines, the incumbent was the only operator expressing interest and was designated. As for maritime services, NITA did not receive any response to the call for expressions of interest. It thus designated the incumbent based on an evaluation of the market and relevant operators as well as certain

technical specifications. For directory services NITA designated the incumbent based on the outcome of the evaluation. Concerns were raised as to whether the compensation mechanism envisioned in the Danish legislation imposes a cross-subsidisation of net costs from services outside the scope of Directive 2002/22/EC. The Commission services are looking into this matter.

Number portability

The amount of numbers ported in the fixed market in the first half of 2008 is 92 706, while the amount of numbers ported in the mobile market in the same period is 293 657. In the respective cases, that is an increase within a year of 12.8% (fixed market) and 23.6% (mobile market).

On the basis of a report on fixed-to-mobile portability, it has been decided not to pass a legislative provision which would oblige the operators to offer fixed-to-mobile and mobile-to-fixed portability to the end-user. However, operators can offer such a service and the market effectively provides services that make it possible for end-users to converge fixed and mobile services.

Consumer complaints

Consumers' complaints regarding products and services offered by the electronic communications providers are addressed to the Consumer Complaints Board. In 2008, the number of complaints received by the Complaints Board reached 391, relating mainly to dispute bills and, to a lesser extent, to the quality of services received. The number of complaints received has fallen significantly in recent years (1 800 complaints received in 2003).

European emergency number 112

The emergency number 112 is very well known in Denmark as it is the only emergency number available since 1992. Caller location information is available from both fixed and mobile networks, with the 'push' forward technology applied for the provision of caller location information to public safety answering points (PSAPs) as soon as a call is received. Approximately 65 250 calls per month are made to the 112 emergency number in Denmark, with the proportion of hoax calls being 75%. If repeated hoax/false calls are made from a certain number, that number can be put on a blacklist.

GERMANY

INTRODUCTION

Fixed broadband and mobile broadband penetration rates continued to increase during 2008. The number of cable broadband connections has grown considerably, mainly driven by a high proportion of new broadband customers. Local loop unbundling (LLU-) based competition remains strong in Germany with a large number of competitors offering electronic communications services. IP bitstream arrived on the market in 2008 and is in the process of being taken up.

The number of fixed subscribers using alternative access providers has grown steadily. Prices for bundles with double-play and triple-play services have dropped noticeably. Mobile options have been added to these double-play and triple-play offers including SIM cards with discounted call rates to the fixed network and one mobile network. A merger of several mobile service providers on the German market has yielded a new player which is now the third biggest mobile service provider according to the number of subscribers.

The deployment of and migration to next generation access (NGA) is still a point of regulatory concern and causes regulatory uncertainty. The medium-term strategy of both the incumbent and other players concerning next generation access does not seem to be transparent. The incumbent's ongoing investment in fibre to the home is currently limited to very high speed digital subscriber lines (VDSL) in big cities for the transmission of IPTV and triple-play, while a few competitors have also made small-scale fibre deployments. Although the Bundesnetzagentur (BNetzA) declared that it intends to set a comprehensive and transparent framework for NGA and to open options for migration of LLU operators, it has not yet taken conclusive action.

REGULATORY ENVIRONMENT

Main regulatory developments

In May 2008 the BNetzA, after lengthy negotiations, decided on a reference offer on IP bitstream, including stand-alone bitstream, and also approved as of August 2008 a reference offer on ATM bitstream. Competitors criticise the insufficient and inflexible control of service quality in the implementation of ATM bitstream as well as the *ex post* approach to price regulation which they say will lead to outdated pricing compared to the price level for leased lines, which are currently the main alternative wholesale product.

The current regulatory decision on mobile termination rates is valid until March 2009. Appeals against this decision, filed by mobile operators, were rejected by the Federal Administrative Court in April 2008. The mobile operators then filed a constitutional complaint against these decisions. The Federal Constitutional Court has not yet decided whether it will accept this complaint and open proceedings.

Regarding the market for wholesale unbundled access to the local loop, on 27 June 2007 the BNetzA was one of the first NRAs to impose on the incumbent the obligation to provide access to its ducts or, if access to ducts is not possible for technical or capacity reasons, to give access to its unlit fibre. This obligation was appealed by the incumbent before the first instance administrative court, which confirmed the decision of the national regulatory authority (NRA) in May 2008. The incumbent then filed a second appeal – still pending – before the Federal Administrative Court. So far the BNetzA has not approved any duct access prices. For determining such prices a two-stage procedure has been agreed with the market players. In the first stage, alternative operators and the incumbent have to reach a business agreement depending on the location and condition of the street cabinets concerned. The BNetzA will then have to approve general prices for access in the second stage. This will probably increase the accumulated delay for new entrants on this market.

There is a pending infringement case before the Court of Justice on the amendment of the German Law on Telecommunications on 18 February 2007 (C-424/07) with respect to the definition of ‘new markets’ and the resulting limitation of powers of the national regulatory authority (BNetzA).

Organisation of the NRA

The level of independence of the BNetzA can be gauged from its decision-making and the composition of its ruling chambers. As mentioned in previous reports concerns continue to exist that the members of BNetzA’s presidential chamber are political appointments. According to the German Telecommunications Act (Telekommunikationsgesetz, TKG) the presidential chamber plays a decisive role in fundamental political questions, including the market definition and analysis of NGA networks.

Decision-making

In 2008, the BNetzA finalised the imposition of remedies on bitstream access and continued the second round of market analysis. The analysis of the wholesale broadband access market was also started, despite the fact that there has not been much time to monitor and evaluate the effectiveness of some first-round remedies, e.g. in the case of ATM bitstream implementation.

Following the procedures of the consultation and cooperation mechanism under the EU telecom rules, the BNetzA submitted, for a second time in one step, its analysis and proposed remedies for the market for voice call termination on individual mobile networks (October 2008). It also notified the Commission about the markets of call origination and call termination on public telephone networks at a fixed location (December 2008). Moreover, the BNetzA sent its notifications on the markets of publicly available telephone services at a fixed location (December 2008). The NRA is obliged by law to repeat market reviews every two years. In its 2008 analysis the BNetzA failed to provide details of the exact termination rates charged by German mobile operators.

Market players still report that the staff resources of the BNetzA in the Ruling Chambers are insufficient for the regulatory workload. The Ruling Chamber on wholesale markets was expanded in 2008. Some network operators have since noticed improvements in the efficiency of decision-making by this Chamber. Nevertheless, the decision process of the BNetzA frequently involves lengthy proceedings, and may last more than four months for a dispute settlement and more than two years for a complete market analysis and the imposition of remedies.

MARKET AND REGULATORY DEVELOPMENTS

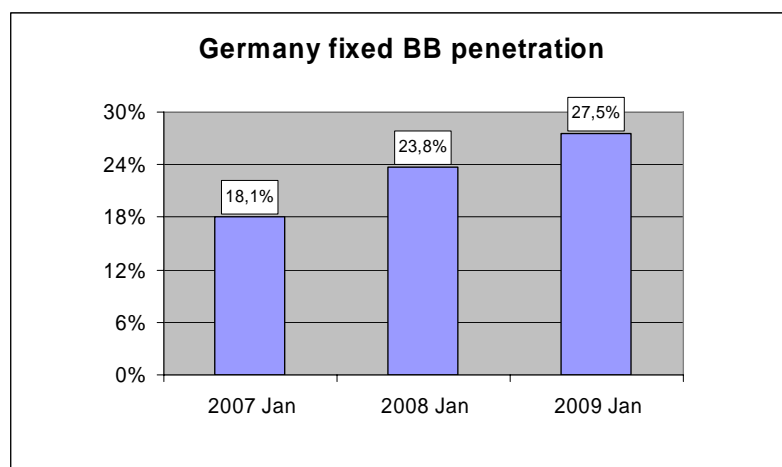
The total turnover of the German telecommunications sector amounted to €64 billion as of 31 December 2007, which is a decline of 3.2% compared to the previous year. The revenue from the fixed markets was €38 billion (€39 billion in 2006), and from the mobile markets €26 billion (€26.6 billion in 2006). The total value of tangible investments by fixed telecommunications operators (including the incumbent) and by mobile operators was €4.8 billion and €2 billion respectively, resulting in a total investment in the telecommunications sector of €6.8 billion. The amount of tangible investment by alternative network operators stood at €3.7 billion⁴⁰.

While voice call traffic volume in fixed networks remained virtually unchanged over the past year, it went up significantly in mobile networks. Stagnation was also observed in the usage of MMS and SMS.

The incumbent fixed operator has continued to roll out its VDSL network in larger cities aiming at competitive triple-play and premium offers. The cable operators have gained market share in triple-play and continue to upgrade the transmission capacity of their networks beyond current VDSL speeds. Increasingly, utility companies have started to invest in fibre infrastructure (“multi-utility” approach).

Broadband

Market situation



The market situation has further improved compared to the previous year with an increasing number of broadband connections and falling prices for flat and bundled offers.

In January 2009, the fixed broadband penetration rate was 27.5% (up from 23.8% in January 2008), which is above the EU average (22.9%).

National DSL coverage increased from 92.6% in 2006

to 95.7% in 2007 and DSL coverage in rural areas reached 87.5%⁴¹. Germany therefore succeeded in increasing DSL rural coverage significantly and so reduced the digital divide for DSL to 8.2 percentage points at the beginning of 2008. For cable, rural coverage increased from 2.5% to 4% while the national coverage went up from 35.7% to 47% over a year. Therefore, the digital divide for cable coverage has widened by almost 10 percentage points to 43%.

In July 2008, 20.7% of the local loops in Germany were unbundled. The proportion of DSL lines based on LLU was 35%, a rise of 3.2 percentage points from January 2008. The alternative operators' share of fixed broadband and DSL-only lines was 54% and 51% respectively. The cable operators' broadband market share was still relatively low – almost 6% – although their customer base developed at the highest rate.

In the wholesale broadband access market, sub-loop unbundling proved to be a viable business case for only a few providers, according to alternative network operators. On the

⁴⁰ This figure is taken from the Dialog Consult/VATM market study “Zehnte gemeinsame Marktanalyse 2008”, based on a poll of the member companies of VATM.

⁴¹ Figures on broadband coverage in this paragraph are taken from the IDATE studies “Broadband coverage in Europe” 2007 and 2008.

other hand, IP bitstream was introduced following the approval of the incumbent's reference offer in May 2008 and has started to be taken up.

DSL remained the prevailing form of broadband access with a market share of 94% of all fixed lines and 66% of all connections having a downstream transmission rate of at least 2 Mb/s. 52% of the cable broadband connections had download speeds of at least 10 Mb/s. The incumbent operator's market share in fixed broadband lines increased in January 2009 to 47.0% (from 46.1% in January 2008) and decreased to 54.5% (from 64.1% in January 2008) with the inclusion of resale offers, remaining at a significant level. There are seven major competitors to the incumbent in the DSL retail market, with market shares varying between 1.7% and 13.4% according to the number of customers.

During 2008, the prices of double-play offers have been stable for most major fixed broadband providers, including the incumbent, and have significantly fallen for one alternative provider. Triple-play offers, including that of the incumbent, have undergone bigger price cuts in the range of 15-25%. The incumbent has offered a premium triple-play product, including advanced TV control and storage options as well as a DSL speed of 16 Mb/s. In the fixed network, many operators provide special offers such as waiving or reducing the connection fee for a certain period or giving fixed sums of credit.

Fibre-based retail broadband lines (fibre-to-the-building, FTTB) have been rolled out by one regional provider with competitive flat-rate voice and double-play offers. Cable providers are the main driver of the triple-play market and are set to become strong infrastructure and price competitors to telecommunications operators. The incumbent operator claims to be still delaying the wide deployment of fibre due to regulatory uncertainty. However, it continued expanding its high-speed VDSL access network in 37 German cities with 9 million potential customers, which is targeted at the provision of high-definition TV for about 30% of the households at streaming speeds of up to 50 Mb/s. Currently, more than 21% of all households have access to such high-speed connections.

The principal market drivers for cable providers are the managed voice and broadband services offered either separately or more often in a bundle on top of the TV service. Cable operators continued to expand their market share in the broadband market and upgraded their networks in terms of transmission speed and service diversification. At the end of 2008 they reported 1.4 million VoIP or broadband subscribers and the acquisition of up to 20% of all new fixed customers. The main product differentiator for cable operators compared to the incumbent and LLU-based competitors is transmission bandwidth. The targeted cable transmission capacity in 2008 is 32 Mb/s with an upgraded feedback channel. In 2009 trials at transmission speeds of up to 100 Mb/s are planned. This will open the door to premium products which are currently unachievable for many telecom operators. Typically, prices of cable-based double-play offers are lower than similar DSL offers. Competitive triple-play offers are provided by the incumbent on a VDSL basis, by one LLU-based competitor on an ADSL2+ basis, and by one city carrier based on FTTB technology.

Cable connections are currently available in 27 million homes in Germany, out of which 23 million homes can be supplied with broadband services including voice, implying a broadband coverage of 58% of households. Even though most of these connections are in urban areas, a lot of them are also deployed in rural areas, often being the only alternative to the incumbent telecommunications operator. Pricing of cable offers is similar to LLU offers at national level but cable products in rural areas are usually more expensive.

As from October 2008, the majority of German cable operators are represented by the association ANGA (a successor to the former Deutscher Kabelverband) with 120 members serving 19 million cable customers in Germany. The biggest cable provider has 50% of all customers.

Mobile broadband access, although used extensively by business customers via UMTS modems in portable computers, still does not represent real competition to fixed lines in residential markets in terms of bandwidth and quality of service.

Regulatory issues

During 2008, the national regulator approved an IP bitstream reference offer, including stand-alone bitstream, and also approved an ATM bitstream reference offer. The state of competition, in particular with respect to the LLU market, is used by the incumbent as an argument to propose geographic segmentation in the broadband market. There are also competing wholesale broadband products based on the combination of LLU and an own backbone network.

Potential customers for the ATM bitstream offer have complained that the reference offer does not allow them to control appropriately the quality of service from the customer premises equipment and that it contains proprietary technological features deviating from the ATM standard. According to them it cannot be considered to be a true real-time offer and does not offer the flexibility of supporting quite different services simultaneously. In addition, the price for ATM bitstream is regulated ex-post which, according to alternative network operators, has led to much higher prices compared to wholesale broadband products via leased lines. As a consequence, alternative operators claim that ATM bitstream is not yet an effective wholesale product, even though the BNetzA has started its second round of market analysis. On the other hand, ATM bitstream is considered by many market players to be a future-proof wholesale technology capable of replacing leased lines since it provides more flexibility in quality-of-service management.

Ethernet-based bitstream handover has not yet been implemented by the incumbent operator, although this has already been demanded by the BNetzA.

Since their adoption in October 2007, the regulatory remedies imposed for all other types of leased lines show implementation delays. Despite an access obligation on the incumbent operator, no reference interconnection offer has been approved and partial private circuits are not widely available.

Next generation access deployments based on VDSL or FTTB continue to make progress in Germany. As already mentioned in the previous report, it is crucial that the NRA monitors the broadband markets and provides transparent information and regulatory guidance regarding the future of multi-service interconnections. The process of upgrading and migrating local exchanges should not create a risk of disruption to alternative market players who depend on the incumbent's wholesale broadband products.

Negotiations involving regulatory and governmental authorities have started between alternative network operators and the incumbent on future interconnection models and migration strategies for NGA. The main aspects of these negotiations are the timetable for migration, compensatory migration charges, the co-existence of fibre-based and ADSL-based access, and commercial VDSL bitstream offers. However, several complaints have been filed with the NRA in relation to NGA migration and interconnection.

Mobile markets

Market situation

The total number of mobile subscriptions and the number of UMTS-capable subscriptions soared in 2008. The mobile penetration rate in October 2008 reached 128.9% (up from 113.3% in October 2007). The mobile broadband penetration rate in January 2009 rose to 14%, whereas the penetration rate of mobile broadband users accessing data services via dedicated data modems, cards or keys was only 2.3%. Market shares have been relatively static with the two largest mobile operators together still holding more than two thirds of mobile subscribers. The market share of the incumbent fixed network operator's subsidiary was 36.6% (37% in the year before). The main competitor held a market share of 34.1% (34.9% in the year before). The third and fourth mobile network operators changed positions in the overall ranking and together had a market share of 29.3% (28.2% in the year before). All mobile service providers without an own network generated 19.1% of the total revenues in

the mobile sector. The volume of mobile voice calls in terms of outgoing connection minutes increased by 33.7% as of 31 December 2007 compared to one year before.

A consolidation of three mobile service providers took place in April 2008, giving rise to a new larger mobile service provider on the German market which is ranked third (in terms of service providers) according to the number of subscribers. There are eight mobile service providers, two of which are mobile virtual network operators (one in 2007), and both of them benefit from access to the network of the fourth largest mobile operator.

The market for pre-paid mobile services has developed rapidly and now almost equals that of post-paid mobile services. The popularity of pre-paid offers has increased due to their particularly low costs for on-net calls and SMS, competitive prices and easy tariff system with just one price for calls and SMS to all other national mobile and fixed-line networks. Mobile operators promote offers with very low connection prices only to their own networks ('on-net') or to the fixed network. In 2008, 56.6%⁴⁰ of the outgoing connection minutes were 'off-net' i.e. directed to numbers of fixed or other mobile networks.

All four mobile operators continued expanding their 3G networks and upgrading them with new technology. The two largest mobile operators have almost completed the HSDPA upgrade of their UMTS networks, which can deliver a transmission rate of 3.6 Mb/s. The UMTS national network coverage of one mobile operator exceeds 80% of the population and for the other three mobile operators it is about 60% or above.

Regulatory issues

The regulation of mobile termination rates in Germany took place in two steps in 2006 and

2007 and has led to a moderate reduction in the retail price of mobile calls to an average level of €0.11 per minute as of 31

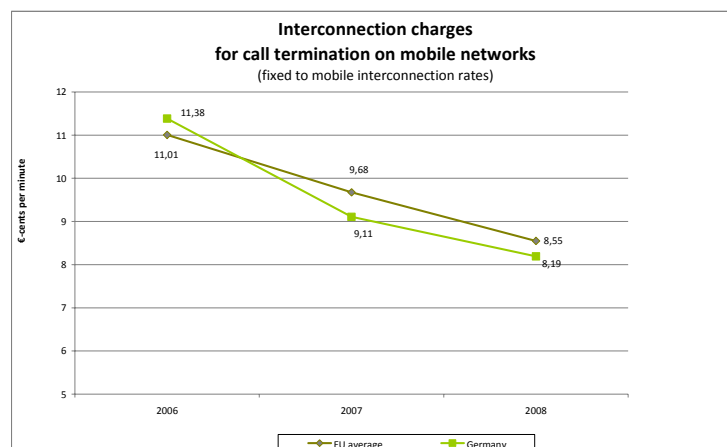
December 2007. The average mobile termination rate decreased to €0.0819 per minute as of

October 2008 (from €0.0911 per minute in October 2007). Fixed network operators have only partly passed on the reductions due to the pending court procedure on mobile termination

rates and the reserves for uncertain liabilities which they set up in anticipation of the decision on ex-ante regulation being appealed⁴². The price levels of the incumbent in particular give no indication that reductions have been passed on to its customers. This was the subject of criticism by the German monopoly commission in its 2007 annual report. Following the Federal Administrative Court's decision of 2 April 2008, these uncertainties no longer exist and the prices are expected to fall⁴².

According to the BNetzA, Deutsche Telekom has reduced fixed-to-mobile tariffs in packages and optional tariffs. It will open the optional tariffs also to all customers without packages, thus allowing 10 million potential customers to profit from them.

The planned amendment of the German Telecommunications Law (TKG) by the government, introducing retail caps to 0180 service numbers, is criticised by some mobile operators for not being preceded by a market analysis by the NRA in accordance with the consultation and cooperation mechanism under the EU telecom rules. The German legislature and the German regulatory authority are of the opinion that the planned amendment does not constitute a case of rate regulation. Rather they believe it is related to the structure and delineation of the numbering ranges, especially regarding the 0900 numbering range for premium services. In



⁴²

This statement reflects an opinion provided by the BNetzA.

this respect, a specific rate limit is to be assigned to a numbering range. The Commission services are monitoring the situation.

Roaming

The average roaming retail price in Germany as of October 2008 was €0.432/minute, excluding VAT.

Germany has not yet fulfilled its obligation under Article 9 of the Roaming Regulation to notify the Commission of the penalties adopted for infringements of the Regulation, and this is being followed closely by the Commission services.

Fixed

Market situation

The incumbent's market share in fixed circuit-switched phone lines ("PSTN" or "ISDN") has dropped to 81.3% (from 84.5% in 2007). As of July 2008, the share of telephone subscribers using direct access to an operator other than the incumbent operator was 19% (up from 16% a year before). These developments are due to increasing competition from alternative telecom operators (either own infrastructure or LLU-based) and cable operators. There were 78 active operators offering public voice telephony by direct access (up from 69 a year before). The total number of active operators offering publicly available telephony services increased to 170 (165 one year before) and the number of managed VoIP operators went up to 75 (48 in 2007), indicating stronger competition and increasing customer orientation to VoIP services. Prices of voice flat-rate offers have been stable or in some cases were decreasing by at least 10% in 2008. The alternative fixed network operators' share of all outgoing connection minutes (including cable providers) reached 53%. Cable competition has increased in 2008 and the number of cable subscribers for voice has almost doubled compared to 2007.

The total amount of investments realised in fixed network infrastructure in 2008 was €4.8 billion. The infrastructure investment of alternative operators has been quite stable in Germany for the last three years.

The volume of voice calls using call-by-call and pre-selection in terms of outgoing connection minutes has continued to drop and now accounts for 39.4%⁴⁰ of the market (down from 51.4% in 2007). This can be explained by the increasing number of customers opting for flat-rate offers and the growth of LLU.

Regulatory issues

Since the adoption of the current regulatory framework the BNetzA has performed two market analyses in the LLU market. The initial deployment of NGA fibre infrastructure has begun in Germany and market players have raised concerns about how the incumbent fixed network operator will proceed with the closure of obsolete main distribution frames (MDF) in the future. In order to ensure business continuity in the process of migrating to next generation access, alternative fixed network providers are considering a variety of strategies including, for example, deploying their own FTTB or fibre-to-the-home (FTTH) technology, access to ducts or negotiations on a commercial VDSL bitstream contract with the incumbent. The incumbent network operator has revealed only its provisional plans on NGN roll-out and legal uncertainty which still exists in some areas needs to be addressed. In particular, the lack of a timely regulatory approach by the BNetzA to the *ex ante* pricing of access to ducts as well as the lack of pro-activity on markets such as VDSL bitstream are likely ultimately to create barriers to competition and investment. The Commission services are monitoring the situation.

Currently, the obligation for pre-selection is fixed in German telecommunications law. The obligation for call-by-call and carrier pre-selection is claimed by the incumbent to have become an obsolete regulatory instrument since competitive LLU-based offers, especially flat rates, dominate the market. In parallel to its PSTN offer, the incumbent operator intends to launch a future offer of single all-IP subscriber lines, where pre-selection can be carried out by router programming. Moreover, the BNetzA has conducted the second round of analysis of

the markets for publicly available telephone services, including fixed-to-fixed and fixed-to-mobile calls at a fixed location and has proposed to withdraw the regulatory measures on these markets. The Commission services have assessed this case.

In June 2008, the BNetzA set one-off fees for LLU (valid until June 2010) and further reduced the price levels for shared access. In November 2008, it increased the interconnection charges for call termination at the fixed network by 4.4% (the incumbent had requested 10%). For the first time in such a decision the regulatory authority took into consideration the costs of special personnel compensation programmes and employment-securing programmes of the incumbent operator. The Commission services are looking into the matter.

Broadcasting

Market situation

The situation in the German retail market for TV and radio has remained unchanged compared to the previous year⁴³ – in July 2008 end-users mainly used cable (52.5%) or satellite (42%). 46.7% of households have access to digital TV programmes. The share of households with digital terrestrial television (DVB-T) grew slightly to 10.5% (from 9.9% in 2007). Television via DSL ("IPTV") accounted for just 0.3% of the serviced households.

Mobile TV does not have a significant share of the market.

In June 2008, there were ten major cable providers including four big companies with more than two million customers each.

Regulatory issues

The BNetzA has imposed remedies in the broadcasting transmission services market, which was subsequently removed from the Commission's current recommendation on relevant markets⁴⁴ in April 2007. Accordingly, cable operators have to grant signal delivery access to downstream cable operators, whereby the signal at the handover point must be decoded. The allegedly high implementation costs for such a handover are not conducive to allowing competitive retail offers by new entrants. Cable operators consider the signal delivery market at national levels three and four⁴⁵ to be competitive so that regulatory measures should have become obsolete. A subsequent market review is expected to be notified by the regulatory authority in due time.

The release of broadcast radio spectrum for mobile services in the UHF range (digital dividend) is under discussion in Germany as part of the preparation of the next frequency allocation ordinance (FreqBZPV) by the Federal Ministry of Economics and Technology, which is expected to be adopted within the first few months of 2009 with the agreement of the Bundesländer.

Horizontal regulation

Spectrum management

As regards frequency harmonisation at European level, Commission decisions adopted up until the end of 2007 are reported to have been implemented, except Decision 2007/344/EC on the harmonised availability of information regarding spectrum use. Furthermore, Germany has to implement the Commission Decisions adopted in 2008, and in particular Decision 2008/477/EC on the use of the 2.5-2.69 GHz frequency band for electronic communications, by making changes to the national framework for frequency allocation. The assignment of 2.6 GHz spectrum for electronic communications services is the subject of court proceedings in

⁴³ The figures in this paragraph are taken from the digitisation report 2008 published by the Association of the Media Authorities of the Länder (prepared by TNS infratest). More than one TV reception path per household may be available.

⁴⁴ Commission Recommendation 2007/879/EC.

⁴⁵ For historic reasons, the cable network in Germany is divided into four network levels. Network levels 1 and 2 serve to transport signals from broadcasters to regional distribution points. Network level 3 extends from these distribution points to the transfer points outside the subscriber's home. Network level 4 is the part of the network from the transfer point to the cable jack in the subscriber's home.

Germany. Both the 2.6 GHz and 1.8 GHz frequencies will probably be auctioned for next generation communications services in 2009. The Commission requested clarification from the German federal government on the auction of 2.6 GHz frequencies in view of the above-mentioned Commission decision, especially with respect to the principle of service neutrality. All mobile operators welcome the discussions and the expected allocation of the digital dividend spectrum for wireless services. It will allegedly reduce the deployment cost of future mobile broadband networks in rural areas by 66% compared to the current cost of deploying UMTS networks in the frequency range around 2.1 GHz. The digital dividend makes available additional bandwidth below 1 GHz for next-generation mobile access, complementing the re-farming of the 900 MHz spectrum, which alone will probably not meet high bandwidth demands.

The Federal Ministry of Economics recently published a draft amendment to the Ordinance on Frequency Allocation which caused controversy and led to disputes between the Bundesländer on the usage of the digital dividend. However, there are signs of compromise which could lead to a solution in the first half of 2009. The Commission services are looking into the matter.

THE CONSUMER INTEREST

Tariff transparency and quality of service

The transparency of DSL offers with respect to the achievable download rate and related contractual obligations are often criticised by German citizens. They complain of very low DSL speeds and the lack of opportunity to cancel a contract or seek compensation in cases of possible violation of the contractual obligations by the incumbent.

The consumer protection organisations conducted an online survey in November 2008 which showed that consumers are forced to wait for one month on average to change their broadband provider. Two thirds of the participants in the survey indicated that they were not satisfied with the customer service of their provider.

Universal service

In Germany no undertaking is designated for the provision of universal service. The State authorities have not intervened as they consider that the market provides the necessary service.

Number portability

In 2008 the average period for having a phone number ported and operational was five working days for fixed numbers and three working days for mobile numbers, similar to previous years. No wholesale charges are levied in the case of the fixed network and the incumbent operator's retail price is regulated at €5.81. Mobile operators charge end customers between €21 and €30 for porting a number.

Between 1 October 2007 and 1 October 2008 there were 558 928 new ported mobile numbers, giving a total amount of 1 987 647 ported mobile numbers in Germany.

Consumer complaints

The number of consumer complaints registered by the BNetzA in 2008 increased compared to the year before and while the exact number is not available it seems to be about 36 000. A few complaints have also been directed to the Commission. As mentioned above, citizens' complaints demonstrate unacceptably low download DSL speeds for the connections provided by the incumbent, especially in rural areas. It is evident that citizens often assume that the DSL speeds claimed in offers, and included in subsequent contracts, are not simply upper limits but rather typical operating speeds. It appears that DSL offers do not make clear, or even completely omit to inform consumers about, the technical limitations of their DSL connections.

Some citizens also complain about the lack of choice of broadband offers in rural areas, where often the fixed line provided by the incumbent operator represents the only possible choice for broadband access.

European emergency number 112

As indicated in the previous report, 112 is technically operational in Germany. Since 112 has been used in Germany for decades to call the fire brigade and the rescue services in emergencies, it seems that its EU-wide application and its usage as a universal emergency number, including for calling the police, needs to be emphasised.

Must-carry

Must-carry is regulated in all sixteen “Bundesländer”, and in some of these all analogue channels are reserved for must-carry. It appears that in a few Bundesländer the stations that take part in terrestrial digital TV provision (DVB-T) receive, in turn, must-carry status for analogue provision via cable. Restrictions are regulated in the legislation and in cable allocation statutes of the Bundesländer. Some must-carry rules have been called into question by market players, and the Commission initiated an infringement proceeding against Germany in October 2006. In so doing, the Commission addressed the legislation of four Bundesländer, without prejudice to the legislation dealing with must-carry rules or the application of these rules in the remaining Bundesländer.

In parallel with the Commission's proceedings against Germany, a German national court asked for a preliminary ruling from the Court of Justice with regard to the must-carry legislation for the Land of Lower Saxony (C-336-07). On 22 December 2008 the Court of Justice ruled that Article 31(1) of the Universal Service Directive does not preclude national legislation from requiring a cable operator to carry over its analogue cable network television channels and services that are already broadcast under DVB-T, even if this results in the utilisation of more than half of the channel capacity available. In the event of a shortage of available channels, this legislation can also provide for an order of priority of applicants which results in full utilisation of the channels available on that network. The Court stated, however, that these obligations should not give rise to unreasonable economic consequences, which is a matter for the national court to establish.

Data protection

As a result of scandals concerning theft and misuse of personal data, also involving the incumbent operator, the German government adopted in December 2008 the draft of a new law on data protection. This draft prohibits the circulation of any private data without the explicit approval of the person concerned, and closes a gap which existed before for certain types of personal data. In particular, internet sales with major companies may not depend on the customer's agreement that his or her personal details be further used for marketing purposes. The law may be enacted in the middle of 2009.

The Parliament's Legal Committee adopted, also in December 2008, a draft law regarding the compensatory payments to providers for complementary services on telecommunications interception. Sector associations criticised the lack of adequate compensation of their member companies for the infrastructure investment for data retention which these companies have undertaken.

ESTONIA

INTRODUCTION

Broadband penetration rose steadily and infrastructure-based competition increased in Estonia in 2008. Take-up of mobile broadband services and innovative services such as IPTV (Internet Protocol Television) has increased. Although the number of fully unbundled local loops has increased, it is still very low, and ineffective take-up of broadband access services on the incumbent's network remains to be addressed.

In 2008 the national regulator initiated a new round of market analyses in the most significant markets, such as the physical network infrastructure access market (LLU), the wholesale broadband access market and the market for voice call termination on mobile networks. The regulator has focused on the implementation of remedies, which could promote competition and result in more choice and lower prices if well implemented.

REGULATORY ENVIRONMENT

Main regulatory developments

Overall, there were no major changes in the legislative environment in 2008 in Estonia. An amendment of the Broadcasting Act has advanced the date for digital switch-over to 1 July 2010 instead of 2012.

The Estonian Competition Authority initiated the second round of market analyses, and focused on improving the implementation of remedies in order to address competition issues.

Organisation of the NRA

A new organisational model was introduced in Estonia on 1 January 2008. The regulatory tasks of the electronic communications sector are now divided between two authorities: the Estonian Competition Authority (*Konkurentsiamet*, ECA) and the Estonian Technical Surveillance Authority (*Tehnilise Järelevalve Amet*, ETSA), both acting as multi-industry regulators. ECA is responsible for economic regulatory issues of non-competitive markets, and ETSA is responsible for issues of technical safety, use of radio frequencies, numbering and electronic communications networks. They replace the previous five governmental authorities, namely the Estonian Energy Market Inspectorate, the Estonian Competition Board, the Estonian Railway Inspectorate, the Estonian National Communications Board and the Technical Inspectorate, acted in the administrative area of the Ministry of Economic Affairs and Communications.

The Estonian NRA (ECA) carries out the main regulatory functions for the electronic communications sector. It has a small operating budget and the staff dealing with electronic communications issues is limited to 13 persons. There are 47 staff members dealing with electronic communications issues in ETSA. It remains to be seen whether ECA will use its limited resources in a more efficient manner and put in place an effective monitoring mechanism, while still carrying out the new round of market analyses. According to market players, the intervention of the NRA is not as effective as it could be and self-initiative is limited.

A positive effect of the reorganisation is that since the competition body and the electronic communications regulatory body have joined forces, the consistency between competition and sector-specific regulation seems to have been improving. As an example, both units have been involved in the settlement of disputes regarding access to ducts.

Enforcement powers of the NRA regarding sector-specific regulation, which are governed by administrative law, continue to restrict the maximum penalty threshold to the considerably low level of about €3 000. However, in some cases it might be possible to use the

Competition Act as an enforcement tool, which provides for stronger enforcement powers, as the maximum penalty threshold is restricted to about €30 000.

Dispute-settlement procedures are used by market players and the legal time frame of four months is generally respected. However, operators doubt whether ECA has sufficient expertise and staff to deal with specific communications issues fast enough.

Monitoring market developments has been a challenge for a number of years in Estonia. The NRA has been faced with a failure by numerous market players to provide market data or has received them in confidence only, which prevents their publication. Discussions are ongoing between the NRA and the industry representatives on this issue, including proposals to define a certain set of market data that will be considered public, but without success so far.

Decision-making

Effective competition was declared in eight out of 18 markets during the first round of market analyses. Three of the SMP decisions adopted by the authority have been contested in court by the operators affected, two of them regarding mobile termination rate (MTR) and one regarding fixed termination rate (FTR) regulation, although the remedies are in place. One application for appeal was dismissed by the Supreme Court in December 2008.

In March 2008 ECA initiated the second round of market analyses of the markets listed in the Commission Recommendation 2007/879/EC, in particular as regards the markets for voice call termination on mobile networks, physical network infrastructure access market (LLU) and wholesale broadband access. The regulator has continued to address the level of competition by improving the remedies imposed on the market players over the years. This is due to the fact that on several occasions, the SMP operators were allowed to further specify the remedies, such as cost-based pricing and the choice of an appropriate cost-accounting model, thereby creating regulatory uncertainty for market players.

Market players tended to lodge complaints under general competition law in 2008. One investigation, launched in 2006 on the basis of several complaints regarding access to ducts and the high prices charged by the incumbent when granting access to ducts to alternative operators, resulted in May 2008 in lower prices and better access conditions in specific areas for the complainants. Several cases are still under examination by the competition unit of the ECA (almost all relating to access to the incumbent's ducts).

MARKET AND REGULATORY DEVELOPMENTS

The total turnover of the Estonian electronic communications sector has grown by 4.8 percentage points and was about €741 million as at 31 December 2007 compared to €707 million one year before. The revenues have increased for both fixed and mobile markets. The revenue from fixed services has increased by 18% compared to 2006 and was about €294 million (€250 million in 2006). The revenue for mobile services has increased by 23% compared to 2006 and was about €446 million (€360.5 million in 2006). Electronic communications sector revenue as a proportion of GDP was about 4.8%, significantly above the EU average (2.8%).

The total value of tangible investments grew by 23% and was €95 million in 2007 (€77.1 million in 2006), with €35 million being invested by the incumbent operator (€31.7 million in 2006). Investments in mobile networks rose by 36% compared to 2006 (from €33.6 to €45.6 billion). The ratio of investments over GDP was about 0.6%, which is above the EU average (0.38%).

The structure of the market did not change significantly during 2008. The demand for bundled products is increasing and, as a consequence, it is becoming more important for operators to be able to offer a full communications package including both fixed and mobile services.

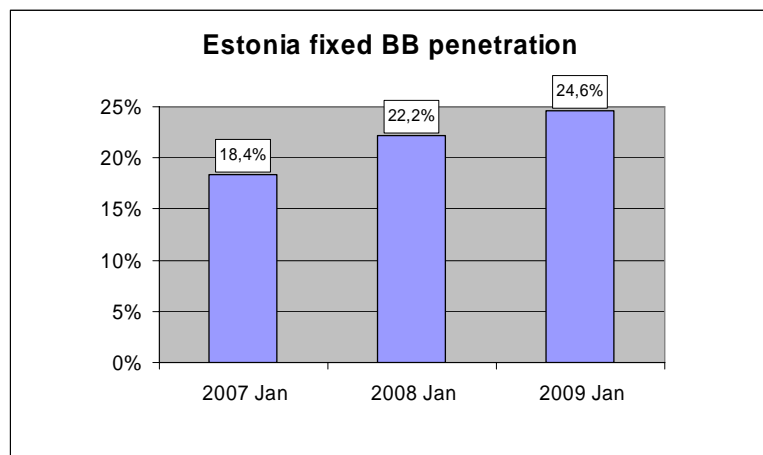
The consolidation that started in 2007 with the creation of a new telecom group in Estonia was eventually authorised in April 2008. As a result, five separate legal entities – an MVNO, two alternative fixed telephony operators, one country-wide WiMAX service provider and a

legal entity holding the fourth UMTS licence in the 2100 MHz band – were merged into one telecom group.

Promoting competition in recently regulated wholesale markets appears to be complicated, due to a number of unresolved complaints and pending court cases. Low take-up of wholesale broadband services by operators and access to the incumbent's local loop unbundling (LLU) products constitute the key regulatory challenges for the year ahead.

Broadband

Market situation



The steadily growing Estonian broadband market is characterised by strong infrastructure competition in urban areas. Competition is also growing in rural areas, mainly based on wireless solutions. The broadband penetration rate is 24.6% (January 2009), placing Estonia tenth in the EU, above the EU average (22.9%), and has grown 2.4 percentage points since last year. Consumers are availing themselves of bundles

offered by several service providers and IP-TV (IP-TV penetration rate is 5% of the population).

The number of fixed broadband lines in total has grown by 10%, from 298 291 in January 2008 to 329 436 in January 2009. The market share of the new entrants' fixed broadband lines has grown from 45.4% in January 2008 to 47% in January 2009.

DSL is not the predominant technology in Estonia and its market share has even dropped from 45.6% to 41% in the last twelve months. The share of technology other than DSL has grown to 59% in January 2009. Cable and FTTx hold market shares of 23% and 21% respectively. A minority of all broadband service end-users access the Internet via wireless networks (11%), although this figure has grown by 5 percentage points over a year. The increase in the use of wireless technology (5% per annum) is mainly due to the fact that one operator launched CDMA-based services in the 450 MHz frequency band in summer 2007 and currently provides nationwide coverage. Moreover, coverage of the WiMAX technology expanded to 80% in October 2008, and will be 100% according to the plans of the network operator, which is offering services on the wholesale level.

The number of 3G users using the Internet is growing (3G penetration is 6% of the population), as operators expand the coverage of 3G networks. While the prices for mobile broadband services are comparable with fixed broadband services, the usage of 3G services is so far restrained by limited geographical coverage.

As regards the LLU market (physical network infrastructure access market), the prices for unbundling have dropped, mainly due to the change of cost accounting methodology, applied with regulation. However, the take-up of LLU services is still limited and only 4% of all connections are based on local loop unbundling in the DSL segment.

Similarly, take-up of the incumbent's wholesale broadband products remains very limited and they are mainly used to provide services to corporate customers. According to alternative operators, one of the reasons why the take-up of broadband products is slow is a low margin for operators using these services when providing retail services to their customers.

Regulatory issues

Promotion of competition in the LLU market, and the provision of wholesale broadband services on the DSL market, seems to be one of ECA's key challenges in 2008. In spite of the remedies imposed by ECA on the fixed incumbent in the market for LLU (the physical network infrastructure access market) and the market for wholesale broadband access in 2007, the NRA has admitted that the market structure of these markets is not conducive to effective competition, and the take-up of the incumbent's wholesale broadband products remains very limited. The NRA is considering addressing primarily the pricing issues in the ongoing second round of market analyses.

While the prices of LLU have dropped, access to ducts appears to be the biggest problem in this market since existing ducts are full or have limited capacity and the building of double or new ducts is complicated (especially in the cities) due to restrictions imposed by local administrative rules.

As a result, there are some areas where the incumbent still holds a large market share because of lack of competing products in the DSL market. The incumbent is obliged to grant access to ducts only if necessary for the provision of LLU access services defined as a part of the LLU market. The NRA received a lot of complaints on this issue in 2008 and has been involved in the settlement of disputes. While the incumbent was forced to grant access in some cases, the process is considered to be time-consuming and costly. The NRA is considering the introduction of regulation with regard to ducts and fibre networks in the new round of market analyses.

Mobile markets

Market situation

The Estonian mobile market is characterised by keen competition at the retail level. Mobile penetration growth, having slowed down slightly, now stands at about 134% (with an increase of 2.5 percentage points compared to last year), which is significantly above the EU average of 118.9%. While fixed calls have continued to decrease, the volume of mobile minutes and the turnover of mobile retail services continued to grow also in 2008.

Three main providers are operating their own GSM and

UMTS networks, whereas the fourth operator offers its GSM services as a mobile virtual network operator (MVNO), although it has started to operate commercially its own UMTS network. The market shares of the three main mobile network operators (MNOs) have experienced no significant changes since last year. The average price-per-minute of mobile communications in Estonia in 2007 was relatively low (€0.11), whereas the EU average is €0.21.

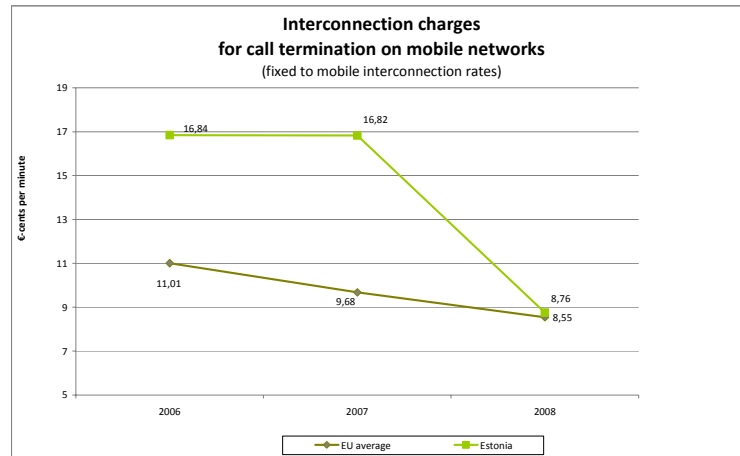
UMTS services have continued to grow, thanks to improved network coverage, enhanced terminals and the launch of mobile broadband and mobile TV by the main market players. UMTS is available in all county towns and also in several smaller cities.

The MVNO, which entered the market in 2007 and which benefited from a non-SMP operator status, applied until July 2008 a mobile termination rate of €0.22, which considerably exceeded the regulated level. The competition situation forced the operator to reduce the mobile termination rate by up to 53% (to the level of €0.11) from August 2008.

Regulatory issues

Following a downward glide path to reduce MTR prices, introduced by the NRA in 2006 and subject to review every year, the settled price for 2008 is €0.876 (which corresponds to the EU average of €0.855 in October 2008). Two smaller operators launched appeals to the national court regarding the market for voice call termination on mobile networks. While the Supreme Court dismissed one application for appeal in December 2008, the other appeal is still pending since April 2006.

In March 2008 ECA initiated the process for the second round of market analyses based on the Commission Recommendation 2007/879/EC in the market for voice call termination on mobile networks. The NRA launched the national consultation period in December 2008.



Roaming

All operators in the market have implemented the Roaming Regulation requirements. However, from August 2007, when the Regulation entered into force, the effect on roaming tariffs in Estonia was twofold: in most cases operators had to reduce the high prices that had so far been applied for roaming calls, but in some cases they were able to raise low roaming prices up to the ceiling provided for by the Regulation. According to the data provided by the ERG, the roaming prices for receiving and making voice calls and for SMS services are below the EU average, except the price for data services, which is above the EU average (over €3 per MB, while the EU average is around €1.3). All operators apply the voice call charging interval of one minute.

Fixed

Market situation

The traditional fixed market volumes have continued to shrink, mainly to the benefit of mobile and broadband services. As reported by the NRA, fixed telephone penetration is low, at 30%, and has remained at this level for several years, while fixed line penetration stands at 37.3% and is slightly increasing, since connections are used for broadband services. Regulation has not significantly improved competition in the fixed markets so far. While alternative operators have slightly gained market share, the incumbent continues to hold a very significant position in the market with a market share above 70% for all types of voice calls, except for international calls. The largest alternative competitor on the fixed market uses a combination of carrier pre-selection (CPS), full LLU (lower bandwidth) and own network elements. Sixteen market players provide national calls services, (six of them using CS/CPS), with the average price for national calls being below the EU average. There are nine managed VoIP operators. In 2008, despite the fact that the fixed voice call market is decreasing, the trend to replace single services with bundled offers was growing fast. Alternative operators claim that it is difficult to compete with the aggressive offers of the incumbent operator. In rural areas the incumbent is considering moving some fixed network customers into wireless solutions, either GSM/UMTS or other wireless solutions, due to the removal of landlines.

Regulatory issues

The first round of market analyses had revealed effective competition on fixed retail call markets, but applied remedies to the incumbent on fixed retail access markets and on the market for fixed wholesale call termination. A court case concerning the latter market initiated by one alternative operator in 2007, and suspended until the final decision of the Supreme Court regarding the market for voice call termination on mobile networks, is still pending.

While mobile termination rates have decreased significantly as a result of the applied regulation, the fixed incumbent operator has not dropped the retail prices for fixed to mobile calls.

While the incumbent is required to apply interconnection prices calculated on the basis of historical costs, alternative operators are applying asymmetrical rates based on a price cap calculated on the EU weighted average (unless a different termination rate is substantiated by underlying costs). As a result the fixed termination rate (FTR) of the incumbent operator has decreased, but two alternative operators managed to raise the termination rate above the EU average, whilst others apply a rate which is the same as the EU average level. Following the regulation of the market for call termination on fixed networks, four price supervision procedures were completed by ECA in the course of 2008. They related in particular to the application of fixed termination rates by operators applying the FTR, based on their underlying costs.

Broadcasting

Market situation

About 45% of all customers use the terrestrial broadcasting transmission platform in Estonia, whereas the number was 52% a year ago. The decrease could be explained by a significant increase in IP-TV take-up over the last year, which has grown from 5% as of 2007 to 11% as of July 2008. Cable and satellite usage has not changed significantly, and the percentages are respectively 39% and 5% of customers.

Spectrum for digital TV would include nine multiplexers in total, according to the GE-06 plan (Regional Agreement GE-06, adopted by Regional Radiocommunication Conference 2006, for planning of the digital terrestrial service in parts of Regions 1 and 3 in the frequency bands 174-230 MHz and 470-862 MHz). The Estonian authorities have so far granted licences for three multiplexers to the broadcast network operator (51% State-owned). Two of them broadcast twenty pay-TV channels covering over 80% of the population, while the third multiplexer delivers free-to-air public broadcasting services, and has increased its coverage to 95% of the population. The procedure for assigning the fourth licence to the incumbent operator is ongoing. After the analogue switch-off, the NRA will probably issue one or two licences for additional multiplexers, while for others it will wait for the digital switch-over in Russia (2015) and in Latvia (expected in December 2011) before doing so.

As regards mobile TV, the broadcast network operator and one electronic communications operator launched a DVB-H (Digital Video Broadcasting: Handheld) pilot trial in the capital in May 2008. Several free-of-charge channels were on offer. The trial ran until the end of 2008. Full DVB-H service could be deployed after the Estonian Digital Dividend strategy has been worked out.

Regulatory issues

An amendment to the Broadcasting Act on 13 July 2008 advanced the date for analogue switch-off to 1 July 2010 (previously it was 2012). In order to manage the digital switch-over, an expert committee has been formed by the government and a detailed action plan is being developed annually. The first digital switch-over operation has already taken place in one island.

To make the transition to digital broadcasting more attractive, the government offered, by amending the Broadcasting Act, to waive next year's licence fees (of €1.6 million), if broadcasters in Estonia start digital transmission by 1 July 2008. Two leading commercial broadcasters that fulfilled these conditions were freed from the licence fees and also had their licences, which were up for renewal in 2009, extended automatically until 2015.

Horizontal regulation

Spectrum management

There are so far no reported plans for the use of the digital dividend to be generated by the switch-over of analogue broadcasting for services other than high definition broadcasting and mobile TV. However, the Estonian Digital Dividend strategy is currently under preparation. Following statutory amendment of the procedure for approval of conditions of frequency authorisation, as of 1 June 2008 ETSA must, before issuing the frequency authorisation, coordinate the conditions of the frequency use with the Health Protection Inspectorate in order to minimise possible health risks in relation to electromagnetic radiation.

It should be noted that Estonia has bilateral concerns regarding spectrum coordination arising from its border with Russia. Several attempts to conclude a spectrum coordination agreement to avoid interference with Russian mobile operators in the remote areas near Estonia's eastern border have failed.

The implementation of Commission Decision 2007/344/EC on the harmonised availability of information regarding spectrum use is under way, while other spectrum harmonisation decisions are already implemented.

THE CONSUMER INTEREST

Tariff transparency

Consumer usage of the online tool to compare customer tariffs is rising, not least since it is accessible through different websites. Information is updated once a month and new functionalities, aiming at improving transparency, are added regularly, like an interface with a Numbering Management Database allowing individual comparisons.

Universal service

In Estonia an alternative operator continues to be bound by a universal service obligation. However, universal service as currently offered is not a relevant service for the large majority of users in Estonia, and only a few new lines are granted under the universal service obligation. The ECA has noted that there is a growing demand for high-capacity broadband data services when installing new fixed lines.

Number portability

In general, number portability is not used much in Estonia compared with other EU countries. In absolute figures there has even been a decrease in fixed number portability from 12 536 as at October 2007 to 8 586 as at October 2008, most likely due to overall shrinking of the fixed voice market. However, the number of ported mobile numbers has increased from 29 734 as at October 2007 to 39 577 as at October 2008, but the rate of ported mobile numbers over total mobile subscribers is still one of the lowest in Europe (2.2%). Estonia is one of the countries in Europe where no price is charged for number portability.

While the maximum period for porting fixed numbers settled by the Electronic Communications Act is 30 days, on average it takes 8 to 13 days to port fixed numbers, while the porting of mobile numbers takes 5 to 11 days.

European emergency number 112

Emergency call handling centres receiving 112 calls can, where necessary, put the call through to the emergency call handling centre of another emergency service which is competent to deal with the call concerned. Certain measures, like the possibility to contact emergency services by fax, are in place for people with disabilities. As regards reform plans, Estonia has indicated its intention to revise the system of emergency numbers, as there is one additional national emergency number for one of the main emergency services.

Consumer complaints

The authority dealing with consumer complaints is the Consumer Protection Board (*Tarbijakaitseamet*). Many complaints still concern disputes about bills, and contract termination. A new issue is bills related to mobile Internet, for which pricing conditions are unclear according to consumers. The majority of complaints are solved by written procedure. Bilateral meetings with undertakings are arranged for large-scale cases.

Data protection

The Data Retention Directive is transposed in the Electronic Communications Act, which entered into force on 1 January 2008.

IRELAND

INTRODUCTION

Competition between different infrastructures continued to develop in 2008, with mobile and cable operators attracting many new broadband customers. Nevertheless, fixed broadband penetration was still below the EU average. Removal of retail regulation of fixed calls has meant that the incumbent is in a position to make service offers, in particular bundles, which, combined with the persisting high local loop unbundling (LLU) prices, affects negatively the prospects of the alternative operators.

While the Irish government has launched a major initiative to support the development of next generation networks (NGN), it remains to be seen how the industry will pursue investment plans in a new economic environment. The mobile sector is awaiting important spectrum-related decisions that will shape its future for years to come.

REGULATORY ENVIRONMENT

Main regulatory developments

In 2008 the Irish government issued a consultation paper on next generation broadband, setting out a vision and a framework for investment by the communications industry in next generation broadband networks, and looking at ways in which the government could contribute to the success of the process. The policy actions suggested include requiring open-access fibre connections in new buildings and better use of public infrastructure for backhaul connections, as well as public funding.

The Commission for Communications Regulation (ComReg), the Irish national regulatory authority, undertook several important regulatory initiatives in the mobile sector, proposing liberalisation of the future use of the 900 MHz and 1800 MHz ("GSM") spectrum and reduction of the wholesale number portability charges in particular.

Organisation of the NRA

In 2008, as a result of the Communications Regulation (Amendment) Act 2007, ComReg started performing new functions relating to the registration of the ".ie" domain names. The Communications Minister also announced his intention to enact legislation in early 2009 to transfer the regulation of the content and marketing of premium rate telecommunications services from the private sector (a company called "Regulator of Premium Rate Telecommunications Services Limited" (RegTel)) to ComReg.

ComReg's powers to investigate breaches of competition law in the electronic communications sector, established in 2007 through the amendment of the Competition Act 2002, have not resulted in any findings yet. Nevertheless, several complaints have been received and are being investigated by ComReg.

It seemed also too early to see the impact in practice of the replacement of the Electronic Communications Appeals Panel with the possibility of appeal to the High Court in 2007. The principal reason for replacing the appeals panel process had been that the anticipated increase in speed and reduction in costs as compared with court procedures would not effectively materialise. Yet, the first estimations by alternative operators are that the Panel could have been a quicker and cheaper option for the resolution of disputes.

Decision-making

The second round of market analyses is well under way. The second reviews of most fixed markets had been notified to the Commission by the end of 2007. In 2008, ComReg further notified to the Commission the analysis of the retail and wholesale leased lines markets.

Notifications concerning the markets for wholesale fixed physical network infrastructure access (LLU) and wholesale broadband access are planned for 2009.

The review of local loop unbundling (LLU) pricing, and elaborating a consistent and effective approach to pricing of bundled services, appear to constitute the next challenges for the regulator in particular.

As demonstrated by a recent mobile interconnection dispute, ComReg is finding it challenging to observe the target time frame of four months for resolving disputes while following all required procedural steps at the same time. A public consultation on the dispute settlement process is planned for 2009.

MARKET AND REGULATORY DEVELOPMENTS

The total turnover of the Irish telecommunications sector was €4.4 billion as of 31 December 2007, compared to €4.1 billion one year earlier. The fixed segment contributed €2.3 billion, and the mobile segment €2.1 billion. Investments in telecommunications networks reached €300 million at the end of 2007 and were largely driven by mobile operators who invested a total of €253 million, resulting in an investment over revenues ratio of 6.9%, below the EU average.

Following the announcements made in 2007 about the gradual roll-out of very high speed digital subscriber lines (VDSL2), the incumbent further clarified its next generation network strategy in 2008. In particular, the incumbent would first upgrade the core part of the network and would then invest in the access part. Concerning the latter, trials of VDSL2 solutions are ongoing at two exchanges and 50 cabinets. Once the results of these trials have been analysed, the incumbent will be in a position to make the necessary investment decisions.

The incumbent's transition to NGN had already been accompanied by regulatory discussions in 2007. In February 2008, the market players communicated to the incumbent their expectations as to future wholesale products. The incumbent would prefer, however, to wait until the VDSL2 trials are completed before elaborating specific wholesale products. ComReg continues to pursue discussions with both the alternative operators and the incumbent, and plans to take the NGN developments into account in its imminent analysis of the wholesale broadband access market.

The changing economic environment has meant that the incumbent's consideration of plans for structural separation have been suspended. It also remains to be seen how the new environment and the reported plans by the incumbent's main shareholder to sell its stake will affect the development of NGN.

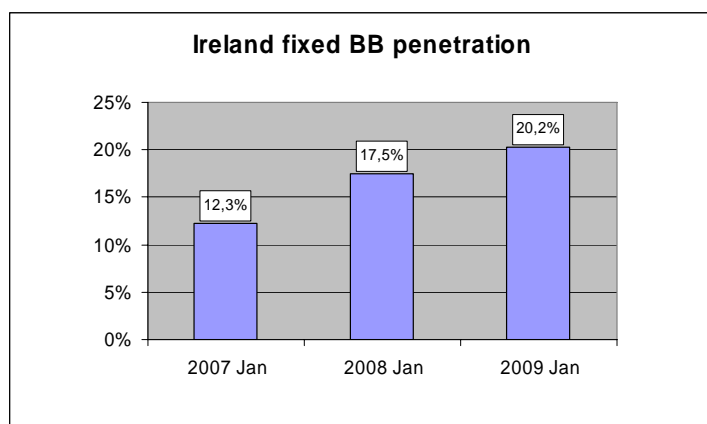
Close to 10% of the Irish population subscribed to bundled offers (mostly "double play") of electronic communications services in 2008. This share has the potential to increase in the near future, as operators are pursuing active marketing strategies. The alternative operators have urged ComReg to put in place clear rules concerning the incumbent's bundles, particularly in light of recent low-priced offers. ComReg launched a public consultation on the treatment of regulated services within bundled retail offers in January 2008, but the final decision was still under consideration at the end of 2008.

Broadband

Market situation

In January 2009, fixed broadband penetration reached approximately 20.2% compared to around 17.5% in January 2008, while the EU-27 average stood at 22.9%. Broadband services are provided through a number of competing infrastructures: growth of wireless local loops (WLL) has levelled off, but cable broadband lines have expanded by almost 33% within a year. Mobile broadband penetration stood at 20.5%, largely above the EU-27 average of 13%. Overall, digital subscriber lines (DSL) remain the main technology, with 74% of subscribers in January 2009. As of January 2009, 31% of all DSL subscriptions were supplied by alternative operators, indicating no change compared to January 2008. The fixed broadband market share of the incumbent grew slightly in 2008 and was 52% in January 2009, above the EU-27 average of 46%.

The Irish government has recently completed the competitive tendering process for the



National Broadband Scheme (NBS), aimed at extending broadband access to the remaining portion of the population (estimated at approximately 10%) that is not covered by the existing broadband infrastructure. In December 2008, the contract for delivery of the scheme was awarded to a mobile operator. It is expected that broadband services will be deployed in all NBS areas within 22 months. National DSL coverage increased

from 86% in 2006 to 89% in 2007, and DSL coverage in rural areas stood at 73%, an increase of 9 percentage points over a year. For cable, rural coverage increased from 4% to 15%, and the national coverage grew from 8% to 27% over a year. Ireland therefore succeeded in narrowing the digital gap for DSL from 22 to 16 percentage points, although the digital gap for cable widened from 4 to 12 percentage points.

Regulatory issues

Following the resolution in 2007 of a number of local loop unbundling issues, such as migration paths to LLU from other wholesale products, and enhanced Service Level Agreements (SLA), ComReg took some further regulatory steps in 2008. In particular, the incumbent was directed to reduce the line share monthly rental charge from €8.41 to no more than €2.94 as of 25 July 2008, and the LLU ancillary charges were substantially reduced as of 1 October 2008.

The line share charge reduction had been designed by ComReg to serve as an intermediate measure pending a comprehensive market review. However, following notice of an appeal by the incumbent, the decision on the line share charge was withdrawn. The comprehensive review was completed and a draft decision imposing a charge of no more than €0.75 per month was published for consultation in December 2008.

As a matter of fact, the monthly rental charge for both fully unbundled local loop and shared access increased slightly in both 2007 and 2008, and is the highest in the EU in the case of full LLU, and the second highest in the case of shared access. In contrast, the connection fees were reduced from €55 to €45 as of October 2008, which is under the EU average. The number of retail LLU lines of alternative operators grew from 17 918 in January 2008 to 22 653 in January 2009. The number of retail bitstream lines of alternative operators reached 182 384, compared to 152 484 lines in January 2008.

The actual service levels available to the market players using the incumbent's network, especially the rate of early LLU line failures, seem to constitute a persisting problem. It is expected that the measures taken by ComReg in the context of universal service, as well as

recent training courses organised by the incumbent for its technicians, will improve the situation.

Following ComReg's suggestions for modification, the capacity-based bitstream product, which would have been favourable to large operators, has been withdrawn by the incumbent.

Mobile markets

Market situation

The mobile penetration rate has grown from 111% in October 2007 to 119% in October 2008, which is over the EU average of 118.9%. Three mobile operators have been providing commercial third generation (3G) mobile services for several years now, and the fourth mobile operator is about to launch its 3G services too. Mobile price per minute of voice communication, at €0.11, compared favourably with the EU average of €0.23.

One mobile operator has carried out mobile TV tests (Digital Video Broadcast – Handheld, DVB-H) in Dublin, but the commercial deployment is on hold for the time being, reportedly due to economic viability issues. The operator is considering wholesale options.

Regulatory issues

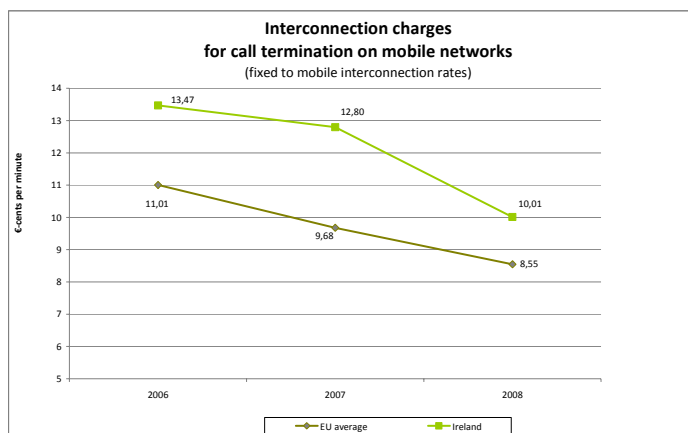
On 8 January 2008, the Commission registered a notification received from ComReg concerning the market for call termination on the mobile network of the third operator which had not been subject to the SMP (Significant Market Power) status, following an appeal. ComReg's final decision of December 2008 obliged the operator in question to reach a target blended termination rate of €0.08 within 60 calendar months. This decision has also been appealed. The termination rates to which the other mobile operators are committed aim at an average blended rate of €0.08 by 1 January 2012. ComReg was engaged with these operators in further reducing the blended rate range. As of October 2008, the termination rates applied by Irish mobile operators varied from €0.09 to €0.14, while the EU-27 average was €0.08.

In July 2008 ComReg issued a consultation paper on liberalisation of the use of the 900 MHz and 1800 MHz spectrum bands. In particular, ComReg proposed to lift restrictions on the technology and services that can be provided in these bands, and to increase the amount of spectrum available to operators. ComReg also described its approach to the award of new 900 MHz and 1800 MHz rights of use, following the expiry of current licences in these bands: the 900 MHz spectrum would be assigned through a competitive award process (auction) to be launched in 2009, while the assignment of the 1800 MHz spectrum would be postponed until 2013. ComReg is analysing the responses to this consultation.

Some market players noted a huge impact on consumers of a potential situation where an existing operator in the 900 MHz spectrum would not get a new right of use for this spectrum. On the other hand, a 3G-only operator insisted on equality of opportunity in any award of the 900 MHz spectrum and called for synchronisation of the liberalisation and any new spectrum assignments. Doubts as to the compatibility of the contemplated mobile virtual network operator (MVNO) access condition as part of the spectrum assignment with the EU regulatory framework have also been voiced.

Roaming

All Irish mobile operators complied duly and on time with the European Regulation (EC) No 717/2007 on roaming on public mobile telephone networks within the Community as



regards the second round of price reductions as of 30 August 2008. Some operators have set their retail prices at the maximum level indicated by the Regulation, and some slightly or even significantly below the maximum level.

Fixed

Market situation

Signs of fixed to mobile substitution have become visible as the fixed telephony traffic was lower in December 2007 than by the end of 2006. The incumbent's market share (measured by retail revenues) in the fixed telephony market was slightly below 70% in 2008, one percentage point up on 2007. Approximately 22% of subscribers used an alternative provider for voice telephony services in July 2008, although only 5.8% of the alternative operators were using proprietary infrastructure for the delivery of such services. The number of Irish VoIP providers increased from nine to 14 in the period from July 2007 to July 2008. However, they accounted for less than 1% of the volume of fixed communications traffic, below the EU average of 8.33%.

Regulatory issues

The deadline of 30 April 2008 had been set by ComReg for the implementation of its 2007 market review decision to withdraw regulation in the retail calls markets. This deregulation has been followed by an increase by the incumbent of its local calls tariffs (the incumbent's monthly line rental charge for residential users remained the highest in the EU in 2008). Following ComReg's market analysis decision in December 2007, the incumbent has to apply cost-oriented fixed wholesale termination prices (using the forward-looking long-run incremental costs — FL-LRIC model), while alternative operators exceeding the market threshold of five per cent are subject to glide paths towards an efficient rate. The incumbent's termination rates were just below the EU average in October 2008.

In 2008 the incumbent proposed a new wholesale product, called "white label", comprising elements of call origination, transit and termination, and meaning in practice that the incumbent would undertake all switching of calls on clients' behalf. The proposal is under investigation by ComReg. The wholesale line rental (WLR) margin was increased from 10% to 14% by ComReg in 2008, partly as a follow-up to requests from alternative operators.

Broadcasting

Market situation

The share of Irish TV viewers relying on analogue broadcasting had fallen from approximately 30% in 2007 to approximately 25% in 2008. The remaining 75% are equally divided between the satellite and cable platforms. Approximately 58% of Irish TV viewers receive digital TV services. Internet television (IPTV) subscriptions are negligible. A digital terrestrial TV (DTTV) pilot project in the Dublin area has been successfully completed. The launch of both public and commercial DTTV is likely to take place in autumn 2009.

Regulatory issues

The Broadcasting (Amendment) Act 2007 sets out the legal framework for the development of DTTV in Ireland. It requires ComReg to award spectrum usage rights to the national public broadcaster, in respect of the public service multiplexers, and to the Broadcasting Commission of Ireland (BCI) for the purposes of commercial multiplexers in 2009. BCI's DTTV tender process took place in 2008, and contract negotiations were ongoing with the preferred bidder. A specific analogue broadcasting switch-off date remains to be set by the Communications Minister, depending on the success of the take-up of DTTV.

On 1 October 2008 ComReg hosted a national conference with a view to launching an informed debate on the future use of the digital dividend. Nevertheless, ComReg had already issued, in June 2008, a consultation paper suggesting the award through an auction of a right to use a single 8 MHz spectrum channel in the ultra high frequency (UHF) spectrum band, between 470 MHz and 750 MHz, in five main urban areas: Cork, Dublin, Galway, Limerick

and Waterford. Two alternative award options, for mobile TV or for any wireless service, are being considered.

Horizontal regulation

Spectrum management

In July 2008, ComReg published the Spectrum Management Strategy Statement 2008-2010, contemplating such regulatory steps as the release of additional spectrum to support wireless broadband access and multimedia mobile services, and the provision of spectrum for a modern digital radiocommunications emergency services network. The Statement also aims at implementing technology and service-neutral spectrum use conditions as far as practicable. In September 2008, the Department of Communications, Energy and Natural Resources (the Ministry) launched a public consultation on a high-level policy paper on spectrum. It contains nine policy principles, referring in particular to the use of market mechanisms where appropriate. Following consideration of the responses to the consultation, a policy paper on spectrum was expected to be published in 2009, and any necessary legislative changes would be introduced subsequently.

In September 2008, ComReg announced a new process to award additional spectrum in the 3.6 GHz – 3.8 GHz part of the band for WLL, but the process was later cancelled to allow time for a thorough consultation with all industry stakeholders.

Following a repeat spectrum assignment procedure for the 26 GHz band in 2008, five national rights of use have been issued. The use of this spectrum in practice will include backhaul communications to support the growing mobile broadband segment.

Based on the fourth edition of the Radio Frequency Plan for Ireland, published by ComReg in November 2008, all of the Commission's radio spectrum harmonisation decisions, adopted by the end of 2007, have been implemented. As regards effective implementation in Ireland of the Commission Decision 2007/344/EC of 16 May 2007 on harmonised availability of information regarding spectrum use within the Community, ComReg has been recently upgrading its databases in order to allow smooth transmission of information to the European Radiocommunications Office's Frequency Information System (EFIS).

Rights of way and facility sharing

Rights of way and facility sharing, and more specifically optimal use of public assets, is being addressed in the Irish government's consultation paper on next generation broadband, including a planned one-stop shop to manage access to publicly owned ducting infrastructure. In addition, the consultation paper also proposes a planning requirement that certain new build premises should have open access fibre connections. Some mobile operators, however, have called for more balanced attention to the fixed and mobile NGN infrastructures.

THE CONSUMER INTEREST

Tariff transparency

In November 2008, ComReg and Excellence Ireland Quality Association (EIQA) proposed a new format for telecommunications billing presentation. It covers various issues such as accessibility, billing information, bill content, bill layout and format.

Following complaints from consumers concerning advertised broadband speeds, ComReg, the National Consumer Agency (NCA) and the Advertising Standards Authority of Ireland (ASAI) held discussions with operators, which led ultimately to a revised voluntary code of standards in relation to the advertising of broadband speeds, published by ASAI in March 2008. The code in particular advises operators to advertise broadband speeds that are available during busy hours.

Although supportive of these initiatives in principle, the industry either called for more clarity on their application in practice, or for more transparency in the discussions and processes leading to such standards.

ComReg's tariff comparison website was further enhanced in 2008, to include more information on headline broadband speeds as well as a new mobile roaming calculator.

Universal service

In 2006 the fixed incumbent had made a formal request to ComReg for compensation of the net costs involved in meeting universal service obligations. ComReg decided on the relevant compensation period and called on the incumbent to submit a full justification for its request, in 2007. ComReg is now in the process of reviewing the incumbent's compensation request together with experts.

Following a public consultation in 2007, ComReg decided in May 2008 to set legally binding performance targets concerning the incumbent's universal service obligations to be achieved, in most cases, by the middle of 2009. In particular, the decision obliges the incumbent to ensure that 80% of all in-situ connections to the incumbent's network are completed within 24 hours of request and 80% of all other connection requests are completed within two weeks of request, to reduce the line fault rates, as well as to meet the target of completing 80% of line fault repairs within two working days. Based on data for the first quarter of 2008 published by ComReg, the level of performance of the universal service obligations has deteriorated as regards both connections to the incumbent's network and line fault rates.

Number portability

Following a specification on wholesale number portability issued by ComReg in 2007, which clarified the application of the cost-orientation principle, a further public consultation was launched in August 2008, which proposed upper limits to the wholesale fixed (€4.02) and mobile (€2.05) number portability charges. ComReg is considering the responses to this public consultation. One of the concerns so far has been the wholesale mobile number portability charge of €20 per port, mostly affecting new entrants, which by definition have a smaller customer base.

Approximately 1.3 million mobile numbers (almost a quarter of all mobile subscriptions) had been ported by October 2008, compared to approximately 1 million numbers 12 months earlier. Approximately 71 000 fixed numbers were ported in 2008. In Ireland the time needed to port a fixed number is 10 days, above the EU average of 7.5 days, whereas the time needed to port a mobile number is one day, substantially below the EU average of 8.5 days.

Consumer complaints and out-of-court dispute resolution

Most consumer complaints continued to be focused on billing issues in 2008, the other frequently aired subjects being quality of service and contractual terms.

European emergency number 112

On the basis of the legislative amendments enacted in 2007, the Ministry launched a tender for the provision of an emergency call answering service. Negotiations with the highest ranked bidder are under way.

116 harmonised European numbers

The number 116123 for emotional support helplines has already been assigned and is expected to be brought into use soon. The number 116111 for child helplines has been assigned, and the assignee has indicated a target in-service date of February 2009. The number 116000 has not been assigned yet. According to ComReg, the introduction of a 116 service is sometimes delayed, because service providers face funding issues to ensure that calls can be made free of charge.

Must-carry

According to the legal framework in place, the must-carry obligations apply currently to cable and MMDS (Multipoint Microwave Distribution System) operators in Ireland. A new

Broadcasting Bill is being debated by the Irish Parliament. It is set to extend the must-carry obligation across various broadcasting platforms.

Data protection

At the time of writing this report Ireland's challenge of the legal basis for the Data Retention Directive (2006/24/EC) was still pending before the European Court of Justice. After initial consideration of a draft statutory instrument to transpose the Directive, revised legal advice was issued to the effect that transposition would have to be by way of primary legislation. The necessary Bill was being prepared as a matter of urgency. Infringement proceedings for non-communication were ongoing in the meantime. The industry expressed serious concerns about several modalities of transposition, including the absence of any cost recovery mechanism, and extension of data retention obligations to offences entailing just six months of imprisonment as well as civil litigation cases. The industry is cooperating with the Department of Justice to produce a memorandum describing the methods of interaction between the police and the operators.

GREECE

INTRODUCTION

Market consolidation in the form of fixed-mobile alliances, along with a strong increase in the wholesale broadband access market, constituted the two elements characterising developments in the Greek electronic communications market this year. In the mobile market, competition at retail prices level was bringing prices down, with (double and triple play) bundled services being offered at flat rates. Broadband penetration continued to rise, yet only marginally narrowing the gap with the EU average.

While the Greek Electronic Communications Law 3431/2006 has seen its second year of implementation, some secondary legislation was still awaited by the market, in particular the adoption of legislation on rights of way, which would facilitate network development. The national law on electronic communications has brought some positive changes to the appeal system, yet not enough to guarantee efficiency in the judicial system.

REGULATORY ENVIRONMENT

Main regulatory developments

The reporting year can be marked as the 'implementation year' of the regulatory framework in Greece with the national Law 3431/2006 'Περί Ηλεκτρονικών Επικοινωνιών και Άλλες Διατάξεις 3431/2006' (Law on Electronic Communications and Other Provisions) being in place and with the final decisions adopted from the first round of market analyses. However, there is still secondary legislation pending in the form of Ministerial Decisions. Most prominent is the lack of a Joint Ministerial Decision on the procedures for granting rights of way. While the NRA, Εθνική Επιτροπή Τηλεπικοινωνιών & Ταχυδρομείων, Hellenic Communications and Post Commission (EETT), submitted its proposals to the Ministry of Transport and Communications in July 2007, the Joint Ministerial Decision has not yet been approved by all competent Ministers (at the time of drafting this report, four Ministers have yet to sign the Decision out of nine signatures required).

In July 2008, the Ministry of Transport and Communications ran a public consultation on a draft law that would revise Law 3431/2006. Principally, the draft law provides for the establishment of a National Observatory for Electromagnetic Fields, mainly in response to expressed public health concerns. In addition, it aims to amend a number of articles on the organisation and administration of EETT, the appeal mechanism, spectrum management, etc. Following publication of the new Recommendation on relevant products and service markets, EETT concluded the second round review for voice call termination markets on individual mobile networks and adopted final measures in October 2008.

From the first half of 2008, telecom operators had access to the 2008 cost-oriented prices relating to all wholesale and retail regulated services for which the Greek incumbent has cost-orientation obligations. This marked the first year that approved cost-oriented prices were made available to the market relatively early in the year, thanks to the earlier submission of data by the incumbent as compared to previous years. Market players could thus formulate their commercial policies on time.

The protection of consumers from unfair practices was also given focal attention, mainly because of the significant rise in consumer complaints registered in 2007. EETT adopted a Code of Practice for operators, and reduced the wholesale tariffs for fixed and mobile call terminations. For the first time, the Ministry of Development, responsible for consumer protection, issued fines to six alternative telecom operators for violating the Consumer Protection Law. The cases related mainly to delays in providing services, and to connections established without the consent of the consumer. Market operators were unhappy with the

government's and EETT's focus on consumers, saying that the market was still immature since Law 3431/2006 had been adopted late.

Since the entry into force of Law 3431/2006, appeals against EETT's decisions can be filed before the Administrative Court of Second Instance, and not before the Council of State (the Highest Administrative Court). This change has already brought positive results, as decisions on appeals can be obtained faster than before. Yet, old appeals filed before the publication of the law continue to face long delays (with some cases pending since 1999). A concern shared by market operators is the legal uncertainty regarding the respective jurisdiction of the two bodies. Such a distinction –which is under review before the Council of State – could help to speed up the legal processes. Operators were reported to be flouting obligations due to the long delays in getting appeal decisions.

The Commission launched an infringement proceeding against Greece for failure to fulfil its obligations in regard to the free movement of capital and freedom of establishment with its national law 3631/2008, according to which private investors seeking to invest more than 20% in shares of strategic importance (including the Greek incumbent) would need the Greek government's prior approval.

Organisation of the NRA

EETT is an independent authority with both financial and administrative autonomy. It currently has a staff of 173 employees (out of 220 that are provided for by the law). Two calls for applications for 30 positions have recently been issued. Forming 'Task Forces' among employees to deal with specific issues/problems such as consumer complaints has proved to be a successful way of producing positive and timely results.

Placing the development of the broadband market in Greece at the core of its work while at the same time pursuing fair competition and consumer protection, EETT contributed significantly to the Greek electronic communications market being one of the fastest growing markets of the European Union in 2007. EETT declared 2008 as the year of 'Qualitative Broadband' and geared its legislative and monitoring work towards accomplishing the goals set in its Regulation Strategy for 2008-2011, i.e. establishing a competitive market based on a sound regulatory framework which would attract investments in broadband infrastructure. In general, EETT has been successful in carrying out its tasks and in addressing market problems, very often under the strong criticism of market operators. The most evident result of its work has been the uptake of broadband lines, and the significant increase in local loop unbundling.

EETT's initiatives in organising conferences and forums, and issuing leaflets on issues of interest to consumers, as well as launching a broadband website (www.broadband.gr), have helped to inform the general public.

Decision-making

In March 2008 EETT approved amendments to the Reference Unbundling Offer (RUO) adopted in April 2007, and adopted a regulation regarding collocation, defining the terms, conditions and procedures for electronic communications equipment. In October 2008, EETT approved the reference wholesale line rental (WLR), and the Reference Offer for leased lines terminating and trunk segments and part circuits.

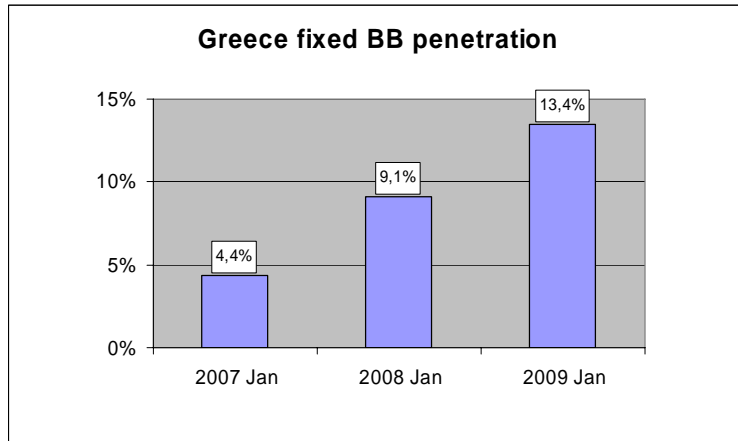
EETT conducted hearings and imposed fines exceeding €15 million in 2008 for a variety of violations, including the unauthorised activation of carrier pre-selection (CPS), or the annulment of applications for cancelling CPS, and delays in the handling of applications for local loop unbundling services. Fixed operators criticised EETT for reducing its regulatory role in the area of competition and giving excessive attention to consumer issues.

Within the context of its responsibilities as the competition authority for electronic communications, EETT approved the change of management of the Greek incumbent and its mobile subsidiary following the agreement signed by the Greek government and the German incumbent in May 2008, under which the German incumbent would acquire a 25% plus one

share stake in the Greek incumbent, thus eventually taking majority control of the Greek operator.

MARKET AND REGULATORY DEVELOPMENTS

The total revenue of the Greek electronic communications sector in 2007 was €8.44 billion, of which €3.85 billion came from the fixed market and €4.59 billion from the mobile market. Investments in the electronic communications sector totalled €1.29 billion, of which €295 million were made by the incumbent in the fixed telephony network, €514 million by



alternative operators, and €486 million by mobile operators. The investment over revenues ratio in the Greek telecom sector for 2007 was 15.3%.

Alternative operators continued to expand their networks, building mainly on local loop unbundling. New investment in fixed networks was undertaken by mobile operators which now provide ADSL services through synergies with fixed operators.

The incumbent extended the

number of sites with LLU collocation facilities. One operator, which is deploying its own network based entirely on the IP protocol, branched out to offer its services to a wider public. In February 2008, the Greek Minister of Transport and Communications presented the government's strategy for electronic communications and ICT for the period 2008-2013. He announced a €3 billion programme including investment of €2.1 billion for the installation of a fibre optic network that would give at least 2 million households and enterprises access to broadband services in at least 52 major cities. The focus of the fibre optic network would be the large urban areas. As regards the remote areas – given the topography of Greece – the emphasis would be on wireless access. Financing for the project was expected to come from the government, the European Union, and from the private sector. The Greek authorities were aiming to submit this project to the European Commission for examination and approval by the end of 2008. The Greek government intends to finance one third of this project. In July 2008, 2.85% of the Greek population used bundled services. The majority of these subscribers (2.31%) used double play services including telephony and broadband while 0.54% used triple play products (fixed-mobile telephony and broadband).

Broadband market

Market situation

The growth of the Greek broadband market during the reporting year was significant. Broadband penetration grew to 13.4% in January 2009 from 9.1% a year ago. Effective regulation in place, the availability of bundled products on the market, and the Greek authorities' efforts to promote broadband, including in the rural areas, have certainly contributed to this positive development.

As a consequence, the gap between Greece's broadband penetration and the EU-27 average of 22.9% was narrowing marginally. The total number of broadband lines reached 1 506 614 in January 2009. This represents an increase by 507% since the adoption of Law 3431/2006 (297 090 lines in July 2006).

The incumbent's market share of retail broadband connections (DSL) decreased marginally, reaching 57.4% in January 2009, compared to 57.8% a year ago. During the same period, alternative operators slightly increased their presence in the overall fixed broadband market with their market share increasing from 42.2% in January 2008 to 42.6% in January 2009.

A significant increase is observed in the number of local loop lines, which reached 541 920 in January 2009 compared to 203 374 a year ago. Fully unbundled lines tripled within a year, reaching 485 030 lines in January 2009 (compared to 161 865 lines in January 2008). Broadband lines via local loop unbundling (both full and shared) constitute 36% of the total broadband access lines. Alternative operators stepped up their investment, thereby depending to a lesser extent on other wholesale broadband access products. This constitutes an encouraging trend for increasing competition in this important market. DSL lines of alternative operators via bitstream have been reduced from 223 122 in January 2008 to 94 413 lines in January 2009.

A significant contributor to the growth in local loop unbundling in Greece has been the availability by the incumbent of new physical collocation sites throughout Greece, standing at a total of 152 sites in December 2008, compared to 119 in December 2007. Some sites offer also distant collocation.

The market share of broadband DSL lines denotes the predominance of the DSL technology (99.6% in January 2009). DSL coverage in urban areas stood at 100% while in rural areas was 50%. The DSL rural gap compared to the national average of DSL coverage stood at 36.3%. Broadband access via cable platform is not available in Greece. Mobile broadband has started to be used and gained a marginal share of 1.6% in January 2009 (calculated as the number of dedicated data services via modems, cards, and USB keys), lower than the EU average of 2.8%.

The majority of fixed broadband lines in Greece are within the range above 144 Kbps and below 2Mbps (43.7% of total retail fixed broadband lines). Broadband speeds in the range of 10Mbps and above constitute 31.5% of the total lines while 24.8% of the total lines are between 2Mbps and 10Mbps.

The roll-out of the funded project for Broadband Access Development in Under-served Territories, which is aimed at co-financing broadband investments for local access across Greece, is progressing satisfactorily. One electronic communications operator started delivering its services on its own network developed as part of this project. Another operator wanted to extend its network to the street cabinet.

Within the framework of the government's Digital Strategy 2006-2013, the deployment of metropolitan fibre optic networks is being implemented in 75 municipalities in Greece, financed by the Operation Programme 'Information Society'. In principle, the purpose of these networks is to connect more than 3 000 sites of public interest (universities, museums, libraries, etc.), while also providing faster and cheaper Internet access to citizens. The development of these networks will be particularly important for Greece's rural areas. Already, some municipalities have started to offer wireless broadband access and services to their citizens.

Regulatory issues (including market analysis and remedies)

The new revised RUO adopted in March 2008 makes provision for easing the development of alternative infrastructure at collocated sites, facilitating the handling of consumer complaints, and accelerating fault management. The Greek incumbent appealed this RUO to the Council of State. Pending the ruling of the Court, the first adopted RUO is currently in force (which already includes one amendment of December 2007). Alternative operators expressed uncertainty as to which RUO version was in force.

In addition, EETT adopted a regulation in March 2008, specifying the procedures for collocation of electronic communication equipment and/or joint use of essential facilities by the network and/or service providers.

EETT is working on the second round review of the wholesale market for unbundled access to the local loops and sub-loops and the wholesale broadband access market.

Mobile markets

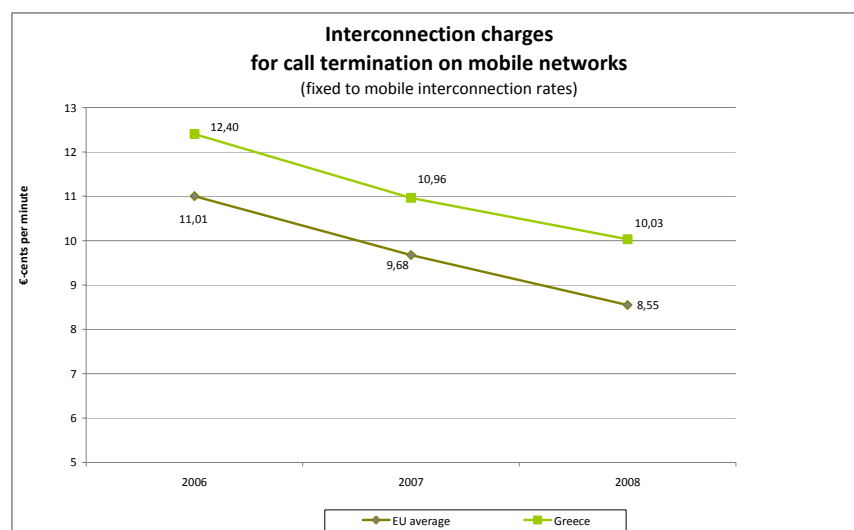
Market situation

Consolidation in the form of fixed-mobile alliances resulted in more intensive competition at retail prices level, and the introduction of fixed-mobile bundled products. The market's three mobile network operators (MNOs) have 3G licences. Their 3G networks are based on the UMTS technology. All have started to offer bundled products (double play, which includes mobile voice telephony and broadband Internet, or triple play, which includes mobile voice telephony, fixed voice telephony and broadband Internet). The entry of mobile operators into the LLU market is expected to result in the availability of quad-play services (fixed telephony, Internet access, digital cable TV and mobile telephony).

The mobile penetration rate in Greece has continued to rise, reaching 122% (active subscribers) in October 2008 compared to 110.2% in October 2007. This figure is above the EU average of 119%. The total number of subscribers reached 13 708 972 in October 2008. All mobile operators experienced a decreasing rate of new subscribers during the reporting year, which is a sign of the market's maturity.

The market share of the incumbent's mobile subsidiary in terms of subscribers was 43.12% in October 2008, a sharp increase from 37% market share in October 2007. This stronger presence in the market

may be attributed to its purchase two years ago of the biggest chain of electronic communications retail products in Greece, expanding in this way its nationwide network of retail outlets. Its market share is well above the EU average of the leading mobile operator's market share of 38.1% (October 2008). In contrast, the market



share of the second operator based on subscribers declined to 29.23% in October 2008 from 35% a year ago. A marginal decline in the market share of the third operator is witnessed also, from 28% in October 2007 to 27.65% in October 2008.

Mobile termination rates in Greece, at €0.10 in October 2008, were above the EU average (€0.0855) albeit decreasing during the reporting year (down from €0.11 in October 2007). On retail level, the average revenue per minute reached €0.1945 at the end of October 2008, the EU average being €0.22.

Currently, there is no MVNO in Greece, although there are two resellers of mobile services (under brand names).

Regulatory issues (including market analysis and remedies)

In October 2008, EETT took final measures on the analysis of the second round review of the market for voice call termination on individual mobile networks. All three mobile operators were found to have SMP in their respective mobile termination markets, and obligations were imposed on them in respect of cost accounting, access and interconnection, non-discrimination, and cost-orientation, with a glide path of 2 years. During the period 1 January 2009 - 1 January 2011, mobile termination rates will be reduced by an average of 50% in order to reach the targeted maximum symmetric rate of €0.0495/min. The termination rates were calculated on the basis of a bottom-up LRIC model.

For all 3G licences, there was a prerequisite of 50% national coverage by 2006. Yet, the roll-out of such networks proved to be difficult due to the procedural problems with licensing and installation of antennas.

All mobile operators were particularly unhappy about the special levy imposed on post-paid mobile subscriptions. The levy, imposed on top of 19% VAT, increases with the monthly bill in a stepwise manner. With the introduction of converged products, this levy is applied to the total cost of mobile services plus broadband costs, plus the VAT. Mobile operators noted that fixed alternative operators were not paying similar taxes on either broadband services or fixed subscriptions.

Roaming

The Roaming Regulation has been implemented smoothly in Greece, with mobile operators offering the 'Eurotariff' along with other international roaming packages.

Fixed markets

Market situation

The main fixed alternative operators (in terms of market share) established alliances with mobile operators, allowing bundled products to be offered (mainly fixed-mobile lines with ADSL). This consolidation has increased the mobile operators' role in the fixed market. A couple of operators were in the process of being liquidated at the time of drafting this report. In total, there were 21 fixed operators, offering public voice telephony services, of which 5 were VOIP operators. The incumbent's share in this market (for all types of calls by minutes of traffic) decreased slightly to 76% in December 2007 from 79% in December 2006.

The Greek subscribers still vastly choose the incumbent for direct access in 92.2% of the cases, more than the EU average of 81.4%. As of July 2008, 21% of subscribers were using a provider other than the incumbent operator for voice telephony services (either through carrier selection and/or carrier pre-selection, and/or direct access), which constitutes an increase of two percentage points from last year.

A new development in the Greek fixed market is the offering of VoIP telephony by five operators, which gained a marginal market share of 0.26% (data based on outgoing minutes of communications – December 2007).

Regulatory issues (including market analysis and remedies)

The incumbent's reference wholesale line rental (WLR) has been approved by EETT with modifications, as well as the relevant tariffs, which were established through a retail-minus methodology, in October 2008.

EETT also approved the Reference Offer for leased lines terminating and trunk segments and partial circuits in March 2008.

The second stage of the glide path for reducing fixed termination rates (FTRs) was applied during 2008. FTRs were not to exceed the ceiling rate €0.011/min up to 31 December 2008 (decreasing from €0.013/min a year ago). As of 1 January 2009, FTRs should not exceed €0.008/min.

Broadcasting

Market situation

The main platform for the provision of broadcasting services in Greece is analogue terrestrial TV (99%) followed by slight penetration of digital terrestrial and satellite TV (7% of households). IPTV was introduced into the market in 2008 and gained a marginal share of 0.22% of the total population.

In the near future, fixed electronic communications operators are expected to launch bundled products transmitting also broadcasting programmes. An IP provider recently acquired digital satellite television, while the Greek incumbent plans to enter the market with its own digital satellite TV. A fixed alternative operator has already started transmitting broadcasting services.

Regulatory situation

Greece intends to move to full digital broadcasting by 2012. The pilot phase of digital broadcasting transmissions was initiated on 1 November 2008.

The Resolution on the Frequency Chart for the purposes of the digital television broadcasting transition was adopted by the Greek government in July 2008. A Presidential Decree on the authorisation and allocation of frequencies (through a tendering procedure) relating to the final switchover was being drafted. Two Joint Ministerial Decisions are pending before the National Broadcasting Council, which can grant authorisations to TV and radio channels. It is not yet clear how much digital dividend will be generated by the switch-off of analogue broadcasting.

EETT held a public consultation from 16 November to 16 December 2008, regarding possible amendments to the Regulation of General Licences, which would define extra responsibilities of electronic communications network providers when producing or transmitting broadcasting programmes.

Horizontal regulation

Spectrum management

EETT has now issued the totality of secondary legislation in the sector of radio frequency spectrum, deriving from Law 3431/2006. This has also led to harmonisation of the Greek legislation with the Commission's spectrum decisions. Greece has implemented all the spectrum decisions adopted up until the end of 2007, except Decision 2007/344/EC on harmonised availability regarding spectrum use within the Community. It has also implemented four of the Commission decisions adopted in 2008, namely, Decision 2008/294/EC on spectrum use for mobile communication services on aircraft; Decision 2008/411/EC on the 3400-3800 MHz band; Decision 2008/432/EC amending Decision 2006/771/EC on short range devices; and Decision 2008/477/EC on the 2.6GHz band (2500-2690 MHz) for wireless communications systems.

A Regulation allowing partial spectrum trading has been adopted and published by the Ministry of Transport and Communications.

Over the summer, EETT launched a public consultation concerning the introduction of technologies other than GSM for the 900MHz and 1800MHz bands, to collect operators' views in view of the Commission's proposal to update and simplify the GSM Directive. The first licence of the 900MHz band will expire in 2012.

Rights of way and facility sharing

The absence of secondary legislation on rights of way continues to be a long-standing deficiency in the Greek electronic communications legislation. The Joint Ministerial Decision setting out the framework and the procedures has not yet been adopted, due to serious delays in relevant Ministries. This situation renders infrastructure development particularly cumbersome and uncertain.

While legislation is in place for the installation and licensing of antennas, in practice the process seems ineffective. One reason is that legislation is not correctly applied by all relevant

authorities. Another reason is that cumbersome obligatory environmental studies must be undertaken prior to any authorisation for installing antennas. As a result, some town planning authorities either take too long to issue licences or simply do not process applications. Currently, there are about 6 500 licensed antennas out of the total of 10 000 antennas in Greece.

THE CONSUMER INTEREST

Tariff transparency and quality of service

Faced with a rising number of consumer complaints, EETT gave top priority to safeguarding consumers' rights. It issued a Code of Practice for the provision of electronic communications, and a Code of Practice for the provision of premium rate services. Furthermore, EETT issued a regulation for the measurement and publication of quality indicators for the provision of retail electronic communications services. Data on these indicators are gradually becoming available on the websites of EETT and of the telecom operators. The majority of such data is expected to become available by the end of 2009, giving consumers comparable information on the quality of services available in the market.

Universal service

According to EETT's decision, the Greek incumbent remains the universal service provider until the completion of the procedures for universal service provider designation under Law 3431/2006. The relevant legislation on the conditions for the selection and compensation of related costs was finalised in 2008. At the time of drafting this report, EETT was working on specifying the selection process to be followed. A Joint Ministerial Decision was adopted in September 2008 introducing measures for users with disabilities in order to ensure access to and affordability of publicly available telephone services.

Directory service and directory enquiry services

In August 2008, EETT issued a regulation on determination of the form of subscribers' directories, the procedures and costs for distributing subscribers' data among operators.

Consumer complaints

During 2007, EETT had received around 17 500 written and 36 900 phone requests or complaints from consumers regarding electronic communications services. The majority of these complaints focused on issues of local loop unbundling, fixed number portability, carrier pre-selection, quality and speed of broadband services and disputed bills. According to EETT, written complaints and telephone calls decreased significantly in 2008 (reduction of 17% and 30% respectively).

European emergency number 112

Calls to the emergency number 112 are handled at the main call centre of the incumbent, which then forwards the calls to the appropriate emergency service. Calls to 112 can be handled in Greek, English, and French, while calls in other European languages can be transferred to another emergency call handler who speaks the language concerned. Approximately 252 000 calls per month are made to the 112 emergency number in Greece. "Pull" is the required forwarding technique for the provision of caller location information to Public Safety Answering Points (PSAPs) from both fixed and mobile networks. Information campaigns on 112 have taken the form of leaflets at airports, ports and railway stations in Greece. Currently, 112 is displayed in highway toll points and in Athens. The level of awareness of 112 in Greece, as the number to call in an emergency situation anywhere in the EU, is amongst the lowest in the EU countries.

Number portability

There was a robust increase of 142% from October 2007 to October 2008 in fixed and mobile ported numbers during the reporting year. A total of 1 590 515 numbers were ported, out of which 779 936 were fixed (49%) and 810 579 were mobile (50.9%). The most important factor that contributed to this positive development was the increase in local loop unbundling, which led to more bundled services being taken up by consumers.

According to national law, numbers must be ported within a maximum of ten working days, unless the consumer decides otherwise in his contract with the provider. Yet, in no circumstances should this period be extended to more than 15 working days. The use of number portability in Greece entails no cost for the end-user. The one-off fee charged by the incumbent to other operators to port a fixed number decreased from €10 in 2007 to €4.5 in 2008.

Data protection

By December 2008, Greece had not yet communicated measures for the transposition of the Data Retention Directive. Infringement proceedings are ongoing.

At the time of drafting this report, a draft Joint Ministerial Decision was under public consultation (3 December 2008-19 January 2009) concerning the minimum obligations of network operators to ensure the integrity of public telephony networks and the availability of public telephony services at fixed locations.

SPAIN

INTRODUCTION

Overall growth in the Spanish electronic communications market has stabilised, while mobile and broadband markets continue to be the more dynamic sectors. Fixed broadband penetration is growing more slowly than the EU average, while mobile broadband is increasingly prominent. On the fixed market, the proportion of subscribers using an alternative operator, mainly cable and local loop unbundling (LLU) operators, for direct access is one of the highest in the EU. Spanish consumers are increasingly choosing bundled services and the use of number portability is very strong, especially for mobile services where new entrants in the market are benefiting from this facility.

The national regulatory authority Comisión del Mercado de las Telecomunicaciones (CMT) has focused on establishing a regulatory framework for Next Generation Access (NGA) networks with a view to fostering infrastructure competition, although some of the principles still need to be adopted or further defined. The regulator has been working on the second round of market analyses and has notified all but one of the relevant markets in the Recommendation. The Secretaría de Estado de Telecomunicaciones y para la Sociedad de la Información (SETSI) is preparing new legislation for users' rights. It appears that the electronic communications sector has a significant and increasing number of users' complaints compared to other sectors in Spain, which can only be partly explained by the relatively high number of contracts.

REGULATORY ENVIRONMENT

Main regulatory developments

The CMT initiated a second round of market reviews and, by November 2008, had notified to the Commission all markets in the Recommendation except the market for wholesale terminating segments of leased lines (market 6). There is a clear trend towards withdrawal of retail regulation in the fixed markets while maintaining wholesale regulation in general. One of the main developments was the imposition on the incumbent of an obligation to provide access to physical infrastructure, although the Commission commented that a detailed reference offer and price obligations should be developed.

During the reporting year, the CMT has been active in defining a regulatory approach for NGA networks. Following a public consultation, in January 2008 the CMT published its regulatory position on NGA in the form of a Guidelines document. In July, the regulator adopted provisional measures imposing an access obligation in regard to the incumbent's physical infrastructure at cost-oriented prices. In November 2008, following verification of the implementation of that obligation, the CMT authorised the incumbent to launch the first commercial offers based on FTTH. The incumbent is also required to provide a bitstream service to collocated operators at a discounted price. This is a compensatory measure for those operators affected by reduced availability of unbundling due to instalment of remote nodes between the local exchange and end-users.

Moreover, the Ministry of Industry, Tourism and Commerce has established an Advisory Committee, which should identify possible barriers to the deployment of high speed access networks and propose recommendations to the Ministry.

In 2007, the Commission launched an infringement proceeding for incorrect transposition and implementation of parts of the Universal Service Directive, which is still pending.

Organisation of the NRA

The division of regulatory functions between different national regulatory authorities (NRAs) persists, even though the main responsibilities are divided between two of them i.e. the CMT and the SETSI, which is at the moment concurrently responsible for telecommunications policy within the Ministerio de Industria, Turismo y Comercio.

There will be major changes in the CMT, as the mandate of the President and some members of the Board expired at the end of 2008, although they are still in office pending a decision of the Government. In June 2008, the CMT signed a cooperation agreement with the national competition authority (NCA), the latter having established telecommunications as a priority area for 2009.

Decision-making

During the last year, the CMT has been working on the second round of market analyses. For the first time, the Commission raised serious doubts about the compatibility with EU law of a CMT draft market analysis (wholesale broadband access market), which were finally withdrawn in December 2008.

In May 2008, the regulator adopted draft provisional measures under Article 7(6) of the Framework Directive, relating to the physical network infrastructure access market (market 4) where an obligation for access to the incumbent's physical infrastructure was imposed at cost-oriented prices, and on non-discriminatory and transparent terms. The Commission pointed out that the above-mentioned article should only be relied upon in exceptional circumstances with full justification for the urgent need to act and invited the CMT to notify as soon as possible the analysis of the physical network infrastructure access market, which the regulator did in September 2008.

While the CMT has continued monitoring the fulfilment of obligations, and it imposed two major fines on the incumbent in 2008, alternative operators are still requesting a more proactive role on the part of the regulator, in particular in relation to non-discrimination obligations and they claim that sanctions have never acted as a deterrent. In this respect, in May 2008 the regulator adopted a decision that should allow comparability of the incumbent's self-provision with the service provided to third parties, and it is currently devising an efficient procedure for payment of penalties, which will be applicable to all reference offers.

Moreover, dispute resolutions are taking on average much longer than four months. The 15 dispute resolutions that were resolved by the CMT during the last year have taken an average of one year.

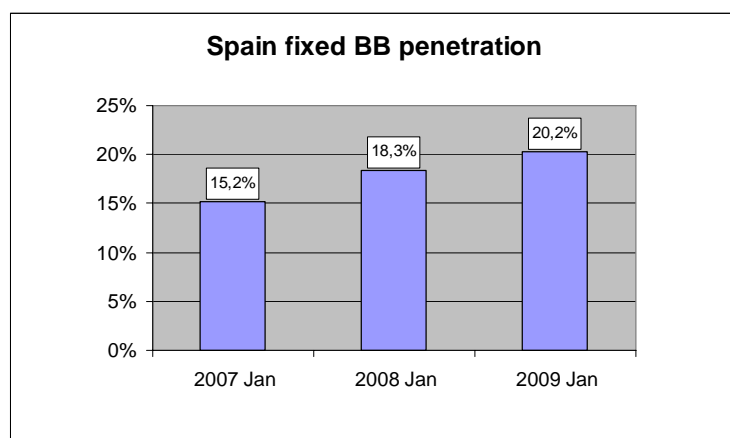
MARKET AND REGULATORY DEVELOPMENTS

The high figures for total revenue and investment over gross domestic product (GDP) for the Spanish electronic communications sector show the importance of this sector for the economy. Total turnover for the sector was €44.2 billion, of which fixed revenues accounted for €9.2 billion and mobile €18.9 billion in 2007. The growth of retail revenue for the electronic communications sector stabilised at 4.53%, whilst growth of wholesale revenue decreased due to the reduction of regulated prices and consolidation in the sector. Investment

figures in the Spanish electronic communications market remained more or less constant (€5 755 million in 2007), amounting to 13.0% over revenue. The incumbent group has increased its investment compared to previous years, while investment by alternative operators continues to represent about 60% of the overall figure.

In Spain the trend towards bundled services continues to be very significant, with broadband as the main driver: 12.01% of the population had subscribed to a double play offer and 2.91% to a triple play offer as of July 2008. Moreover, IPTV has experienced significant growth during the last year, reaching 668 520 subscribers by July 2008.

Broadband



Market situation

The number of fixed broadband lines continued to grow last year although at a slower pace than the EU average: broadband penetration increased by less than two percentage points to reach 20.2% in January 2009, but it is still below the EU average (22.9%). The majority of broadband residential customers in Spain subscribe to broadband

services as part of a bundled offer.

With almost four out of five fixed broadband lines being DSL, this constitutes the main technology, followed by cable. The use of mobile data services is increasing and there were 1 161 167 datacards in Spain in January 2009 and a high percentage of mobile terminals enabled with a UMTS functionality.

The digital divide in terms of DSL coverage between the national average and rural areas in Spain remains more or less stable at only four percentage points while it is significantly higher in terms of cable coverage (39 percentage points).

Following the upgrading of their networks, cable operators launched the first broadband offers of 50 Mbps and 100 Mbps in the market. The incumbent launched a pre-commercial offer based on VDSL with speeds up to 30 Mbps, while the CMT is in the process of amending the reference offer in order to include new bitstream modalities.

The upward trend in the number of unbundled lines continues (1.70 million lines in January 2009, compared to 1.35 million lines in January 2008). Since 2006, LLU is the option preferred by alternative DSL operators whilst the number of indirect access and resale lines continues to decrease. Market shares have remained more or less constant: alternative DSL operators held 23.22% of the retail broadband market and cable operators 19.39% as of January 2009. However, the incumbent is adding the majority of new broadband subscriptions and slightly gained market share in 2008.

Regulatory issues

During the reporting year, several important regulatory decisions were taken regarding NGA networks, and some modifications were made to the existing regulatory obligations in the broadband market.

In May 2008, the CMT adopted draft provisional measures under Article 7(6) of the Framework Directive, relating to the physical network infrastructure access market (market 4) where an obligation for access to the incumbent's physical infrastructure was imposed at cost-oriented prices and on non-discriminatory and transparent conditions. The proposed obligation to provide an access service at a local exchange at a reasonable price, while access to physical infrastructure was not available, was withdrawn in the final decision of July 2008, on the basis that the incumbent was ready to fulfil the obligation to provide access to physical infrastructure by September 2008. Appeals before national courts are pending in this regard. Following verification of the online system for access to the incumbent's physical infrastructure, the CMT gave the green light for the incumbent to launch offers over fibre.

In September 2008, the regulator notified the physical network infrastructure access market, where it proposes to maintain LLU obligations and access to physical infrastructure including the provision of dark fibre in cases where access to infrastructure is not technically or physically feasible. The draft measures also contain a detailed information obligation and conditions for the closure of local exchanges, in order to ensure the transition to NGA networks. The Commission commented that a detailed reference offer and price obligations should be developed. The experience with LLU in Spain has shown that, even when procedures are specified, the efficient implementation of this type of access obligation can raise many problems. Moreover, it appears that the regulator has not conducted any study or audit in order to analyse the feasibility of network deployment by alternative operators based on the access to physical infrastructure obligation in Spain.

On the wholesale broadband access market the regulator has proposed to impose an obligation on the incumbent to provide a single bitstream product replacing the existing ATM and IP bitstream, for the provision of speeds up to 30 Mbps in the whole national territory. In December 2008, the Commission withdrew the serious doubts it had about this market analysis.

In October 2008, the CMT launched a public consultation on draft measures intended to impose symmetric obligations on operators regarding in-building fibre infrastructure. The CMT notified these to the Commission, in accordance with Article 12 of the Framework Directive, which provides for the imposition of obligations on operators for facility sharing according to certain criteria. Under the proposed measures, the first operator to reach a building with its fibre network, regardless of its significant market power (SMP) condition, should meet reasonable access requests by third parties, at reasonable prices and under transparent conditions. Although this type of measures seems to be a positive step towards removing bottlenecks, the CMT did not provide sufficiently specific justification to support their imposition in accordance with the facility-sharing provisions under EU law.

At the same time, the Ministry of Industry, Tourism and Commerce has established an Advisory Committee, which should identify possible barriers to the deployment of high speed access networks and propose recommendations to the Ministry. This Committee will examine ICT rules in Spain, network deployment in roads and railways, and obstacles to infrastructure deployment in the public and private domains.

In March 2008, the CMT adopted a new reference offer for bitstream (known as OIBA) and further reduced wholesale prices, which should apply nationwide and retroactively, the latter being currently under verification by the regulator. A new service for 'naked ADSL' was included for the first time in the offer allowing alternative operators to provide broadband services over lines without a telephone service subscription by paying an extra charge of €9.55. In December 2008, the regulator reduced the monthly fee for full unbundled loops by 20% (to €7.79), while the weighted monthly average total cost for shared access continued to be higher than the EU average (namely €5.83 compared to €4.13 EU average) mainly due to high connection fees.

In relation to the incumbent's deployment of remote nodes between the local exchange and end-users, in July 2008 the CMT modified the Reference Unbundling Offer (RUO) establishing that the incumbent should provide, as a compensatory measure to collocated operators affected by reduced availability of unbundling, an indirect access service at a discount of 23.5% for ATM bitstream and 40.6% for IP bitstream. However, this measure does not enable alternative operators to provide the same services as they already can from the local exchange. The incumbent should inform the CMT six months in advance of any new installation of remote nodes. According to the figures provided by the incumbent, 621 000 local loops were affected in May 2008 by instalment of remote nodes in Spain.

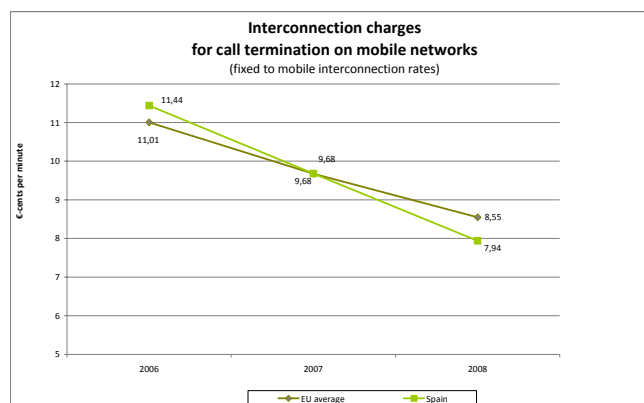
Mobile markets

Market situation

The mobile penetration rate grew significantly last year (114.27% as of October 2008), but it is still below the EU average (118.9%). This is partly due to the increase in the number of players in the mobile market, with the fourth UMTS licence-holder and several mobile virtual network operators (MVNOs) launching commercial services. Most of the new entrants are mobile service providers, although some others are MVNOs with an infrastructure-based business model. New uses of mobile service appeared in the market, for example, the number of machine-to-machine lines, enabling communications between electronic devices through mobile networks, has doubled over the past year.

For the second year running, the market share of the incumbent's subsidiary in terms of subscribers dropped slightly in favour of the second operator. The fourth mobile network operator (MNO), which launched commercial services in December 2006 and, in contrast to its main competitors only holds a UMTS licence, still has only a small subscribers' market share of approximately 1.5%, which is similar to the overall share so far obtained by MVNOs. The fourth MNO and MVNOs are seeing a positive net gain of lines by using mobile number portability.

Competition in the mobile market is strong, with number portability being used intensively as a competition tool (35.45% of mobile numbers ported over total number of mobile subscribers) and three of the main European mobile players present in the market. In 2007, the average price per minute for voice traffic on mobile networks was €0.17, which is above the EU average (€0.14), and annual average revenue per user (€308.56) was higher than the EU average (€282.49).



Regulatory issues

The mobile termination rates (MTRs) of the four MNOs have decreased according to the established glide paths and are below the EU average (€0.0794 compared to €0.0855 EU average). In February 2008, the CMT adopted measures requiring the six 'full' MVNOs at the time to set reasonable termination charges at the same rate as its regulated host MNOs. In December 2008, the CMT decided to extend the current obligations to a further seven 'full' MVNOs and to oblige SMP operators to set a single per-second billed tariff. The regulator will set the new glide paths for the MNOs by July 2009, although details on the cost methodology have not yet been communicated.

Following the access obligations imposed by the regulator on the three MNOs present at the time, several new entrants are currently providing mobile services in the market. Conditions were agreed on a commercial basis without requiring further regulatory intervention. The appeals to the national courts, which were lodged by the MNOs against the regulator's finding of joint dominance, are still pending. The CMT has not yet come up with a review of the former mobile access market, which is no longer in the Recommendation.

Roaming Regulation

The CMT and the SETSI both have competence in relation to the Roaming Regulation. Spain gave notice that the current sanctioning regime provided for in the Ley General de Telecomunicaciones will also apply in cases of breach of the Roaming Regulation.

Fixed

Market situation

There has been a consolidation trend in the fixed market. For another year, the incumbent remained dominant in the fixed telephony retail market with a more or less stable market share in terms of revenues (75.49% compared to the 64.76% EU average in December 2007), while overall revenues in the fixed sector continued to fall. The market share of VoIP is still marginal at 0.38%.

In Spain, 14.92% of the population had subscribed to a bundled offer as of July 2008. The double-play offer of fixed telephony and Internet access is still the most frequently purchased service package. Fixed number portability is used frequently to facilitate switching of providers, although the growth in the number of fixed ported lines per year has now stabilised.

By July 2008, as a result of cable and LLU infrastructure investments, 21.9% of subscribers were using a provider for direct access other than the incumbent (compared to an EU average of 18.6%), one of the highest proportions in the EU. The number of pre-selected lines continued to decrease in the course of 2008.

Regulatory issues

Retail regulation has been reduced significantly: the regulator has proposed the withdrawal of obligations on the fixed retail call markets, which are not part of the current Recommendation, after finding that these markets are competitive. The CMT will set the maximum increases for the monthly fee for fixed access, while the set-up fee is no longer regulated.

Moreover, the CMT has proposed to broaden the scope of regulation on the fixed wholesale call termination market by including IP interconnection, while it has maintained the previously established asymmetry of 30% between the incumbent's and other operators' termination prices. It is not yet clear how the incumbent's migration to IP may impact on the existing interconnection obligations.

The introduction of wholesale line rental (WLR) as a remedy in the fixed wholesale call origination market, which allows alternative operators to provide their customers with a single bill, has not had a significant impact. Operators may gain some interest in this wholesale offer as a complement to the recently introduced 'naked ADSL' service. However, alternative operators have stated that conditions for both WLR and 'naked DSL' service would have to be significantly improved before this offer could be taken up by market players.

The CMT imposed obligations not only for traditional interfaces but also for Ethernet and Fast Ethernet interfaces on the market for wholesale terminating segments of leased lines. The reference offer (known as ORLA) was adopted in December 2007 with prices established through a retail-minus methodology. Several operators have concluded agreements for Ethernet interfaces under the new ORLA, and the first lines have already been delivered.

Broadcasting

Market situation

Spain has one of the highest terrestrial television market shares in the EU (36.68% of households over population for analogue TV and 13.64% of households over population for digital TV). During the past year, there has been an increase in the number of IPTV subscribers in Spain, though the market share is still marginal (1.48% of subscribers over population). The majority of cable and IPTV subscribers are benefiting from an offer bundled with additional services, such as fixed telephony or Internet. The incumbent is likely to intensify its presence in the pay TV broadcasting market, if it finally acquires the only satellite TV service provider in Spain, which has two million customers (4.59% of subscribers over population) and many exclusive contracts for premium content.

During the past year, the broadcasting transmission market continued to grow mainly because of the gradual introduction of digital terrestrial television (DTT) services.

Regulatory issues

At the beginning of 2006, the CMT imposed an access obligation at cost-oriented prices on the SMP operator, which owns the only terrestrial broadcasting transmission network with national coverage. The CMT is about to approve the cost accounting model, an issue which has been pending for a long period. However, it seems that the measures will come at a time when there might be no potential beneficiary of this access obligation due to consolidation in the broadcasting transmission market.

The switch-off of analogue TV will take place according to a regional staggered timetable, which started with a pilot trial in July 2008 and should be completed by April 2010. In 2005, the government provided for the allocation of a single multiplex for mobile broadcasting services before the switch-off. However, there is as yet no date envisaged for the tender for assignment of the frequencies.

Horizontal regulation

Spectrum management

The SETSI currently retains competence in relation to spectrum, since the Radio Spectrum Agency, which would be responsible for managing radio frequencies, has not yet been established. Several stakeholders have called for an evaluation of the efficiency of spectrum use in Spain. Although national legislation allows transfer of spectrum rights of use, in May 2008 Spain adopted a regulation on radio spectrum management specifying the conditions for spectrum trading for very limited frequency bands only and a more flexible use of spectrum through technological and service neutrality.

Spectrum refarming is still a contentious issue in Spain, as assignment of spectrum in the relevant bands is unequal and new operators are also interested in obtaining frequencies. In July 2008, the SETSI launched a public consultation on the future use of frequencies in the 2.6 GHz band (including the options for tender/auction/mixed and regional/national scope) and the amendment of licences for 900 MHz, 1800 MHz and 3.5 GHz.

The Spanish authorities decided that a large part of the digital dividend is still to be used for broadcasting terrestrial services to the exclusion of other services, and this has resulted in a significant increase in the number of allocated digital channels. Moreover, the upper part of the UHF band was allocated to national digital TV channels in 2005, contrary to the recent trend in other Member States and to the intention expressed in the Commission Communication on digital dividend⁴⁶, for which the Spanish authorities seem to be exploring different scenarios.

Spain has taken measures to implement the remaining Commission Decisions adopted under the Radio Spectrum Decision to harmonise spectrum use in specific bands. The national frequency allocation plan (known as CNAF) already makes provision for the use of 900 MHz and 1800 MHz bands for different technologies but mobile licences will still need to be adequately modified.

Rights of way and facility sharing

Operators are still concerned about difficulties in network deployment. The situation is very diverse and in some regions and municipalities operators are still encountering serious difficulties in obtaining rights of way in the form of burdensome procedures, delays or even dismantling of mobile antennae. Some publicly financed programmes (*Plan Avanza*) are giving incentives to the relevant authorities for facilitating network deployment.

An increased number of local authorities started imposing a tax equivalent to 1.5% of gross revenue on mobile operators for the use of installed facilities. The interpretation of these local authorities is that mobile operators are not excluded by a 2003 law on municipalities funding. Some of the appeals by mobile operators have already been rejected by national courts.

⁴⁶ COM(2007) 700.

THE CONSUMER INTEREST

Users' rights and tariff transparency

In February 2008, Spain adopted legislation for data premium services (SMS and MMS)⁴⁷, which establishes the right of subscribers to disconnect from these types of services, improved transparency conditions regarding service information and itemised billing, and provides for new numbering ranges. As a follow-up, a code of conduct on the provision of these services is currently being prepared.

The SETSI has also presented a draft *Charter of rights of users of telecommunications*, which, among other things, will establish an obligation on operators to ensure that the theoretical speeds for ADSL connections are at least 80% of the contracted speed.

At the end of 2006, general consumer legislation⁴⁸ prohibiting the rounding up of tariffs entered into force, with practical implications for mobile services. The NCA investigated the increase in domestic prices that followed the modification of mobile tariffs and seems to have found evidence of collusion by the three main MNOs. A final decision of the NCA is still pending.

Universal service

An infringement proceeding is still pending for incorrect implementation and transposition of parts of the Universal Service Directive. The Spanish authorities initiated the first designation procedure for a universal service provider under the current regulatory framework. The bundling of universal service elements as laid down in the public consultation may have limited the number of expressions of interest from potential operators. The incumbent operator was the only undertaking to express interest in accordance with the established criteria. In December 2008, following applications by three operators, the incumbent was awarded a tender for the provision of directory enquiry services for a period of three years and it has also been designated for the provision of the remaining universal service elements for a period of two years.

In November 2007, the CMT approved the net costs for the provision of universal service during the years 2003, 2004 and 2005 and it has become one of the first regulators to decide to activate the universal service financing mechanism. In August 2008, the regulator determined that, apart from the incumbent, only mobile operators will contribute to the universal service fund in view of their revenues. The contributions are: the incumbent's mobile arm €59.4 million (33%), the second MNO €31.65 million (17%) and the third MNO €18.98 million (10%). Mobile operators have announced their intention to appeal the decision. In November 2008, the CMT launched a public consultation on the draft decision on net cost calculation for the year 2006.

European emergency number 112

Spain has a system with a network of 17 centralised Public Safety Answering Points (PSAPs) at regional level in addition to two PSAPs in Ceuta and Melilla, as responses to 112 calls are a matter of regional competence. The implementation of 112 in Spain is considered satisfactory and the most efficient 'push' system for caller location information is used in most PSAPs.

⁴⁷ Orden ITC/308/2008, de 31 de enero.

⁴⁸ Ley 44/2006, de 29 de diciembre.

In October 2008, the main public television channel started broadcasting a series on real interventions by 112 emergency services, which could contribute to raising awareness of 112. According to a Eurobarometer survey, 64% of the population know 112 as a number to call in case of emergency in Spain, but only 21% mentioned 112 as the number to call from other EU countries⁴⁹.

Number portability

Spanish consumers continue to benefit significantly from number portability, with more than four million fixed ported numbers and 18.3 million mobile ported numbers (35.45% of the total mobile numbers) by October 2008, one of the highest figures for ported numbers. The use of mobile number portability in Spain entails no cost for the end-user or for the operators. The fourth MNO and MVNOs are getting a positive net gain of lines by using this facility.

There is currently an average period of five days for porting both fixed and mobile numbers in Spain, which is below the EU average. The draft *Charter of rights of users of telecommunications* contains a proposed reduction to one day for the porting of both fixed and mobile numbers.

Consumer complaints and out-of-court dispute resolution

The number of complaints in the telecommunications market continues to increase. The main areas for improvement seem to be transparency of contracts, difficulties in subscribing, cancelling contracts and billing issues.

Consumers and users' associations claim that there is a lack of coordination between the different bodies dealing with complaints in the area of electronic communications at national, regional and local level. The office established within the SETSI to deal with users' complaints and to provide information on their rights received an average of 782 queries and 84 complaints a day in the first half of 2008. The number of complaints relating to fixed access has decreased, although it is still the second area of concern with 14.7% of the overall number of complaints, after billing issues (35.7%)⁵⁰.

⁴⁹ Eurobarometer Flash survey on the European Emergency Number 112 (February 2009).

⁵⁰ SETSI's report on queries and complaints, June 2008.

FRANCE

INTRODUCTION

The broadband sector continued to be the most dynamic market segment in France in terms of competition and penetration in 2008. Consumers benefited from low prices and also from bundled offers. The next challenge is the deployment of fibre. In contrast, the mobile market has not experienced significant changes and the potential entry of a new mobile operator is still unclear.

2008 was characterised by intense legislative activity related to electronic communications. Besides new rules aimed at reinforcing consumer protection and modifying the universal service designation mechanism, the French legislator also set out a regime on access to fibre within buildings. Additionally, draft laws on online piracy and on public television funding were presented to the Parliament. Furthermore, a plan to foster the development of the digital economy, which includes measures and actions to be undertaken, was adopted by the government.

REGULATORY ENVIRONMENT

Main regulatory developments

The legislator has been active in France in 2008 regarding electronic communications regulation. A law on competition and consumer protection (Loi n° 2008-3 du 3 janvier 2008 pour le développement de la concurrence au service des consommateurs, so called "loi Chatel"), with specific provisions on mobile, fixed and broadband services, was adopted in January 2008. The law on the modernisation of the economy (Loi n° 2008-776 du 4 août 2008 de modernisation de l'économie, LME) includes a chapter on electronic communications, aimed inter alia at regulating the in-building sharing of the terminating segments of fibre networks. Implementing Decrees were expected to be adopted shortly. It remains to be seen how these rules will be implemented in practice.

In the meantime, a French plan on the development of the digital economy, called Digital Plan 2012 ("France numérique 2012"), was launched by the government in October 2008.

Important measures include filling the gap in broadband coverage and, more generally, increasing the broadband penetration rate, licensing UMTS frequencies, stimulating the deployment of digital terrestrial TV (DTTV), and reserving some of the digital dividend generated by the switch-off of analogue broadcasting for the development of mobile broadband and very high speed broadband.

Other proposed laws, not specifically aimed at electronic communications, could have a non-negligible impact on the sector. A draft law on the diffusion and protection of Internet content ("projet de loi favorisant la diffusion et la protection de la création sur Internet") provides for a "graduated response" approach. After two successive warnings to Internet users in cases of copyright infringement, the administrative authority, created by the draft law, would have the power to order Internet providers to cease giving Internet access to subscribers illegally downloading content, subject to certain conditions. The surveillance role that seems to be assigned to Internet service providers by the proposals and the overall proportionality of the sanction have been questioned by market players opposing the draft measure.

A draft law reforming the public television system was also presented to the French Parliament at the end of the year. Among other measures, it proposed the imposition of a new charge on telecoms operators and Internet providers, in order to compensate for the suppression of advertising on public television. That charge could reach 0.9% of the undertakings' turnover. A unanimous reaction against this charge came from the telecoms sector, claiming inter alia a negative impact on the current investment efforts. It is also possible that the charged operators would pass on the cost to consumers. It is unclear if this

charge will be imposed under the general authorisation delivered to telecom operators. Administrative charges should only cover the administrative costs for management, control and enforcement of the authorisations, according to the EU Regulatory Framework. The Commission services are following this matter closely.

Organisation of the NRA

The mandate of the current Chairman of ARCEP (the French regulatory authority, Autorité de Régulation des Communications Électroniques et des Postes) expired at the end of 2008. A new Chairperson was appointed by the President of the French Republic for a term of six years in December 2008. According to the law, the regulator's board has seven members nominated for six years. Their mandates are irrevocable and non-renewable, in order to guarantee their independence.

The possibility of closer cooperation between the telecoms regulator, ARCEP, and the broadcasting regulator, CSA (Conseil supérieur de l'audiovisuel) has been mentioned in the Plan on the development of the digital economy, to reflect the markets' growing convergence and the new exclusivity-based agreements between network access providers and content broadcasters.

The number of procedures submitted to ARCEP for dispute resolution increased in 2008. Four disputes were submitted to ARCEP in 2007 and six in 2008.

The law on the modernisation of the economy (LME) has charged ARCEP with the resolution of disputes between cable operators and local authorities related to infrastructure sharing. However, it appears that the cable operators have not used this opportunity to clarify a situation they have been concerned about for several years.

Decision-making

ARCEP continued with the second round of market analyses and notified the reviews of the fixed retail access market, the fixed wholesale call origination and call termination markets, the physical network infrastructure access market and the wholesale broadband access market, in June 2008. ARCEP also completed its second cycle of market analysis for the mobile call termination markets by adopting in December 2008 its decision defining the price caps of mobile termination rates for mobile operators in France (except Overseas Departments, forecast in 2009) for the period between mid-2009 and end of 2010.

The regulator's enforcement powers have been strengthened by the new LME. In particular, the regulator will deal with disputes between operators on fibre sharing inside buildings. Also, its sanctioning powers have been increased in that it can now impose restricting measures on an operator further to a formal notice, and new measures such as reduction of rights of use, use of spectrum or of numbering.

MARKET AND REGULATORY DEVELOPMENTS

The total electronic communications turnover in France increased slightly (by 3.38% compared to the previous year) from around €46.17 billion at the end of 2006 to around €47.73 billion at the end of 2007, following the same trend as the previous year in terms of balance between revenues from the fixed and mobile sectors (€24.52 billion from the fixed market compared to €23.20 billion from the mobile market). At the same time, France is one of the two Member States where the total value of tangible investments has dropped (by 14.96% in 2007), decreasing from €7 billion by the end of 2006 to €5.96 billion by the end of 2007. This is mainly due to the mobile sector, which reduced its investment from €3.27 billion to €2.29 billion.

There was some consolidation in the telecoms sector in 2008. The second mobile operator, whose owner also owns one of the main actors in pay TV, bought one of the alternative fixed operators, which will allow the former to offer mobile, fixed, broadband and television services. In the meantime, the third mobile operator started offering broadband and television services. More generally, the question of the links between content and electronic

communications services providers has been raised by ARCEP as potentially negative for competition in the telecoms market.

As regards next generation access, several tests and subsequent agreements between some operators on in-building wiring have been developed, based on the new regulation set in the LME. Bundled offers continued to have an influence on the market, mainly through double and triple play, and progressed to 18.67% of the population in the first quarter of 2008.

Broadband

Market situation

The broadband penetration rate in France, at 27.7% in January 2009 compared to 24.8% in January 2008, is still ahead of the EU-27 average (22.9% in January 2009), thereby placing it in the seventh position in the EU. The increase in the penetration rate was approximately, 3 percentage points from January 2008 to January 2009, slightly above the EU average growth of approximately 2.8 percentage points in the same period. France increased the total number of broadband lines to 17.69 million in January 2009, compared to 15.69 million in January 2008 (12.7% growth), which shows a slowdown in the process, compared to 22.4% growth in the same period last year.

The DSL market share remained stable from January 2008 to January 2009, being 95.3%. Out of the 16.85 million DSL lines, 6.33 million were unbundled lines in January 2009, the bulk of which were fully unbundled (4.94 million lines) as at January 2009, compared to 3.62 million as at January 2008. LLU is still the main driver of DSL growth, together with naked DSL, although it is likely to achieve market saturation soon, according to ARCEP. A not insignificant part of the local loops (up to 15%, according to ARCEP) has been unbundled by networks owned by regional authorities.

France narrowed the digital gap for DSL coverage. National DSL coverage remained roughly the same (98.5% in 2007 compared to 98.4% in 2006) and DSL coverage in rural areas increased by 0.2 percentage points over a year (from 96.5% to 96.7%). For cable, rural coverage and national coverage stood unchanged at 1.1% and 24.9% respectively.

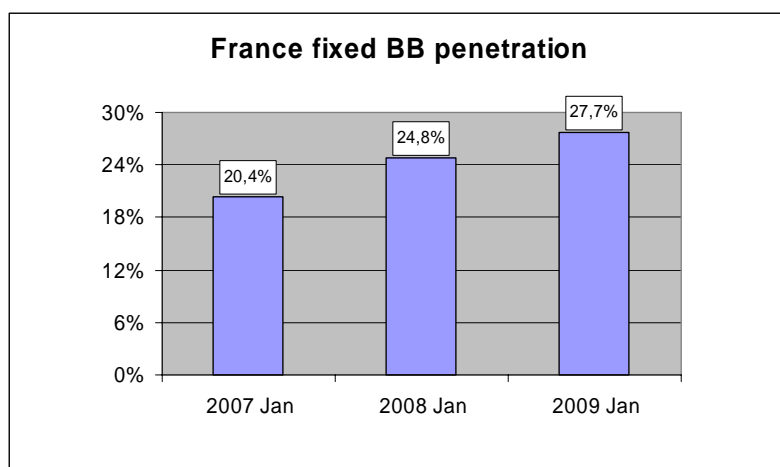
The cable operator offers to deploy fibre for other operators and some of them are using this possibility. It remains to be seen what impact the incumbent's commercial wholesale reference offer in fibre will have. In spite of these developments, one local authority

("département") has announced its intention to deploy its own fibre network. This is causing concern among telecoms operators, as fibre deployment by private initiative seems to be developing well so far, and therefore public intervention might not be needed. The Commission services are looking into this matter. The Plan on the development of the digital economy

included a "right to broadband for all", which would imply broadband coverage of all the territory by 2010. The Plan announced the launch of a call for tenders in the first half of 2009, for designating the provider that would ensure that service (a minimum of 512 kb/s) at an affordable price (35 euros/month) to all.

Regulatory issues

ARCEP notified its market analysis on the market for physical network infrastructure access (LLU), which included in the market definition both copper and fibre local loops, as well as



telecommunications civil works infrastructures, and imposed access to the ducts of the incumbent and access to the copper local loop, but not access to fibre. ARCEP also notified its market analysis on the market for wholesale broadband access, which included DSL and fibre connections, and imposed bitstream access for copper infrastructure, but not for fibre infrastructure. ARCEP continued the existing access obligations for the copper local loop. Following these analyses, in September 2008, the incumbent operator launched the corresponding reference unbundling offer (RUO), the bitstream reference offer and the ducts' access reference offer, as well as a commercial offer on fibre.

In order to complete these measures and to facilitate fibre deployment, the legislator has included in the LME several provisions on the deployment and sharing ("mutualisation") of fibre in-building wiring, which would aim to ensure that every residential user has the right to obtain access to a fibre network ("droit au très haut débit", "right to fibre"). A decree adopted in early 2009 sets out the procedure by which this "right to fibre" may be exercised.

According to the LME, any reasonable request by an operator to deploy fibre in existing buildings should in principle be met; owners of buildings may only oppose it if a fibre network has been or is being deployed in the building. The law further provides for a mandatory convention between operators and owners of buildings, aimed at regulating their mutual obligations when deploying fibre in-building wiring. Another decree, adopted in early 2009, specifies the compulsory elements of this convention. If a fibre network has already been deployed by an operator, the latter should, regardless of its SMP (significant market power) status, grant other operators access to its network under reasonable conditions, for the purpose of providing services to end-users, giving priority to commercial agreements between operators. Access must be subject to an agreement between operators, aimed at determining the financial and technical conditions of access. ARCEP has been granted the power to set rules regarding sharing obligations, and to resolve disputes between operators. The LME also includes an obligation to equip new buildings with fibre in-building wiring. Another decree adopted in early 2009 specifies this obligation.

Mobile

Market situation

The French mobile market has been characterised by its limited dynamism over recent years. The penetration rate was still well behind the EU-27 average, standing at 88.4% as of October 2008 (compared to 118.9% in the EU), up from 83.3% as of October 2007. This significant gap might, however, partly be attributed to a relatively small share of pre-paid users in the mobile market in France, compared to the share for post-paid (34% and 66% respectively). The main mobile network operator's market share decreased by less than one point, from 44.3% to 43.6% (in terms of subscribers), as did the second operator's share, which decreased from 34.1% to 33.4% between October 2007 and October 2008. The third operator's market share also decreased slightly from 17.4% to 17.2% in the same period. Mobile virtual network operators (MVNOs) gained some market share, growing from 4.2% in October 2007 to 5.8% as of October 2008.

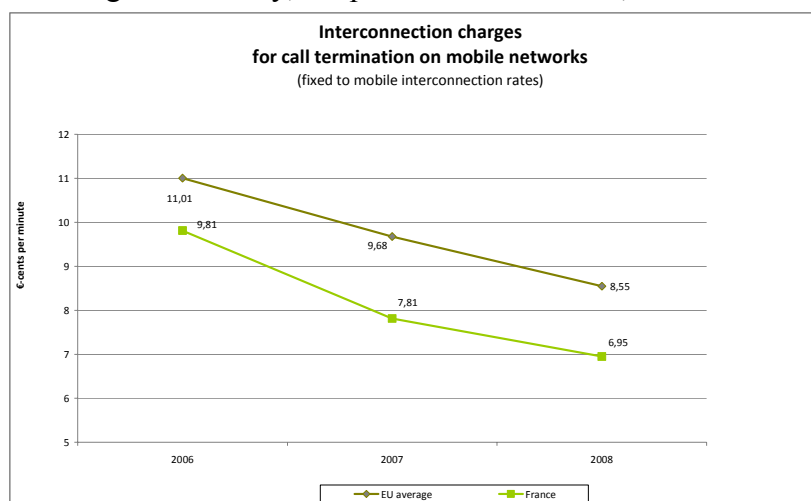
16 MVNOs (one of which is registered but has not yet launched any commercial offer), three more than the previous year, were on the market as at October 2008. Three of them have been bought by their network operators. In view of the stability on the mobile market, it appears that MVNOs have not had an impact on competition in any significant manner.

Regulatory issues

The situation of MVNOs, expected to make the mobile market more dynamic, attracted specific attention in 2008. At the request of the French government, the National Competition Authority (NCA, Conseil de la concurrence) analysed the market conditions imposed by network operators on MVNOs. In its opinion of July 2008, the NCA acknowledged the existence of various restrictive conditions imposed on MVNOs which limited their ability to compete. The NCA also stressed their low market share, compared to other Member States.

The government asked ARCEP to take measures further to this opinion. While ARCEP initiated a dialogue between MNOs and MVNOs focusing on contractual issues (e.g. the duration of exclusivity clauses and pre-emption conditions), the impact of this initiative remains to be seen.

The Plan on the development of the digital economy, adopted in October 2008, stressed the need for a mobile market that allows MVNOs to bring competition and broader choice to citizens, and also stressed the possibility for the legislator to intervene if the MVNO conditions were not improved. The Plan also referred explicitly to the MVNOs' conditions as an element that would be taken into account in the allocation of 3G frequencies.



The LME has effectively allowed ARCEP to allocate 3G frequencies through an auction procedure, according to conditions set by the Minister, upon a proposal of ARCEP. In particular, the conditions for allocating those frequencies to new network operators and existing operators will be decided in the first quarter of 2009. In principle, neither of them are expected to be excluded from the process. The LME also contains several provisions on 2G network coverage reporting and on 3G deployment (through facility sharing in urban areas). In December 2008, ARCEP adopted measures to lower further the mobile termination rates in the period between mid-2009 and end of 2010, under the second round of notifications. ARCEP maintained asymmetry of termination rates for the third operator. These measures were expected by consumers' associations to contribute to a drop in retail prices. The Commission supported the move towards cost-orientation, while reminding ARCEP that any asymmetry should ultimately be phased out.

Roaming

No particular problems were reported in 2008 concerning the implementation of the Roaming Regulation.

Fixed

Market situation

The fixed market (including dial-up Internet) has further decreased in volume and revenues. The distribution of voice traffic (including calls to Internet) was 55% for fixed calls and 45% for mobile calls in 2007. The total number of active operators continued to decrease, from 43 to 38 as at March 2008. The incumbent's market share is sizeable, but the slowly decreasing trend of past years has continued, with a 68.4% share in December 2007, compared to 69.6% (by revenues) as at December 2006. At the same time, a significant increase in the market share (by volume) of VoIP operators has been observed, from 14% in December 2006 to 27.34% in December 2007, which is well ahead of the EU27 average (8.25% of voice traffic by December 2007).

At retail level, flat-rate offers (excluding fixed-to-mobile calls) have been made generally available by most operators.

Regulatory issues

ARCEP adopted a decision in July 2008, following a market analysis, removing regulation in the retail fixed market. This was a matter of concern to alternative operators, which

considered that the incumbent's market share was sufficiently large to merit the maintenance of remedies. The regulator launched a public consultation prior to a decision on quality of service standards, expected by the end of 2008. The indicators would measure the quality of access to the network (related to bundled offers and fixed telephone only) and the quality of the telephone service itself.

Following the presentation in 2007 of the incumbent's cost-accounting and accounting separation for 2006, the association of service and network operators (alternative operators) lodged a complaint with ARCEP, in which they claimed that the report appeared to prove an excessive profit produced by overcharging of regulated wholesale prices. ARCEP's decision was still pending when this Report was drafted.

Broadcasting

Market situation

25.3 million households were served with TV in July 2008. The broadcasting market shows platform competition and different technical options, between terrestrial television (analogue and digital), cable, satellite and IPTV. Digital terrestrial TV is the main platform with 31.7% of households, whereas exclusive analogue terrestrial TV still represents 29.1% of households. Cable represents about 14.5% of households, the satellite figure is about 25.7% and IPTV is used by about 13.2% of households (22% of households are subscribed to a triple play offer that includes IPTV)⁵¹. New technologies are developing in France. A call for tenders on mobile TV was launched to allocate a total of 13 channels, out of a total of 16, since the government pre-empted three channels for public services. In addition, several broadcasters started broadcasting high definition TV from October 2008.

Digital terrestrial TV (DTTV) continued to be deployed, reaching 87% coverage by October 2008. National free-to-air broadcasters (except encrypted) will have to cover 95% of the population by November 2011, and all other broadcasters (private and public) have undertaken to achieve the same goal. A first region will switch over by the end of 2009. The Plan on the digital economy announced that the sub-band 790-862MHz, part of the digital dividend, would be kept for the development of new electronic communications services and, in particular, for very high speed broadband and mobile broadband. An ordinance published by the end of 2008 modified the national table of frequency allocation in order to assign that band to mobile services from December 2011 and placed its management under ARCEP's responsibility, with the goal of allowing very high speed mobile Internet offers over the whole territory. The ordinance also states that the 174-223MHz band will be fully allocated to digital broadcasting applications, after the analogue TV switch-off. Finally, the 470-790 MHz band remains fully assigned to broadcasting activities, with the aim of developing in particular digital terrestrial television (11 national multiplexers (HDTV) and two mobile TV multiplexers).

Regulatory issues

The LME established several measures specifying the deployment of DTTV and the switch-off of analogue TV. A special fund will be earmarked for supporting low-income households during the switch-over process. A decree, still pending, will develop this principle and set the conditions for receiving this aid, which will be given to consumers, and not to undertakings. The March 2007 broadcasting law, whereby additional digital channels ('bonus channels') would be allocated to the three main analogue broadcasters without a prior call for tenders, has been contested by several alternative broadcasters. This allocation, which would become effective with the switch-over by November 2011, seems to be in the nature of compensation for the early termination of some of those broadcasters' analogue licences, caused by the switch-off of analogue TV. New entrants in DTTV point to the disproportionate character of this compensation. They are also concerned that this will limit the options for new entrants in

⁵¹ Source: National broadcasting regulator, CSA (Conseil supérieur de l'audiovisuel).

the market, as there will not be enough spectrum to be distributed, and provides discriminatory advantages to the existing broadcasters.

ARCEP launched a public consultation in November 2008 on the revision of the wholesale broadcasting transmission services, which related to the advisability of extending the current regulation and possible measures to be imposed on the operator with SMP in the wholesale broadband market. The results were not expected before the beginning of 2009. The rules for implementation of the cost-accounting and accounting separation obligations, imposed on the current operator with SMP, were specified only in April 2008, two years after the market notification and just one year before the expiry of the previous decision.

Finally, in May 2008, the NCA dismissed a complaint regarding exclusivity agreements on catch-up TV (i.e. TV on demand allowing access to TV programmes shortly after the first broadcast) reached between the incumbent (which has SMP in the wholesale broadband access market) and the public service television broadcaster, which was lodged by the association of telecom network and services operators. The agreements allocate an exclusivity right to the incumbent for broadcasting, to its DSL and mobile subscribers, certain programmes shortly after their normal diffusion.

The NCA dismissed the complaint on the grounds that the impact of the exclusivity agreement was limited, in terms of programmes and duration. It nevertheless left open the possibility to lodge a new complaint further to the implementation of the agreements, if new elements were to arise. Also, the incumbent fixed operator has launched two TV services provided to its mobile and DSL subscribers on an exclusive basis. ARCEP appears to be opposed to this kind of agreement and, more particularly, to bringing exclusivity (which is standard practice in the content market) to the telecom market, since it could limit the access of certain users to different services. The regulator has expressed its concerns with regard to telecom operators acting in the content market, and would support equal access to content for all telecom operators.

Horizontal regulation

Implementation of spectrum decisions

All spectrum decisions have generally been implemented, including the amended WAS/RLANs Decision (Decision 2007/90/EC). The French authorities have requested a derogation from Decision 2008/477/EC on the harmonisation of the 2500-2690MHz frequency band, on the grounds of its current use for security purposes. The transitional period has been requested for over four years, which might hamper the uptake of broadband to some extent. France plans, however, to free the most densely populated areas first in order to limit the potential impact of the derogation on broadband coverage.

The allocation of frequencies for deploying 3G was one of the most recurring issues in 2008. After the unsuccessful 2007 assignment process concerning the fourth 3G licence, ARCEP launched a public consultation in June 2008, proposing different solutions for the allocation of free spectrum. Further to the results of the consultation, ARCEP recommended that part of the spectrum be allocated to new entrants, which would facilitate the effective entry of a new operator in the mobile market. In the French Digital Plan, the government announced the launch of a call for tenders based on financial conditions, coverage and contribution to increased competition, in the first half of 2009, but did not specify that time whether it would reserve spectrum for a genuine new entrant. This announcement generated controversy among stakeholders. A new entrant in the mobile market could contribute in a substantial manner to making the mobile market finally more dynamic.

The use of the 900 and 1800 MHz bands for 3G services, which ARCEP has agreed to allocate to the main mobile operators, will help them to fulfil their coverage obligations. The third operator has not applied for this use so far.

ARCEP monitored the WiMAX deployment obligations during summer 2008. A large number of licences are held by regional authorities. While WiMAX licences have been used

for mobile broadband and for increasing the DSL coverage, ARCEP found that the deployment was significantly below the operators' commitments, and therefore put the latter under surveillance. As a result, monitoring exercises will take place every six months to verify that operators meet their obligations.

Rights of way and facility sharing

It appears that the thresholds for fees set in the 2005 Decree on rights of way apply to new contracts (mostly fibre deployment). They do not apply to contracts pre-dating the Decree, which are therefore submitted to bilateral negotiations and are less constrained. Also, some cities providing access to their sewers request high fees for such access, on the basis that they offer additional services (as there are special provisions, e.g. related to public health, to be respected). The Directorate General for Enterprise can be addressed in the case of a town not respecting the regulation on rights of way.

Authorisations

The LME established that local authorities can impose a new obligation on the cable operator to give access to its network in a transparent, objective and non-discriminatory manner. An agreement should then be signed by the operator, the local authority and the operator requesting access. The cable operator expressed its concern, as the local authority could in addition take control of the network, if the operator refuses to give access, further to a formal notice and a contradictory process, in exchange for compensation and the right of use of the network.

THE CONSUMER INTEREST

Tariff transparency and quality of service

Special attention has been paid to consumer protection this year as evidenced by several pieces of user-oriented legislation. The "loi Chatel", with specific provisions on mobile, fixed and broadband services, was approved in January 2008, and the most relevant provisions entered into force on 1 June 2008. Under those provisions, calls to hotlines (technical assistance and customer care services) may not be premium-rated and the waiting time for on-net calls to those services should be free-of-charge. Regarding contractual conditions, the notice of termination by users was reduced to ten days, and the maximum duration of a contract to 24 months. Terminating the contract after 12 months is permissible against payment of a limited termination fee. While this law could improve transparency, its effective impact remains to be seen, for instance on the number of complaints. The law provides that ARCEP will assess the impact of these provisions in 2010.

An issue raised by many mobile communications users, especially those not residing permanently in France, seems to be the short validity period of pre-paid cards in France and the early expiry of the recharge period, together with the loss of unused credit. Such conditions might have contributed to the small proportion of pre-paid users in France. Finally, a judgment in September 2008 declared as abusive several contractual clauses that had to be withdrawn from the second mobile operator's general conditions. The most significant related to the limited operator's obligations on the provision of broadband services, in a way that allowed the latter not to be responsible if the subscribed download speed was not provided.

Voluntary agreements were concluded by the government and the association of telecom operators in order to improve transparency and consumer protection, through a revised guide on electronic communications (drawn up in cooperation with the consumers' associations), a telephone number for reporting SMS spam, and compensation for users suffering an unsolicited change of operator.

Universal service

The European Court of Justice gave its judgment on the French universal service designation mechanism in June 2008 (Case C- 220/07). The Court concluded that French law, by restricting participation in the designation process to operators able to cover the whole of the national territory, did not comply with the principles of efficiency, objectivity, non-discrimination and transparency, set out in the EU Regulatory Framework. As a result of that restriction, it could not be ensured that universal service was provided in the most efficient and cost-effective manner.

Further to the Court's decision, the French legislation was amended in order to open participation in the designation mechanism to any interested operators. At the same time, the provision of directory and directory enquiry services was unbundled, in order to allow the designation of different providers for each of those elements, as required by the EU Regulatory Framework. The next call for tenders for designating the universal service provider was expected by the beginning of 2009.

It would appear that the universal service financing mechanism is applied automatically, without any formal request from the provider. Moreover, when the net cost calculation of the comprehensive directories and directory enquiry services results in a net benefit, this would not be taken into account in the calculation of the overall net cost of a universal service provider. There are concerns that, as a result, the amount to be paid from the universal service fund would be higher than justified, because the overall net cost for which a designated operator is to be compensated should take account of any net benefit from all individual components covered by that operator. The Commission services are looking into these matters.

It should also be noted that under the LME (outside the universal service regime), mobile operators will provide a special tariff for people with low income, on a voluntary basis, further to an agreement between operators and the government, still to be concluded.

Directory services and directory enquiry services

According to a new provision of the LME, calls to directory enquiry services originating in a mobile network will be charged as a normal national call, adding the price of the provided service. Users will be informed in advance about the prices for having their calls put through to the required number.

Emergency services (112)

The previously reported problems in reaching 112 in cases of roaming or in areas covered by only one mobile operator have been solved. The caller location information is obtained using a manual system, as it seems that there is an interface problem between the 112 centres and the operators that impedes automatic transfer of data. It is to be hoped that improvements will be made to the manual system (by which the 112 centres contact the operator to obtain the user's location), in order to reduce the time needed for locating and to improve security of citizens, in line with the Commission Recommendation on caller location.

Number portability

The average time for porting a fixed number was four days, and seven days for mobile numbers, as of October 2008, which is below the EU-27 average. The volume of ported fixed numbers continued to rise and reached 2 800 000 as of October 2008, compared to 1 700 000 the previous year. The total accumulated volume of ported mobile numbers, 2 746 900 in France metropolitan (overseas excluded) as of October 2008, represented 2.63% of the mobile numbers. This figure seems to confirm the value of the regulatory changes, reducing the deadline for porting and introducing a one-stop-shop system, and shows further growth from 1 490 600 in October 2007.

Must-carry

The March 2007 broadcasting law imposed new provisions for carrying channels, to be applied to mobile television service providers. Pursuant to the EU Regulatory Framework, must-carry obligations may only be imposed where a significant number of end-users use the network as their principal means to receive radio and television broadcasts and when they are necessary to meet clearly defined public interest objectives and are proportionate.

Consumer complaints and out-of-court dispute resolution

The electronic communications sector was still the subject of a large number of complaints from users. The total number of complaints was 35 000 in 2007, most of them relating to quality of service, technical problems, billing and termination conditions.

As some of those issues are covered by the law on consumer protection which entered into force in July 2008, a potential effect of this law could be a reduction in the number of complaints by users.

Data protection

The draft anti-piracy law, which was still being discussed in the Parliament at the end of 2008, has raised concerns among Internet access providers regarding the filtering measures that they would have to implement. Following a request from the administrative authority regarding specific subscribers, Internet providers would have to investigate the websites consulted by the latter.

ITALY

INTRODUCTION

While overall growth in the electronic communications market decreased for the first time in several years, Italy's mobile sector, which has the highest penetration rate in the EU, continued to grow in 2008, and mobile broadband is increasingly prominent. The broadband market has also grown further, although penetration is still lower than the EU average. The digital divide has been significantly reduced thanks to several projects carried out by public entities, and to investments by fixed operators.

The most important regulatory issue in 2008 was the incumbent's proposed undertakings in the framework of an operational separation between retail and wholesale activities aimed at guaranteeing non-discriminatory treatment in the provision of wholesale access services.

Other significant issues were the setting-up of a glide path to reduce the asymmetry of fixed and mobile termination rates between the incumbent and alternative operators, and the successful transition to digital TV of the first Italian region.

REGULATORY ENVIRONMENT

Main regulatory developments

In July 2008 the incumbent proposed to AGCOM a set of commitments in addition to existing obligations imposed in 2002, intended to ensure non-discrimination in the provision of wholesale access network services. After a public consultation and some requests for modifications from AGCOM, the commitments were approved by AGCOM in December 2008.

The incumbent proposed that its already existing business unit, "Open Access", would be in charge of the management, planning, development and rationalisation of the incumbent's network access. "Open Access" would deliver wholesale services to both the incumbent's retail unit and the incumbent's wholesale unit according to a set of rules that – in AGCOM's view - would help to guarantee non-discrimination.

The commitments also oblige the incumbent to provide a reference offer for its passive fibre infrastructure. They also foresee the constitution of a working group open to all operators, which will assist AGCOM on technical, organisational and economic aspects connected with the transition to the New Generation Access.

A Supervisory Board (with three members designated by AGCOM and two by the incumbent) is supposed to monitor the implementation of the undertakings through a set of indicators measuring the quality of the supply of wholesale services. Non-compliance with the commitments would be reported by the Board to AGCOM and to the management of the incumbent, unless the incumbent brings the violation to an end within an agreed time frame, determined on a case-by-case basis.

A Dispute Settlement Body will be in charge of resolving the controversies of a technical-operational character in relation to the services of access to the network.

The decision by which AGCOM accepted the commitments suspended the ongoing proceedings for non-compliance by the incumbent with existing obligations. At the end of the reporting period AGCOM had not yet formally notified any draft measures that would include Telecom Italia's commitments.

Other important regulatory decisions were taken on fixed and mobile termination rates, numbering, spectrum management and consumer issues. Italy does not comply with the EU requirements concerning calls to the European emergency number 112. A procedure concerning caller location information was pending before the European Court of Justice at the end of the reporting period, and a new procedure concerning the effectiveness of 112 call handling was opened in 2008.

Organisation of the NRA

In order to increase the efficiency of the dispute resolution mechanism between operators (questioned by alternative operators) AGCOM has approved a new regulation that allows the complainants to request an interim measure, and AGCOM to open a sanctioning procedure during litigation.

AGCOM's decision-making process is generally considered open and transparent. However, the lack of transparent internal procedures for handling complaints remains an issue for the operators.

Decision-making

In March 2008, AGCOM started the second round of analyses for all markets. However, the majority of the analyses of fixed markets were suspended in July 2008, pending evaluation of the above-mentioned undertakings proposed by the incumbent. While all existing obligations remain in place, some of the price caps imposed as remedies expired before the new market analysis could be finalised. In these cases interim decisions were adopted.

In December 2008, on the basis of the comments received by the Commission, AGCOM adopted a decision to reduce mobile termination rates with a glide path implementing full symmetry between operators by 2012. The Commission had also invited AGCOM to reduce mobile termination rates to the cost level of an efficient operator.

The analysis of the mobile access and call origination market (notified to the Commission on 19 December 2008) led to the conclusion that the three cumulative conditions for ex-ante regulation were not being met.

During 2008, AGCOM carried out seven investigations for non-compliance by the incumbent with existing obligations concerning, mainly, win-back activities, the activation of non-requested retail services, and the disconnection of carrier pre-selection without users' consent. Decisions regarding all the above proceedings have been suspended after AGCOM's approval of the incumbent's undertakings; however, the proceedings may be resumed in the event of non-compliance with the undertakings.

The national antitrust authority (AGCM) accepted, in December 2008, a set of commitments proposed by the incumbent with a view to stopping illegal use of privileged information for the purpose of win-back.

MARKET AND REGULATORY DEVELOPMENTS

For the first time, in 2007, the increased revenues in the mobile sector (1.4%) did not offset the reduction in the fixed sector (-3.7%). As a consequence, the revenues of the overall electronic communications sector had declined to €43.7 billion (the majority of which, €22.9 billion, came from the mobile sector), compared to €44.18 billion in 2006⁵². Mobile UMTS subscribers continue to grow (+18% since January 2008) and as of January 2009 there were almost 29 million subscribers, representing 32% of the active SIM cards.

Investments by operators in the sector during 2007 (€6.9 billion) grew by 2.8% since 2006 and were mainly focused on fixed networks (54%). Investment by alternative operators on fixed network (€1.1 billion) represented around 34%.

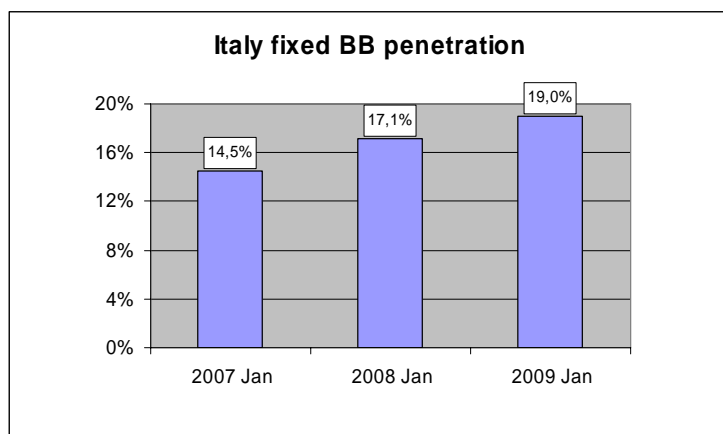
The deployment of New Generation Access (NGA) is at a relatively early stage as current investments still relate mainly to advanced DSL technologies on copper network. However, Italy has a relatively high number of fibre to the home (FTTH) connections, with around 300 000 active fibre lines and around two million homes connected in December 2008. The incumbent estimates that the deployment of NGA will cost above €6.5 billion (including various types of fibres). During the period 2009-2010, investment will be mainly focused in metropolitan areas (covering 50-60% of the access lines). One alternative operator planned to launch a new Internet access service at 100 Mbit/s by the end of 2008 in the larger cities. A significant number of operators are now providing double (12), triple (5) and quadruple play services (1), with more than 8 million users overall (13.8% of the population).

Broadband

Market situation

As of January 2008, the number of broadband lines stood at 11.3 million, which represents a penetration rate of 19%. In spite of an increase of almost 10.75% since January 2008, the penetration level in Italy remains below the EU average (of 22.9%).

The usage of mobile broadband services in Italy is quite strong: as of January 2009 the penetration rates of both mobile broadband for general usage (13.6%) and mobile broadband based on data cards (2.9%) were above the EU average (13% and 2.8% respectively).



ADSL remains the most widely used technology, representing more than 96% of the broadband lines. As of January 2009 almost 68% of the existing fixed broadband lines offers high speed connections (i.e., speed over 2 Mbit/second). The incumbent's market share on the broadband market has declined from 63.4% to

59.8% during the period January 2008 - January 2009, although it is significantly higher than the EU average (45.6%, excluding resale lines).

Italy remains one of the EU leaders in Local Loop Unbundling (LLU) and, as of January 2009, active full LLU wholesale lines reached 4.7 million (+31% with respect to January 2008). Investments by alternative operators on LLU have increased and, at mid-2008, more than 60% of the population was connected to a local switch where alternative operators could provide broadband services using LLU.

Although one-off fees for LLU have increased by 11% since October 2007, the monthly average total cost (that includes both one-off fees and monthly rental) for full LLU continued

⁵²

These data are not comparable with AGCOM's Annual Report 2008 (table 1.3 and 1.6).

to be among the lowest in the EU (€8.75 per month in October 2008, compared to the EU average of €10.88 per month).

Public and private investments in broadband networks have helped to significantly reduce the digital divide. At the end of 2007, ADSL coverage of the population in the urban area was almost 100%, while in rural area it was 81.7% (+31 percentage points relative to December 2006). The DSL rural gap with national coverage decreased from 38.5% in 2006 to 12.3% in 2007⁵³.

In order to strengthen the roll-out of a broadband network throughout the country significant public initiatives have been taken. The "Programme for infrastructural broadband coverage (2007-2009)", amounting to €197.5 million, aims to provide broadband connections to 99% of the population (94% at 4 Mbit/s as minimum). A draft legislative bill (currently under discussion in the Parliament) earmarks a further €800 million for the period 2009-2013 for the roll-out of the new generation network. In this connection a task force bringing together the Ministry, the main stakeholders, experts and market analysts will be established in order to coordinate the different initiatives.

Regulatory issues

The postponement of the second round of market analyses implies that the price cap for LLU (that expired in 2007) has not been renewed. The reference unbundling offer (RUO) for 2008 (approved by AGCOM in October 2008) increases the price for the one-off fees by 11% (currently at €40.08), and re-introduces a cost for line-testing (suppressed temporarily a few years ago) for lines not already used for x-DSL. On the other hand, other cost elements, like the price for collocation, have been reduced. AGCOM estimated that alternative operators would benefit from an overall saving of around 2%, in comparison to the year 2007. Despite the fact that it constitutes an amendment of the LLU price, this measure was not notified to the Commission. Besides, alternative operators questioned the absence of a public consultation prior to AGCOM's approval.

In December 2008, AGCOM's draft decision concerning the incumbent's RUO for 2009 (that proposes an 11% increase in the monthly rental for LLU) was notified to the Commission. The new value is based on the analysis of the incumbent's regulatory accountancy for the year 2006, that has not been audited.. Alternative operators claim that such increases are not justified by costs duly approved by AGCOM and would significantly reduce their ability to invest in the network. The Commission notes that using the most recent audited data is essential to ensure legal certainty for all market players. Therefore, the Commission invited AGCOM to adopt the final measure with regard to the LLU only once the audited data are available.

The incumbent's 2008 offer for bitstream services still needs to be approved by AGCOM. Alternative operators claim that the replicability of the incumbent's convergent retail offers is not always assured and, in November 2008, AGCOM set out specific guidelines for this purpose. Alternative operators are also concerned about the incumbent's proposal for a significant price increase for some components of the service (up to +21%), and by the fact that the technical conditions for bitstream services on Ethernet networks do not allow them to provide innovative convergent services to their customers.

The new migration procedure between different types of LLU started to be implemented in mid June 2008. In particular, it has become possible to migrate between alternative operators while maintaining the same number. The new procedure is also aimed at reducing the illegitimate use of wholesale information for win-back activities by the incumbent, and putting an end to the non-requested migrations between operators. Consumer associations welcome AGCOM's measure that puts the client at the centre of the whole process.

Mobile market

Market situation

⁵³ Source: IDATE 2008. Broadband coverage in EU.

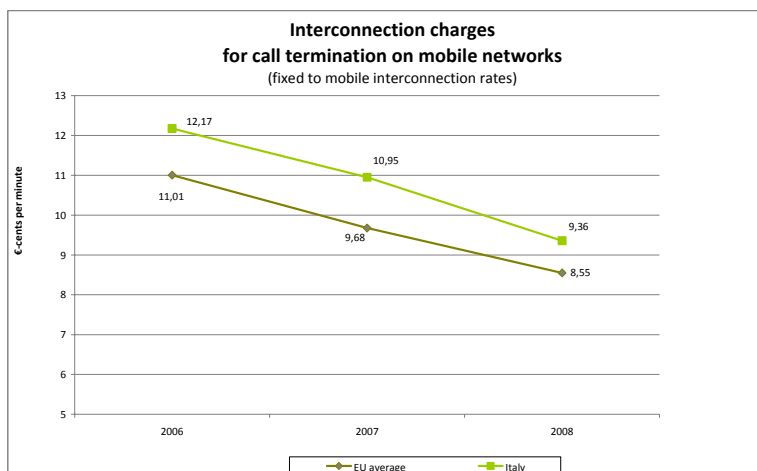
Although mature, the mobile market in Italy is still growing and, in October 2008, mobile penetration reached 152.86%, which is the highest in the EU (88% are pre-paid cards). During 2008 the mobile market was characterised by an increase in traffic volume, mainly driven by mobile data services (+140% relative to the previous year), and by the lower rate of growth in revenues, due to the reduction in both wholesale and retail prices. From 2006 to 2007 revenues for the mobile sector grew by +1.4% (from €22.6 billion to €22.9 billion). Thanks to the wide diffusion of enhanced terminals able to support mobile data services such as mobile TV, mobile e-mail, and instant messaging, as of January 2009 UMTS users numbered almost 29 million (+18% since January 2008).

The market shares of the four mobile operators have remained more or less stable since October 2007 with a rather high level of concentration on the overall market (GSM and UMTS). In October 2008 the two main operators held, respectively, 38.8% and 33.2% of the market, while the third operator had around 18% of the market. The later new entrant (using UMTS technology only) had around 9%.

As of October 2008, 15 mobile virtual network operators (MVNOs) agreements had been signed with the four mobile network operators. While the bulk of MVNOs are large distribution chains and utility companies, three fixed operators will provide integrated fixed-mobile services. As of October 2008, the overall market share of MVNOs was around 1%.

Regulatory issues

Although decreased by almost 11% since October 2007 as at October 2008 the average mobile termination rate in Italy (€0.0936) is still above EU level (€0.0855). MTRs have been set by AGCOM at different levels for the mobile operators, due to factors outside the control of the operators, such as the up-front cost for the use of frequencies and the technology used. Furthermore, the latest entrant in the market (using UMTS technology) has not yet been fully able to develop its own economies of scale.



Price control on the MTRs of this later entrant was imposed by AGCOM in March 2008 (at €0.16, reduced to €0.13 as of November 2008).

In December 2008 AGCOM adopted a three-year glide path for MTRs from 2009 to 2011 in order to reduce the existing asymmetry between the mobile operators. The Commission considered that the initial price caps for 2011 suggested by AGCOM (€0.059 and €0.07 for the later entrant) were still high compared to those in other EU Member States, and invited AGCOM to develop a cost model whereby the MTRs should be reduced to the cost level of an efficient operator employing efficient technology with a view to eventually arriving at a symmetric rate for all operators by 2012. AGCOM's final decision lowered the MTRs for 2011 to €0.053 and €0.063 for the later entrant. AGCOM also undertook to revise (downwards) in 2010 the values applicable in the period 2011-2012 on the basis of a "bottom-up long-run incremental cost" model developed in accordance with the forthcoming Commission Recommendation on the regulatory treatment of fixed and mobile termination rates.

The result of the second round of analyses for the mobile access market (notified to the Commission in December 2008) confirmed that there is no evidence that the market will not tend towards effective competition over time. Since the three-criteria test for ex ante regulation is not fulfilled, mobile operators have not been subject to remedies. MVNOs do not share AGCOM's conclusion, considering that the market is highly concentrated and needs regulatory intervention in order to create a level playing field. According to them the greater part of retail offers provided by mobile network operators (in particular for mobile data services) are not replicable. Furthermore, network providers are not willing to renegotiate economic/technical conditions and MVNOs are *de facto* prevented from changing network providers, since numbering ranges belong to network operators (according to the current rules numbers can be assigned only to "real" MVNOs while operators currently active in the Italian market belong to the category of Enhanced Service Providers).

In July 2008, AGCOM and AGCM launched a joint investigation on SMS (short message services), MMS (multimedia messaging services) and mobile data services, with the aim of verifying the competitiveness of the retail market (the standard price for SMS is €0.125, one of the highest in the EU) and the transparency of information provided to customers. Mobile operators maintain that SMS and MMS services are mainly provided through promotions and bundled offers, at significantly lower prices than the standard price.

Fixed market

Market situation

Revenues in the fixed electronic communications sector (€22.3 billion as of December 2007) continued to fall mainly because of the reduction in revenues for intermediate fixed wholesale services, and the migration towards double/triple play broadband services. An increasing number of customers have dismissed the fixed line, having chosen to use mobile service only. While the incumbent still holds a strong position on the access market (82.5% at October 2008), the percentage of subscribers using alternative operators for direct access has grown from 12.4% to 18.3% since October 2007.

The incumbent's market share on the fixed telephony calls market decreased from 63.8% to 62.1%⁵⁴ during the period December 2006 - December 2007 and, as of December 2007, is below the EU average (64.8%). On the same date the main four alternative operators had market shares ranging from 11.5% to 3.4%.

Regulatory issues

In February 2008, AGCOM notified to the Commission a cost model for fixed termination rates based on the LRAIC (average Long Run Incrementation Cost) bottom-up model. A subsequent notification of May 2008 set up a glide path for alternative operators that should lead to symmetric termination rates with the incumbent by July 2010 (at the maximum level of €0.057).

Alternative operators contested the measure, claiming discrimination in comparison to the methodology used for mobile termination rates (which include also some historical costs) that allows mobile operators to subsidise the integrated fixed-mobile services. Some alternative operators have challenged AGCOM's decision before the national court.

AGCOM has approved the incumbent's offer for trunk and terminating leased lines setting up a price cap for the period 2006-2008. Furthermore, AGCOM has extended the validity of the offer for wholesale direct circuits also to 2008, with a price decrease of 8-10% compared to 2006.

AGCOM is trying to catch up on the delay in approving the incumbent's regulatory accounting and accounting separation by summer 2009 (the latest certified year was 2004).

The Commission services are looking into the matter. AGCOM is aware of the need for a more coherent set of regulatory accounting rules (principles, criteria and reporting rules) and discussions with the incumbent are ongoing.

The incumbent's wholesale line rental offer became effective as from January 2008.

Alternative operators note that, in practice, the service is not offered for non-active lines.

Broadcasting

Market situation

As of October 2008 there were 13.3 million households with digital TV access, representing 55% of the households equipped with TV. Digital terrestrial decoders have significantly increased by more than seven percentage points since October 2007 (currently used by 24.8% of households), while IPTV and satellite platforms increased only slightly (used by 1.6% and 29.4%, respectively, of households).

By Law 101/2008 of September 2008 Italy has set a timetable for the complete switch-off of analogue TV transmission by the end of 2012 (but already in 2010 70% of households will receive digital transmissions only). The switch-off has already taken place in the pilot region of Sardegna (in October 2008, covering 1.6 million inhabitants). The transition process allowed the release of new frequencies in the pilot region and similar resources are expected to become available in the rest of the country. While no final implementation plan for attribution of the digital dividend is in place, it is expected that these new frequencies will be attributed to new TV network operators.

Regulatory issues

⁵⁴

These data are not comparable with AGCOM's Annual Report 2008, table 1.25.

In January 2008, in the context of a reference for a preliminary ruling (Case C-380/05, "Centro Europa 7"), the European Court of Justice ruled that the Italian system for awarding analogue TV frequencies is not in line with EU law, insofar as it makes it impossible for an operator holding rights to broadcast in the absence of broadcasting radio frequencies granted on the basis of objective, transparent, non-discriminatory and proportionate criteria. In December 2008, the Italian authorities assigned the use of channel E8 within the band VHF-III throughout the whole territory to the operator concerned in order to roll out a national network (analogue or digital). The operator has challenged this attribution before the national court because of the alleged limited coverage of channel E8 (20% of the territory, according to their estimates). The Commission's services are following the issue.

In the context of an infringement procedure under Article 226 EC, in July 2007 the Commission requested Italy to bring into line with the EU rules its legislation allowing existing incumbent broadcasters to get a privileged position during the "switch-over" period from analogue to digital terrestrial television broadcasting. The Commission's services are currently analysing some amendments to the existing legislation (namely Law 101/2008), which Italy considers an improvement from the point of view of opening the digital terrestrial television market.

Horizontal regulation

Rights of way

Alternative operators confirmed that the situation had not improved since last year as regards the high fees (€1 000 per km) for rights of way requested by the public entity Azienda Nazionale Autonoma delle Strade (ANAS) on non-metropolitan roads and motorways. ANAS informed the Commission that a proposal for reducing the fees had been sent to the Ministry of Economic Development for comments. The Commission services are looking into the matter.

Law 133/08 adopted in August 2008 aims at simplifying and facilitating the administrative procedures for laying down new fibre optic cables on public and private land.

Spectrum management

In September 2008, the national frequency plan was aligned with the requirements of the outcome of the World Radio Conference 2007. In addition, the new plan introduced in Italy the European raster for broadcasting TV services in VHF III agreed at the Regional Radio Communication Conference 2006 (Geneva-06 Agreement) allowing an additional channel (Ch 8) to be freed within this band.

In October 2008, AGCOM approved the criteria for reorganisation of the frequency already assigned within the 900/1800 MHz bands that will make it possible for the three current GSM operators to get adjacent nationwide blocks of frequencies up to a maximum of 25 MHz.

Consequently, five MHz of spectrum within the 900MHz band will be available for assignment through competitive selection to new entrants.

AGCOM's decision also provides that use of the 900 MHz band for 3G-type services will be authorised, as soon as the relevant EU legislation is adopted. In order to avoid an undue advantage for existing GSM operators, AGCOM has clarified that the refarming will be authorised only after the 900 MHz block of frequencies has become available.

In anticipation of European legislation amending the GSM Directive to allow other technologies use the 900 MHz band, the Italian Ministry for Economic Development started a procedure to optimise the use of this band, which will ultimately lead to the release of 5 + 5 MHz at national level.

During 2008, one UMTS operator that had never started any operational activity returned the frequencies (15 MHz) to the Ministry. The Ministry has started the procedure for reassignment of the frequencies through competitive selection.

In May 2008 the Ministry assigned rights of use for frequencies at 3.4-3.6 GHz, amounting to a total of 35 local/regional authorisations (to eleven different operators, ten of which are new

entrants on this market). The overall expenditure by operators was €138.3 million. The procedures to assign rights of use for Wi-MAX services were principally aimed at reducing the digital divide.

Italy has implemented all the Commission's decisions on spectrum harmonisation adopted before the end of 2007, except Decision 2007/344/EC on the harmonised availability of information regarding spectrum use within the Community.

THE CONSUMER INTEREST

Tariff transparency

In March 2008, AGCOM approved new rules on billing transparency: voice traffic should be billed separately from premium rate services and, in case of litigation on premium rate service, operators are obliged to keep the telephone line active until the resolution of the conciliation procedure. Many operators have appealed this decision because it does not set a clear deadline for recovering the credit.

The national antitrust authority has been very active in monitoring and sanctioning unfair commercial practices, in particular as regards the transparency of information for consumers. In the course of 2008 six operators were fined a total of around €4.6 million.

Generally speaking, fraud and incorrect use of premium rate numbers seem to have been a persistent problem for Italian consumers. During the past two years AGCOM intervened several times by imposing selective call barring for call origination and by increasing transparency for fixed telephony billing. Finally, from October 2008, the opt-in model for premium rate services replaced the opt-out model used so far.

In July 2008, AGCOM adopted the New Numbering Plan in order to include new services (like nomadic services, integrated fixed-mobile, MVNO services) and to improve consumer protection with regard to the illegitimate use of voice and data premium rate services. The New Numbering Plan also provides that telecom operators' customer care services must be free of charge and that services with a social value are to be provided through the number 116, in line with EU requirements.

The decision taken by two mobile operators in summer 2008 to reduce the number of existing tariff schemes has the effect of a general price increase for more than 9 million users. After a temporary suspension, AGCOM asked the operators to provide additional information to the users concerned and to extend the deadline for changing operators without penalties.

Universal service

According to the Code for Electronic Communications the incumbent will continue to provide universal service until a formal designation under the current regulatory framework takes place.

The incumbent is concerned about the delay in the definition of the net cost that has been carried out up to 2003 (€41 million net cost for that year). The evaluation dating from 2004 has also been delayed because of the new methodology approved by AGCOM in March 2008. The incumbent contests the retroactivity of application of the new definition of non-profitable areas for the years 2004 and 2005 and has appealed the decision.

Number portability

By December 2008 the total of fixed numbers ported was almost 4.3 million, with more than one million ported during 2008. The new migration procedure for users connected to an alternative operator using LLU has finally allowed users to maintain the fixed number while changing between alternative operators. The incumbent does not allow number portability in the case of fixed geographic numbers not assigned to a "single" voice service, like the fixed telephone number for ADSL double play services (voice and data) using VoIP technology. AGCOM is analysing the issue.

Mobile number portability (MNP) has been successfully used since its launch in 2002. As of October 2008, almost 20% of customers (more than 18 million) had changed operator using mobile number portability, with more than 4 million doing so during the period October 2007 - October 2008.

AGCOM has been forced to intervene regularly in order to increase the daily capacity for executing portability orders. The current capacity (12 000 numbers ported per day) seems to be attuned to the market trend and the inter-operator time taken for porting mobile numbers complies with the limit set by the regulation (five working days).

The new AGCOM proposal to review the rules on MNP (approved in November 2008) aims, inter alia, at reinforcing safeguards in favour of MVNOs, which have experienced excessive refusals to provide number portability for "non-technical" reasons (up to 85% of their requests). MVNOs are worried about the delay in the effective implementation of the above proposal.

The above decision cancels the inter-operators charge (currently €10) for porting mobile numbers and reduces from five to three days the inter-operator time limit for porting a number (including two days reserved by legislation for controls by the Ministry of Internal Affairs). AGCOM has postponed the decision that would allow fixed operators to have access to mobile numbers. Fixed operators complain about the disparity of treatment, since mobile operators are already allowed to port fixed numbers on their mobile networks.

Consumer complaints

A significant number of complaints were made during 2008 concerning fraud and undue billing for traffic for premium rate services (mainly through illegal auto-diallers). In addition to the conciliation procedure before the regional entities (8 204 during the first half of 2008), a considerable number of disputes are settled through bilateral procedures between operators and consumers' associations (i.e. more than 7 000 conciliation procedures with the incumbent during the same period).

Furthermore, AGCOM eased the internal procedures with regard to consumers' complaints involving sums of less than €500.

AGCOM has obliged mobile operators to set up a common procedure by May 2009 to allow customers to transfer their residual credit on pre-paid SIM cards to the new operator in the case of mobile number portability. Getting residual credit reimbursed is still a hassle and particularly expensive with regard to some mobile operators (up to €8).

European emergency number

The Commission has opened an infringement proceeding against Italy for not having ensured that the handling and answering of 112 calls is as effective as for calls made to other national emergency numbers (in particular ambulance, fire and rescue services). In fact, call centres of the emergency service in charge of receiving 112 calls cannot transfer callers to the centres of other required emergency services. Another procedure, concerning the lack of 112 caller location information from mobile calls was pending before the European Court of Justice at the end of the reporting period.

Data protection

Directive 2006/24/EC (notably amending Directive 2002/58/EC) was transposed in Italy by Decree Law no. 109 of 30 May 2008 (which came into force in July 2008). Additional legislation on data retention (Decree Law no. 151/2008) aligns Italy with the rules harmonised at EU level by reducing the data retention period to 24 months for telephone traffic and to 12 months for Internet traffic in case of judicial proceedings. However, the entry into force of the data retention periods referred to above has been postponed until 1 April 2009, in order not to prejudice ongoing criminal investigations.

In September 2008 the Data Protection Authority (DPA) banned external service providers, in their capacity as controllers of databases used for telemarketing purposes, from using and

selling the data collected without specific consent by the user for promotional activities. The DPA also prohibited alternative telecom operators from using such databases for promotional purposes. Alternative operators claim that this decision has significantly limited their commercial activities.

CYPRUS

INTRODUCTION

Despite ongoing investment in alternative infrastructure and relatively significant consolidation in the market, competition on the electronic communications market remained limited in Cyprus in 2008. The main feature is still a very strong market position of the 100% state-owned incumbent operator in the fixed, mobile and broadband markets. While significant improvements have been reported in the fixed sector, efficient granting of rights of way to enable network roll-out is still a key issue for alternative operators in the mobile market.

During 2008 the second mobile network operator ("MNO") continued to increase its market share (albeit slowly) and public authorities made efforts to address rights of way issues in the fixed market. On the other hand, broadband penetration is still low and a national broadband strategy is still not available. Notwithstanding the availability of regulatory tools imposed on the operator with SMP, no bitstream agreement has been signed so far. In addition, concerns have been raised with regard to the fact that the auction of Fixed Wireless Access licences, which has been pending for several years, has not yet taken place. There are also concerns regarding the decision by the Council of Ministers on digital switchover and the difficulties related to service provision at the two new international airports.

The second round of market reviews has started with the wholesale markets for voice call origination, access and termination on individual mobile networks and the wholesale broadband markets (wholesale unbundled access and wholesale broadband access).

The second MNO had been taken over in September 2007 by a company which, in 2008, proceeded to buy out its parent company and took over one of the fixed alternative operators as a joint venture with another private investor. This consolidation move allows the second MNO to provide fixed, mobile and broadband services.

REGULATORY ENVIRONMENT

Main regulatory developments

Although there were a few developments with regard to the regulatory approach in Cyprus in 2008, some of the main regulatory problems which have been pending for many years are still not resolved. The main regulatory challenges are the digital switchover, which will take place in 2011, and the question of allocation of the remaining mobile frequencies in light of the concerns already expressed regarding rights of way applying to masts and antennas. On the other hand, the National Regulatory Authority, the Office of the Commissioner for Electronic Communications and Postal Regulation ("OCECPR") implemented the measures relating to the market analyses carried out in 2006 in respect of WLR and LLU. Positive steps have been taken to tackle problems related to rights of way in the fixed sector.

Organisation of the NRA

In Cyprus, the main regulatory tasks continue to be carried out by the OCECPR and the Department of Electronic Communications of the Ministry of Communications and Works ("DEC").

The Minister of Finance, who is responsible for management oversight functions in relation to the incumbent operator, drew a dividend from the profits accrued by the incumbent.

Nevertheless, given that it is still not mandatory to return dividends to the State, the incumbent operator cannot be considered as being subject to normal business constraints.

Decision-making

In 2008 the OCECPR started the second round of market analyses with regard to wholesale mobile access and termination markets and wholesale broadband markets (wholesale unbundled access and wholesale broadband access).

Concerns were raised by market players about the inefficiency of dispute resolution in Cyprus. In order to formalise a dispute a special form, designed by the OCECPR, needs to be filled in, whereby the complainant is requested to set out the nature of the complaint, the result of consultations with the party in dispute, and the remedy sought. This procedure, of which operators were informed through a presentation given by the OCECPR, is not respected by some operators who keep sending their complaints to the OCECPR without using this special form or including the information requested, with the result that their complaints are not taken as a request for formal dispute resolution. Further awareness should be encouraged in order to ensure all parties get the full benefits of this important regulatory tool. In order to improve efficiency related to fines imposed on the SMP-operator, the OCECPR provided in the Reference Interconnection Offer ("RIO") and the Reference Unbundling Offer ("RUO") of the SMP operator that fines resulting from dispute resolution in connection with their SMP obligations should be paid to the complaining operator and not to the OCECPR budget, within the framework of a Service Level Agreement (SLA).

In general, market players state that the enforcement of regulatory decisions by the OCECPR should be more efficient in Cyprus.

MARKET AND REGULATORY DEVELOPMENTS

The total turnover of the Cypriot telecommunications sector was 304 million Cypriot pounds (€521.77 million) as of 31 December 2007, with revenue from the fixed markets (including broadband and leased lines) amounting to 77 million Cypriot pounds (€132.16 million) and revenue from the mobile markets totalling 154 million Cypriot pounds (€264.32 million). The total value of tangible investments in telecommunications networks during 2007 was 63 million Cypriot pounds (€108.13 million), including investments of 6 million Cypriot pounds (€10.3 million) by the incumbent in fixed telephony networks and an estimated 9 million Cypriot pounds (€15.45 million) by both alternative operators in fixed telephony networks and MNOs. The investment over revenues ratio in the Cypriot electronic communications sector was 20.7% in 2007 compared to an EU average of 11.5%.

As the incumbent's continuing dominance in the fixed, mobile and broadband markets demonstrates, the Cypriot e-communications market is still in transition from a monopoly situation to competition. The slow opening of the market and the low level of access products are regrettable at a time when converged services and products are increasingly being requested by end-users. The trend towards consolidation on the market, which should strengthen competition, as well as the possibility for MVNO access to be imposed and/or the remaining mobile frequencies to be auctioned, should result in a more balanced situation where several market players would be in a position to provide converged services.

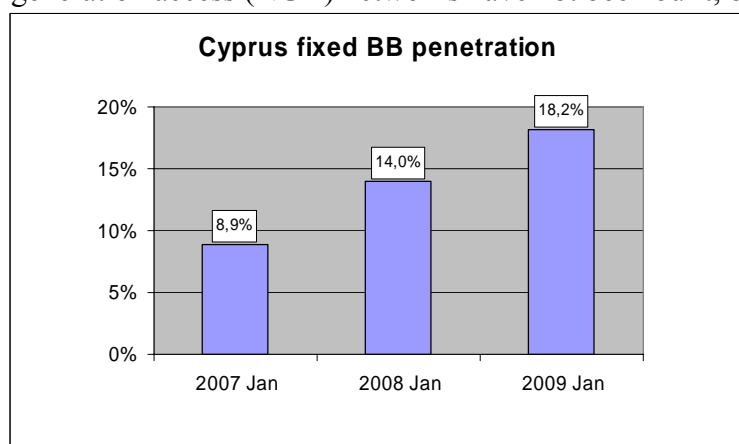
Moreover, by a decision taken in 2007, the Supreme Court of Cyprus ruled that all decisions of the Competition Authority taken in the past four years are null and void and the cases should be re-examined under its new composition. Because this decision of the Supreme Court has been appealed, the Competition Authority will not proceed with the re-examination until the outcome of the appeal procedure is known. This situation has undermined legal certainty in the market.

Broadband

Market situation

In January 2009 broadband penetration stood at 18.2% in Cyprus (14% in January 2008). Notwithstanding this rapid increase, broadband penetration is still lower than the EU average (22.9%).

The incumbent operator's broadband market share is 80.8%, which clearly shows strong dominance on this market (88% in January 2008), although it is slowly decreasing. This constitutes the highest incumbent market shares on this market in the EU. In addition, platform competition is at a very early stage of development since DSL is the main technology for broadband services (97% is based upon DSL). The broadband presence is mostly concentrated in the main cities rather than in the countryside. Triple-play services are offered by the incumbent operator and one of the alternative operators. IPTV services are slowly developing in Cyprus and a new cable operator has entered the market. The main new entrant, the strategic partner of the Cyprus Electricity Authority, owns its own island-wide fibre optic network built on the electricity network. This reaches end-users via the sub-loop of the incumbent operator. This new entrant intends to establish its own submarine cable in order to get access to international capacity other than via the existing cable⁵⁵. In Cyprus, next generation access (NGA) networks have not been built, but the incumbent operator and the



main alternative operator have been carrying out pilot projects in this field.

No naked DSL offers are available at either retail or wholesale level; nevertheless the OCECPR proposes to introduce this at wholesale level within the course of the second round of market analyses.

In terms of the digital divide, in December 2007 the gap between rural and overall national

coverage for DSL widened and was 79.6% compared to 69.7% in December 2006.

In Cyprus mobile broadband services are used by 9 072 mobile active users in January 2009, which is relatively low penetration compared to the level of development in other Member States (approx. 1.1% of the population in Cyprus compared to 13% the EU average). The number of mobile broadband connections using only dedicated data cards/modems/keys, typically allowing mobile Internet via laptops, was significantly lower standing at 0.4% in January 2009, while the EU average stood at 2.8%.

Regulatory issues

A national broadband strategy has still not been adopted by the competent authorities (Planning Bureau of the Minister of Finance), which is particularly regrettable.

Following its market analysis, in 2006 OCECPR imposed full and shared access to the incumbent's local loop or sub-loop on a non-discriminatory and transparent basis following cost-based prices. The incumbent operator is also obliged to publish a RUO. With regard to the wholesale broadband access market, the provision of bitstream access based on the "retail minus" method was imposed on the incumbent operator. Despite this remedy and the availability of the service, no bitstream agreement has been signed so far between the incumbent and the alternative operators. The availability of wholesale broadband access products is important in order to foster competition in the retail broadband markets, as these products facilitate market entry for alternative operators with relatively moderate investments. Since the 2006 RUO, the time frame for unbundling has been dramatically reduced from 25 to 6 days. Nevertheless, alternative operators still point to several difficulties with local loop

⁵⁵

The only existing submarine landing station is considered to be a bottleneck.

unbundling. Operators complain that they experience delays in the assessment of fault reports, that communication with the incumbent operator is bureaucratic or that there are problems linked to charges. There were no changes in the RUO in 2008. The monthly average total cost per full unbundled local loop in Cyprus (€10.32) is below the EU average (€10.88). In this respect, alternative operators complain about the low margin observed between the incumbent operator's wholesale and retail prices, in particular in the light of the fact that the incumbent operator increased the speed of its broadband services and lowered its retail prices in October 2008 following the negative results of a price squeeze test carried out by the OCECPR and evaluation of the contributions in a public consultation process.

The number of unbundled local loops grew rapidly in 2008; 18 915 local loops have been fully unbundled (compared to 1 957 in January 2008) while 330 shared lines were reported. According to the NRA's decision of 20 April 2006, the incumbent operator was required to establish and publish an operational version of the Access Network Frequency Plan (ANFP) to be adopted for its network. The completed ANFP was finally adopted in December 2008 but the delay in its adoption, due to the operators' desire to reach an agreement on its content themselves, caused difficulties with regard to sub-loop unbundling.

As for the second round of market analyses relating to broadband markets, it is intended that the provision of naked DSL and access at DSLAM be imposed where this is technically feasible. Also, bitstream prices, regulated so far on the basis of "retail minus", will be regulated on a LRIC basis.

Mobile markets

Market situation

In Cyprus there are two MNOs, the incumbent operator with 84.92% market share (in terms of subscribers) in October 2008 (88.77% in 2007) and the second MNO with 15.08% market share in October 2008 (11.23% and 10% respectively in 2007 and 2006), which constitutes only a slow strengthening of the second MNO's market position. Both

MNOs have 3G licences and provide related services. In October 2008 mobile penetration reached 126.05% (119.09% in October 2007), which is above the EU average (117.3%).

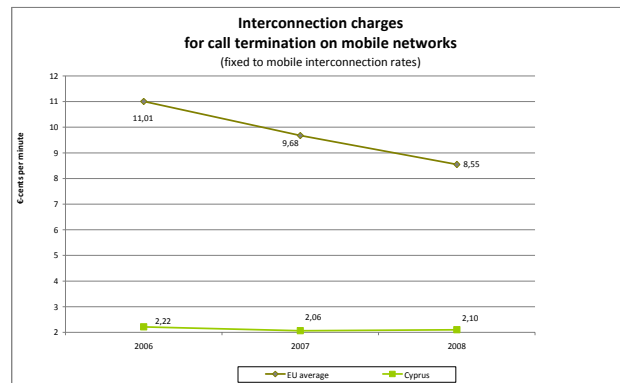
Regulatory issues

Cyprus is one of the few Member States where the mobile access market has been found not to be competitive and the dominant MNO (the incumbent operator) has been designated as having SMP. In the absence of mandatory MVNO access⁵⁶, the OCECPR has had to ensure through stringent and effective wholesale regulation that the two MNOs currently on the market in Cyprus compete at arm's length.

The Commission, in its comments following the notification of the mobile access market, invited OCECPR to impose price regulation with regard to national roaming services which the incumbent operator is obliged to offer to the second MNO. The price of national roaming was fixed by OCECPR at €0.0214, which the second MNO claimed was twice as high as it should be according to its own calculation of cost orientation. According to the OCECPR, the national roaming price was calculated in accordance with the relevant secondary legislation provisions and the second MNO does not have access to all the relevant cost information. Wholesale national roaming services are still expensive in Cyprus, since the second MNO has not yet completely rolled out its own network (86% in October 2008), notwithstanding its desire to achieve total territorial coverage as soon as possible.

As a result of the recent market analysis of the wholesale market for voice call origination and access on individual mobile networks, the OCECPR intends to propose MVNO access on the MNO with SMP and/or auctioning of the remaining mobile licence(s) in order to boost mobile competition and overall competitive conditions in a market where converged services are demanded by end-users.

Moreover, it has to be noted that cost-oriented⁵⁷ "MTR" charges in Cyprus are by far the lowest in the European Union (the EU average being €0.0855). While the average MTR in Cyprus is €0.0210, the incumbent's termination rate is €0.0206/min following the current asymmetric price regulation. The second MNO proposes to introduce accounting separation as of 1 January 2010 since its annual turnover has exceeded €50 million⁵⁸.



⁵⁶ According to the Contest Documents for granting the second MNO's licence with Ref. No. MCW/OCTPR 1/2003 on "Auction for the Grant of Individual Licenses Authorizing the Use of Spectrum and the Establishment and Operation of One Mobile Public Telecommunications Network and the Provision of Mobile Public Telecommunications Services in Cyprus", Nicosia, 10 July 2003, the reserved spectrum will not be licensed for a period of five years or until the new entrant has achieved a market share of 25%, whichever comes first. Also, in the same Contest Documents it was stated that in order to facilitate infrastructure competition MVNOs would not be allowed and that the matter of licensing MVNOs would be revisited once effective competition is established.

⁵⁷ Top-down LRIC.

⁵⁸ According to the results of the first round of market analysis, the second MNO should introduce accounting separation once its annual turnover exceeds €50 million.

Following OCECPR's 2008 review of the wholesale market for voice call termination on individual mobile networks, OCECPR intends to introduce a three-year glide path effectively leading to symmetry in the MNOs' MTRs as of 2010.

Roaming Regulation

Both MNOs are reported to have introduced the "eurotariff" (at least at the level of the ceilings) and subsequent reductions as of 30 August 2008 for receiving and making phone calls within the Community and within the deadline provided for by the Roaming Regulation and to have introduced the required transparency measures.

Fixed

Market situation

In Cyprus, the incumbent operator still has a dominant position in the fixed voice telephony sector. Its market share in terms of total revenues amounted to 81% for all types of fixed calls and 69% for international calls on 31 December 2007⁵⁹ (90% respectively 90% in December 2006). As regards international calls, the decrease in the incumbent operator's market share is relatively significant. For all national calls the incumbent's market share is 90%⁶⁰ (95% in December 2006) while the overall fixed line traffic volume is in decline.

The alternative operators provide voice telephony services through carrier selection, pre-selection and access to the internet through public switched telecommunications networks. In Cyprus ten operators provide VoIP-based services including the incumbent operator. Concerns have been raised by operators with regard to the provision of publicly available electronic communications services at the new airport terminals (fixed line telephony services for tenants, internet access services, payphones, Wi-fi internet services, etc.). It appears that the services can be provided only subject to the approval of the constructor of the terminals. This manner of proceeding raises the question of exclusive and special rights which are not permitted in the electronic communications sector. The Commission services are looking into this matter.

Regulatory issues

Following its market analysis in December 2006 OCECPR imposed on the incumbent operator CS/CPS and WLR obligations, thus finally ensuring that new entrants can have a direct contractual relationship with their end-users and provide them with only one bill. As an implementing measure of that decision, the WLR price for alternative carriers was fixed in July 2007 by the OCECPR at 18.44% retail minus + €0.05. Despite these regulatory measures, the take-up of this product in the course of 2008 remained very slow (215). There has been an improvement in the process for carrier pre-selection but as a consequence there have been allegations that the incumbent operator has launched allegedly anti-competitive win-back campaigns for all the customers that move to an alternative operator. As a result, the OCECPR inserted a "Subscriber Win-back Code" in the incumbent's 2006 RIO, in order to minimise such market behaviour. Alternative operators claim, however, that this measure has not been sufficient as the incumbent operator can still contact the subscribers for many other reasons.

One of the alternative operators challenged the decision by OCECPR before the Supreme Court regarding the lack of a requirement for accounting separation by the incumbent operator in the RIO for the year 2004. The Supreme Court supported the request in autumn 2008 and declared the 2004 RIO to be null and void without affecting the currently applicable version of the RIO.

Broadcasting

Market situation

⁵⁹ 31 December 2007.

⁶⁰ Data from December 2007.

In Cyprus end-users receive broadcasting services mainly via analogue terrestrial transmission (31.46%), cable (2.52%) and satellite (1.64%). Eight television channels (six free-to-air and two pay-tv channels) and 13 radio stations – all with nationwide coverage – are offered via analogue terrestrial transmission. Cable and xDSL are in the early stages of development. Despite the incumbent operator having started IPTV services several years ago, the IPTV take-up is still very low in Cyprus (0.04%⁶¹ of the population).

Two analogue channels have at the moment been reserved to facilitate the introduction of digital terrestrial television in Cyprus. 2011 was fixed as the date for the digital switchover. The Council of Ministers adopted a decision on 9 July 2008 fixing the main modalities of digital switchover in Cyprus. According to this decision, by mid-2011 all analogue transmissions will stop and two licences will be available. One licence will be granted to the Public Broadcaster to use 1 multiplex to transmit its programmes. The second licence, which will be auctioned, will include 2 multiplexes during the switchover period and 5 multiplexes after the switch-off. These processes are currently under way and it is expected that both licences will be granted by 2009. The roll-out of DTTV and availability of services will commence as soon as possible and no later than 2010. The legality and proportionality of the measure whereby one of the licences is given to the Public Broadcaster without a tender is questionable given the availability of other regulatory tools such as the possibility of imposing a must-carry obligation, while granting special rights is forbidden under the 2002 regulatory framework for electronic communications. The Commission services are looking into this matter.

Regulatory issues

As regards the broadcasting market, the regulatory situation did not change in Cyprus in the course of 2008.

Horizontal regulation

Spectrum management

All radio spectrum harmonisation decisions are reported to have been transposed, including Decision 2007/344/EC on the harmonised availability of information regarding spectrum use. Despite the plans pending for several years, Fixed Wireless Access networks and services do not yet operate in Cyprus. In order to increase competition, the DEC has been planning for years to introduce Fixed Wireless Access via an auction process (in collaboration with OCECPR). The auction process was supposed to take place in 2007 following the public consultation in 2006. Nevertheless, following plans to exclude the incumbent operator from the tendering process, the latter was stalled for more than one year, which inexplicably delays a very important process affecting the development of electronic communications in Cyprus.

Administrative charges

The market surveillance fee is applied to service providers on the basis of their revenues. The minimum payment is €854 per service provider. For an operator with an annual turnover of less than €10 million the fee is 0.2% of its annual turnover.

Rights of way and facility sharing

With regard to the roll-out of fixed infrastructure, market players have voiced strong criticism that the granting of the required rights of way is very slow and different practices have been employed by different competent authorities involved in the licence granting process. Taking into account the difficulties experienced by new entrants in rolling out fixed networks, such as the refusal to grant rights of way to install facilities on, over or under public property and on roads/motorways by the relevant authorities, the European Commission had started formal infringement proceedings.

As a result, the Cypriot authorities made efforts to harmonise the granting of the necessary permits between the different competent authorities and to tackle the technical difficulties in relation to the granting of rights of way. According to the Cypriot competent authorities, all

⁶¹ Figure based upon estimation of the OCECPR.

applications for the acquisition of rights of way are evaluated within six weeks, provided that all essential documents are annexed. The infringement proceeding was subsequently closed in January 2009.

Co-location is promoted in the case of existing roads. Underground roll-out of fixed line infrastructure on the existing roads is examined on a case-by-case basis if co-location is not technically feasible. In case of refusal of co-location, effective and systematic verification of the reasons invoked in order to justify the refusal should be considered. On new roads special ducts have been dedicated to all the operators and the cost will be shared between the interested parties.

Concerning mobile networks, both the incumbent operator and the second MNO are faced with considerable delays⁶² and difficulties in obtaining all the necessary permits for the roll-out of their mobile networks. In order to tackle existing difficulties in relation to the granting of town planning and building permits for masts and antennas, the Council of Ministers adopted a Code whereby checks for both town planning and building permits should no longer include verification of exposure to electromagnetic fields. Furthermore, the maximum time limit for examining applications for town planning and building permits is limited to six weeks and, in the case of building permits, an application which has not been examined within the six-week time limit is considered approved. Finally, mobile telephony stations on towers that are less than 9m high when installed on buildings are exempted from the town planning permit requirement, while stations of less than 600 kg or 4-metre diameter are exempted from the building permit requirement. As for building permits, the amendment of the Streets and Building Law was adopted by the Parliament in summer 2008. The amended law allows the Minister of Interior to define the frameworks for obtaining building permits as regards the installation of radio stations and also authorises the Minister to issue a Decree exempting mobile telephony stations (regardless of their weight and diameter) when installed on existing masts for which a building permit has already been obtained. Other important points of the Code should also be covered by the Decree to be adopted following the adoption of the draft bill, such as the six-week rule and in general all the provisions relating to time limits. Nevertheless, the more flexible building permit regime has still not entered into force more than three years after the adoption of the Code, in the absence of the Ministerial Decree. Taking into account the difficulties experienced by the second MNO seeking to install its own base stations, the European Commission sent a letter of formal notice and a Reasoned Opinion to Cyprus in March 2007 and in January 2008 (to which no reply has been received by the Commission) and the case was referred to the European Court of Justice in October 2008.

Apart from the slow process of granting the necessary permits and licences for the installation of mobile networks, operators also face a problem related to the removal of illegally erected masts/antennas. While the incumbent operator has had to remove five base stations so far, the second MNO has had to dismantle 40 base stations since the beginning of its operations.

THE CONSUMER INTEREST

Universal service

In Cyprus, OCECPR designated the incumbent operator as a universal service provider on 4 March 2008 for a period of three years. The incumbent, as the only tenderer, was designated for all elements and for the whole territory. The OCECPR did not receive any request for the setting-up of a compensation mechanism for the provision of universal service.

⁶² Out of applications filed for building permission by the second MNO, three have been pending for more than two years, 23 since more than one year (excluding the cases pending for more than two years) and five were rejected. As regards town planning applications by the second MNO, seven have been pending for more than one year and two were rejected; no approval in any town planning application has been reported.

European emergency number (112)

In Cyprus emergency calls are made both to 112 and to 199, the national emergency number, but both numbers are answered by the same emergency authority, the Cyprus Police.

According to information received from operators and Cypriot authorities, mobile caller location information is automatically addressed to the emergency authority (date and time of the call, name and phone number, address or geographical latitude and longitude), while for emergency calls coming from fixed lines the caller location information is received under a pull system. In 2007, some operators reported that 112 caller location information could not be effectively transmitted to the competent emergency authority. The Commission services were assured by operators and the Cypriot authorities that technical difficulties linked to the transmission of information had been resolved.

Tariff transparency

Operators are obliged to publish all tariffs including the monthly subscription, connection and maintenance fees. Service providers are also obliged to inform their subscribers about billing issues including information regarding the total number of units to be charged for the accounting period, start time and duration of the calls made and/or the data volume transmitted, and advance payments, payments by instalments, disconnection and reminders. OCECPR is also developing a consumer guide on services that will be published in 2009.

Complaints

Indicators for quality of service are set out in the Order on Quality of Electronic Communications Services (KDP 74/2005) including measurement methods and targets.

Number portability

Operators have 14 working days to port fixed and mobile numbers but often it takes less time. In Cyprus 16 903 mobile numbers were ported between 12 July 2004 and October 2008, which constitutes 1.69% of mobile subscribers.

116

By 31 August 2007 the national numbering range beginning with “116” had been reserved for harmonised numbers of harmonised services of social value. Numbers 116000, 116111 and 116123 (including service descriptions) were published for assignment on 9 November 2007. According to OCECPR, numbers 116000 and 116111 will be assigned to non-profit organisations, and number 116123 will most probably be assigned to the Mental Health Services of the Ministry of Health.

Must-carry

In Cyprus a must-carry obligation has not been imposed. The OCECPR is planning to apply this obligation to the DTTV platform operator for all free-to-air broadcasters (currently the analogue broadcasters).

LATVIA

INTRODUCTION

Competition in the Latvian mobile and broadband markets remained strong and consumer prices continued to decrease during 2008, in particular in the mobile sector. In the first part of the year the electronic communications sector continued to be the only major industry sector escaping the general inflationary tendencies, which culminated in an annual inflation rate of 17.9% in May, before starting to decline in the following month as a result of the general economic downturn. However, unlike previous years, the growth of broadband penetration was slower than the EU average growth and Latvia's gap with the EU average broadband penetration accordingly widened during 2008.

REGULATORY ENVIRONMENT

Main Regulatory developments

In February 2008, the Commission was able to close the infringement proceeding against Latvia concerning caller location for mobile calls to 112. Later in October, the Commission closed another infringement proceeding, which concerned inadequate transposition into the national law of the notification mechanism under the Directives. At the same time, the Commission also opened a new proceeding concerning 'structural separation' as regards the role of the Latvian Ministry of Transport in the electronic communications sector.

The introduction of mobile number portability for pre-paid customers as of 1 February 2008 had a tangible impact as the total number of ported mobile numbers more than doubled in 2008. At the same time, it has also given rise to inter-operator disputes over the relevant wholesale charges. Following the imposition of regulatory remedies in 2007, a consultation was launched in September to boost the take-up of wholesale broadband access products and local loop unbundling (LLU), which has not seen much progress so far. In March 2008, the new entrant mobile network operator (MNO) reduced voluntarily its mobile termination rates, which means that all three Latvian GSM/UMTS MNOs now have symmetric termination rates.

Discussions continued during 2008 on the introduction of a universal service compensation mechanism but no tangible progress was made. The new provisions introduced in 2007 concerning rights of way appear to be causing confusion among operators and additional delays.

Organisation of the NRA

Latvia has notified multiple national regulatory authorities in the electronic communications sector under the Framework Directive — the Public Utilities Commission, the Electronic Communications Office (ECO), the Ministry of Transport, the State Data Inspectorate and the Consumer Rights Protection Centre. Among these various regulators, it is the Public Utilities Commission (*Sabiedrisko pakalpojumu regulēšanas komisija* — SPRK), which has the broadest regulatory responsibilities, including market analysis, designation of significant market power (SMP) operators and imposition of regulatory obligations.

In October 2008, the Commission launched a new infringement proceeding against Latvia under Article 3 of the Framework Directive, which provides for 'structural separation' of regulatory functions exercised by the national regulatory authorities from their activities associated with ownership or control. The Commission held that this provision was breached in the case of the Latvian Ministry of Transport, which is in charge of preparation of Government decisions regarding frequency allocation and the national numbering plan and at the same time exercises activities associated with ownership or control in State-owned communications undertakings.

Decision-making

At the same time in October 2008, the Commission closed the infringement proceeding against Latvia concerning inadequate transposition into the national law of the notification mechanism provided in the regulatory framework. This was possible following the latest amendments to the Electronic Communications Law passed earlier in July. The Latvian legislator solved one of the outstanding transposition problems raised by the Commission by taking a step further than the current regulatory framework requirements in the area of consultation. Instead of adopting a provision concerning the binding effect of Commission decisions regarding proposed designation of SMP operators, the new legislation imposes an obligation on the SPRK to abide by Commission views regarding remedies proposed in relation to such operators.

In assessing the operation of SPRK, some industry representatives expressed the wish that it would play a more pro-active role, referring in particular to its cautious approach in resolving disputes related to number portability charges, which are described in more detail later on. In 2008, SPRK continued its practice of organising public hearings on new regulatory initiatives, which operators considered to be of great significance especially for technically complex matters where efficient consultation can contribute to improving quality of decisions. While the consultation process was generally viewed positively by the operators, the feedback provided by SPRK on the comments made by the industry was nevertheless still considered to be inadequate.

On the other hand, the consultation efforts of the Ministry of Transport in the preparation of the new national numbering plan and latest amendments to the frequency allocation plan were regarded as leaving room for improvement. It was, however, noted as a positive development that, during 2008, the Ministry of Transport did not anymore resort to urgent decision-making procedures, like those which had been applied in 2007 for the adoption of a Government decision revising rates of administrative charges collected by the ECO, which caused dissatisfaction within the industry about the lack of consultation.

Regarding appeals against the SPRK decisions in the electronic communications sector, the experience to-date remains limited. Only two SPRK decisions have been appealed to the administrative courts so far, of which one appeal was subsequently withdrawn by the applicant. Admission of third parties to such proceedings is subject to the general rules of administrative procedure and decided by the relevant administrative court. Given the limited number of cases, the jurisprudence in this area remains limited. However, in the two appeals heard so far, which both concerned SPRK decisions on mobile termination rates, the administrative court rejected the applications of operators, who were not the direct addressees of the decisions concerned, to be admitted to the proceedings as third parties.

The aforementioned amendments to the Electronic Communications Law also tackled the issue of confidentiality of market data submitted by communications providers to the SPRK. These amendments prevent the providers from presenting their submissions as confidential with the exception of data relating to revenues. Views diverged among operators on this new provision. Some were concerned that it would compromise their legitimate business secrets and should be interpreted restrictively. On the other hand, the proponents of this amendment were sceptical as to whether it will have the expected effect because it was not clear how the SPRK will tackle the submissions that will continue to be presented as confidential despite these new legal requirements.

MARKET AND REGULATORY DEVELOPMENTS

The total turnover for the Latvian telecommunications sector was about €730 million as at 31 December 2007. Revenue from the fixed markets was €132 million and from the mobile markets €296 million. The total value of tangible investments in telecommunications networks stood at €120 million. The fixed incumbent invested €47 million, mobile operators invested €70 million and alternative operators invested €3 million.

Broadband

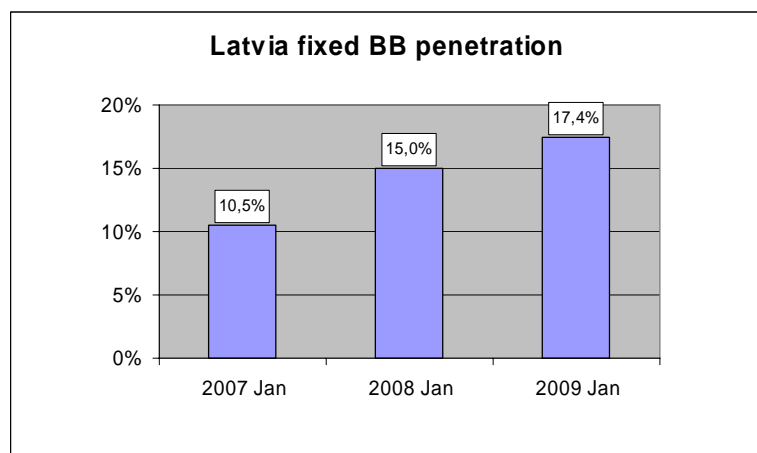
Market situation

The growth of Latvia's broadband market slowed down significantly during 2008 — the broadband penetration rate increased by about 2.4 percentage points to reach 17.4% in January 2009 compared to 15.0% in January 2008. This growth rate is much smaller than 4.5 percentage points recorded in the previous one-year period and the gap accordingly widened between Latvia's and EU average broadband penetration rate, which increased by 2.8% percentage points to reach 22.9% in January 2009.

In terms of access speeds, Latvia has a lower share of fixed broadband lines in the 2 to 10 Mb/s range, which is the most common in the EU (53.0% compared to 60.8% on average in the EU), and a lower than EU average share of lines in the top range of 10Mb/s and above (8.8% compared to 14.1%). The share of low-speed lines (up to 2Mb/s) is accordingly larger than the EU average (38.1% compared to 25.1%).

As regards mobile broadband, the Latvian penetration rate of 8.0% is also below the EU average of 13.0% as of January 2009. Moreover, among the EU countries, which provided this type of information to the Commission, Latvia also has the lowest penetration rate of mobile connections using only dedicated data cards/modems/keys typically allowing mobile Internet via laptops (0.4% compared to the EU average of 2.8%).

As far as broadband coverage in Latvia is concerned, national DSL coverage⁶³ increased from 72% at the end of 2006 to 87% at the end of 2007, while the coverage in rural areas nearly doubled from 37% to 65% over the same period. The DSL rural gap with national coverage



accordingly narrowed from 35 to 22 percentage points. In addition, cable began to be rolled out in rural areas bringing cable rural coverage from 0% to 5% at the end of 2007, thus reducing the gap with national coverage from 60 to 50 percentage points. National cable coverage accordingly increased from 50% to 65%. The fixed incumbent's broadband market share has

increased over the past year to reach 46.4% in January 2009 compared to 44.2% a year ago. It ranges from a relatively small share in Riga, which is due to the significant infrastructure-based competition, to a much higher share outside the capital, where the incumbent's DSL lines remain the dominant infrastructure. The main broadband competitors are Ethernet and cable operators. It is estimated that in Riga the residents of multi-apartment buildings would normally have a choice between three to four alternative broadband providers and price competition is accordingly strong. Fibre to the Home (FTTH) broadband access solutions have been deployed by both the fixed incumbent and some alternative network providers in some pilot sites in cities, in particular in the new build sites. If these initial deployments turn out to be successful, the fixed incumbent could launch a broader fibre deployment programme later on in certain densely populated residential areas.

A widely used method of providing broadband in multi-apartment buildings in cities is a wireless solution using the unlicensed 2.4 and 5.4GHz frequency bands. Although the national frequency allocation plan authorises the use of these frequencies only for low-power transmissions, the alternative broadband providers are using them in excess of the authorised power levels as a means to provide broadband to multiple users. Since these frequency ranges

⁶³ Source: IDATE reports 'Broadband coverage in Europe'.

are not licensed, their use is not controlled by the ECO, which would intervene only on the basis of specific complaints. Therefore, interference between providers using this solution is commonplace and the quality of their service is often poor. However, these providers make significant savings on network costs and can provide service at lower prices than other players thus distorting the market.

The regional development project to improve access to broadband in Latvian rural areas was completed in 2008. Within the framework of this project, a CDMA wireless network has been built across the country allowing minimum access speeds of 256/128 Kb/s (the real speeds being about 800 Kb/s according to measurements). However, it is recognised that this CDMA broadband solution is technically unable to satisfy the needs of customers should their number and the traffic volume increase. Therefore, the Latvian authorities expect that local retail broadband providers will use this newly built network as a core network and provide the 'last mile' connections using other technologies, which will guarantee higher data rates for customers in rural areas.

Regulatory issues

In 2007, the SPRK imposed a range of remedies on the fixed incumbent in the wholesale unbundled access market and the wholesale broadband access market. Nevertheless, the past year has not seen much progress in the take-up of the wholesale products offered by the incumbent in these markets, which remains almost non-existent with LLU in particular, being still at zero level. In terms of access prices, the monthly average total cost for full LLU in Latvia (€9.63) is below the EU average (€10.88) while the monthly cost in the case of shared access (€5.50) is slightly above the EU average (€4.13).

The lack of take-up is explained by the specific market conditions in Latvia where it remains relatively easy and cheaper for alternative operators to duplicate infrastructure. For example, according to estimates made by some operators, it is possible to recover the costs of a broadband network in a densely populated urban area within three years. SPRK is nevertheless concerned at the lack of interest in LLU and wholesale bitstream products by alternative operators which is why, in September 2008, it issued a consultation document concerning the fixed incumbent's reference offers for unbundled access to local loop and broadband access as well as concerning terminating segments of leased lines and the minimum set of leased lines markets, in which regulatory remedies were also imposed in 2007. In this document, the SPRK announced that it will use the feedback received in this consultation to analyse and, if necessary, to make amendments in these reference offers.

Mobile Markets

Market situation

As of October 2008, the Latvian mobile penetration declined to 95.6%, which was one of the lowest in the EU. On the other hand, the average consumer price for mobile services in Latvia was €12.84 per month, which is below the EU average of €19.49, and average mobile tariffs were reported to have decreased during 2008, in particular for corporate clients.

MNOs observed a sharp rise in the usage of data services, especially after the introduction of flat rates with unlimited consumption. Mobile TV is available to 3G users and DVB-H standard transmissions were being tested internally by one MNO.

The mobile virtual network operator (MVNO) business is struggling in Latvia — two MVNOs operating on the new entrant's network ceased activity in 2008 bringing the number of independent active MVNOs down to four (the fifth and largest Latvian MVNO, although remains a legally separate entity, was acquired in 2007 by its network provider, one of the established MNOs).

Regulatory issues

The mobile termination rates (MTRs) of the two established Latvian MNOs were set by the SPRK at their current level of €0.0874 in 2005, which is slightly above the EU average rate of €0.0855 as of October 2008.

They remained unchanged after the market analysis and the imposition of regulatory remedies, including price controls, on these operators in 2006. The new entrant MNO was subjected to lighter regulatory controls, excluding in particular price controls, when it was also designated as having SMP on the relevant call termination market in 2007. The new entrant had commercially agreed higher MTRs up until March 2008 when it decided voluntarily to reduce its MTRs in order to align them with those of the two established MNOs. Accordingly, the three Latvian GSM/UMTS operators now have symmetric termination rates and it is only the fourth MNO using CDMA technology, which continues to have a higher MTR.

The SPRK decision of 2005 imposing the above MTRs prior to market analysis was appealed by one of the established MNOs. The district administrative court found the decision of the SPRK to be unlawful in the first instance in 2007 but its judgment was appealed to the regional administrative court, which in 2008 upheld the SPRK decision.

Roaming

Both the Eurotariff and the transparency requirements of the Roaming Regulation have been implemented by Latvia's mobile operators. Latvia is one of the few remaining Member States, which has not yet notified rules on penalties applicable to infringements of the Roaming Regulation, for which the deadline was 30 March 2008. However, the relevant amendments to the Code of Administrative Offences are in the parliamentary procedure and their adoption is expected soon.

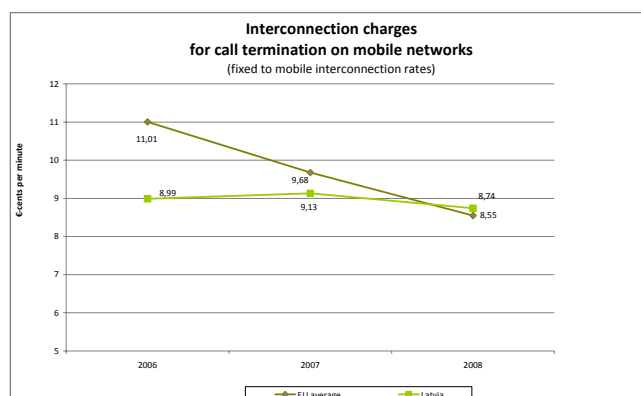
Fixed markets

Market situation

In the fixed voice telephony market, the incumbent's market share by retail revenues fell significantly — from 91% in December 2006 to 76% in December 2007. On the other hand, its market share by the volume of traffic slightly increased from 94% to 96% in the same period. Carrier pre-selection (CPS) services are being provided for international calls by a number of undertakings. Concerning local calls, increasing numbers of users switch to mobile communications and the fixed voice market share is declining substantially. According to some estimates, the volume of mobile calls is currently three times the volume of fixed voice calls.

Regulatory issues

In 2007, the SPRK imposed a range of remedies on the fixed incumbent in retail access and call markets, including price control. In the context of implementing these remedies, during 2008 the SPRK notably continued approving the fixed incumbent's retail call rates to customers of new alternative operators. On the other hand, these price control remedies have not prevented the fixed incumbent from bundling unlimited voice calls on its network with its offering of broadband (and IPTV if the customer subscribes to its triple-play product). In 2008, the Competition Council examined a complaint concerning the bundling of voice services with broadband services by the fixed incumbent. It did not find that the fixed incumbent applied predatory pricing but it noted that it is the competence of the SPRK to verify whether the fixed



incumbent complies with its retail price control obligations as regards the voice telephony services included in the bundle and if there is a case of cross subsidy.

The charge for terminating calls on the fixed incumbent's network is €0.0114 in the case of both single and double transit. It has not changed compared to a year ago and remains above the EU average of €0.0086 in case of single transit and close to the EU average of €0.0113 in case of double transit.

Broadcasting

Market situation

According to estimates, the Latvian TV broadcasting market has the following market shares by platform: 50% cable, 45% terrestrial and 5% satellite. Even though the take-up of IPTV offered by the fixed incumbent is advancing, its market share is currently insignificant. In certain areas where cable is not available, the wireless Multichannel Multipoint Distribution Service (MMDS) technology is used for TV transmissions as an alternative.

Regulatory issues

In September 2008, the Cabinet of Ministers issued Regulations on the procedure for the introduction of digital terrestrial TV (DTTV). These Regulations provide for the use of DVB-T and DVB-H broadcasting technologies and MPEG-2, MPEG-4 or other compression technologies and of the 174-230 MHz frequency and 470- 862 MHz frequency bands for this purpose. The Ministry of Transport was entrusted with the task of organising a selection procedure to choose the provider of DTTV broadcasting. Regulations also prescribe that the National Radio and TV Council will grant to the winner of the selection procedure the rights of use to these frequency bands for the provision of DTTV broadcasts until 31 December 2013. It accordingly appears that, at least until that date, a possible use of digital dividend for other purposes is not on the agenda of the Latvian authorities. Six applicants applied and the selection procedure was won in December by the fixed incumbent. In January 2009, the results of the selection were endorsed by the Government.

In December 2007, the Latvian national frequency allocation plan was amended to extend the use of MMDS in the 2.6 GHz frequency band until the end of 2013. It had been previously planned to free this frequency band for UMTS/IMT-2000 systems as of 1 January 2008.

Horizontal regulation

Spectrum Management

During 2008, the SPRK launched a number of selection procedures for granting rights of use to radio frequencies, in particular in the 900 MHz and 410-430 MHz bands where the relevant rights of use were granted to mobile providers and in the 450-470 MHz and 25 GHz band where the selection procedures were not completed by the end of 2008.

In addition, SPRK also granted a number of rights to use frequencies without following a selection procedure, which is only required for frequency bands listed in specific Government Regulations. In particular, following amendments to the frequency allocation plan in September 2008 concerning the 2.3-2.38 GHz band, ten undertakings applied to the SPRK for the rights of use to this frequency band. Since a selection procedure was not mandated in this band, the SPRK granted the rights of use to all of them.

In consequence, it is now fully up to the ECO, responsible for the technical management of frequencies, to arrange how and to what extent these ten rights holders will use their frequency assignment because it is clear that only one of them will be able to use this band for nation-wide services such as WiMax, which is referred to as the most likely candidate for deployment in this frequency range. It appears therefore that the SPRK decision in this case has been a mere formality and, in practice, it will be the ECO that will assign this spectrum band to users even though, formally speaking, its role is limited to technical implementation of the frequency assignment decisions made by the SPRK.

There is an interest on the part of Latvian MNOs to use 3G services in the 900 MHz band, which would in particular enable them to extend the coverage of mobile broadband services in

rural areas and compete with the current broadband offering of the CDMA mobile operator operating in the 450 MHz band. However, no discussion has yet been started on this issue of spectrum re-farming.

Implementation of frequency Decisions

As far as the Commission spectrum harmonisation Decisions adopted up until 2007 are concerned, Latvia has still not provided information about its implementation of Commission Decisions 2006/771/EC, 2006/804/EC, 2007/90/EC, 2007/98/EC, 2007/131/EC and 2007/344/EC.

Rights of way and facility sharing

A widely reported issue among the operators was the new role of the ECO in the procedures of granting rights of way. According to the amendments to the Electronic Communications Law passed in 2007, ECO was charged with the review and authorisation of construction projects for rolling out electronic communications networks as well as with control functions in this area. The State authorities attached great significance in particular to this new control function of the ECO since, according to them, so far no State institution has in reality dealt with cases of unauthorised network roll-out.

It appears that operators as a rule viewed the ECO's involvement in the authorisation of projects as an additional and time consuming formality, which does not provide any added value since the authorisation of projects by the relevant local authorities continues to be needed anyway. In fact, those operators that followed the letter of the new legal provisions and only applied to the ECO for authorisation of their network projects had run into unexpected difficulties later on because the relevant local authorities refused to accept the putting into operation of their completed objects, arguing that this formality should also be performed by the ECO, which authorised the relevant projects in the first place. However, the law does not provide the ECO with such functions and this has resulted in a deadlock regarding certain projects. Moreover, since ECO is based in the capital Riga, an undertaking wishing to carry out a network construction project outside the capital is now additionally required to travel to Riga to submit documents. According to the ECO, reflection is underway on involving ECO's regional divisions in this new activity in order to make it more easily accessible for operators working outside the capital.

In the context of implementing these new ECO responsibilities, a draft Government decision was drawn up in 2008 to set the charge rates for the relevant ECO's activities. According to the operators, the proposed rates were significant and for certain network roll-out operations would have exceeded the actual cost of the operation concerned. However, following consultations with the industry, the draft decision on the ECO's charges was taken off the agenda. In consequence, the ECO currently performs the approval of construction projects at no extra charge within a few weeks. However, a fast-track procedure is available to those undertakings, which voluntarily enter into contracts with ECO providing for payment of fees, determined by the ECO itself without any Government decision, in return for faster approval of projects.

The Commission will continue to monitor developments in this area closely.

Fees and charges

For several years, the Latvian authorities have been reflecting on the introduction of fees for the use of numbers and frequencies. Operators are concerned about a possible increase in their operational costs and, in particular, question the justification of fees for numbering resources arguing that, after the introduction of the 8-digit numbering system, numbers no longer constitute a scarce resource (with the exception of short codes). The relevant draft regulation was submitted to the inter-ministerial consultation procedure at the beginning of the year but has not seen progress since then. As regards the frequency fees, their introduction was put on hold considering that it should be linked to a general overhaul of the system of state duties. As regards administrative charges, the SPRK continues not to distinguish its specific administrative costs relating to the regulation of the electronic communications market from

those relating to its regulation of postal, energy and railway services. Its costs are covered by a 'regulatory charge' levied on operators in the regulated sectors and set at 0.2% of operators' annual turnover. However, further to the SPRK's proposal, the Cabinet of Ministers reduced, in December 2008, this rate to 0.17% of operators' annual turnover in 2009. Moreover, as a result of an annual adjustment regarding 2007, SPRK also reduced the amount of the charge due in 2008.

Another issue concerning this regulatory charge remains its application to wholesale products, which is regarded by some operators as a disincentive to buy. According to them, this charge applies to the wholesale product twice — both when the wholesale service is provided and when its cost is included in a retail product by another operator. On the other hand, SPRK continues to insist that undertakings purchasing wholesale services have the right to discount their wholesale costs from the amount subject to the regulatory charge. However, this is still not happening in practice since the undertakings concerned claim that they cannot do it in the absence of a proper methodology.

Another national regulatory authority collecting administrative charges in Latvia is the ECO, which is responsible for the management of the use of radio frequencies. All operators using radio frequencies have to pay the rates charged by the ECO for the provision of 'electromagnetic compatibility'. Certain ECO charges were significantly increased by a decision of the Cabinet of Ministers in 2007.

The Commission will continue to monitor developments in this area closely.

THE CONSUMER INTEREST

Tariff transparency and quality of service

Further to the review of certain operators' customer contracts by the SPRK, the Latvian operators are now required to indicate not only the headline but also the guaranteed broadband access speeds in their customer contracts.

Universal service

As in the previous year, in 2008 the SPRK extended the designation of the fixed incumbent as the provider of Universal Service (US) until such time as the universal service compensation mechanism takes effect. The justification advanced for this simple extension was that no other provider would be interested in providing universal service in the absence of a compensation mechanism. However, unlike the previous 2007 extension of designation which was to last until either the establishment of a compensation mechanism or until the end of 2008, the new extension of designation no longer has such an alternative specified time limit.

At the beginning of 2008, the multi-sector working group established for this purpose presented to the Government a draft concept for the compensation mechanism for US obligations. It proposes a single mechanism for the three industry sectors regulated by the SPRK — electronic communications, post and electricity. According to the concept the costs of universal service are estimated at 1.3% of the annual turnover of undertakings in these sectors, subject to annual revision. It proposes to designate several universal service providers for each of its elements. The eligible customers would then choose from among the designated providers that will be entitled to compensation from the US fund.

As regards the electronic communications sector, it is not intended to include in the US basket access to networks at a fixed location since it is considered to be available to anybody at acceptable prices. The discussion is ongoing about the cost burden of the compensation mechanism, the determination of appropriate volumes and affordable prices for the services included in the US as well as the registration of eligible users. As a result, the concept has not developed any further since its first presentation at the beginning of the year and the prospects of progress are unclear.

In 2007, the fixed incumbent for the first time requested compensation of its net costs for the provision of the US in 2006. The NRA found an unfair burden and confirmed the request for compensation. It was planned to pay this compensation from the State budget of 2008 but this has not happened so far since the necessary resources have not yet been identified. In 2008, SPRK received a similar request concerning the costs in 2007 and, by a decision passed in November confirmed the unfair burden in the provision of the US in 2007. The Commission will continue to monitor developments in this area closely.

Number portability

Since number portability became available also for Latvian pre-paid mobile customers as of 1 February 2008, the total number of ported mobile numbers more than doubled in 2008. As of October 2008, 64 967 mobile numbers have been ported, which represents 2.99% of all mobile numbers. The number of ported fixed numbers also increased to 16 475 numbers in October 2008 compared to 12 533 numbers in October 2007.

Number portability remains free of charge for both fixed and mobile customers. However, in view of the significant increase of mobile number portability after 1 February, the two established MNOs introduced wholesale charges of about €9.5 for numbers ported out. The new entrant did not accept them and applied to the NRA with a request to set cost-oriented number portability charges. The NRA requested the MNOs to provide justification for charges and the case is yet to be resolved.

Another dispute about number portability charges was pending between the fixed incumbent and one alternative fixed provider. The disputed charge set by the fixed incumbent was about €8.6, which is slightly lower than the EU average of €9.69. This dispute was formally referred to the NRA, which, rather than deciding the case on its merits, decided to impose an obligation on the operators concerned to reach an agreement through negotiations within a fixed deadline. In the absence of such an agreement, the SPRK finally passed a decision in December recognising the rate set by the fixed incumbent as cost oriented.

Consumer complaints

In Latvia, consumer complaints against operators can be reviewed by both the SPRK (except billing disputes) and the Consumer Protection Centre. Both institutions can impose administrative fines on operators and order the payment of compensation to customers. The most common subject matters of disputes are accuracy of bills and quality of services and there has been a significant increase in complaints about the quality of mobile broadband services. The number of complaints concerning fixed broadband has, on the other hand, declined in 2008.

European emergency number 112

At the end of 2007, Latvia put into operation a system for the delivery and transmission of caller location information also for mobile emergency calls. In consequence, the Commission could close in February 2008 the infringement proceeding opened against Latvia on this issue. Emergency services now acquire caller location via the central location database run by the ECO. The computer interface of the ECO's caller location database includes warning to its authorised users in the emergency services about the circumstances in which it can be legally used. However, it depends on the emergency services to ensure that their authorised personnel abide by these strict access rules. In addition, some mobile operators have set up filters to prevent the use of the ECO database for requesting caller location information regarding numbers, from which there is no emergency call in progress or no such call has been made in the immediate past.

116

The '116' numbering range was included in the new national numbering plan adopted by the Government in August. The Ministry of Transport subsequently published the list of currently

reserved numbers (i.e. 116000, 116111 and 116123), which enables the SPRK to assign them to interested operators. The first assignment was made in December when the '116111' number was assigned to the fixed incumbent. It is expected to become operational in the next few months and the service provider will be the State Inspectorate for Protection of Children's Rights.

LITHUANIA

INTRODUCTION

In 2008, the trend towards infrastructure-based competition continued to prevail, notably in the form of fixed-to-mobile substitution, which was above the EU average. A majority of broadband lines were provided by technologies other than digital subscriber lines (DSL), and there was an increasing range of innovative service offerings to users of telecommunications services, including mobile broadband. However, fixed broadband penetration and its rate of growth were below the EU average in 2008.

On the regulatory side, there is still no country-wide solution for a 112 caller location service. The issue of effective separation of regulatory functions in the field of electronic communications from activities associated with ownership or control of providers of electronic communications networks or services led the Commission to take formal action.

REGULATORY ENVIRONMENT

Main regulatory developments

The legislative framework was relatively stable in Lithuania in 2008. The Data Retention Directive (2006/24/EC) was finally transposed into Lithuanian law. In addition a specific date - 29 October 2012 - for the switch-off of analogue TV broadcasting was set by the government.

Ryšių reguliavimo tarnyba (RRT), the Lithuanian national regulatory authority for electronic communications, achieved some tangible results as regards implementation of the remedies imposed as a result of market analyses. Nevertheless, further monitoring, enforcement and dispute settlement efforts will be required, in order to ensure that the terms and conditions of regulated network access which are available in practice to alternative operators allow them to compete with the incumbent on an equal footing.

Organisation of the NRA

The lack of effective structural separation of regulatory functions in the field of electronic communications from activities associated with ownership or control of providers of electronic communications networks or services continued to be an issue in Lithuania in 2008. Most of the tasks of the regulatory authority are performed by RRT. However, the Ministry of Communications of the Republic of Lithuania (the Ministry) is directly involved in the procedures leading to the approval of the National Radio Frequency Allocation Table, as well as in the elaboration of regulations governing the provision of universal service in Lithuania. It also appears that the Ministry carries out activities associated with both ownership and control of providers of electronic communications networks or services, in particular where a company provides inter alia broadcasting transmission and wireless broadband. An infringement case was opened against Lithuania in September 2008 on the grounds that such lack of effective structural separation was contrary to the requirements of Article 3(2) of the Framework Directive.

In 2008 RRT received nine requests for dispute resolution, compared to an annual average of one to two in previous years. This might be due to the alternative operators' changing attitude to formal dispute resolution procedures. RRT also launched a web page dedicated to dispute resolution procedures.

Decision-making

In 2008, RRT proceeded with the actual implementation of the measures adopted under the first round of market analyses, and commenced several second round market reviews. Lithuanian Administrative Courts have so far upheld all the RRT's market analysis decisions

that had been challenged by market players, except for one concerning the wholesale broadband access market.

According to applicable regulations, any new reference offer is sent to RRT two months in advance of its entry into force. The draft is made public, and RRT is entitled to make comments, which it usually does. In order to increase transparency for the market players, RRT also started publishing a comparative table showing all the modifications compared to an earlier version of a specific reference offer as of 2008. Moreover, RRT retains the right to question any of the incumbent's reference offers at all times, irrespective of their entry into force. Nevertheless, the limited scope and low thresholds of contractual sanctions, such as fines, and the requirement that alternative operators provide a financial guarantee, appear to constitute continuing weaknesses of the Lithuanian legal set-up for the implementation of electronic communications market regulation. They appear to prevent alternative operators from availing themselves of equivalent terms and conditions for the use of the incumbent's network.

Recently, the national competition authority (NCA) has been reported to be reluctant to launch new ex-post competition-law investigations in the electronic communications sector. In particular, an appeal by alternative operators against the NCA's refusal to investigate price squeeze issues is under examination by Lithuanian Courts.

MARKET AND REGULATORY DEVELOPMENTS

The total turnover of the Lithuanian telecommunications sector was €0.83 billion as of 31 December 2007 (close to 3% of GDP), representing growth of more than 10% compared to one year earlier. Revenue from fixed markets was €168 million, and revenue from mobile markets was €560 million. Lithuanian telecommunications companies increased their rate of investment by 33% in the period 2006 – 2007, to €136 million, resulting in an investment over revenues ratio of 16.4%, above the EU average. At the end of December 2007 the total value of tangible investment by alternative operators in fixed telephony networks was €17 million. Mobile operators invested as much as €79 million, while the fixed incumbent invested €40 million.

Fixed-to-mobile substitution had become widespread by the end of 2007, with fixed outgoing voice traffic contracting to 27% of all outgoing voice traffic, which was significantly below the EU average of 63%.

In July 2008, just over 32 000 Lithuanian users were subscribers of bundled offers of electronic communications services (mainly television and broadband), representing less than 1% of the population. RRT has not yet outlined its regulatory approach to bundled service offers.

In 2008, some innovative ways to offer services to consumers were introduced in Lithuania. Particular examples include pre-paid mobile Internet access, a bundle of flat-rate mobile Internet access and a pre-determined amount of voice minutes and SMS (short messaging service), as well as flat-rate unlimited national voice calls plans.

The roll-out of the publicly funded rural fibre backbone network (called RAIN) was completed in 2008. The initial market reaction appears to be positive: many fibres, amounting to approximately 7 000 kilometres in total, are already rented. The network is operated on a wholesale basis only, and is open to access by operators. Two municipal broadband projects were launched in 2008.

National digital subscriber line (DSL) coverage increased from 83% in 2006 to 88% in 2007, and DSL coverage in rural areas stood at 68%, an increase of 10 percentage points over a year. For cable, rural coverage increased from 2% to 3%, and the national coverage grew from 52% to 57% over a year. Lithuania therefore succeeded in narrowing the digital gap for DSL from 25 to 20 percentage points, although the digital gap for cable widened from 49 to 54 percentage points.

The fixed incumbent's next generation network (NGN), consisting of fibre to the home, focuses in the initial stages on five major cities, and is largely based on a case-by-case

approach. The roll-out is usually synchronised with the construction of new buildings, or renovation of old buildings. Upgrading of the core part of the network had already been completed by the incumbent in 2007.

Some discussions between RRT and the incumbent as regards the future regulation of NGN are already ongoing, but no thorough public debate has been initiated yet. RRT considers that any launch of a national debate should await the conclusion of discussions at the level of the European Regulators Group (ERG).

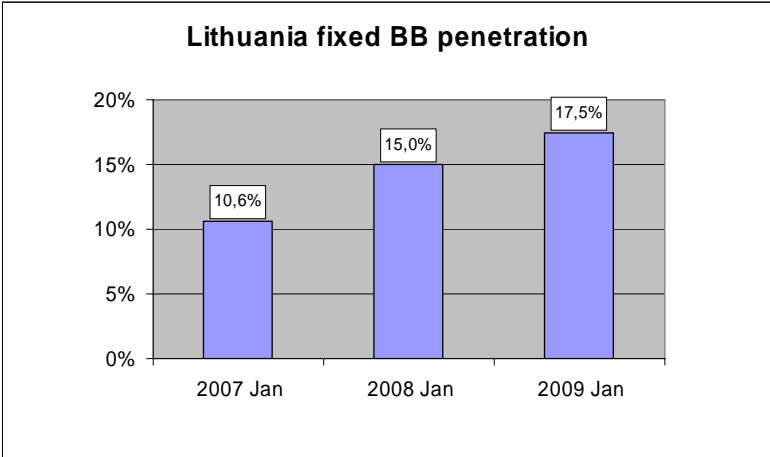
Broadband

Market situation

In January 2009, broadband penetration had reached approximately 17.5%, compared to approximately 15% in January 2008. Lithuania lags behind the EU average of 22.9%. Moreover, the rate of growth of broadband penetration was below the EU average in 2008. Fixed broadband services are delivered through a number of competing types of infrastructure: fibre (approximately 27%), cable (approximately 12%), local area networks (approximately 10%). In 2008 wireless Internet access services based on the WiMAX technology (Worldwide Interoperability for Microwave Access) were launched in three major cities, by one of the 3.5 GHz spectrum assignees. Up to 57% of broadband lines were provided using non-DSL technology in January 2009, largely above the EU average of 21%. Mobile broadband penetration represented 6.2% in Lithuania as of January 2009, below the EU average of 13%. However, penetration of data service cards, modems or keys stood at 3.4%, above the EU average of 2.8%. The broadband market share of the fixed incumbent remained stable at 50% in January 2009, above the EU-27 average of 46%. Nevertheless, the incumbent's DSL share was as high as 99%. In January 2009, 58% of all fixed broadband lines allowed speeds up to 2 Mbps, whereas around 12% of lines were enabled with speeds of 10 Mbps or more.

Regulatory issues

The incumbent has appealed against all the remedies imposed by RRT as a result of the analysis of the wholesale broadband access market, and the appeal has been upheld by the Lithuanian Administrative Courts. In particular, in February 2008, the Supreme Administrative Court of Lithuania ordered RRT to reconsider the remedies imposed. In April 2008, RRT petitioned the Court for renewal of the case. Nevertheless, wholesale bitstream



lines are provided by the incumbent on purely commercial terms and conditions for the time being. RRT is in the process of carrying out the second round analysis of the physical network infrastructure access (LLU) market. As of January 2009, unbundled local loops were in use by the alternative operators mostly for provision of data transmission services

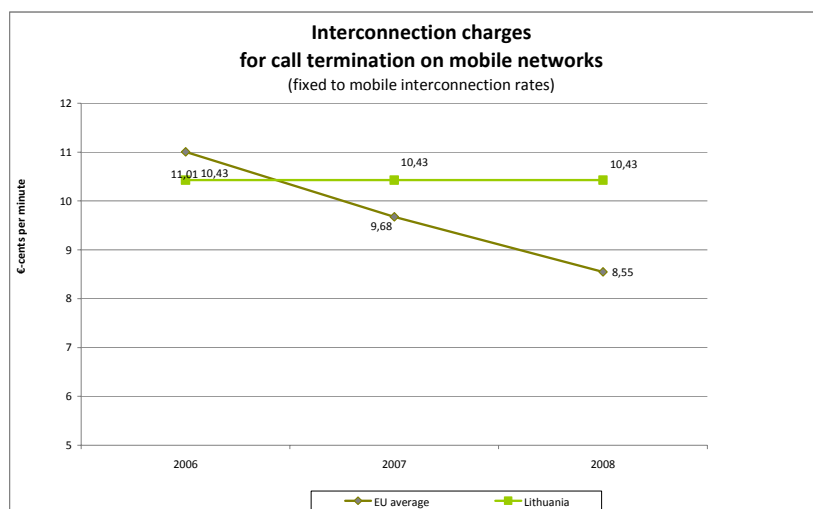
in Lithuania, and two agreements for a total of 473 wholesale LLU lines were in place. The number of retail broadband lines based on bitstream access was only 2 282. In October 2008, the connection fee for a fully unbundled loop was almost €140, the highest in the EU, and the monthly rental charge equalled €7.75, slightly below the EU average of €9.28. Both connection (€140) and monthly rental (€5.46) of shared loops were priced well above the EU averages (€54 and €2.62). RRT has ordered an audit of the incumbent's accounts, in order to

determine whether the current levels of LLU prices are cost-oriented, and whether they have any price-squeeze effects on the market.

RRT's formal dispute resolution decision on LLU was adopted in 2007, and ordered the incumbent to apply non-discriminatory technical investigation deadlines, not to charge a technical investigation fee, and to give access to the network information system free of charge. It is still under examination by the Lithuanian Courts.

In 2008 RRT approached the incumbent, requesting removal of the restriction of technologies that can be implemented in unbundled local loops. The incumbent's reference offer had allowed only asymmetric digital subscriber line two (ADSL2), whereas ADSL2+ services had been

provided by the incumbent at the retail level. The incumbent's updated technical conditions of the LLU reference offer are under preparation.



Mobile markets

Market situation

The mobile sector has remained the leader in terms of revenue generation, accumulating approximately 47% of total electronic communications revenue. The mobile penetration rate has stabilised, growing from 145% in October 2007 to 149% in October 2008, which is way above the EU average of 118.9%. The market shares of the three mobile operators were approximately 39%, 38% and 23% in October 2008, very similar to the situation one year earlier. Lithuanian users enjoy very cheap mobile voice communications, €0.07 per minute, compared to the EU average of €0.23. The annual average revenue per user was the lowest in the EU as of December 2007, at approximately €111, compared to the European average of approximately €254. Two operators are offering mobile TV services, based on point-to-point streaming technology.

Regulatory issues

The mobile call termination markets had been analysed by RRT already in 2005. However, the implementation of the price control remedy was delayed, because the results of the tender for developing a cost model had been appealed. RRT had not yet finalised the bottom-up long run average incremental cost (BU-LRAIC) model that will determine wholesale prices in mobile termination markets. However, in November 2008 RRT decided to impose a 20% reduction of mobile termination rates as of January 2009. These will apply until the cost model is finalised. As a result, an average termination rate of €0.08, equal to the EU-27 average, applies in Lithuania, even though the RRT's decision was appealed by one of the mobile operators. All the three mobile operators drew up, and brought into use, new versions of reference interconnection offers in 2008.

Roaming

All Lithuanian mobile operators complied duly and on time with the European Regulation (EC) No 717/2007 on roaming on public mobile telephone networks within the Community, as regards the second round of price reductions as of 30 August 2008. In most cases the retail prices were set at or very close to the maximum level indicated by the Regulation.

According to representatives of consumer interests, travellers may be unaware that retail prices for calls to fixed or mobile networks operating in a visited country do not fall within the scope of the Regulation.

Fixed

Market situation

Fixed voice telephony income continued to decline in 2008. The incumbent's market share in the fixed telephony market (all types of calls) by retail revenue fell by only 1%, from 93% to 92% in the period December 2006 – December 2007. As a matter of fact, the incumbent's market share decreased only in the market for calls to mobile networks. There were 34 (up from 27) managed VoIP providers in Lithuania in July 2008. However, they generated only 1.74% of fixed voice traffic, compared to the EU average of 8.33%. Only approximately 5% of subscribers used an alternative provider to make and receive fixed national calls in July 2008. All the alternative operators that are currently offering public voice telephony through direct access are using their own proprietary infrastructure. These operators make up more than half of all alternative operators.

Regulatory issues

Final measures in the markets for fixed wholesale call termination, resulting from the second round analysis, were notified to the Commission in February 2008. The hybrid long run average incremental cost (HY-LRAIC) model is used to determine cost-oriented fixed termination rates in Lithuania. The model has already brought about remarkable reductions in the charges applied by the incumbent: from €2.61 to €1.56 for local level interconnection and from €3.48 to €2.09 for double transit (comparing October 2008 to October 2007).

Nevertheless, pending a further planned reduction, these termination charges remain well above the relevant EU averages.

Wholesale call termination rates applied by alternative operators are not subject to price control measures. However, the existing interconnection agreements between the incumbent and the alternative operators oblige the latter to reciprocally reduce their termination rates, each time the incumbent's termination charges fall.

Alternative operators consider that this symmetry in termination charges is unjustified, notably in view of the different cost structures of the incumbent and alternative operators, as well as the way costs of establishing and maintaining interconnection points are attributed between the incumbent and alternative operators. A formal dispute, initiated by alternative operators, is pending before RRT on this issue.

A new version of the reference interconnection offer, reflecting the reduced termination rates, was published by the incumbent in July 2008. RRT made a number of comments concerning, in particular, the absence of a cascade settlement method, certain provisions in respect of payment for facilities which are not necessary for the services requested, and the absence of cost-sharing provisions in respect of resources which interconnected operators are using together. A version of the offer that takes these comments into account is expected from the incumbent.

The second round review of fixed retail calls markets was notified by RRT to the Commission in March 2008. As a result of this review, an additional price control obligation was imposed on the incumbent in order to deal with the issue of higher retail prices for calls to alternative networks compared to retail prices for the calls originating and terminating on the incumbent's network (on-net calls). Under this obligation the price for national calls from the incumbent's network to any other fixed network should be calculated in the following manner: the price of the incumbent's on-net call minus the price of on-net call termination plus the price of call termination on the other public fixed telephone network. The incumbent had made some voluntary reductions of retail prices for calls to other networks in anticipation of the measure, which were deemed insufficient by alternative operators.

Wholesale line rental (WLR) is, reportedly, used by only one alternative operator. The facility of automatic activation of lines is not made available to alternative operators, even though it appears to be technically possible. As a result, retail clients of alternative operators are forced to enter manually the activation codes in order to get WLR services.

Broadcasting

Market situation

Two digital terrestrial television (DTTV) networks are operated by the analogue broadcasting transmission incumbent, and the other two by the fixed incumbent in Lithuania. Each network allows for the broadcasting of 10 digital programmes. All networks are already in service in the five major cities of Lithuania and together cover approximately 95% of the population. The fixed incumbent's DTTV networks had approximately 17 000 retail subscribers in October 2008.

Close to 1% of the Lithuanian population were subscribers to the fixed incumbent's IPTV product in July 2008. Cable networks and microwave multipoint distribution systems (MMDS) served approximately 400 000 TV subscribers in 2008 (approximately 30% of the TV market). The market share of satellite TV providers was close to 4%, while the market share of terrestrial TV (both analogue and digital) was approximately 65% in 2008.

Regulatory issues

The switch-off of analogue TV broadcasting had been originally set to commence in 2012. However, in September 2008 the Government of Lithuania decided to establish a specific switch-off date – 29 October 2012, which is conditional upon at least 90% of Lithuanian households being in a position to receive, using any of the digital broadcasting technologies, all the free-of-charge terrestrial TV programmes (both national and local). Based on the relevant resolution of the Government, any digital dividend will be allocated for DTTV in Lithuania.

A cost-accounting and accounting separation system was completed by the analogue broadcasting transmission incumbent, which was the SMP (significant market power) operator in the wholesale broadcasting services market, in December 2007, and was updated in 2008, following comments from RRT. An audit of the system has been ordered by RRT in order to assess whether it complies with RRT's rules on cost-accounting and accounting separation. The results of the audit would be helpful in determining whether an increase in prices of some wholesale broadcasting services at the beginning of 2008 was appropriate. RRT is in the process of carrying out the second round analysis of the market.

Horizontal regulation

Spectrum management

Following the assignment by RRT of radio spectrum (3.4-3.6 GHz bands) to three operators of public wireless broadband access networks in autumn 2007, first announcements of the launch of commercial WiMAX (Worldwide Interoperability for Microwave Access) services in three largest cities of Lithuania were made in 2008. According to the tender requirements, the three operators will have to cover three major cities within two years, five major cities within five years, and all the territory of Lithuania within ten years. One appeal against the results of the tender is still pending before the Supreme Administrative Court of Lithuania (another appeal has already been dismissed).

RRT has commenced developing spectrum assignment plans in the 450–470 MHz, 2300–2400 MHz, 2500–2690 MHz and 3600–3800 MHz bands.

Based on the Plan on the Usage of Radio Frequencies, as updated in August, November and December 2008, and the List of Radio Frequencies/Channels That May Be Used Without an Individual Authorisation, approved by RRT, all the Commission's radio spectrum harmonisation decisions, adopted by the end of 2007, have been implemented. As regards effective implementation in Lithuania of the Commission Decision 2007/344/EC of 16 May 2007 on harmonised availability of information regarding spectrum use within the

Community, RRT is already providing to the European Radiocommunications Office's Frequency Information System (EFIS) data concerning spectrum allocations and applications. RRT started providing radio interface specifications at the end of 2008.

Rights of way and facility sharing

In 2008 RRT carried out a survey regarding tariffs and conditions for duct access in Lithuania. It indicates that comparable terms and conditions tend to be applied by all access providers. The fixed incumbent increased its tariffs as of 1 October 2008. A formal dispute concerning the incumbent's tariffs has been submitted to RRT by cable operators.

THE CONSUMER INTEREST

Tariff transparency

RRT's consumer-dedicated price comparison website, launched in October 2007, was further improved in 2008, in particular by reflecting more varied price plans whereby pre-determined amounts of voice minutes and/or data are offered to consumers for a fixed minimum fee.

Universal service

In view of the high degree of fixed-to-mobile substitution, the incumbent is seeking to reduce the number of payphones that it has to maintain. In September 2008 RRT announced its annual open call, inviting expressions of interest for the provision of universal service, or of any of its elements, without compensation.

Number portability

Approximately 275 000 mobile numbers had been ported by October 2008, compared to approximately 107 000 numbers 12 months earlier. Approximately 11 521 fixed numbers were ported in 2008, compared to just 4 449 one year earlier. In Lithuania the time needed to port a fixed or a mobile number is five days, below the respective EU averages of 7.5 days for fixed numbers and 8.5 days for mobile numbers.

European emergency number 112

The functioning of the 112 service still appears not to be entirely satisfactory in Lithuania. In 2006, an infringement case was opened against Lithuania on the grounds that, contrary to the requirements of Article 26 of the Universal Service Directive, caller location information was not available to emergency authorities in Lithuania for calls made from mobile phones. In September 2008, the Court of Justice of the European Communities ruled that, by not ensuring in practice that authorities handling emergencies are, to the extent technically feasible, given caller location information for all callers to the single European emergency call number '112' when public telephone networks are used, the Republic of Lithuania had failed to fulfil its obligations under Article 26(3) of the Universal Service Directive.

According to the information available to the Commission services, at the end of 2008 the mobile caller location function was in place as regards the capital Vilnius and surrounding areas, but was still not available in the whole territory of Lithuania.

In the view of consumer interest representatives, the single emergency number '112' has been somewhat weakened by the recent introduction of several special emergency numbers, e.g. to report cases of road rage. Furthermore, it appears that calls to '112' concerning specific issues, such as drugs, are not transferred by the joint emergency centre to the competent authorities.

116 harmonised European numbers

The numbering range beginning with "116" has been reserved for harmonised services of social value in the Lithuanian numbering plan. In September 2008, RRT announced a public tender for granting the right to use the number 116000 for the purpose of establishing a hotline for missing children, but the tender was terminated owing to lack of interest. RRT intends to announce further public tenders in 2009.

Must-carry

Two Lithuanian mobile operators have already obtained the content ("re-broadcasting") licences for the purposes of their mobile TV offerings. As a result, the must-carry obligation, including approximately six TV channels, applies. While technical capacity to transmit these channels does not appear to constitute a problem, operators have found it challenging to deal with the copyright issues. The Commission services are looking into the matter.

Consumer complaints

Billing and payments remained the main themes of consumer complaints in 2008. Several instances of exorbitant bills were identified. RRT has prepared changes to the rules clarifying the setting of limits for consumption of telecommunications services.

Data protection

Following the opening of infringement proceedings, the Lithuanian Parliament adopted the amendments to the Law on Electronic Communications that transpose the Data Retention Directive (2006/24/EC), in November 2008. The amendments are set to enter into force in March 2009. The Law now provides for a data retention period of six months, instead of 12 months as in the previous draft. No mechanism for providing compensation of costs to operators is established. Some operators are still unsure about how to deal with Internet traffic.

In 2008 the Lithuanian authorities continued the elaboration of a Law on Electronic Communications Network and Information Security aimed at ensuring a high level of security of electronic communications. RRT's computer emergency response team (CERT) was reorganised into a national electronic communications network and information security investigation service (CERT-LT). Moreover, a website dedicated to security incidents and their prevention has been launched.

Investigations of spam, the most frequent communications security incident in Lithuania, are carried out by the country's Data Protection Agency. RRT assists the Agency by collecting technical data. There appears to be an issue with feedback to RRT about the completed investigations. Moreover, it seems that the respective institutional roles are not very transparent to consumers.

LUXEMBOURG

INTRODUCTION

Broadband penetration continued to increase in 2008 and competition was strong in the mobile sector. In contrast, the incumbent's predominance in the broadband and fixed sectors was reinforced by its bundled offerings.

While some important regulatory measures have been adopted by the regulatory authority in order to safeguard competition on the local loop unbundling (LLU) and the wholesale broadband access market, thereby granting easier access to the incumbent's infrastructure, and providing a wider choice for consumers, concerns regarding the conditions of access to next generation networks (NGN) are rising among alternative operators.

REGULATORY ENVIRONMENT

Main regulatory developments

Luxembourg has improved significantly its regulation regarding spectrum, following the adoption of a Règlement grand-ducal in July 2008, which includes a new frequency plan incorporating most of the long over due EU Radio Spectrum Decisions into national law. In January 2008, the Commission launched an infringement proceeding against Luxembourg on the grounds of a lack of effective separation between the regulatory functions and those functions associated with the ownership or control of undertakings providing electronic communications networks and services.

This resulted firstly in the resignation of one public official from a managing position in an electronic communications operator in May 2008. As a follow-up, a new Règlement grand-ducal was adopted on 14 November 2008 giving a legal basis to the Service des Médias et des Communications (SMC) and restructuring it in order to ensure effective separation between the regulatory functions and those functions associated with the ownership or control of an operator. The Commission's services are analysing these reforms in order to assess whether the Commission's concerns, as expressed in the infringement proceeding, have been addressed. Following the implementation of these changes, the case was closed in early 2009.

Organisation of NRA

Operators tend to consider that the National Regulatory Authority, the Institut Luxembourgeois de Régulation (ILR) is acting independently. In order to increase its flexibility, despite limited resources, the NRA has, however, chosen to hire experts only when a need arises, inter alia in relation to market reviews. Furthermore, alternative operators claim that regulatory deadlines imposed by the ILR are clustered in a very specific period of the year and that the regulatory output of the NRA should instead be more equally spread out throughout the year. It can nevertheless be noted that there is good collaboration between the ILR and the competition authority.

Decision-making

The ILR adopted two important decisions in August 2008, regarding the market for local loop unbundling (LLU) and the wholesale broadband access market, which had been long awaited by the Commission and the telecommunications operators of Luxembourg. These decisions impose a set of obligations on the incumbent, identified as the operator with significant market power (SMP), in line with the relevant national legislation, and with the provisions of the Access Directive. They include an obligation to give access and interconnection to the twisted metallic pair local loop and obligations of non-discrimination, transparency and accounting separation.

The second round of market analyses, following the adoption of the revised Commission's recommendation on relevant markets, is due to start in 2009 and is expected to focus first on the broadband and mobile markets.

A procedure for dispute resolution was launched in 2008 as a follow-up to the ILR decision of September 2007 imposing upon the incumbent a technically feasible replacement solution for alternative operators affected by the relocation of the Kirchberg exchange. As a result, this exchange centre was replaced by 160 points of presence (POPs) and five collocation centres accessible to operators. This was a positive development from a competition point of view, although the incumbent has not yet announced its willingness to give optical fibre access to alternative operators. It remains to be seen how the ILR will ensure a smooth transition to optical fibre.

However, there is still no ruling from the Administrative Court following the incumbent's appeal against ILR's 2007 decisions approving the reference interconnection offer (RIO) of 2007, and those regarding the markets for fixed wholesale call origination and call termination. This situation creates legal uncertainty with the risk of new tariffs being applied retroactively should these decisions be overturned.

MARKET AND REGULATORY DEVELOPMENTS

The total turnover of the Luxembourg telecommunications sector was €493 million as of 31 December 2007. Revenues from fixed markets were €242 million and revenues from mobile markets were €251 million. The total value of tangible investments in telecom networks was €96 million, where the incumbent invested approximately €70 million in fixed telephony networks, while alternative operators invested only around €5 million.

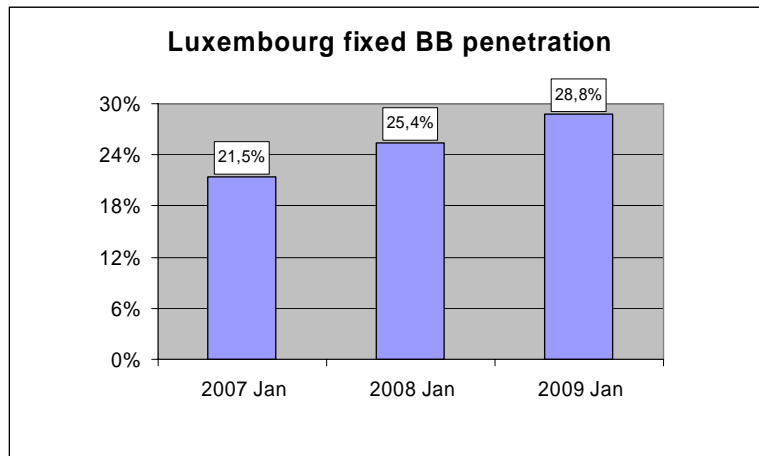
The investments by mobile operators amounted to €21 million, a decrease of €6.5 million, compared to last year's figure.

2008 has witnessed several significant developments. A major alternative operator was acquired by the Belgian incumbent operator in June 2008, and two additional licences were allocated to two mobile operators. However, less than a quarter of the fixed telephony market is held by alternative operators and the predominance of the incumbent in terms of traffic volumes is being strengthened, although its market share has slightly decreased in terms of revenue. The incumbent has started to develop a large FTTC (Fibre-to-the-Curb) network in the most profitable regions. However, the state-owned company, created in 2006 to provide dark fibre to other operators from May 2008, is not yet operational.

Broadband

Market situation

Luxembourg's broadband penetration rate increased by 3.4 percentage points since January



2008 and reached 28.8% in January 2009, which is well above the EU-27 average of 22.9%. It has the fifth highest broadband penetration rate of the EU27. The incumbent's share of the broadband market (including resale of DSL lines) dropped slightly to 80.9% as of January 2009 compared to 84.9% as of January 2008. The market share of the alternative operators (excluding resale DSL lines) has increased and

reached 19.1% in July 2008, which represents an increase of 4 percentage points since January 2008.

The number of resale DSL lines has not increased significantly and represents almost 12% of the total number of broadband DSL lines, or 58% of the total of the alternative operators' DSL lines.

As regards the LLU market, the number of fully unbundled lines is slowly increasing, although it is still limited (10170 lines as of January 2009). In its comments following the notification of the market for local loop unbundling (LLU), the Commission invited the ILR to clarify without delay the details and timing of the implementation of the cost-orientation obligation. However, the price charged for LLU has not changed from last year and the connection fee remains high, for both full LLU (€91.1) and shared access (€157.4). Alternative operators have requested that this connection fee should be closer to the EU average.

Luxembourg is still among the top three EU countries having complete national and rural DSL coverage and a strong cable coverage of 71% of the country, gaining 0.8 percentage points since last year and representing 82% of urban coverage and 50% for rural areas.

Regulatory issues

The absence of a genuine bitstream regulated offer in Luxembourg continues to harm the development of a really competitive broadband market. The deployment of NGN infrastructures was expected to essentially be based on VDSL technology and optical fibre. Continued investment in copper-based networks was uncertain. It is likely that the provision of a real bitstream offer will depend upon the regulator's willingness to impose on the incumbent cost-oriented tariffs rather than retail minus tariffs, which would allow alternative operators to offer differentiated services.

On the other hand, following its decisions of July 2008 regarding the market for local loop unbundling (LLU) and the market for wholesale broadband access, remedies are now imposed on the operator with significant market power. Following these decisions, the incumbent published three updated reference offers at the end of October 2008: a Reference Unbundling Offer (RUO), a Reference Collocation Offer (RCO) and a reference DSL Offer (RDSLO). The RUO included fully detailed provisions about a differentiated business and standard service level agreement (SLA). Approval of the 2008 RIO was still pending at the end of the reporting period.

Mobile

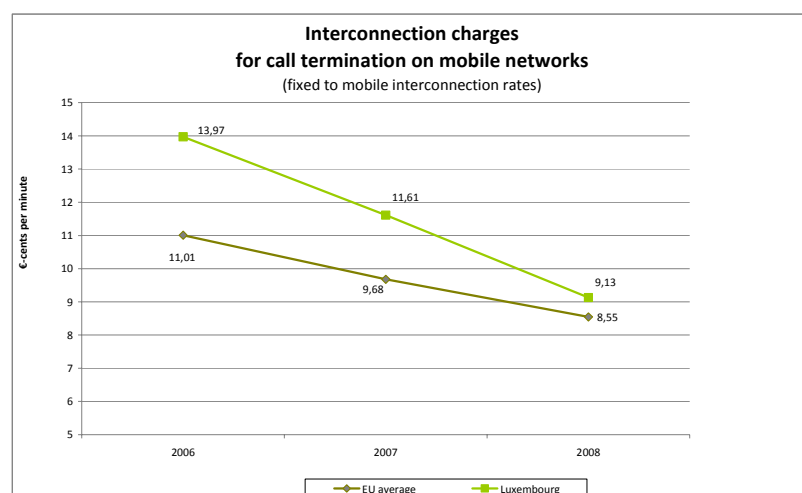
Market situation

As of October 2008, the penetration rate for mobile was 142%, slightly down from last year's 149% but well above the EU average of 118.9%. The mobile sector is leading in terms of revenue generation, by contributing to approximately 51% of the revenue of the total telecommunications sector. As of 1 October 2008, the number of mobile subscribers was approximately 690 000, with 43% pre-paid subscribers and 57% monthly paid subscribers. Overall the sector is quite competitive. The market share, based on traffic, is 54% for the incumbent, while the first and second competitors' market shares are increasing, at respectively 31% and 15%. In terms of subscribers, the mobile arm of the incumbent holds 39% of the market, whereas the share is 38% for the second mobile operator and 23% for the third.

The price for mobile communications in Luxembourg can be as low as €0.09 per minute. The incumbent's mobile broadband offer includes speeds ranging between 1.8 and 3.6 Mbps, and covers 90% of the territory. The incumbent has indicated that approximately 13% of its subscribers have opted for a 3G package. The penetration rate of mobile broadband for general usage was at 10.1% as of January 2009 (below the EU average of 13%) while the penetration rate for mobile broadband based on data cards was significantly lower at 1% (the EU average being 2.8%).

Regulatory issues

As a result of the legal action by a competing mobile operator which led to the cancellation of the previously allocated 3G licence at the end of January 2008, a negotiated solution was finally found in April 2008, whereby a licence was granted to each of the two initial applicants who will share the frequency bands initially allocated to only one licence.



Roaming

The Roaming Regulation is implemented in Luxembourg and the subsequent reduction of roaming tariffs appears to be well received by consumers. The roaming billing system is based on a per-minute billing for the first minute and per-second billing thereafter. Operators are also ensuring information and transparency of tariffs for voice and data roaming. Roaming customers also have the possibility to opt for special tariffs.

While inadvertent roaming is still an issue in border areas and in order to avoid bill-shocks, one alternative mobile operator has taken steps to put in place a system that allows the blocking of roaming on terminals by deactivating data roaming by default for all new mobile broadband subscriptions (activation of data roaming can be requested by SMS).

Fixed

Market situation

2008 saw an increase in the state-owned incumbent's already very high market share in terms of call volumes in the fixed telephony market (80.3% by call minutes). The market share by revenue, however, decreased from last year for all types of calls, and in particular for calls to mobile.

As regards traffic volumes, fixed voice traffic is decreasing significantly to the benefit of mobile traffic: fixed voice traffic represents 69% of the total call volume (as of December 007) compared to 74% one year previously.

The market share of the VoIP operators amounts to 5% of the fixed telecommunications market. Two operators were offering managed VoIP traffic based on CATV infrastructure.

Regulatory issues

In February 2008 the ILR finally approved the long overdue incumbent's wholesale line rental (WLR) offer, which applies until 2010 and is based on cost-oriented prices. Alternative operators are however claiming that this offer is not satisfactory due to an insufficient retail margin (12.7%), excessive entrance fees and the absence of a genuine service level agreement (SLA) that would allow them to replicate the services offered by the incumbent.

Interconnection charges for terminating calls for local and single transit are above the EU average. While the EU average for local transit and single transit stood at €0.57 and €0.86 respectively as of October 2008, alternative operators are charged for these levels at €0.76 and €1. One operator has raised concerns regarding the fact that the incumbent is billing VoIP communications on top of the flat-rate, and has requested that it should consider these VoIP numbers as geographical numbers to be included in the flat-rate.

Broadcasting

Market situation

Although cable remains by far the most used platform (75% of households as of 1 July 2008), satellite TV gained four percentage points compared to last year, and now has a penetration rate of 24%. More than 10% of households have access to both cable and satellite. In March 2008, the first IPTV offer in Luxembourg, provided by the incumbent, was launched in nine municipalities. It remains to be seen what the impact of this service will be on competition in the sector.

Regulatory issues

The integration of IPTV in the so-called "Integral" bundled offer of the incumbent was identified as an abusive practice of bundling by the President of the Conseil de la Concurrence (Competition Council) in its decision of 22 January 2008. This decision is supplemented by another decision of the Competition Council of 26 February 2008 imposing a penalty on the incumbent for non-compliance with the initial decision. It also orders the incumbent not to incorporate IPTV into the "Integral" bundled offer, or in any other bundled offer until alternative operators are in a position to replicate this offer on the basis of a non-discriminatory and transparent network access offer from the incumbent. Both decisions have been appealed by the incumbent.

Horizontal regulation

Spectrum management and implementation of spectrum decisions

The situation in 2008 has improved significantly compared to last year, due to the adoption of the New Frequency Plan in the form of a Règlement grand-ducal on 29 July 2008. All the Commission spectrum harmonisation decisions are now considered by Luxembourg to be implemented with the exception of Decision 2008/671 on the harmonised use of radio spectrum in the 5875-5905 MHz frequency band for safety-related applications of Intelligent Transport Systems (ITS) and Decision 2008/673 on the use of the frequency band 169.4-169.8125 MHz (updating the ex ERMES paging system decision). Consequently a new draft Frequency Plan that will include these latter decisions was put to consultation at the end of September 2008.

One alternative operator is using its WiMAX licence based on wireless local loop (WLL) to provide broadband services to small and medium-sized businesses.

Administrative charges

The administrative charges are based on a percentage of the turnover of the operators and were reduced at the end of 2007 to 0.4%. However, alternative operators continued to claim that under this mechanism, the ILR is depending more on the incumbent which is paying a higher fee, due to its larger turnover. This was rejected by the ILR.

Must-carry

Article 13 of the 2005 Law on electronic communications networks and services provides that a must-carry obligation may be imposed on undertakings providing an electronic communications network to broadcast specified radio and television services. Article 22 (5) of the 1991 Law on electronic media further indicates that a Règlement Grand-ducal may establish a list of such services. These provisions would ensure access by certain programme editors to broadcasting platforms, in particular cable networks. Such a regulation has not been adopted so far.

Rights of way and facility sharing

As a follow-up to last year's adoption of two Règlements grand-ducaux regarding respectively State motorways and railways and municipalities' public roads, a positive development has been the concession of broadband services of one municipality to one alternative operator in collaboration with the existing local cable TV provider. However, concerns have been raised about effective structural separation between the function of granting rights to install facilities and activities associated with ownership and control, due to the difficulties alternative operators are facing when deploying and installing mobile antennas. On a national level, alternative operators are referring to the absence of call for tenders concerning municipal telecommunications networks and services which would result in the incumbent being chosen as the sole candidate.

THE CONSUMER INTEREST

Tariff transparency

While transparency is a key principle of the Universal Service Directive, several citizens of Luxembourg have informed the Commission's services of their concerns in the matter of the period of validity of prepaid cards.

Universal service

While universal service provider has been designated, the incumbent provides universal service on a voluntary basis. As a result, not much information is available on the effective provision of some components of universal service, such as public pay phones, universal directory services and social tariffs.

Number portability

Mobile number portability continued to increase in 2008. There were 74 643 ported mobile numbers as of October 2008 which represents 27 221 new ported numbers since October 2007. Since the start of portability in Luxembourg, approximately 10% of the mobile numbers have been ported.

While it seems technically feasible for a mobile number to be ported in one day, it takes in practice four business days for porting a number from the major mobile operator.

Fixed number portability figures are comparatively lower, with 9 123 fixed numbers ported as of October 2008; however, this is an increase of 2 547 numbers in comparison to last year's figures. No information is available concerning the number of days necessary for porting a number from the incumbent to the major alternative operator.

European emergency number 112

112 appears to be widely accessible from fixed (including public pay telephones) and mobile phones (using the national mobile network or by national and international roaming).

Disabled users and people with speech disorder have the possibility to reach 112 by SMS or fax. Calling Line Identification (CLI) is available automatically for mobile phones with every 112 call (push mode) and upon request by the emergency services for fixed telephones (pull mode). The time needed to provide the CLI information ranges between one and four seconds. 112 calls are handled by the Administration des Services de Secours (Rescue Services Agency) under the Ministry of Internal Affairs. There is an additional emergency number 113 for police calls. Both numbers have their own PSAP (Public Safety Answering Points) that may redirect calls to each other. However, calls to 112 account for more than three quarters of the total national emergency calls (78%).

116 harmonised European numbers

The ILR issued a regulation in March 2008 concerning the attribution and use of numbers starting with 116 for telephone services of social value, such as the reserved 116000 Europe-wide hotline for reporting missing children. However, no demand has yet been registered from socially-involved associations.

Data protection

Following the launch of an infringement procedure for non-transposition of the Data Retention Directive, Luxembourg notified national measures in March 2008.

HUNGARY

INTRODUCTION

In 2008 the Hungarian electronic communications market was characterised by the strengthening of mobile broadband services, IPTV, bundled offers, mobile payments, and further growth in mobile penetration. Another notable development was the effective implementation of retail and wholesale naked ADSL services. Despite high mobile and growing Internet penetration rates, the relatively low level of broadband penetration still remains to be addressed while the number of fully unbundled local loops did not increase significantly in 2008.

Progress in the regulatory environment was mainly in the areas of consumer protection, the digital switchover and the tendering for the 4th UMTS licence, which was published in October. There were fewer developments regarding market analysis and amending legislation. Nevertheless, a new Reference Unbundling Offer (RUO) was adopted in September in order to improve the technical and financial conditions for this type of access. Symmetry of mobile termination rates was reinforced with a lowering of the glide paths as a result of the new market analysis. Fixed interconnection charges for operators with significant market power (SMP) fell by 20% on average as of 1 May 2008. While the incumbent plans to introduce a fibre-to-the-home (FTTH) network based upon GPON technology, the NCAH (National Communications Authority of Hungary) is only at an early stage of its reflection on this regulatory challenge. The convergence of electronic communications services raises regulatory challenges in Hungary ranging from the increasing need for efficient assessment of bundled offers by the competent authorities to the need for greater opening of the market.

REGULATORY ENVIRONMENT

Legal framework

As in the previous two years, the "Act on electronic communications"⁶⁴ was modified in 2008 without the modifications being notified to the Commission. On 15 March 2008, the legislative act transposing the Data Retention Directive⁶⁵ entered into force, followed on 1 September 2008 by the Act XLVII of 2008 on unfair commercial practices. The Act LXXXII of 2008 on amending certain Acts establishing the 2009 budget of the Republic of Hungary modified the Act on electronic communications in order to clarify the regulatory tasks between the two Ministries.

The two secondary legislation price-fixing instruments declared in ministerial decrees were finally removed in 2008 in accordance with what had already been announced in 2005. The adoption of the "Act on digital switchover" (Act LXXIV of 2007) raised certain concerns as to its conformity with the EU regulatory framework, in particular concerning must-carry obligations on mobile TV and the imposition of regulatory obligations on electronic communications operators without SMP. The Commission's services are looking into these matters.

The Ministerial Decree 23/2007 (II.23) GKM, which introduces a push system for making caller location information available for 112 calls in Hungary, entered into force on 1 December 2008. However, the transition from a pull to a push system has not been accompanied by the necessary preparatory work to ensure effective implementation of the

⁶⁴ Act C. of 2003.

⁶⁵ Act CLXXIV of 2007.

technical conditions. This risks undermining legal certainty and the effective application of the secondary legislation.

The Governmental Decree 229/2008 (IX.12.) provides that electronic communications operators must inform their customers in their general contractual terms and in advertisements about the quality of their services including, for example, download and upload speeds in kbit/s with a guarantee of 80% performance level. This also includes the proportion of on net SMS sent and received within 60 seconds. This Decree entered into force on 11 December 2008 and constitutes an encouraging tool for consumer protection.

The Data Retention Directive has been transposed by the Act CLXXIV of 2007 modifying the Act on electronic communications and the Governmental Decree 38/2008. (II.23.) modifying the Governmental Decree 180/2004. (V.26.).

Main regulatory developments

Despite the presence of a large number of alternative operators, the main incumbent, a fully vertically integrated operator, still has a strong market position in certain segments of the market (fixed, mobile and ADSL). The division of the fixed-line market geographically between three local telecommunications operators (LTO) still results in differences, for example in terms of wholesale pricing.

The NCAH carried out a tendering process for five 12-year licences for digital terrestrial television broadcasting frequencies, and for one 12-year licence for digital terrestrial radio broadcasting frequency. It also launched, on 22 October 2008, two 15-year mobile telecommunications services licence tenders and a third tender for further mobile infrastructure developments in order to boost competition in the mobile market.

In 2008, the NCAH demonstrated a strong commitment to consumer protection and made great efforts to facilitate the LLU procedure via the market analysis process, since effective LLU is considered to be one of the key elements of competition in the sector. Nevertheless there is not much concrete evidence of LLU take-up in the market.

Organisation of the NRA

The regulatory tasks are divided between the NCAH and the Ministry of Transport, Telecommunication and Energy ("Ministry") and the Minister of Prime Minister's Office ("MeH"). The Ministry has seen serious manpower cuts during the last two years, its structure has been significantly reorganised several times and its powers have been reduced, and in 2008 the bulk of activities related to the electronic communications sector⁶⁶ were finally moved to the MeH. Since 2006 there have been four different Ministers, resulting in a lack of continuity in the political strategy for the sector. In particular, operators lack a clear strategic and long-term vision for the Hungarian electronic communications sector.

The NCAH has around 400 employees with an annual income of HUF 20 billion (about €80 million). It now plays a greater role in general policymaking and in spectrum policy and enjoys greater independence from the Ministry. This raises the question of whether general policymaking tasks should be financed from administrative charges levied on electronic communications network or service providers. In addition to its wide-ranging responsibilities, the NCAH received in 2007 further powers in the areas of broadcasting and digital switchover (registration of broadcasting services or market supervision). On 13 August 2008 a cooperation agreement was signed between the NCAH and the National Radio and Television Commission in order to create the framework for the cooperation required in law.

Some market players have indicated that, despite some undeniable merits, there is a lack of strategic and long-term vision in the Hungarian electronic communications sector on the part

⁶⁶ With the exception of the supervision of the NCAH or the functioning of the Universal Fund.

of both the NCAH and the Ministry, while the NCAH has a long-term regulatory strategy (2006-2010) and annual work plans based on that strategy.

Compared to previous years, fewer decisions by the NCAH Board are being challenged before the Court of Appeal. The level of pending appeals against these decisions may seriously reduce legal certainty and predictability in the market as regards network contracts since the Hungarian courts remain overburdened. A final decision from a court of second instance can take several years. Some market players are concerned that the appeal courts often take decisions on the basis of procedural issues rather than on the merits of the case. In April 2008 the Supreme Court upheld the NCAH's market decision relating to the wholesale market for mobile call termination and dismissed the claims of the two mobile network operators.

Decision-making

In 2008 the NCAH commenced the third round of market analyses and implemented the results of the previous rounds.

With the notification of draft measures concerning the wholesale market for mobile call termination, the NCAH has introduced symmetry between the three mobile network operators with declining glide paths until December 2010.

The NCAH decreased the fixed interconnection charges applied by operators with SMP by 20% on average in August 2008 with retroactive effect to 1 May 2008.

In general, the work of the NCAH in 2008 was considered to have focused on regulatory details, and operators underline the lack of an overall regulatory approach in the market. Concerns are still voiced as to the lack of mobile virtual network operators (MVNO) in Hungary⁶⁷.

Market players are concerned about the very short consultation deadline (20 days) defined by the law for comments on draft NCAH decisions. They also complain about the large number of, often burdensome and incoherent, data requests from the NCAH and other authorities and the lack of transparency of certain decisions. The NCAH and the Office of Economic Competition (the NAC) appear to have cooperated more closely during the year as demonstrated by the fact that the NAC takes part in the project management committee for the market analyses.

In general, electronic communications operators are concerned that the NCAH's decision-making in the course of dispute resolution is very slow and lacks effectiveness. In all six dispute resolution cases closed by the NCAH in 2008, its decisions were within the time limit set by the law (45 days which can be prolonged once up to 15 days). Three other dispute resolution cases are still pending. The decision in one of these pending cases will be delayed significantly as a result of consultation of another authority.

MARKET AND REGULATORY DEVELOPMENTS

The total turnover of the Hungarian telecommunications sector was around €5 billion as of 31 December 2007, with revenue from the fixed markets (including broadband and leased lines) amounting to €2.52 billion and revenue from the mobile markets totalling €2.5 billion. The total value of tangible investment in telecommunications networks during 2007 was €432.03 million, including €221.58 million by the incumbent in fixed telephony networks and an estimated €100 million by alternative operators. Mobile operators invested around €110 million in 2007. The investment over revenue ratio in the Hungarian electronic communications sector was 8.6% in 2007 compared to the EU average of 11.5%.

⁶⁷ However, since December 2008 an ISP provides data transmission services on the 3G network of the second MNO which provides wholesale airtime to this ISP.

Market players take the view that following the increasing level of consolidation of the Hungarian electronic communications market and taking into account the take-up of triple play and mobile broadband services, the convergence of services remains the major regulatory challenge in Hungary given the growth of bundled offers.

Broadband

Market situation

Broadband penetration increased to 16.5% in January 2009 (14.19% in January 2008), but remains below the EU-27 average (22.9%). Out of 1 640 444 active retail broadband lines, 806 677 are xDSL retail lines (49%).

In Hungary, roughly half of the broadband lines are based on ADSL and half on cable technology or mobile broadband and fixed wireless technologies. Both cable and ADSL operators offer triple play services, although IPTV does not seem to have been taken up significantly (0.15% of the population).

The fixed incumbent operator announced in June 2008 that it would invest €166 million in fibre and cable networks by 2013 with the aim of offering a fibre-to-the-home (FTTH) network to 780 000 households and upgrading lines to serve a further 380 000 households.

In Hungary mobile broadband services were used by 220 675 active users representing a 2.2% mobile broadband penetration rate as at July 2008.

In terms of the digital divide, in December 2007 the gap between rural and national coverage for DSL was 11% compared to 12% in December 2006. In 2007 DSL rural coverage was 80% (77% in 2006).

Regulatory issues

With regard to the wholesale broadband access market, the NCAH decided in September 2006 to set the wholesale prices on a "retail minus" basis for each operator found to have significant market power (SMP) on the given market in order to guarantee a minimum margin for retail service providers. As a result of this regulatory intervention, wholesale prices further decreased in May 2008. Prices fell by 40% for packages with 1 Mbps on average between the first half of 2005 and the second half of 2007 while the regional asymmetry is diminishing.

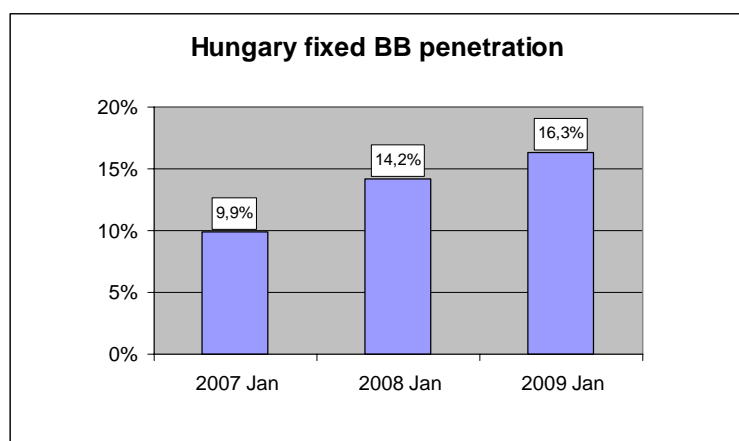
Following the intervention of the NCA, the three LTOs committed themselves in 2007 to introducing naked DSL services both at the retail and at the wholesale level. In accordance with this commitment, and following market analysis, the NCAH has imposed wholesale

naked DSL on the said operators.

The wholesale tariff for naked DSL services varies from HUF 1 214 (about €4.85) to HUF 1 942 (about €7.7).

Operators effectively introduced naked DSL services both at the retail and at the wholesale level in 2008.

As regards the LLU market, the three LTOs were designated as having SMP and, accordingly, access and interconnection-related obligations were imposed



on them. As a result of the regulatory intervention the one-off fees of the operators with SMP decreased while the monthly local loop charge also fell by 20% on average⁶⁸. The Hungarian

⁶⁸

The fall in the monthly fees is mainly due to the fact that the NCAH introduced LRIC in costing obligation instead of the former fully allocated costing methodology.

monthly average of the total cost per fully unbundled local loop stands at €7.95⁶⁹ (€11 in October 2007), below the EU average (€11.04) and for shared access (€3.69) it is slightly below the EU average (€4.26).

By 2008⁷⁰, 11 597 local loops were fully unbundled (9 019 in January 2008) while 4 800 shared access were reported (4 163 in January 2008), with significant divergence from one LTO to another. In the light of the 204 280 bitstream access lines in 2008 and the low number of local loops, the Hungarian market does not have many operators relying on local loop unbundling. In this respect, it is worth noting that local loop unbundling started to show some signs of growth in Hungary only in 2006 and take-up remains quite low. The new RUO published in October 2008 aims to tackle the administrative barriers encountered by new entrants in the past. Effective implementation of remedies is needed in order to further enhance the provision of local loop unbundling and, in particular, to ensure that the levels of local loop unbundling and bitstream prices/conditions create the appropriate incentives for alternative operators to switch from the bitstream offer to the local loop unbundling offer. A cooperation agreement was signed in July 2008 under the aegis of the NCAH between more than twenty alternative operators and the three LTOs in order to simplify the switch from one ISP to another. As of 15 July 2008 the switch will occur within 11 days provided that the end-user has no debt vis-à-vis the former service provider.

On the introduction of new generation networks, the NCAH organised a public consultation based on a strategic study and also held a public hearing on 31 October 2008.

Mobile markets

Market situation

In Hungary there are three MNOs - the mobile division of the main incumbent and two Hungarian subsidiaries of foreign MNOs, with market shares respectively of 43.80%, 35.41% and 20.79% in October 2008. While the MNOs' market shares have remained basically at the same level for several years (44.08%, 34.85% and 21.07% in September 2007 and 44.8%, 33.8% and 21.4% in 2006) the trend of increasing numbers of subscribers continued in 2008. Mobile penetration reached 117.18%⁷¹ (104.52%⁷² in 2007) with 11 771 million subscribers in 2008. There is an increasing number of post-paid subscriptions (39% as opposed to 37% in 2007). Between May 2004 and October 2008 a total of 227 417 mobile numbers were ported in Hungary, representing 1.93% of the total number of mobile subscribers.

The extension of the concession contracts (licences) relating to 2G frequencies (900 MHz) with the two major MNOs took place in November 2007. For the 7.5-year extension of the licences, the two MNOs agreed to pay 10 billion HUF each (€39.5 million) and to invest a net 20 billion HUF (€79 million) each on developing their mobile broadband infrastructure further in the next two years. The market leader MNO has signed an agreement with the European Investment Bank for a long-term loan to fund its mobile broadband investment plans covering its investment obligation. It was granted €205 million by the EIB. This loan matures in January 2015.

All MNOs have a UMTS licence. The fourth 3G licence had still not been granted in Hungary in 2008. Following a public hearing in July 2008 the NCAH launched two tenders for 15-year mobile frequency licences and a third frequency tender for further mobile infrastructure developments in order to boost mobile market competition, on 22 October 2008. One of the licences covers the 900/1800/2100 MHz frequency package for a one-off fee of HUF 100 million (€362 000) plus a minimum 0.75% of the annual net revenue of the new mobile

⁶⁹ Data from October 2008.

⁷⁰ Data from July 2008.

⁷¹ Data from October 2008.

⁷² Data from October 2007.

service provider. The winner of this tender is required to provide mobile communications services to 35% of Hungary's population within three years.

The other licence concerns the 450 MHz frequency and the winner is required to cover 30% of Hungary's geographical area within three years. In addition, five individual blocks in the 26 GHz (microwave) frequency band to be used in mobile backbone infrastructure are also part of the tenders published in October 2008. The tendering process encountered a number of problems from the very beginning. The Commission services were denied access to the detailed tendering documentation. By virtue of the modification of two secondary legislative instruments regulating spectrum usage⁷³ which entered into force one day prior to the publication of the tender and without any public consultation, the spectrum covered by the tenders was technically rearranged and opened, but at the same time operators with rights of use in the 3.5 GHz band were excluded from the bidding process.

This exclusion was considered to be a mistake which affected the larger fixed-line operators with 3.5 GHz band licences who had been eager to enter the "classic" mobile telephony market for years. It was finally corrected shortly before the end of the deadline for submitting bids. In consequence, the time allowed to submit applications was prolonged. This case underlines the lack of cooperation between the Ministry and the NCAH. Despite the fact that the NCAH held a public hearing in July 2008, no proper public consultation took place on the draft measure of the tender. A relevant public consultation and better cooperation would be necessary for conducting this process in line with the EU regulatory framework for electronic communications and in particular the provisions of the Authorisation and Framework Directives.

Mobile broadband take-up in 2007 constitutes an important development in the Hungarian electronic communications sector but official data on the market shares of the different MNOs are not available. Effective mobile TV service provision can only start once licences are granted for the operation of one digital radio (T-DAB) and five digital TV free-to-air broadcasting networks (DVB-T), given that bundled DVB-T multiplexes and DVB-H must be provided on one of the licences.

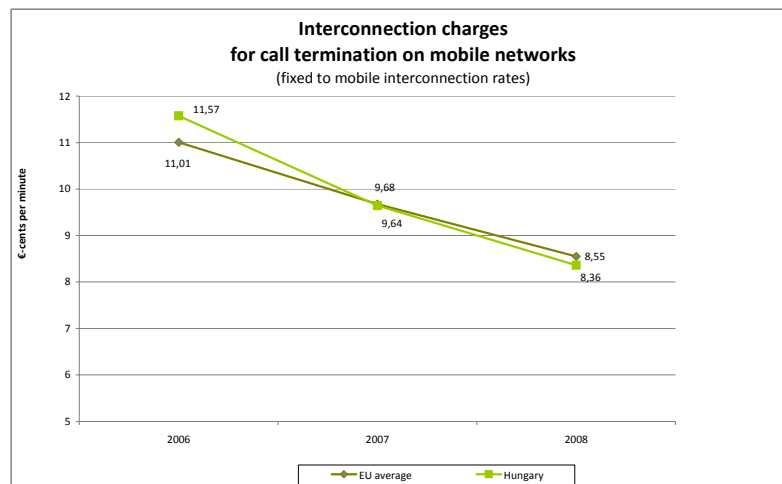
Regulatory issues

Following the designation of all MNOs in 2005 as operators with SMP in the wholesale mobile call termination market, on 4 October 2006 the NCAH required the MNOs to gradually decrease their MTRs following a specific glide path

towards symmetry between the operators and in cost-oriented MTRs by 1 January 2009 (at HUF 16.84 (about €0.067)). The glide path is based on a bottom-up LRIC model. The reductions at wholesale level also brought down the retail fixed-to-mobile price (€0.0018), which is slightly below the EU 27 average (€0.0023).

Following the market analysis by the NCAH in 2008 the symmetrical glide path should be further reduced to HUF 14.13 (about €0.056) and HUF 11.86 (about €0.047) in January and December 2010 respectively.

Roaming Regulation



⁷³

Government Decree 346/2004 (XII. 22.) and 35/2004 (XII.28).

All three MNOs are reported to have introduced the "eurotariff" (at the ceiling price) both for receiving and making phone calls within the Community within the deadline provided for by the Roaming Regulation, and to have introduced transparency measures in line with the Roaming Regulation.

Fixed

Market situation

Following the consolidation process of the last two years, the number of LTOs decreased from five to three. In 2008, the second LTO was put on the market for sale.

The three LTOs still hold a strong market position in their respective territories. On the basis of revenues, in 2008⁷⁴ the LTOs had 82% market share for all types of fixed calls (85.72% in 2007) as well as 80% and 70% market shares respectively for calls to mobile and international calls. The LTOs' market share for international calls declined in 2008 (from 73.02% to 70%) following the trend in the last few years, while their market share for calls to mobile remained the same. Despite the regulatory obligations imposed under the first and second rounds of market reviews, competition in the retail calls market in Hungary has not developed significantly.

Fixed-line penetration stood at 31.34% in 2008⁷⁵ compared to 32.58% in September 2007, while mobile penetration increased to 117.2% in 2008⁷⁶ (103.3% in September 2007). Fixed voice traffic also continued to decrease in 2008.

Traditionally, new entrants in the fixed communications market are more active in the non-residential segment, providing voice telephony services through carrier selection and pre-selection. Today, new entrants and the three LTOs clearly intend to widen the scope of their services to include fixed, mobile and broadband to both residential and corporate clients. Between January 2004 and September 2008 altogether 307 822 fixed numbers were ported in Hungary.

Regulatory issues

The NCAH found in its previous market analyses that there was effective competition in the wholesale markets for transit (first and second rounds of market analyses) and trunk segments of leased lines (first round).

On 10 May 2006, the NCAH decided to reduce the charges of the five SMP operators for wholesale call origination and call termination. A reduction of the one-off fee relating to carrier selection and number portability fees was also imposed.

Following a NCAH decision of August 2008, as of 1 May 2008 the fixed interconnection charges for operators with SMP were reduced on average by 20% compared to the fees previously applicable. The main incumbent's wholesale price for making and terminating local calls during peak time is now HUF 1.38 (€0.00055), constituting a reduction of 23% for termination and 34% for origination. In the call termination market, NCAH imposed asymmetric remedies on LTO and on alternative operators, *inter alia* imposing price control and cost accounting obligations only to the LTOs but not to the alternative operators. The Commission took the view that since termination fees of alternative operators are higher than the incumbent's termination rates, and they show an increasing trend, the imposition of price control obligations might be appropriate for the alternative operators as well.

Following the reductions in interconnection fees, charges for call termination on the incumbents' fixed network (single transit) (€0.0076)⁷⁷ (€0.0095 in October 2007) are slightly above the EU average (€0.0086).

⁷⁴ Data from 1 January 2007.

⁷⁵ September 2008.

⁷⁶ Data from September 2007.

⁷⁷ Data from October 2008.

In order to tackle the interconnection problem between one cable operator and the second LTO⁷⁸, as reported in the two previous reports, the NCAH intended to impose an indirect interconnection obligation on the wholesale market for fixed call termination. The Commission took the view that this problem is not directly related to the termination market and the obligation for indirect interconnection was therefore not imposed by the NCAH. Since then, no request for dispute resolution has been filed with the NCAH on this issue.

Broadcasting

Market situation

In Hungary broadcasting transmission services are provided via several platforms: analogue terrestrial (12.3% of households over population), cable (34.61% of subscribers), satellite (7.01% of subscribers), microwave, IPTV (0.15% of subscribers) and DVB-T. The main incumbent announced on 24 November 2008 that it would launch a nationwide satellite TV service.

The national coverage of analogue terrestrial transmission is approximately 90% of the Hungarian territory. The major television and radio transmission company was privatised in 2005 and resold in 2007. The Hungarian cable TV market is still very fragmented with several hundred service providers, although the two biggest operators cover almost half of the total cable subscriptions. Satellite broadcasting subscriber services are provided by two operators. With the entry into force of the Act on digital switchover, the complete analogue switch-off must take place by June 2011 following a gradual switch-off of the analogue transmitters. The tenders for five 12-year licences for digital terrestrial television broadcasting frequencies, and for one 12-year licence for digital terrestrial radio broadcasting frequency, were launched in March 2008. The major television and radio transmission company was designated in July 2008 as the winner of both tenders⁷⁹. Digital terrestrial broadcasting and radio services will be provided respectively on the basis of MPEG4 and DAB+ audio compression technologies. Mobile television services (DVB-H) should be launched in 2008 with a commitment of 16% coverage in 2008 and 20% for DVB-T.

Regulatory issues

Hungary notified the draft measures relating to the wholesale market for broadcasting transmission services to the European Commission in December 2007. The major television and radio transmission company was designated as operator with SMP and access, transparency, price control and non-discrimination obligations have been imposed on it. In connection with the notification the Commission noted that Act LXXIV of 2007 on broadcasting transmission services and digital switchover on imposes special obligations on "Dominant broadcasting transmission services providers". The Commission took the view that under Article 8 (2)-(3) of the Access Directive obligations set out in Articles 9-13 of the Access Directive should not be imposed on operators that have not been designated as having SMP as a result of market analysis. The Commission's services are examining whether the obligations established by the said Act comply with the European regulatory framework.

Horizontal regulation

Spectrum management

The radio spectrum harmonisation Decisions of 2004 and 2005, as well as Decisions 2006/771/EC, 2006/804/EC, 2007/98/EC, 2007/131/EC and 2007/90/EC are reported to have

⁷⁸ Refusal to send calls originating on the SMP operator's network via a transit provider to a third party network for termination.

⁷⁹ Programme providers and operators with more than 300 000 subscribers in the TV broadcasting markets (de facto the two major cable operators) were excluded from this tender in order to avoid vertical integration in the market.

been transposed in the National Frequency Plan while the implementation of Decision 2007/344/EC is under way.

The present Hungarian frequency management system contains different kinds of fees payable by MNOs. The frequency use authorisation is a licence fee that operators are required to pay in tenders or auctions. The level of this kind of fee varies, depending on the nature of the actual frequency band, and substantial differences can be observed. For bands used by MNOs the fee is higher than for other bands. The actual frequency fee structure consists of two elements. These are the so-called band usage fee and the TRX fee. The first part of the fee is fixed and the second part is payable for numbers of TRX units installed in the operators' networks.

The total amount payable by MNOs depends on the number of TRXs installed. In consequence, the greater the network the more should be paid by the operator. Operators say that the fees payable in other Member States with similar systems are 50 times lower than the fees paid in Hungary. The Ministerial Decree 18/2008 (VIII.8) KHEM amending the Ministerial Decree 6/1997 (IV. 22.) KHVM, which entered into force on 1 July 2008, modified the above system. It affects the UMTS band only where the new decree reduces the fees payable according to the number of carriers operating in the UMTS band. It reduces this type of fee by 33%. The other fees in all frequency bands are unchanged. Operators stress that taking into consideration the rate of growth of 3G networks, the reduced unit fee does not seem to significantly reduce the constantly growing total amount to be paid by MNOs.

Administrative charges

The market surveillance fee cannot be higher than 0.35% of the previous year's annual net revenue derived from e-communications services. The exact rate is established by the Minister each year. This amount was fixed at 0.212% for 2008.

Rights of way and facility sharing

MNOs expressed their concerns regarding the increasing difficulties they have encountered, resulting from the Municipalities' refusal to install masts and antennas for 3G networks.

THE CONSUMER INTEREST

Universal service

In April 2004 each of the five LTOs (currently three LTOs) was designated by the Minister of Informatics and Communications (the current Minister of MeH) for four years as a universal service provider (USP) and since then they provide the four components of universal service in their respective geographic areas. Operators can benefit, in principle, from the Universal Electronic Communications Support Fund. For the years 2004, 2005, 2006 and 2007, the USPs' compensation requests were refused as net avoidable costs were not demonstrated. By December 2008 no agreement had been reached about extension of the universal service contracts following the reorganisation of ministerial responsibilities. In consequence, the universal service provision is guaranteed by a legislative modification of 31 December 2008⁸⁰ for at least one more year with the same components and conditions as the previous four years. Negotiations are ongoing with the LTOs in order to extend or renew the expiring universal service contracts under the same conditions, without any modification regarding the scope of universal service. The whole designation process will be assessed in the light of the requirements of the Universal Service Directive.

⁸⁰

Government Decree 352/2008 (XII. 31.).

Emergency services (112)

A Decree provides that as of 1 December 2008 a push system will apply with regard to 112 caller location information. However, no preparatory work has yet taken place, creating some uncertainty as to the effective implementation of the push system for caller location information by the legally required date.

Must-carry

Following the adoption of the Act on digital switchover, new rules relating to must-carry obligations apply since July 2007. "Dominant broadcasters", as defined by the Act, have to conclude a contract for forty television programmes with the programme provider and to broadcast these programmes to subscribers. In addition, must-carry obligations are imposed on mobile TV service providers without taking into account whether a "significant number of end-users of such networks use them as their principal means to receive radio and television broadcasts". The Commission services are examining the conformity of these provisions with the requirements of Article 31 of the Universal Service Directive.

Consumer complaints

Several consumer protection legislative and regulatory measures were taken in Hungary throughout 2008.

The Act XLVII of 2008 on unfair commercial practices has introduced new general rules on consumer protection. Operators stress the importance of the different authorities authorised to intervene in the electronic communications sector from a consumer protection perspective (NCAH, NCA and the Consumer Protection Authority) coordinating their action in order to ensure legal certainty in the market.

The Governmental Decree 229/2008. (IX. 12.) puts in place quality service parameters of electronic communication service providers such as the downloading and uploading speed in kbit/s with a guarantee of 80% success in the case of ISPs and the proportion of sent and received on net SMS within 60 seconds in the case of mobile network operators. This Decree entered into force on 11 December 2008.

According to data published in September 2008 by the NCAH, the authority receives more consumer complaints with regard to ISPs than with regard to mobile network operators concerning the quality of services and the responsiveness of the service providers.

The NCAH took several decisions in 2008 on breaches of the rules relating to electronic communications in the field of consumer protection, resulting in the imposition of significant fines. It made public a decision in February 2008 fining the main cable operator HUF 40 million (about €160 000) for ceasing VoIP-based services without having informed its two thousand subscribers. The third mobile network operator in terms of market share was fined HUF 20 million (about €80 000) for failing to provide billing details to its pre-paid customers in accordance with the conditions laid down in the Act on electronic communications.

Following the publication in 2007 of the results of a survey of individual subscriber contracts concluded between almost one hundred service providers (fixed, mobile, internet and programme distribution) and approximately 15 million subscribers, the NCAH fined 21 electronic communications service providers an amount of HUF 30 million (about €120 000) in July 2008 for the omission of several obligatory elements in individual subscriber contracts.

MALTA

INTRODUCTION

In 2008, Malta witnessed a rapid increase in fixed broadband penetration, while mobile broadband and high speed connections were also highly popular. In the broadband market the smaller alternative Internet service providers were experiencing difficulties. While consumers' choice of mobile operators increased with the entry of two mobile virtual network operators, and further market entry is expected shortly, prices and penetration show no significant change so far.

On the regulatory side, Malta finally closed the first round of market analyses in 2008, with the deregulation of the markets for wholesale broadband access, and for wholesale broadcasting services.

REGULATORY ENVIRONMENT

Main regulatory developments

Some amendments to the Electronic Communications (Regulation) Act (Cap. 399) and to the Malta Communications Authority Act (Cap 418) came into force in August 2008. While the legislative framework remained quite stable, the ceilings for monetary sanctions available to the MCA were substantially increased.

The Malta Communications Authority (MCA) made a substantial effort to improve access conditions in the fixed market in 2008. This included changes to the reference interconnection offer and regulation of leased lines. At the same time 2008 also witnessed some substantial deregulation. Following market analyses, all remaining obligations on the cable operator in the markets for wholesale broadband access and wholesale broadcasting transmission were lifted. In December, Malta launched national consultations withdrawing obligations in the retail calls markets.

Organisation of the NRA

Following elections in March 2008, the responsibility for the MCA was designated to the new Ministry for Infrastructure, Transport and Communications. In April, a new chairman and executive board of the MCA were appointed, as the term of office of the previous board had expired. Operators are generally satisfied with the new regulatory approach and openness to dialogue.

The MCA, which assumes all the responsibilities of the NRA under the EU regulatory framework, was assigned additional responsibilities for national measures aimed at achieving e-Inclusion, and increased take-up of e-Business, and eight additional staff members were transferred to it for this purpose.

Responsibility for competition issues was transferred to the Ministry of Finance, the Economy and Investment. While discussions were still ongoing on the assignment of powers under competition law to the MCA, proposals strengthening the existing enforcement regime were also under consideration by the government. Operators generally found the Competition Authority to be not active enough and lacking expertise, and they agreed on the necessity to clearly delineate responsibilities in order to avoid parallel investigations. However, they were divided on the solution they would best like to see implemented, with some preferring a transfer of powers to the MCA, and others being of the opinion that *ex post* and *ex ante* regulation should remain in different hands.

- The limited sanctioning powers available to the MCA with regard to access and interconnection-related disputes were substantially raised by amendments to the Electronic Communications (Regulation) Act (Cap.399) and the Malta Communications Authority Act (Cap. 418) in August 2008. The level of maximum financial penalties was increased from € 233 000 for a one-off fine to € 349 406, or up to 5% of revenue in exceptional circumstances. The maximum daily fine more than doubled and now stands at € 11 649.86.

Decision-making

The MCA finalised its first round of market analyses by the re-notification of the wholesale broadband access market and the wholesale broadcasting transmission services market in October 2008. It found effective competition and lifted existing obligations on both markets. The second round of analyses started in March 2008 with the mobile call termination market. The MCA was planning to re-analyse all markets of the previous Commission Recommendation with the exception of the national roaming market.

- In order to make the dispute settlement procedure more transparent, the MCA held consultations in October 2008 on putting in place norms which would clarify the distinction between disputes and allegations of breach, and provide guidance on the process. While, generally, operators felt that cooperation with the MCA in this regard was good, some were discouraged by the length of the dispute resolution process, pointing out that many problems require immediate attention, as well as by the difficulty in proving discriminatory tactics. The number of disputes was on the decline, with six cases pending before the NRA in September in comparison to 12 a year ago.

Some progress was also made as regards the effective functioning of the appeal process. While deficiencies in terms of expertise remain, in 2008 an experienced extra member of the Appeals Board was appointed. Operators also found that decisions were now being issued more quickly. When this report was drafted, there were only six appeal cases pending, in comparison to 12 in 2007.

MARKET AND REGULATORY DEVELOPMENTS

Total turnover for the telecommunications sector as of December 2007 was € 248.74 million. The fixed market generated €46 million, while total revenue from the mobile market stood at € 140.90 million. Operators invested € 38 million in 2007, with mobile operators investing over € 17 million.

Generally the Maltese market with several ubiquitous networks in various technologies and with full national coverage is unique, which also poses regulatory challenges in creating a level playing field.

As a first step towards a strategy on next generation networks (NGN), the parent ministry of the MCA published a green paper in July 2008. The paper opened the discussion on Malta's future infrastructure, and concentrated on fibre connectivity with particular emphasis on the possible role of the government in its implementation. It remains to be seen how this will translate into practical decisions. Operators found that the conclusions of the paper were not clear, particularly as regards government participation in network roll-out.

In the meantime, the cable operator, who was already feeding some business customers via fibre, and offered speeds of up to 30 Mbps, was planning further upgrades to its network allowing speeds up to 100 Mbps. In order to keep up with competition, the fixed incumbent was also keen to invest in a next generation network.

The electronic communications marketplace in 2008 consisted of three large players, capable of offering triple or quadruple play, and a number of smaller players, including an alternative fixed operator, two mobile network operators (MVNOs) and a number of ISPs. The state of development of the various markets concerned is, however, quite diverse. On the fixed market, the cable operator rapidly extended its market share to reach 18% in terms of

subscribers and 24.4% in terms of originated traffic in October 2008. It was expected that the entry of two MVNOs, and the launch of 3G mobile services by the cable operator, would lead to some price competition and a higher penetration rate. The competitive situation in the broadband market did not improve as alternative service providers were struggling to maintain their market share and were unable to launch wireless broadband services. The only operator that had launched such services at the time of drafting this report had managed to attract only a small market share of some 3%.

Over three per cent of the Maltese population currently subscribe to bundled offers, with the majority choosing triple play. While the fixed incumbent was bundling free DTTV set-top boxes with a two-year contract for fixed line services, its cable competitor was providing a triple play offer which included a fixed telephony service, a broadband connection and television content, and was also offering a free fixed line service to all customers with a 128 Kbps connection. It was clear that the bundling of various services on a triple or quadruple-play basis offered by the large vertically and horizontally integrated operators could not be replicated by smaller players.

During 2008 Malta also experienced interruptions in international connectivity in August and December when the submarine cable operated by the incumbent was damaged. In both instances the fault resulted in a near total loss of international connectivity for the incumbent's subscribers for a number of hours.

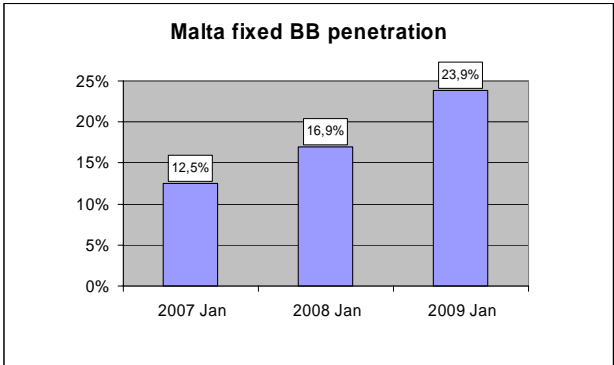
Broadband

Market situation

Broadband penetration continued to grow rapidly (by 41.4% in the reporting period) to reach 23.9% in January 2009, above the EU average of 22.9%. This was a result of competitively priced, lower-tier connections, as well as a government initiative, launched in March, which allowed consumers to benefit from a free, one-year subscription. Maltese consumers were also benefiting from further improvements in the price-speed ratio, with the vast majority (94.5%) of subscribers enjoying speeds of 2 Mbps or higher. Due to the presence of a number of ubiquitous networks, there were no digital divide issues in Malta.

Malta also witnessed an encouraging take-up of mobile broadband connections, with a penetration rate of 10% (below the EU average of 13%), however the penetration of dedicated mobile data service cards stood at 1.2%. Two mobile networks were offering 3.5G HSDPA nationwide coverage, and a third network operator was on track to start offering it commercially in February 2009.

Retail broadband lines in technologies other than DSL had a market share of 53.2% in January 2009, overtaking DSL for the first time. The fixed incumbent's market share, which in January 2009 stood at 38.3%, continued to decrease steadily. However, the incumbent further strengthened its share of DSL lines, to reach 82% in January 2009, as the market share of the non-incumbent ISPs was rapidly shrinking. The ISPs were being squeezed out of the market and due to a lack of wholesale alternatives, were considering exiting the market altogether.



The mobile operator that launched wireless broadband services as of July 2007 managed to attract almost 3000 subscribers and held approximately 3% of the market. However, due to technology limitations, it was not able to replicate the higher speeds available on DSL and cable. For the first time this year, a number of operators expressed an interest in local loop

unbundling (LLU), while they stressed the need to adapt the reference offer to the specific conditions of the Maltese market. No local loop had been unbundled when this report was being drafted.

Regulatory issues

- On 17 November, the MCA adopted final measures on the wholesale broadband access market. It found competition on the market, following the entry of the wireless broadband access operator, and improvements in the price-quality ratio. All obligations, previously imposed on the fixed incumbent and the cable operator (not enforced), were removed. The Commission, in its comments, invited the Maltese NRA to closely monitor the market and to re-analyse it should competitive conditions change.

A number of ISPs expressed concern about the removal of wholesale access obligations. They expected to find themselves in a very weak bargaining position vis-à-vis the fixed incumbent once obligations were to be removed in July, despite the fact that their current contract was automatically renewable every year. According to the ISPs, the current contract did not allow them to freely structure its offering, since it was limited to a resale service. Moreover, they could not find a wholesale alternative, since no wholesale broadband access products were available on cable.

Following deregulation of the wholesale broadband access market, more attention was focused on LLU. Operators, who, for the first time, expressed interest, pointed out that the reference unbundling offer (RUO) in place was not well adapted to the Maltese market, and some information components were lacking. The MCA, for its part, was aware of the issues, and was launching a review of the current reference offer in order to refine it further.

Mobile markets

Market situation

Competition became keener in the Maltese mobile market following the entry of two mobile virtual network operators (MVNOs) in October 2008. The two MVNOs were trying to attract niche groups, for instance TV viewers, or to appeal to young users with original marketing. The situation is set to improve further with the launch of a third 3G network operator, announced for February 2009. The operator – a subsidiary of the cable operator – was in the last stages of physical roll-out and had already been granted number ranges by the MCA when this report was drafted. Arrangements for interconnection were also in place following negotiations and some involvement of the NRA.

It is expected that this will, in the future, have a positive effect on prices which are still among the highest in the EU. Penetration grew substantially but, at 94.5%, remained below the EU average of 118.9%. The two mobile network operators, with 100% 3G coverage, each held approximately half of the market, with market shares of 52.99% and 47.01% respectively. While consumers could benefit from slight decreases in retail tariffs especially for on-net minutes, they found it very difficult to compare offers and choose among the various plans and bundles. A minute of mobile voice traffic costs € 0.27 in Malta, compared to € 0.14 on average in the EU. Given the high tariffs, the average revenue per user, at € 367.89, is, unsurprisingly, amongst the highest in Europe. Most subscriptions (87%) continue to be pre-paid. Operators started subsidising handsets also for retail customers. While no mobile TV was available, one operator was offering live streaming of 18 TV channels.

Regulatory issues

The imposition of obligations on mobile networks, to provide mandatory access in order to facilitate entry of MVNOs, resulted in a Mobile Virtual Network Enabler (MVNE) eventually concluding a commercial agreement with a mobile network operator, and led to the first of two service providers launching operations in October.

Mobile termination rates stood at € 0.096, following a decline in January 2008 in accordance with the MCA's glide path of December 2005. Interestingly, as from 2009, following the analysis of the mobile call termination market, a new remedy will be established in the mobile termination market, which will follow the extent of the reduction observed in the rest of the EU. The MCA considers that that such a remedy will be less burdensome on the operators than the implementation of an LRIC model, and more efficient than building a bottom-up cost accounting model for mobile termination in hybrid 2G/3G networks.

Roaming

Initial problems relating to the lack of tariff information by SMS to the roaming subscribers of one mobile operator were resolved by January 2008.

Maltese subscribers were concerned about still being charged more for their international mobile calls than roaming customers. One Maltese mobile operator was still charging on a 'per minute' basis, while the other had switched to per second billing from the second minute onwards.

Fixed

Market situation

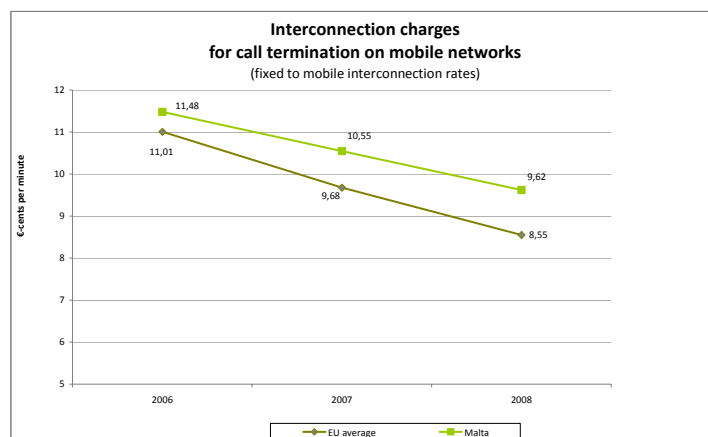
While fixed-to-mobile substitution continued on the traffic level, with a further decrease of some 87 million fixed minutes between 2006 and 2007, Malta held the second highest share of fixed traffic in Europe (at 70% of all traffic), and even noted a further increase in fixed subscriptions. This can be attributed, to some extent, to the differences in fixed and mobile tariffs, as well as double subscriptions with both the fixed incumbent and the cable operator. The cable operator, who entered the fixed market in 2006, was rapidly gaining market share and, in October 2008, held 18% of the market in terms of subscribers, and 27% in terms of originated traffic. It was competing with the still strong fixed incumbent, and two other nationwide service providers. In July 2008, 19.8% of subscribers were using an alternative provider for fixed voice services.

The alternative operator, which had been operating on the basis of carrier pre-selection since 2006, started providing services on the basis of the wholesale line rental offer of the incumbent in the first half of 2008. It was concerned about low margins and the fact that it was not able to replicate certain offers of the incumbent, due to a low customer base. The MCA for its part was reviewing all retail offers of the incumbent, and testing for margin squeeze.

Regulatory issues

On 5 December 2008, the MCA launched national consultations on its analysis of the fixed retail calls markets. The review proposed to define separate markets for national and international calls without distinguishing between residential and non-residential calls. The authority conducted the three-criteria test and determined that regulation was not warranted. It proposed to withdraw existing obligations on the incumbent, 30 days after adoption.

Throughout 2008, the MCA was actively attempting to improve wholesale access to the fixed market by a number of regulatory decisions and as part of dispute settlements.



- In January 2008, the authority reviewed the terms and conditions of the incumbent's reference interconnection offer (RIO), following a public consultation. Charges for call termination and call origination have continued to decrease. The last reduction in fixed termination rates took place on 1 July 2008. In order to guard against price squeeze in regulated markets, all tariff revisions or bundles involving retail tariffs for fixed telephony introduced by the incumbent were notified to the MCA and subjected to margin-squeeze tests prior to adoption.

In order to address various allegations of anti-competitive practices, which led to a number of disputes being filed, the MCA published in March a decision to prevent anti-competitive win-back practices during number portability, wholesale line rental and carrier pre-selection. Following a market analysis and the finding of SMP in the national and international trunk segments of leased lines, the MCA was able to implement cost-accounting and price-control remedies, using a bottom-up cost model. As a result of this measure, the tariffs for international dedicated capacity have been significantly reduced. Leased line products have now also been introduced for partial circuits.

Moreover, the MCA mandated the introduction of offers for international leased lines at high capacities, which were important for alternative operators, and which were previously not offered.

Broadcasting

Market situation

According to NRA figures, 81% of Maltese households had access to some form of pay service to receive their TV broadcasts in 2007. While the cable operator held a majority market share of some 86%, split between its digital and analogue services, the digital terrestrial television (DTTV) operator, a subsidiary of the fixed incumbent, held some 14% of the pay market. Some 16% of households had access to satellite TV reception, while interestingly there were no registered satellite television operators in Malta. Analogue terrestrial transmission was carried out by the four national broadcasters themselves. The basic TV packages are inexpensive, and often offered in bundling. In addition, set-top boxes are offered for free in exchange for longer-term contracts.

Regulatory issues

In October 2008, the MCA notified its analysis of the wholesale broadcasting transmission services market. It did not find evidence of ineffective competition, and proposed to withdraw all existing obligations on the cable operator. The Commission issued no comments and final measures were adopted in November.

Malta is on track for analogue terrestrial TV transmission switch-off by 2010. As regards the digital dividend, no frequencies other than those currently assigned for analogue broadcasting would be released following switch-off, as Malta is already using all the assigned digital frequencies for its digital terrestrial television platform. Some of the coordinated frequencies in the UHF band are subject to interference from television signals from neighbouring countries.

Horizontal regulation

Spectrum management

Malta appears to be on track in the implementation of Commission radio spectrum harmonisation decisions.

On 6 October 2008, regulations came into force implementing the EU Commission Decisions on harmonised conditions of spectrum use for the operation of mobile communication services on board aircraft.

The effective roll-out of the three broadband wireless access networks in the 3400 – 3600 MHz frequency band, licensed in 2005, remained an issue. The two licence holders who, at the time of drafting this report, had not launched services, were paying sanction fees due to missed roll-out licence requirements. While one (the fixed incumbent) had achieved 93% coverage as of October 2008 and was on track to meet its roll-out obligations, following some early problems with the mobile standard, the other (a consortium of ISPs) had not managed to obtain the necessary finance.

The 2G mobile licences will expire in 2010. Operators would like to have more information as to whether these will be extended to cater for remaining 2G users, or whether they will be 're-farmed' for 3G services. The MCA is planning to publish a consultation paper on the subject in early 2009.

Rights of way

While some operators have mentioned cumbersome procedures and the inactivity of the Malta Transport Authority, which is responsible for rights of way, regarding in particular access to building sites, the length of procedures is not a cause for concern.

The MCA has been collaborating with the Malta Transport Authority with a view to future cooperation over the roll-out of next generation networks.

Some operators continue to express concern over the comparatively high administrative costs, which include the MCA's running costs, fees for licences and rights of way. However, the NRA made sure that any administrative funds not spent on regulatory work are effectively refunded to the operators.

THE CONSUMER INTEREST

Delays in launching the European numbers of the 116 range have been caused by a shift in the responsibilities of different ministries following elections this year. However, the selection process has been established. The government has already identified operators and an awareness campaign is to be launched before and after the services become available.

Tariff transparency

Maltese consumers had difficulty comparing tariffs, due to the lack of transparency of the various offers and minute plans in place, according to a consumer organisation.

The MCA, for its part, had not registered any significant concerns regarding tariff transparency. Nevertheless, it was closely monitoring the tariffs and terms and conditions published by operators, as well as their marketing material, to ensure effective publication of tariffs and terms and conditions.

In November the MCA published a decision on proposed modifications to the terms and conditions of subscriber contracts, which clarifies the procedures related to notification of proposed changes.

Universal service

The fixed incumbent is the designated universal service provider. The MCA was preparing a consultation on the review of the current universal service operator (USO) designation.

However, no significant modifications to the scope of universal service are expected, as the current obligations are being met, and no major 'gaps' have been identified which were not being reached on a commercial basis.

With all obligations being met, no request for USO funding has been submitted to the MCA in recent years.

Number portability

Since number portability became available for mobile subscribers as of 1 April 2006, 45 600 mobile numbers had been ported up until October 2008, which represents ca 11.8% of total mobile numbers. Fixed number portability was also being taken up, and increased to 6 607 from 1 488 a year ago. Maltese consumers also have the possibility to switch operator while changing only the first digits of the number, which has discouraged some users from porting. Portability takes 5 days for fixed and 1 day for mobile, which is below the respective EU averages of 7.5 days for fixed and 8.5 days for mobile.

Emergency services number (112)

The European emergency number 112 has been working effectively in Malta, since 2000.

Must-carry

The MCA has been collaborating with the Broadcasting Authority in drawing up an implementation strategy for broadcasts classified as meeting general interest objectives, in the context of the transition to digital terrestrial broadcasting scheduled for 2010.

While the situation will change following switch-over, the must-carry obligations, which include all four national channels, are currently being applied to DTTV operators, thereby raising the issue of compatibility with the regulatory framework. According to the Universal Service Directive, imposition of must-carry should be limited to cases where a certain network is used by a significant number of end-users as their principal means of receiving radio and television broadcasting.

Data protection

The Data Retention Directive was transposed in 2008 by amendments made to the Processing of Personal Data (Electronic Communications Sector) (Amendment) Regulations (LN 198/08) and by the Electronic Communications (Personal Data and Protection of Privacy) (Amendment) Regulations (LN 199/08).

Following a security breach in the government's IT system, Malta announced plans to set up a National Information Security Agency which would be complementary to the Malta IT Agency and the MCA.

NETHERLANDS

INTRODUCTION

The Netherlands kept their top position in the European ranking for broadband penetration. Infrastructure competition between DSL and cable operators remains vigorous and has brought major benefits to consumers, who are increasingly choosing multiple-play packages. Fixed telephony traffic continues to decrease but competition remains intense, thanks to the bundling of services and the remarkable growth of voice-over-broadband telephony. The national regulatory authority has carried out the second round of market analyses, rolling back regulation in retail markets. New regulation is being introduced for fibre access. In its daily practice, the national regulatory authority has been very attentive to the enforcement of remedies, being lenient where possible but intervening firmly with fines in the event of infringement. Consumer concerns have also been addressed, especially with regard to switching between providers.

REGULATORY ENVIRONMENT

Main regulatory developments

By the beginning of 2008 attention had shifted away from the incumbent's "All IP" plans and the migration issues related to the roll-out of this next-generation network (NGN). The possibility of self-regulation by means of agreements between the incumbent and the competitors resulted notably in a public offer of the incumbent regarding migration conditions and tariff caps for collocation. The Dutch national regulatory authority, Onafhankelijke Post en Telecommunicatie Autoriteit (OPTA), started analyses of almost all relevant markets and submitted them to national public consultation in August 2008. One of the new regulatory responses to the challenges of NGN would be the obligation imposed on the SMP operator to provide access to the fibre network, including migration rules for phasing out main distribution frame (MDF) access. Taking into account the ubiquity of cable networks in the country, further new regulation is to be expected for the markets of broadcasting transmission services.

Several initiatives for new legislation, or for self-regulation among providers, have led to better protection of consumers in the fields of tariff transparency and switching between providers.

Organisation of the NRA

In spite of structural re-organisation, which was implemented in January 2008, the NRA was able to carry out its fundamental tasks. Changes involved reduction and re-organisation of staff, fewer managers, and only three departments left, in order to increase flexibility. Market developments are systematically monitored in the structural market monitor, a process that aims to increase OPTA's insight into developments and to reduce workload on operators through predefined, periodical questionnaires.

Enforcement of the existing obligations was identified as a key objective for 2008. New tasks in the field of telemarketing and the use of premium rate numbers were integrated into OPTA's work programme. In other domains, operators were encouraged, or indeed requested, to adhere to the existing dispute resolution committee for electronic communications. Taking its cue from consumer complaints, OPTA wrote to several operators to remind them of their obligations, in particular as regards the provision of transparent tariff information for premium rate numbers and the rights of end-users of Voice over Internet Protocol (VoIP) telephony services.

OPTA fine-tuned its view on the application of infringement prevention and "high-trust" principles. While market players were invited to adopt compliance programmes, OPTA

defined policy rules for the determination of fines in March 2008. As in competition cases, the gravity and duration of the offence as well as the economic context and other circumstances will be taken into account. In some circumstances, attenuation of the sanction can be decided, for example when an effective compliance programme has been put in place or when the offender is willing to cooperate in the investigation. Wrongful functioning of such a compliance programme, however, would be taken into account as an aggravating factor when imposing penalties.

In this context the fixed incumbent was the first operator to conclude a compliance charter with the NRA in April 2008. This includes concrete elements, with measurable performance indicators and a specific timetable, to be transposed into the undertaking's business practice. The undertaking is also to report periodically on the effectiveness of the programme, and to inform the NRA of any rules of conduct found to be inadequate. Possible infringements of the Telecommunications Act will need to be promptly submitted to the NRA, which will continue to be legally charged with the examination of infringements.

Alternative operators believe that OPTA's high-trust approach is inappropriate to counteract the incumbent's illegal behaviour. They refer to the high fines repeatedly imposed in 2006 and 2007, and recently in October 2008, for offences against regulation in the business telephony market. According to OPTA, the implementation of the effective compliance programme is to be further developed and is not the answer to all infringements committed by the incumbent. With the compliance charter concluded with the incumbent, however, possible infringements could come to light at an earlier stage.

Decision-making

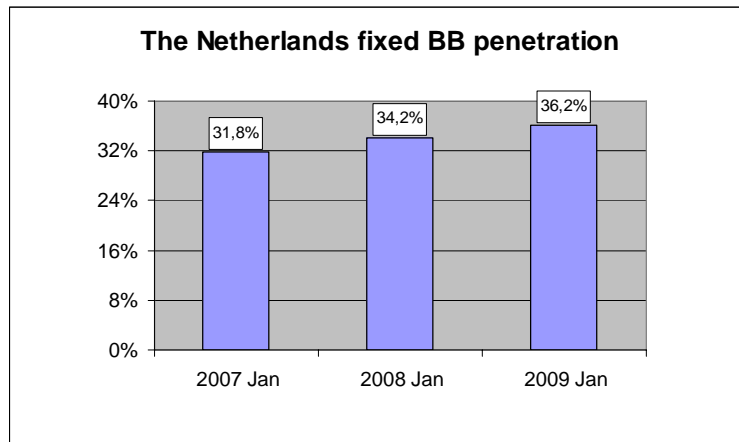
The self-regulatory approach, favoured by the NRA to address access and migration in the context of NGN did not produce conclusive results, meaning that regulation was still needed. After successfully conducting negotiations with the main operators of local loop unbundling (LLU), the incumbent had concluded memoranda of understanding in 2007. These were turned into a public, non-discriminatory offer containing conditions for phasing out MDF access and migration to other forms of access. An important result of the process was the commitment of the incumbent to keep MDF access operational for a longer period. The incumbent was, nevertheless, not able to formalise any agreement with alternative DSL operators.

Being legally obliged to adopt new market decisions before January 2009, the NRA started the new round of market analyses based on the new Recommendation. National consultations on the draft decisions began in August 2008. At the same time, the outcome of the previous negotiation process was taken into account.

The NRA again designated the incumbent as an SMP operator in most of the relevant markets. At the same time regulatory remedies in the wholesale markets would be reinforced. Retail markets, however, are expected to be deregulated. Alternative operators fear that regulatory safeguards against price squeezes would be completely removed. They have requested that, as a complement to any cost-orientation for wholesale services, retail services using regulated wholesale elements continue to be addressed by ex-ante imputation tests. Comments received in the public consultation exercise prompted the NRA to strengthen the non-discrimination remedy in order to avoid margin squeezes. Further clarification should be provided through policy guidelines expected for 2009.

In 2008, the Competition Authority had to assess a proposed concentration by which the incumbent would create a joint venture with a company specialised in the roll-out and exploitation of fibre networks. This separate company would then sell optical distribution frame (ODF) access to the incumbent and to other operators. These operators of the passive layer would in their turn sell wholesale broadband access to service providers. The Competition Authority finally approved the concentration in December 2008, taking into

account the joint venture's commitment to providing non-discriminatory network access to other telecom companies. OPTA had been closely cooperating with the Competition Authority and its recently issued policy rules on tariffs for unbundled fibre access were taken into account in assessing the case.



MARKET AND REGULATORY DEVELOPMENTS

The total turnover of the telecommunications sector in the Netherlands was €12.09 billion as at 31 December 2007: the revenues from fixed markets were €5.89 billion, and the revenues from mobile markets

were €6.19 billion. The total value of investments in the telecommunications sector was €1.5 billion (EITO data).

The uncertainty since 2005 surrounding the announcement of the incumbent's "All IP" plans, including the phase-out of MDF access, has had a big impact on the business cases of alternative operators. Further roll-out of local loop unbundling has almost been completely suspended. Delays and, in some cases, even a halt in roll-out of the announced VDSL network, suspension of migration plans and phasing out of MDF exchanges, further changed business plans in 2008. The incumbent recently announced a new business strategy combining roll-out of fibre to the home in certain areas with fibre to the street cabinet in others. Starting from mid-2010, MDF locations would be phased out and current LLU providers would have to migrate accordingly.

Although consolidation has taken place in the recent past, competition remains effective between DSL providers and cable providers. This has led to many offerings of VoIP telephony, high-speed Internet, digital television and content, often grouped in bundled offers. The Netherlands has one of the highest rates in take-up of bundles, mostly in double-play, combining broadband with another product (17% of the population) but also in triple-play (11% of the population). Penetration of digital television is well advanced (growth by 10 percentage points to 38% of all households), although analogue cable television remains widespread.

Broadband

Market situation

In the European ranking of broadband penetration, the Netherlands keeps a strong second position behind Denmark (36.2% in January 2008). This compares with 34.2% in January 2008. Growth has slowed down, but remains steady.

The fixed incumbent's and the alternative operators' market shares seem to have stabilised at almost 50% each since 2007. Cable networks account for 74% of all alternative operators' broadband retail connections. Within DSL retail lines, the incumbent maintains a very significant, slightly decreasing market share of 82%. The proportion of fully unbundled lines is still increasing (from 58% to 70%). With 1.7% of all retail broadband lines, fibre to the home remains marginal.

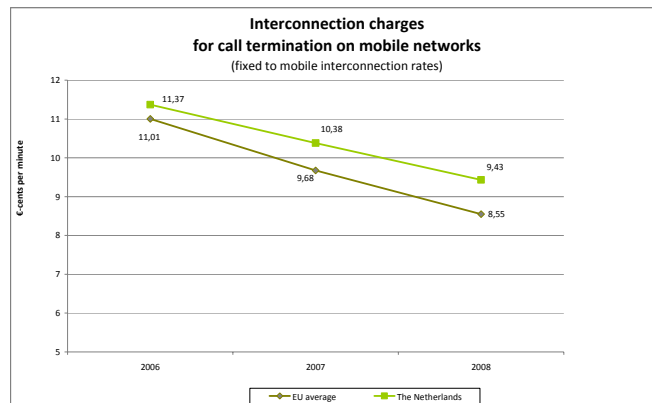
A large proportion of retail broadband connections are provided in a bundle (almost 70%). 95% of all bundles contain at least a broadband product.

Broadband coverage is very high in rural areas, with 99% for DSL and 43% for cable, in 2007. For the latter transmission platform, there remains however a gap of 49% with regard to national coverage average. .

Regulatory issues

OPTA carried out new analyses of the markets for LLU (physical network infrastructure access) and wholesale broadband access. The draft decisions entered into force on 1 January 2009. The incumbent was designated again as an SMP operator. Unbundled access was imposed on the copper network (access to both the main and the subloop distribution frame) and the fibre network (ODF access), including migration rules for phasing out MDF access and backhaul as an ancillary facility. The wholesale broadband access market was again broken down into markets for high-quality and low-quality broadband access. New regulation was introduced for the low-quality market, while the existing regulation for the high-quality broadband access market was extended to fibre access.

With the aim of striking the correct balance between encouraging fibre investments and fostering competition via open access, the NRA drew up policy rules on the principles of tariff regulation for fibre access, in conjunction with an explicit price proposal of the fibre company. After consultation, these were adopted together with the market decision on LLU. At the very core of these policy



rules is a price cap on access tariffs established on a long-term basis by OPTA. While providing for a maximum tariff for access for entrants to the new fibre network, such a price cap would give long-term certainty for investments in fibre networks. Periodical review of the price cap should ensure that the fibre company does not make a profit on the access tariff not relating to the cost.

Mobile markets

Market situation

With only three network operators left, one virtual mobile operator and a considerable quantity of resellers, competition is strong on the Dutch mobile market. The mobile branch of the fixed incumbent holds a large, but decreasing market share (between 30% and 40% of subscribers), the second and the third each holding between 20% and 30%.

Mobile penetration rose further from 113% to 121% and is slightly above the European average of 118.9%.

Regulatory issues

Mobile termination rates, based on an agreement among operators (after the first decision was annulled by the Court in August 2006) and established by the NRA decision of July 2007, are following a glide path until July 2009; they are currently set between €0.09 and €0.104.

This market decision was appealed by one of the fixed telephony operators, which challenged the level of fixed-to-mobile termination. The Court concluded by an interim decision that the NRA had not sufficiently substantiated its market decision by basing the termination tariffs on the common agreement of the operators and not on the results of the bottom-up long run incremental cost model (BULRIC). The Court did not annul the decision but reopened the investigation, asking the NRA to take a position. Should OPTA decide to adopt tariffs agreed upon by the mobile operators, or to base the tariffs on the results of the BULRIC cost model,

the revised decision would again be subject to the current appeal procedure, unless the appeals were withdrawn.

Fixed

Market situation

Bundling of connection and calls for flat fees (65% of all fixed telephony connections), together with the sharply increasing uptake of voice over broadband (32% of traffic volume) are the main characteristics of the fixed telephony market in the Netherlands. More than 30% of VoIP connections are provided by the fixed incumbent. Its market share in fixed connections, however, has decreased to between 70% and 80%. Wholesale line rental operators have achieved a market share of over 5%.

The incumbent's market share (in terms of revenue) has also been further decreasing to approximately 65%, whereas it still maintains a share of 70% for international calls. Two smaller operators holding market shares of respectively less than 20% and 10% and a high number of very small operators are also active in the market.

Regulatory issues

In 2008 the incumbent received again a heavy fine of €1.5 million and an official warning, for offering illegal discounts to business customers, contrary to its non-discrimination obligation. In two administrative appeals against fines imposed in 2007, the NRA reduced the amount of the fine. In determining the level of the sanction, the NRA took into account the repetition of this practice, the incumbent's willingness to cooperate in the investigation procedure and the fact that the incumbent and the competitors involved had reached an agreement to make available an amount of €8 million to the prejudiced parties.

In November 2008 OPTA notified new market analyses for the wholesale and retail fixed telephony markets. While maintaining regulatory obligations for the wholesale markets, it would withdraw existing obligations for the retail market, but in the case of the retail business market, not until new wholesale remedies had been effectively implemented. In contrast, alternative operators claim that, given the incumbent's bad record of illegal action, the regulator should reintroduce ex-ante regulation and supervision through strong price controls and price-squeeze tests.

Broadcasting

Market situation

While cable remains the main infrastructure for broadcasting subscriptions, other platforms are increasingly used instead of, and also in addition to, cable. The cable companies' joint market share (in number of subscriptions) has been steadily declining from 83% in 2007 to 80% in July 2008. Digital television continues to expand, mainly via cable (close to 1.8 million connections), but also via digital terrestrial, satellite and IP connections (almost 1.5 million connections by July 2008). DTTV takes a market share of between 5% and 10%.

Viewing broadcasts via exclusively analogue cable transmission, though still very significant (in 68% of cable subscriptions), has been steadily declining over the years. Cable customers increasingly combine their digital package, mainly used for their primary television set, with the analogue signal, which is always provided together with the digital signal.

It has to be recalled that the Netherlands deviate in transition speed from other EU countries due to the high penetration of cable and the continued importance of analogue transmission over cable.

A growing number of Dutch households (22%) are using triple or quadruple bundled packages, including broadcasting services.

Regulatory issues

OPTA started to carry out new analyses of the wholesale markets for broadcasting transmission services within the coverage areas of the different cable operators. Draft decisions were consulted with market players as of August 2008, and were expected to be notified to the Commission in January 2009. New market decisions prolonging existing, or imposing new, obligations are scheduled to enter into force in March 2009.

Considering that triple-play packages, including analogue broadcasting, are taking an increasing share of the market, OPTA proposes a new type of remedy. Cable operators would be obligated to resell their analogue television connection and signals, in order to allow other operators to complete their offer by including a television service. Cable operators have doubts about the proportionality of the measure, and fear that further regulation would have a heavy negative impact on the broadcasting market. Alternative distributors on the other hand welcome the measures.

Until 2017 most of the spectrum delivered by the digital dividend has already been allocated to broadcasters (public service broadcasters and commercial DTV). As to the technical possibilities, a political choice is expected to be made in 2009.

Horizontal regulation

Spectrum management

The 2.6 GHz band is expected to be auctioned for mobile electronic communications services in 2009. After public consultation of market players and additional opinions provided by OPTA and the Competition Authority, some elements of the authorisation procedure were amended regarding the maximum amount of spectrum to be granted, and the obligation to use spectrum. The draft rules for participation in the auction were made public in November 2008. Furthermore, in December 2008, the Dutch parliament accepted a proposal to allocate a certain percentage of the spectrum to a new player on the market. Implementation of this proposal might delay the auction.

An amendment to the Telecommunications Act, introducing more flexibility in spectrum policy, is under discussion in parliament.

Implementation of spectrum decisions

According to the Netherlands, the Commission spectrum harmonisation decisions have been fully implemented.

THE CONSUMER INTEREST

Tariff transparency

Excessive pricing for calls to premium rate numbers, and dissatisfaction of consumers in this regard, was addressed by an amendment to the Ministerial Regulation on universal service and end-user interests. Service providers are obliged to indicate maximum tariffs for certain categories of expensive premium rate calls, while mobile operators will have to provide suitably clear information on the traffic charges that customers will be billed besides other charges. OPTA has been instructed to monitor and enforce these rules.

Number portability and switching

OPTA's policy rules for number portability were amended in order to improve the porting system, and to better protect the consumer's number during one month, in case of a porting mistake. Over the last few years the porting time of ten days has in most cases been reduced to a shorter period of five or so days.

Switching between Internet services, frequently signalled as a problem by the consumer association, was addressed on the basis of self-regulation. After negotiations with the sector, the largest ISPs covering more than 90% of the consumer market now adhere to a uniform switching system and follow clear rules, which are published on their website. Switching requests should be addressed in 95% of cases on the agreed day, and interruption of service should not be longer than 24 hours.

A new provision of the Telecommunications Act provides for specific contractual arrangements for telecommunications, thereby facilitating further switching between providers. Contracts of indefinite duration, as well as contracts with a definite duration prolonged after automatic renewal, can always be terminated with a month's notice.

Consumer complaints

In order to facilitate the handling of consumer complaints about switching problems and other matters, Internet service providers have been urged to voluntarily affiliate with the dispute committee for electronic communications. OPTA has also launched specific actions to remind VoIP telephony providers of their legal obligations.

The joint consumer information portal of the regulatory, competition and consumer authorities has made available a special online complaint form about telemarketing and the abuse of premium rate numbers.

Emergency services (112)

On 9 October 2008 the Court declared that the Netherlands had not fulfilled its obligations under the Universal Service Directive by not having ensured that, to the extent technically feasible, mobile caller location information is made available for mobile calls to the emergency number 112. The Dutch authorities claim that this information will be made

available by early 2009 to the centralised 112 exchange of the national police services, which would be able to process the calls.

Must-carry

In December 2008 the new Media Act was adopted. While the earlier must-carry rules will remain applicable to analogue broadcasting transmission, new provisions applicable to digital broadcasting will further reduce the scope of the must-carry obligations applying to the public service broadcasters.

Data protection

In March 2008, OPTA published new policy rules for enforcement of the spamming prohibition. OPTA imposed several high fines on spam distributors (up to €500 000). The NRA is also investigating options to increase Internet security by enforcing other provisions of the Telecommunications Act.

The prohibition on sending unsolicited communications to natural persons was further extended by law and has been made applicable to legal persons. Furthermore, for calls made by telemarketers a formal "don't call me" register was introduced by law, giving consumers the opportunity to register for no further telephone contacts. Telemarketers are obliged to consult this register.

By December 2008, the Netherlands had not yet communicated measures for transposing the Data Retention Directive. Infringement proceedings were ongoing.

AUSTRIA

INTRODUCTION

Following last years' trends, the Austrian market continues to be characterised by a highly innovative and competitive mobile market, covering not only voice but also mobile broadband services, the expansion of which has grown significantly during this year. There are low mobile end-user prices with flat-rate offers, and mobile TV has also been launched. At the same time, with the increasing popularity of mobile broadband services, end-users are becoming aware of the capacity constraints that these services present. Against the success of mobile services, the fixed markets are likely to undergo significant changes in the coming years; the size of the fixed market is decreasing but the market shares of the incumbent's fixed network operator are increasing in several segments of the fixed retail calls markets. Fixed broadband penetration in Austria is below the EU average. To face the challenge of mobile broadband services, the incumbent operator is offering triple-play and quadruple-play bundled offers at very low end-user prices. In addition, alternative operators have invested in their own infrastructure in the most densely populated areas, such as the main cities, and competition in the wholesale broadband access market appears to be more intense in these areas despite the fact that on a nation-wide basis alternative operators appear to be losing market shares. The coalition agreement of the new Austrian government which was established in December 2008 addresses the existing digital divide, and sets access to broadband at a minimum speed of 25 MB/s for the whole population as a target to be achieved before 2013. There continue to be delays in the implementation of the NRA's decisions and concerns as to the need in certain areas for a more pro-competitive strategy towards the regulatory challenges facing the sector as a whole.

REGULATORY ENVIRONMENT

Main regulatory developments

The NRA continues to be very active in carrying out market reviews and, where necessary, imposing remedies. However, there continue to be delays in the implementation of these decisions. The second round of market analyses was completed with the review of the wholesale broadband access market. The third round of market analyses has already started, with the consultation on the draft for a new telecommunications market definition ordinance. While the NRA considered that the obligation to provide wholesale broadband was not necessary in certain areas, due to heightened competition on the basis of alternative infrastructures, and since the mobile markets are characterised by intense competition, it is difficult to judge the effectiveness of the remedies imposed in other markets, in particular the fixed markets. The triple-play and quadruple-play retail bundle offers of the incumbent fixed network operator have been analysed by the NRA, but they remain at the moment a matter of concern for alternative operators.

With the completion of the second round of market analyses, several remedies under the new regulatory framework have only been specified following dispute settlement procedures between operators, despite the fact that the NRA has the power to set prices if it observes any deviation from the price setting standard it has imposed as a remedy for a particular service. The NRA's practice has led to delays in setting tariffs, with a negative impact on the efficiency of the regulatory process. The way in which the NRA will specify the remedies in the third round of market analyses remains to be seen.

Market players have expressed concerns about the overall effectiveness of the performance of the NRA, regretting in some cases the lack of transparency and pro-activity of the NRA. Some operators consider that regulatory intervention is not sufficiently fast for this dynamic sector.

Organisation of the NRA

The Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR) acts as the operational arm of the Austrian Communications Authority (KommAustria), which is a subordinate administrative body of the Federal Chancellery that regulates the broadcasting sector. RTR also acts as the operational arm of the Telecommunications Control Commission (TKK), which is responsible for regulation of the electronic communications markets. No modification of the organisation of the NRA took place in the reporting period. However, new legislation in the broadcasting sector is under preparation. According to the coalition agreement of the new Austrian government, the organisation of the NRA should be restructured, by extending the scope of responsibilities of KommAustria to also cover electronic communications. Particular attention will need to be given to whether this new NRA will fully comply with the requirement of independence as established by the EU regulatory framework.

Decision-making

TKK notified the second market review for the wholesale broadband access market during 2008, thereby completing the second round of market analyses. Taking account of the different degrees of infrastructure-based competition in this market, TKK proposed geographic variations in the remedies imposed on the incumbent fixed network operator and withdrew most of the obligations currently imposed on the incumbent fixed network operator in those areas with higher competitive pressures.

Furthermore, at the end of 2008 RTR launched the public consultation on the new telecommunications market definition ordinance, thereby initiating the third round of market reviews. The proposed new ordinance defines nine electronic communications markets susceptible to ex ante regulation. The market for access to the public telephone network at a fixed location is proposed to be subdivided into two access markets for residential and for non-residential customers respectively. There are two separate markets defined for wholesale terminating segments of leased lines, depending on the bandwidths, and for the higher bandwidths RTR proposes to take account of geographic variations in the competitive conditions by defining sub-national markets. In addition it is proposed to define a retail market for the minimum set of leased lines. Some market players felt that there was not sufficient transparency and cooperation with RTR in the preparation of this draft ordinance, prior to the launching of the official public consultation. The Commission commented on the approach entailing separate notification of the market definition and the market analysis, considering it as an inadequate means to identify and address all competition problems on the relevant telecommunications markets.

The NRA reported that dispute settlements continued to play an important role during 2008. The market analysis decision sets the general regulatory framework applying in a particular market, and the dispute settlements specify the concrete elements of the imposed obligations. However, alternative operators are concerned about the fact that the deadline for completing the dispute settlement procedures is not always respected and, recently, TKK has expressed its intention to resolve the disputes in a timelier manner. Furthermore, the annulment of some market analysis decisions by the Austrian Administrative Court has made it necessary to review the dispute settlement procedures already completed. In such cases the NRA can impose the level of prices that would apply retroactively via dispute settlement decisions, but according to the Austrian Administrative Court not within market analysis decisions, which results in legal uncertainty for market players. The Commission services are looking into this matter.

In the request for a preliminary ruling (C-426/05) made by the Austrian Administrative Court, the European Court of Justice interpreted the relevant provisions of the regulatory framework in a way which allowed affected undertakings that are not the direct addressee of a decision by the national regulatory authority to have this decision reviewed by a court. They are to be

regarded as "affected" by such a decision if they can demonstrate that it adversely influences their rights deriving from EU telecoms rules, e.g. the rights corresponding to non-discrimination or access obligations of SMP undertakings. The Court thus promoted effective legal protection of alternative operators in the market review procedure. As a result of that judgment, the NRA gives all interested parties, including alternative operators, the opportunity to submit comments during the process of adoption of the market analysis decisions.

MARKET AND REGULATORY DEVELOPMENTS

The total turnover of the Austrian telecommunications sector was €5.91 billion as of 31 December 2007, with revenue from the fixed markets (including broadband and leased lines) amounting to €2.25 billion and revenue from the mobile markets totalling €3.66 billion. The total value of tangible investment in telecommunications networks for 2007 was €879 million, including €219 million by the incumbent and €101 million by alternative operators in fixed telephony networks. Mobile operators invested around €559 million.

Broadband

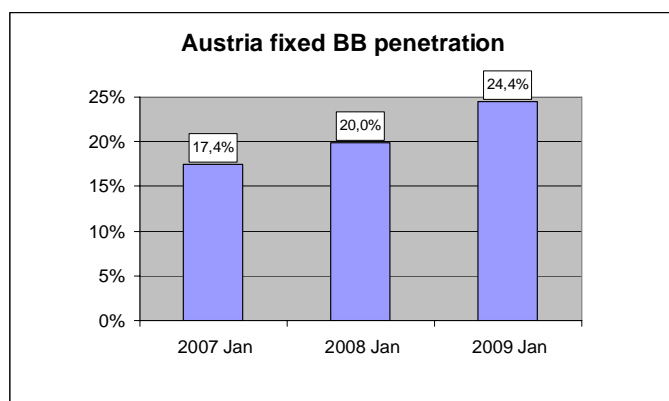
Market situation

The penetration rate was 21.4% in January 2009 (up from 18.98% in October 2007 and 20.8% in July 2008, but still below the EU average of 22.9%). National DSL coverage remained relatively stable from 91.3% at the end of 2006 to 92% at the end of 2007. DSL coverage in rural areas increased slightly from 79% at the end of 2006 to 80.6% at the end of 2007. In urban areas cable continues to be the most popular technology. Cable coverage in rural areas also increased slightly from 17% at the end of 2006 to 18% at the end of 2007. In January 2009, all broadband lines based on means other than DSL, which includes wireless local loop, cable modem, fibre to the home, leased lines, power line communications and others, had a market share of 36%, down from 38.2% in October 2007.

As regards broadband lines, the market share of alternative operators was 55% in January 2009, down from 61.7% in October 2007. In January 2009, 64% of broadband lines in Austria were based on DSL technology and the market share of the incumbent fixed network operator in DSL lines was 71%. In January 2009 new entrants had 293 909 DSL lines on PSTN using full LLU (up from 252 487 in the previous year).

Whereas 372 266 new broadband lines were created from July 2005 to July 2006, the year from July 2006 to July 2007 saw this figure decrease to 238 963, and from July 2007 to July 2008 it further decreased to 174 212. There is therefore a decline in the rate of growth of broadband services. According to the NRA the retail prices for fixed broadband have been dropping⁸¹.

Mobile broadband continued to grow significantly during 2008, with very competitive prices.



Mobile broadband penetration stood at 22.8% in January 2009, well above the EU average of 13%. Furthermore, taking into account only the number of mobile broadband connections using only dedicated data

cards/modems/keys, typically allowing mobile Internet via laptops, Austria is the leading country with 11.4% penetration, compared to the EU average of 2.8%. According to the NRA, whereas in the past mobile

⁸¹

broadband connections were mainly used by business customers and certain residential customers as a complement to fixed broadband access, the expansion of mobile broadband is now exerting a certain competitive constraint on fixed broadband, and influencing its development. The NRA reports that, in the residential segment, most of the consumers with a mobile broadband connection do not have an additional fixed broadband connection. However, the bandwidth available with mobile broadband services in practice remains low compared to fixed-line broadband despite the fact that the actual bandwidth appears to be increasing, and the growth of these services is also making consumers more aware of the technical constraints. However, market adoption stayed strong over the reporting period. The incumbent operator responded to these developments by offering retail triple play bundled products at a reduced price, for a limited period of time, that were very well received by customers.

Regulatory issues

The NRA adopted the second review of the wholesale broadband access market. In its decision, TTK defined a national market but recognised certain geographic variations in the competitive conditions when defining the remedies.

TTK included in the market definition wholesale broadband access by means of DSL, cable and fixed wireless access (WLAN, WLL). In addition to external wholesale provision, self-provided services by vertically integrated undertakings were also included, and this was largely based on the indirect competitive constraints exercised via their retail products. The incumbent fixed network operator was designated as having SMP on the national wholesale broadband access market. However, TTK considers that competition problems arise mainly in areas with a more limited presence of alternative infrastructure operators.

TTK proposed to differentiate the remedies by maintaining the existing remedies in the less competitive areas, including access, price control on a retail minus basis, non-discrimination and cost accounting, and removing the existing obligations on the incumbent with the exception of accounting separation in those areas with more infrastructure competition.

However, by a recent decision by the Austrian Administrative Court on 17 December 2008 this decision has been annulled. Therefore, the previous decision still applies.

In addition, a new bitstream offer was put in place during the reporting period, but so far only one alternative operator appears to have applied for this new offer.

The incumbent fixed network operator introduced a retail triple-play offer in mid-November 2007 lasting two months, which its competitors regarded as resulting in a margin squeeze, in particular on broadband tariffs at wholesale and retail level. During the promotion period, the price for full unbundled access was set at €6.35. TTK analysed this triple-play offer and imposed conditions on it. The reduced price would apply permanently for those new customers acquired by alternative operators during this period. Furthermore, following a dispute settlement procedure introduced by one alternative operator against the incumbent fixed network operator, the NRA decided to reduce the level of LLU fees for full unbundled access to €9.33 applying retroactively as from 1 January 2008. For the first time, the NRA thus set those fees below the Forward Looking Long Run Average Incremental Costs (FL-LRAIC) level in order to avoid any potential margin squeeze, which, for some alternative operators, calls into question the effectiveness of the wholesale prices applied up to that date. Given the success of this bundled offer in 2007, the incumbent operator introduced a similar offer in November 2008, and this has also been examined by the NRA. Even though the prices for LLU and WBA were again reduced for new customers acquired by alternative operators during the promotional period, some alternative operators claim that the current conditions of the wholesale products are not sufficient to reproduce the incumbent's retail offers whilst also permitting an acceptable profit margin. The NRA considers that these offers did not have an appreciable impact on the fixed line competitors, but noted that the increase in mobile broadband services slowed down during the promotional period and a number of fixed broadband customers were acquired. Alternative operators claim that the volumes in WBA

and LLU were significantly reduced during that period. While a reduction in WBA volumes in favour of LLU services was observed, as regards broadband lines at the retail level, the market share of alternative operators declined from 61.7% in October 2007 to 55% in January 2009.

RTR has initiated a national discussion on next-generation networks and established an industry group to discuss technical and regulatory issues related to next generation access (NGA) networks; however, no definitive investment decision by the incumbent fixed network operator has yet been taken. The incumbent operator would like risk-sharing arrangements to be put in place, whilst alternative operators complain about the lack of transparency regarding these future developments.

Mobile markets

Market situation

Mobile penetration was 122% in October 2008 with more than 10 million subscribers, and an increasing proportion of the total voice traffic volumes handled through mobile networks (62% at the end of 2007). The mobile market in Austria continues to be characterised by highly competitive retail prices and innovative services, such as mobile TV. As of October 2007, the leading mobile operator had a market share of 40.12%, the second largest operator had a market share of 33.55% and the rest of the operators together had a market share of 26.33%.

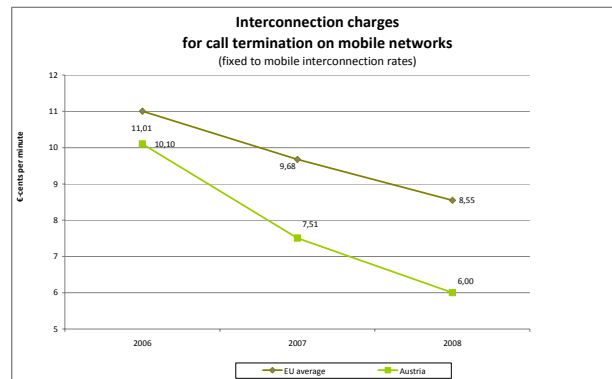
According to the NRA, retail rates for mobile communications have continued to decrease⁸². Diversity of offers, including the introduction of flat rates as from 2007, lowers prices considerably, and end-user prices for mobile communications have in general remained among the lowest in Europe.

Regulatory issues

Following the annulment by the Administrative Court (VwGH) of the decisions by TKK in the first and the second round of market reviews concerning the market for voice call termination on individual mobile networks, TKK was invited by the VwGH to carry out the market analyses again for the period 2004-2008 and to set concrete mobile termination rates.

TKK adopted a new decision setting the mobile termination rates, and set out a glide path towards a symmetric target mobile termination rate of €0.0572 as from 1 January 2009 at the latest. This level is to be reached by all MNOs through linear decreases towards the target level. The decision was appealed by all mobile network operators and this appeal is still pending, thus creating some legal uncertainty.

During the reporting year, the NRA resolved two disputes between the mobile branch of the incumbent operator and another mobile operator in relation to the fees and charging principles for call origination on the public mobile networks, and in relation to the fees for SMS termination, respectively. Given that no operator has been designated as having significant market power in the markets concerned, the NRA did not impose cost-oriented prices but set the prices at a reasonable level. In the case of mobile origination, the prices are set at an asymmetric level for the past, with lower origination prices for the mobile branch of the incumbent operator, and at a symmetric level as from 1 January 2009. In the case of SMS termination, the NRA established symmetric rates.



Roaming Regulation

The price caps established in the Roaming Regulation were applied in time and operators offered the Eurotariff, which in all but one case was set at almost exactly the price cap level, with billing unitisation intervals higher than per second. The number of complaints about inadvertent roaming fell, but taking into account the level of mobile broadband penetration in Austria, the high invoices for data roaming services remain a problem and operators have already taken different measures in this respect. A Court judgment was delivered on the issue of inadvertent roaming as regards voice calls and SMS.

Fixed

Market situation

While the overall size of the fixed markets appears to be decreasing due to the pressure from mobile services, the incumbent fixed network operator has maintained its leading position in the market and its market share has increased in many of the segments, in particular in terms of revenues. Regarding calls from fixed to mobile, its market share went up from 49.7% to 59.2% based on retail revenue. However, it remains at a lower level than other EU countries. For other types of calls its market share has also remained high. For instance, its market share for national fixed calls is 60.1% based on outgoing minutes of communications and 64.1% on the basis of retail revenue. The NRA also reported that the incumbent's market share had increased significantly in 2007 for national calls, including calls to mobile⁸³. There has been consolidation in the fixed market, with the incumbent fixed network operator having acquired an alternative fixed operator.

Retail rates for fixed voice telephony have been stagnating and even slightly decreasing⁸⁴.

Regulatory issues

TKK had imposed an obligation on the incumbent fixed network operator to offer wholesale line rental to its competitors. However, this has not been taken up in practice and the NRA expects that naked DSL will provide a basis for the provision of VoIP by alternative operators.

Given the relevant position and regaining of market share of the incumbent fixed network operator in the retail calls markets, in particular in the business segments, alternative operators argue in favour of continuing retail regulation. In the new telecommunications market definition ordinance, RTR did not propose to define as susceptible to ex ante regulation any retail calls markets, in line with the new Recommendation on Relevant Markets.

Broadcasting

Market situation

As of August 2008 there were 118 000 households with analogue terrestrial TV, representing 1.42% of the households over population, and 158 000 households with digital terrestrial TV, amounting to 1.90% of the households over population, the latter having been launched only in October 2006. At the same time, 20.56% of subscribers (1.71 million subscribers) received TV via satellite and 16.80% of subscribers (1.4 million subscribers) used cable as their TV platform.

Mobile TV based on DVB-H was launched at the time of the European football championships in Austria and Switzerland in June 2008, and consumer take-up is increasing. Three mobile operators provide this service and at the end of 2008 its coverage was above 50% of the population.

IPTV has also been introduced by the incumbent operator, but so far with limited take-up and as of August 2008 it amounted to 50 000 subscribers (0.6% of subscribers over population).

Regulatory issues

⁸³ RTR's Communication Report 2007, p. 149 and 150.

⁸⁴ RTR's Communication Report 2007.

New broadcasting legislation announced by the recently formed government should include the restructuring of the broadcasting regulatory authority which, according to the governing agreement of the coalition parties, would then become fully independent from the government. The Commission services will follow this matter.

Following the allocation of the nationwide licences for digital terrestrial TV, the process for revoking the existing analogue licences has been finalised. The NRA is reportedly in the process of granting licences for regional digital TV. Discussions as to the use of the released frequencies are expected to take place from the beginning of 2009.

Horizontal regulation

Spectrum management

Austria has implemented the relevant Commission decisions under the Radio Spectrum Decision up to 2007 by adapting the federal frequency usage plan accordingly. Commission decisions from 2008 are in the process of implementation. In the light of the envisaged digital switchover in 2010, alternative operators have expressed an interest in the re-farming of frequencies. This would be in line with the Commission's policy on the digital dividend and would allow operators to take advantage of the technical characteristics of the upper UHF band to increase the range of broadband wireless services, particularly in rural and isolated regions, and to combine with higher frequencies to increase capacity for these services. In a similar vein, spectrum in the 900 MHz frequency band was assigned during 2008 to one of the mobile network operators. However, the tender procedure covering a part of the 450 MHz band did not result in the assignment of the frequency band. The NRA took the view that the current economic situation might have temporarily diminished the interest from operators in this frequency band.

In December 2008, TKK also assigned several regional frequencies in the 3.5 MHz band.

THE CONSUMER INTEREST

Universal service

As in previous years, the funding of universal service was not based on the funding mechanism laid down in the Telecommunications Law, as operators had agreed among themselves on compensation for the universal service provider. There are no discussions at the moment to modify the scope of universal service.

Number portability

In general, number portability is not very much used in Austria and in absolute figures there has only been a slight increase in both fixed and mobile number portability. Regarding the prices for fixed number portability, Austria remains one of the countries in Europe with a very high wholesale price. As far as mobile number portability is concerned, the wholesale price is quite moderate and has remained stable at an average of €8.21 (without taxes). However, the prices to be paid at the retail level by users requesting number portability are at the level of €19, but are often reimbursed by the operators. The incumbent's mobile subsidiary announced last year an increase in the retail price for mobile number portability to €29, which was considered as excessive by the NRA, and therefore the price of €19 continues to apply and is considered as the maximum. Furthermore, the incumbent's mobile branch also charges significant termination fees to business customers, a situation which has been examined by the NRA. As a result, the termination fees for old or new customers applied by the incumbent's mobile branch were prohibited. Alternative mobile operators have also reported on the message that users get when calling a customer whose number has been ported, informing them of the fact that the number has been ported, since this may discourage consumers, especially business customers, from making use of this facility. In that regard, given that number portability was introduced some years ago, and taking into account the

generalisation of flat rates for mobile services which do not make a distinction between on-net and off-net calls, the obstacles to competition that this measure creates may outweigh its consumer protection benefits.

At the retail level, the standard length of contracts over two years, the high costs for number portability and, in some cases, the contract termination fees applied, increase significantly customers' switching costs, which may make it difficult for operators to compete.

Consumer complaints

The NRA has reported an increase in the number of consumer complaints for 2008, in comparison with 2007⁸⁵; the number of complaints for 2008 rose to 5 230 from 3 494 in 2007. In particular, as mobile broadband becomes more popular, there have been more complaints in relation to the capacity available in mobile broadband services as well as to the billing of those services. The consumer protection department of the Austrian Chamber of Labour has also reported that a number of consumers have complained about mobile broadband services, and has conducted a study on the real transfer speed available with that technology, which revealed the capacity constraints that mobile broadband services present. The Chamber of Labour reported on the large number of complaints received regarding high bills for data roaming services, while the NRA reported a small proportion of the complaints received on this issue.

Due to the sometimes contradictory decisions on the general terms and conditions between the NRA and the consumer protection authorities, some market players have argued that enhanced cooperation between these authorities would be desirable.

European emergency number 112

The European emergency number 112 can be called from both fixed and mobile telephones. Caller location information is provided for all calls, upon request ('pull-system').

Must-carry

Austria introduced for mobile TV operators a 'must-carry upon request' provision in favour of the state-owned public broadcasting station and the nationwide private television station. The Austrian legislator limited this controversial provision to the first one and a half years of operation of the platform, and the authorities have indicated that it will not be extended.

Data protection

The EU Directive on data retention has still not been transposed. The Commission sent a reasoned opinion to the Austrian authorities in this respect. Regarding data on internet use and emails, Austria has to transpose the relevant rules laid down in the EU Directive on data retention by March 2009.

Operators have indicated that they are satisfied with the solution adopted for the financing of interception costs and would expect a similar solution for the financing of data retention obligations. Following an amendment to the general police law, there has been an increase in requests for data from the police, since in certain cases it is not necessary to have a Court ordinance to obtain data in the course of an investigation.

⁸⁵ See also RTR's Annual Report on the conciliation procedure: "Tätigkeitsbericht der Schlichtungsstelle 2007".

POLAND

INTRODUCTION

The situation remained relatively stable on the Polish electronic communications market in 2008. While competition continued to be keen in the mobile market, the incumbent continued to be dominant in both broadband and fixed telephony. Broadband penetration, still amongst the lowest in the EU, grew strongly in 2008.

Poland did not finalise the first round of market analyses in 2008. While the regulator continued to focus on the promotion of consumer interests and competition, less attention was paid to creating the conditions for necessary investments such as cost-orientation or pricing in line with the ladder of investment. The regulator started proceedings aimed at the functional separation of the incumbent. Six infringement proceedings were pending against Poland.

REGULATORY ENVIRONMENT

Main regulatory developments

The long-awaited large review of the Telecommunications Act of 2004 was split into two parts in order to speed up adoption. The first part, aimed at bringing the Act into line with the regulatory framework and transposing the Data Retention Directive, was approved by the Government and sent to Parliament in October 2008. The remaining part was still under preparation by the Ministry.

A new regulatory strategy for the years 2008-2010 was defined by the President of UKE (Office for Electronic Communications) in spring 2008. While the strategy still focuses on increasing the accessibility and usage of electronic communications services for citizens, some emphasis is now also placed on stimulating investment in infrastructure.

In December, the Regulator took steps towards the introduction of functional separation of the incumbent, following the results of a detailed study which concluded that this tool would be effective in fighting discriminatory tactics although it would not remove other barriers.

Out of six pending infringement proceedings for the incorrect transposition and application of the EU regulatory framework, four were referred to the European Court of Justice by 2008.

The Commission was able to close the proceedings concerning directory services and lack of caller location for 112 in the course of 2008.

Organisation of the NRA

The question of the legality of the process of appointment of the President of UKE was finally resolved in 2008, with the ruling of the Polish Supreme Court, which in February decided in favour of the President.

The responsibility for regulation of the Polish market is currently shared between the President of UKE and the Ministry of Infrastructure. While the President of UKE is charged with most of the responsibilities of the NRA under the regulatory framework, the Ministry is responsible for market definition for the purposes of market analysis, and for legal acts, including a number of ordinances. The cooperation between the two bodies has become strained over the last year with UKE accusing the Ministry of alleged inactivity and the Ministry questioning the legal grounding of some regulatory measures. Both the NRA and the Ministry, which are fully state-funded, experienced difficulties in attracting and retaining suitably qualified staff, which put a considerable strain on their resources.

Under the amendment to the Telecommunications Act, the responsibility for market definition would be transferred to UKE, giving the NRA full control over the market analysis process. The amendment would also reintroduce a fixed five-year term of office for the President of UKE, together with a list of conditions for dismissal. This would limit the discretion of the President of the Council of Ministers to dismiss the head of the NRA at any time, and without

the need to indicate reasons, which was a source of concern for the Commission. The Commission referred the corresponding infringement case to the Court of Justice in July 2008.

Additional judges were appointed to the Competition and Consumer Protection Court, which together with the Provincial Administrative Court is responsible for the electronic communications cases, raising the total number of judges from 4 to 11. This led to a slight improvement in the length of appeal proceedings, which are now generally resolved within two years. However, operators point out that the Courts concentrate on administrative aspects and do not intervene on substance. The number of appealed decisions is on the increase, with over 500 proceedings pending when this report was drafted.

Decision-making

The President of UKE (Office for Electronic Communications) continued to be active along the lines of the regulatory track set in previous years.

The NRA did not finalise the first round of market analyses in 2008. The re-notification of the last remaining market for wholesale trunk segments of leased lines was registered in December and subsequently partially withdrawn. It found a lack of effective competition and proposed to differentiate obligations according to the level of competition in different product markets. The second round of market analyses started in mid-2008, and UKE was planning to re-analyse all of the 18 markets of the previous Commission recommendation. The new recommendation is not yet implemented in Poland, as the Ministry has not yet issued a new ordinance.

In order to facilitate new entrant access, new reference offers for interconnection, bitstream access and local loop unbundling (LLU) were approved in 2008. A new mobile termination rate (MTR) glide path was introduced in October, setting bigger cuts than the one approved last year. In order to fight digital exclusion, UKE was throughout 2008 auctioning spectrum for wireless broadband access and compiling maps of 'white patches', where broadband access was still unavailable. The 116 European number became operational in November. Despite much regulatory activity, the results in terms of broadband penetration, improved access conditions or investment were not very pronounced. The decision-making process remained essentially unchanged with frequent recourse to dispute resolution as a regulatory tool, and a hands-on approach of the NRA's president.

While previous years' decisions, such as the introduction of wholesale line rental (WLR), or bitstream access (BSA), were still bearing fruit on the market, there was some concern as to the lack of a coherent strategy or pricing approach which would enable alternative operators to move up the investment ladder. The need to bring wholesale rates more into line with costs became apparent after the incumbent's mobile arm started to offer retail broadband and voice services at competitive prices profiting from the large retail minus discounts at wholesale level. The competition authority, in parallel with UKE, was analysing whether competition rules had been breached.

In order to seek further specification of the wide range of not always detailed remedies imposed by the NRA, operators continued to resort to dispute settlement proceedings and their right to appeal. In the months until October, the department responsible for dispute resolution in the NRA issued 130 regulatory decisions, out of which approximately half concerned WLR, BSA or LLU. The process generally took much longer than the prescribed four months, with some proceedings pending over two years. This approach, where numerous decisions and changes are issued, appears to affect coherence, transparency and legal certainty for market players.

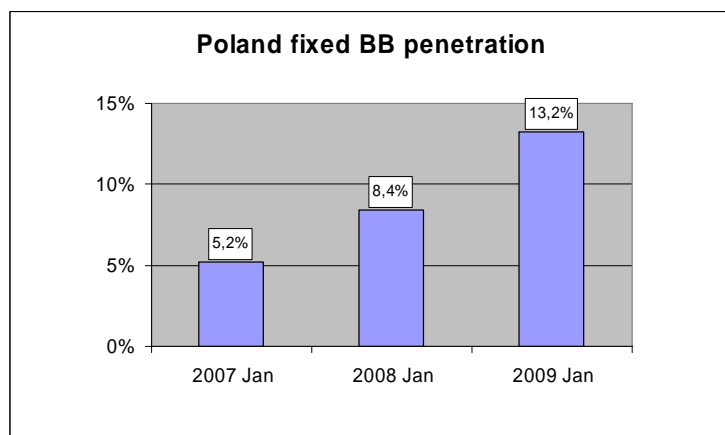
Moreover, most of the regulatory obligations currently in place are still based on benchmarks or a retail-minus methodology, despite cost-orientation being imposed for the incumbent, once cost calculations are approved by an independent auditor. A positive opinion was issued for a second consecutive year in July 2008. The Regulator was in discussions with the

incumbent about gradually bringing prices more into line with costs when this report was being drafted. The Commission was looking into the matter following a formal complaint received on the subject.

MARKET AND REGULATORY DEVELOPMENTS

Revenues in the telecommunication sector in 2007 totalled € 13.16878 billion, which represents an increase of approximately 27% in comparison to a year earlier. Revenue from the fixed markets stood at € 2.81 billion in 2007, while the revenue generated by the mobile market was € 5.97 billion. The total value of tangible investments in the electronic communications sector grew to € 2.64 billion, with most of the investment coming from mobile operators.

2008 saw no substantial investment in next generation networks (NGN), and the regulatory approach to investment in NGN infrastructure was not clearly defined. On 18 December the President of UKE presented an opinion on the building and operation of NGN in Poland, for consultation. In September, the incumbent had published a strategy on the subject, estimating the cost of necessary investment at between PLN 14 and 28 billion (approximately € 4.1 and € 8.2 billion), and pointing out that future investment will depend on cooperation with public authorities. It also presented data showing that the amount of data transferred over the fixed network had risen threefold in the last 24 months, and quadrupled over the mobile network.



Some alternative operators also announced their readiness to upgrade technologies or invest in fibre networks, taking advantage of the availability of EU funds. Fixed to mobile substitution was very pronounced with the number of fixed minutes reducing by 14.3%. Competition became keener in the mobile market with the fourth network operator reaching a market share of ca 4.75%, and the entry of a number of mobile

virtual network operators (MVNOs). In the fixed market the incumbent slightly reduced its market share, and some significant consolidation was observed among the alternative operators.

Bundled offers were becoming more common as operators entered new markets in order to offer additional services. However, double play remained the favourite choice as price was a determining factor.

The Regulator decided to launch proceedings aimed at functional separation of the incumbent, following the results of an extensive study on the costs and benefits of such a solution which became available in November. The report concluded that the economic costs of introducing separation, and benefits accruing from it, would be comparable. While the tool would be effective in fighting discriminatory tactics of the fixed incumbent and would introduce a degree of legal certainty, it would not eliminate other barriers such as the low quality of the access network, and a number of legislative amendments would be necessary before implementation. At the same time, the Authority was negotiating with the incumbent on alternatives to full separation, including voluntary restructuring and performance indexes to allow alternative operators access on non-discriminatory terms.

Broadband

Market situation

Broadband penetration in Poland continued to experience strong growth, by 57.69% in the reporting period, to reach 13.2% in January 2009. However, it was still amongst the lowest in

the EU-27 and significantly below the EU average of 22.9%. The speeds provided were also amongst the slowest, with 83.1% falling in the range of 144 Kbps and 2 Mbps, as against the European average of 25.1% for this segment. The incumbent's broadband market share declined to the level of 50.3%, however, its share of DSL lines remained high (at 80% in January 2009). Growth was registered mainly in technologies other than DSL, with the number of lines doubling in the reporting period to reach over 2 million in January 2009. As regards mobile broadband, which is only available in bigger cities, the penetration rate stood at 3.9%, below the EU average of 13%. However, the penetration of mobile dedicated data cards stood at 2.8% in line with the EU average and the services were growing in popularity as, according to mobile operator data, 11% of new broadband subscriptions are mobile in comparison to 6% a year ago. This is mainly due to a drop in prices following the mobile broadband offer of the fourth entrant, which started providing services in July 2008, as well as offers, which often include subsidised computers in exchange for longer-term contracts.

Low fixed line telephony penetration, particularly in rural areas, and lack of investment in the existing network, still constitute intrinsic barriers to fixed broadband penetration growth. The digital divide remains an issue with DSL broadband rural coverage at 42.5%, representing a gap of 21.5% with national coverage. The growth in service-based competition with 12 alternative operators now providing services on the basis of the wholesale bitstream offer, has led to further price reductions. Many local authorities also provide free Internet access at restricted speeds in order to fight digital exclusion. Local loop unbundling was still not functioning in Poland as only 1544 lines had been unbundled by January 2009. However, the incumbent gave access to 143 collocation sites, allowing access to 1.9 million lines available for unbundling, and a further 20 sites were under preparation.

The main competitors to the incumbent's broadband offering were cable operators, whose market share grew steadily to reach ca 1.3 million lines in January 2009, and who were generally able to offer higher speeds, reaching 20 Mbps, than those available over DSL. The cable sector, however, remained fragmented and did not cover rural areas.

In December 2008, the incumbent's mobile sister company launched Internet access using the CDMA technology, which allows transfer rates of about 1 Mbps, and uses the 450 MHz frequency previously reserved for analogue mobile telephony. This will potentially give broadband access to some 2 million households in digitally excluded areas. Coverage, which at the end of 2008 stood at 50% of the population, was expected to be extended to 90% in 2009.

Regulatory issues

In December 2008, the NRA published a new reference unbundling offer (RUO) following a national consultation (not including prices). It fully amended the incumbent's proposal and substantially reduced prices from PLN 36 to PLN 22 (approximately € 10.6 and € 6.5) and the costs of collocation. The NRA also made changes to the process itself, shortening implementation times and minimising the involvement of subscribers. The incumbent was concerned that the rates imposed ignored cost calculation results and the results of negotiations.

According to UKE data, only 1544 lines were unbundled up to October, by three operators. However, only one of those was effectively competing on the retail market. Alternative operators blamed the incumbent's discriminatory tactics in the form of frequent technical problems, or incomplete and erroneous information, for the delay in take-up. At the same time the incumbent was pointing to a lack of consistency between pricing of different wholesale products as a reason. However, the introduction of the new LLU reference offer in December reversed this situation by lowering the price of LLU in relation to WLR and bitstream access. In early May 2008, the President of UKE approved a new bitstream reference offer which extended the scope of obligations to provide access at all levels including DSLAM and ATM, as well as managed and unmanaged IP. Operators were concerned about the lack of

consultation in respect of decisions setting wholesale prices. On the positive side, UKE has stepped away from regulation on the basis of transitional measures, as reference offers are now based on market reviews.

Many local authorities were financing free Internet access with restricted content and speeds up to 250 Kbps. As part of its strategy to fight the digital divide, the NRA was strongly supporting this process, through local spectrum tenders in the 3600-3800 MHz. The Government also lowered spectrum tariffs for less populated areas. In October, the President of UKE consulted on a wireless broadband access tender (covering 18 reservations, for national frequencies in the range of 2010-2025 MHz and 2500-2690 MHz) which would require that 20% of the spectrum is reserved for the provision of free broadband access with some restrictions on data transfer. Operators were concerned about the promotion of free Internet by the NRA, in particular as the lower speed restrictions were not statutorily laid down.

Following a judgement of the Appeals Court of 10 April 2008, national Courts upheld the NRA's 2006 and 2007 decisions in relation to broadband retail regulation without a prior market analysis. Only in November, after the Commission's decision to apply to the European Court of Justice in this respect, did the Court of Competition and Consumer Protection decide to suspend proceedings in order to obtain more information on the Commission's application.

Mobile markets

Market situation

The mobile penetration rate reached 101% in October 2008, following another year of significant growth (some 9 percentage points in the reporting period), but is still below the EU average of 118.9%. 2008 also witnessed strong growth in the volume of mobile traffic, which increased by 32% in the reporting period. The three large network operators on the Polish mobile market generally maintained their market shares with 33.07%, 31.96% and 34.97% of the market (in terms of subscribers as of October 2008). The fourth (smaller) player managed to attract over 1.67 million customers and has achieved a market share of ca 4.75% since its market entry last year. However, out of 11 MVNOs, only one had managed to attract over 100 000 subscribers and in total held less than 1% of the market. As the market matures, new entrants and MVNOs are attracting customers by assertive marketing and by targeting niche clients.

With regard to retail price trends on the mobile telephony market, following large reductions in the previous years, subscribers enjoyed some further cuts in 2008 in particular among the popular lower usage baskets, and retail tariffs remained among the lowest in the EU, as a minute of voice traffic cost on average € 0.10 (compared to an EU average of € 0.14). The rapid rise in mobile penetration shows that price is no longer a barrier for customers. The mobile operators invested strongly over the past year to upgrade their networks and improve 3G coverage. They were also investing in innovative services such as the possibility of making payments by mobile phone, or consulting a doctor's agenda in order to make an appointment.

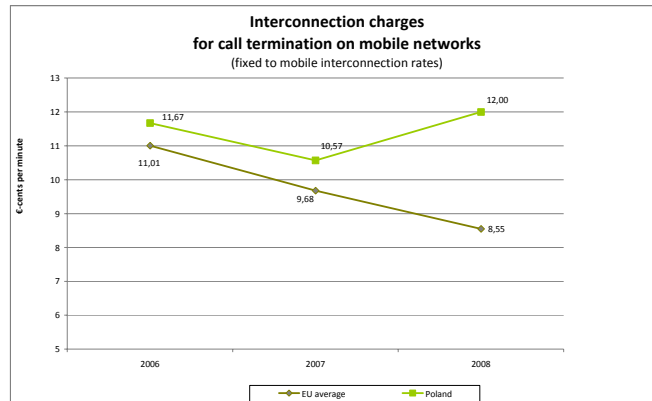
A consortium of the four mobile network operators (MNOs) expressed interest in the beauty contest for frequencies in the range of 470-790 MHz, which would allow them to provide mobile TV in 31 cities up to 2015, and over the whole territory of Poland thereafter. If successful, the consortium would then offer such services wholesale to all interested parties. The two operators that were awarded 1800 MHz spectrum in 2007 did not start rolling out their networks. While one was in the process of signing the necessary agreements and was on track to start roll-out early next year, the other was experiencing some difficulties in obtaining financing and had not yet signed up for national roaming. According to the roll-out requirements operators should provide coverage of 15% of the population by the end of 2009. The number of mobile players is likely to increase further following the results of a tender in November, for two reservations each covering 25 duplex channels in the GSM 900 MHz

range. The fourth mobile network operator was awarded both reservations but eventually opted for one, and the second was taken by a new entrant linked to a large broadcaster.

Regulatory issues

In August 2008, the President of UKE finalised the analysis on the market for mobile access, by closing the procedure to determine whether the market is effectively competitive. However, it did not state explicitly that it found competition, yet the market was not regulated.

Mobile termination rates of the three large mobile operators declined to the level of PLN 0.3387 (€ 0.09) in May 2008, in accordance with the glide path of April 2007. In order to further reduce prices paid by end-users for mobile calls, UKE issued decisions obliging operators to set wholesale rates according to a new glide path. Rates should be set at the level of PLN 0.2162 (€ 0.06) as of 1 January 2009, and reach PLN 0.1677 (€ 0.05) in July 2009. According to information published on its website, UKE is planning to reduce the mobile termination rate further by about 10%



each year in order to reach PLN 0.11 (€0.03) on 1 July 2013. The President of UKE was also consulting on the possibility of introducing 'bill and keep'. Mobile operators expressed concerns that they were not consulted with regard to the decisions and that new decisions were issued while a market analysis was being conducted on the relevant market and while a previous glide path was still binding until 2010, since this affects legal and business stability. They planned to appeal the decisions. The Commission was concerned that the decisions had not been notified.

Currently the termination rates of the fourth MNO and an MVNO are not subject to the glide path as UKE decided not to impose price control. The President of UKE is planning to reduce the asymmetry annually, starting from 157% on 1 January 2009 to reach PLN 0.11 (€0.03) for all operators in 2014 according to information published on its website.

Some further uncertainty was caused by loosely defined post-control obligations imposed on three mobile operators in July 2008, requiring them to remove breaches of the 'non-discrimination' obligation in relation to the pricing of on-net calls. Mobile operators interpreted this as an attempt to regulate their retail offering, as the MTR rate was already imposed by regulation. According to UKE, the decisions were aimed at showing the disproportion of on-net and off-net prices.

The question of imposing MVNO access obligation on one of the mobile network operators, irrespective of its market power, was finally settled when the President of UKE consulted on a draft decision refusing access in December 2008. This followed the ECJ's November judgment concerning incorrect transposition of the Access Directive in Poland (Case C-227/07), which confirmed the Commission's view that Poland had breached the framework by obliging operators to negotiate access with one another irrespective of their market power. However, it also found that the Commission did not provide enough evidence regarding the NRA's powers to intervene under the Directive.

Fixed

Market situation

Despite increased competition from new alternative operators, the incumbent remained the largest player with regard to fixed telephony, and its market share declined only slightly to 69.8% of the fixed calls market (as of December 2007, in terms of minutes of traffic).

Alternative operators were operating over 700 000 lines on the basis of WLR agreements as of September 2008. The market also witnessed significant consolidation among the large alternative players, meaning that the incumbent was now facing more unified competition with the main alternative player holding about 15% (as of December 2007, in terms of revenues). However, alternative operators were concerned that the incumbent was transferring its retail services to its mobile arm, which started providing fixed voice services in November. Consumers' choice on the fixed market increased further in 2008, as 85 operators were providing publicly available telephony services as of July 2008.

As fixed subscriptions became less popular, and the volume of traffic decreased by almost 4 billion minutes, operators took a number of steps to fight the outflow of customers. Customers could now benefit from lower tariffs (also those of the incumbent), packages of free minutes, or improved VoIP services.

The growth in terms of subscribers of telephony services over cable slowed down in 2008 and reached 440 000 in mid-2008 in comparison to 420 000 a year earlier (according to figures produced by the cable operators association (Polish Chamber of Electronic Communications – PIKE) in September). Their overall market share remains marginal.

Regulatory issues

On 8 April 2008, the President of UKE approved a new reference interconnection offer (RIO) setting wholesale prices for origination and termination in accordance with the level of the incumbent's cost calculation results for 2007. However, the prices for WLR and flat-rate interconnection remained unchanged and were still set according to the NRA's own methodology. The incumbent was concerned that the reference offer was not consulted with market players, and that it included some services which were not part of the definition of the relevant market, and asked UKE to reanalyse the offer as a first step in the appeal process. Some regulatory uncertainty was still present in 2008, as WLR continued to be implemented on the basis of 17 dispute resolution decisions. Only one commercial agreement was signed with the incumbent's mobile arm and the costs were based on retail minus methodology. The weak legal status of the WLR decisions became apparent when, in June, the Polish Appeals Court questioned one of the decisions and suspended its application. UKE reacted by issuing *ex officio* a new six-month decision without consultation. It cited the need to urgently protect end-users and to ensure continuity of service.

Asymmetry in fixed termination rates remained very high in Poland in 2008, reaching some 500%. It was a result of individual UKE decisions aimed at allowing alternative operators to compete more effectively, as well as some commercial agreements signed by the incumbent in 2007. According to information published on its website in October, the President of UKE is planning to gradually remove the differences in rates so as to reach full symmetry in January 2014. A formal decision has yet to be taken.

Broadcasting

Market situation

2008 witnessed a further reduction of 0.9 million subscribers relying on analogue terrestrial broadcasting as their main means to receive TV broadcasts (corresponding to a market share of 38.8% in mid-2008 based on PIKE data). Users switched mainly to the three satellite digital platforms, which in September 2008 held 27.6% of the market (an increase of 1.1 million subscribers), as well as to cable operators, which had a market share of 33.6%, and which were providing some 140 channels, including a number of channels in HD format.

Cable TV penetration remained stable at 6 million passive and 4.5 million active subscribers of some 630 operators. The main growth was registered in the area of digital cable, which was expected to reach 500 000 subscribers at the end of the year according to PIKE, as a large player launched its digital satellite TV in May. Despite progress, this is still a very small subscriber base in comparison to digital satellite.

The incumbent, which in October had ca 60 000 IPTV subscribers, extended its offering to include services based on satellite technology. This will allow greater coverage as the incumbent is planning to attract over a million IPTV users in two years' time. Its main competitor has been testing IPTV services following an agreement with a satellite platform, and was expecting to launch the offer commercially in the first half of 2009.

Regulatory issues

While no new switchover strategy had been formally adopted in 2008, Poland is planning to switch off analogue transmission by the end of 2014. While the first multiplexer will be reserved for the current analogue broadcasters, there is some disagreement between the authorities on the procedure for allocating broadcasters to the second multiplexer. Delays are also caused by the reluctance of private broadcasters to give up analogue frequencies currently licensed until 2014, in exchange for digital ones, while no concrete plans are in place.

In November, UKE launched consultations to gauge interest in digital radio in the 1452-1492 MHz range.

Horizontal regulation

Spectrum management

The NRA's policy is aimed at facilitating access to spectrum, and at effective use of limited resources, in order to boost economic and social benefits. No decisions have been made as regards the digital dividend.

Spectrum trading between undertakings is allowed if both parties consent to it. However, this does not apply to spectrum assigned at auction, in which case a favourable decision by the NRA and the competition authority is required.

Poland is on track for implementing all of the Commission Radio Spectrum Decisions, including Decision 2008/294/EC regarding mobile communication services on aircraft. The President of UKE will authorise base stations on board Polish aircraft, and this will require no separate reservation of frequencies, and there will be no charge.

Rights of way and facility sharing

Operators have complained about cumbersome procedures and the lengthy process (about 18 months) of obtaining permits. They also believe that the lack of architectural planning or clauses in the current plans block the possibility of construction in large parts of Poland. Operators would also like to be more involved in the consultation of draft laws.

While the President of UKE was late in issuing permits for the use of radio spectrum, ongoing local controls resulted in some mobile operators being fined for lack of authorisation of their transmitters.

THE CONSUMER INTEREST

Tariff transparency and quality of service

While tariffs are generally complex and difficult to compare, one pre-paid operator was offering a flat tariff with calls to the EU at the same rate as national calls in order to attract subscribers. The President of UKE has initiated efforts to build a tariff comparison tool to help consumers choose the right offer (the 'tariff calculator'). A public consultation has been carried out and ended on 14 November 2008.

Universal service

Building on the Commission's Communication on the review of the scope of universal service, the President of UKE carried out consultations on the possible inclusion of broadband Internet access in the scope of universal service.

The fixed incumbent, which was designated as universal service provider in May 2006, applied this year for compensation of PLN 220 million (approximately €64.7 million), to be shared by all operators with revenues above PLN 4 million (€1.1 million). Following the Provincial Administrative Court's judgement, which ruled against last year's refusal to grant compensation on procedural grounds, the President of UKE is now trying to verify the cost calculations. However, a decision is not expected until the second half of 2009, due to budget limitations for hiring external experts.

Alternative operators maintain that the compensation figure was inflated by the inclusion of a social tariff plan, which was priced below cost, and was available for all new subscribers and not only those with low incomes or the disabled. This plan was only available to new subscribers until December, and was replaced by one restricted to the most disadvantaged. Despite overall improvements in the provision of service, the incumbent was fined in November for breaching the conditions of the provision of universal service, including in particular the length of time an end-user had to wait for a connection.

Number portability

While number portability for both fixed and mobile numbers has been available since 2006, the process remains lengthy and procedures are cumbersome. Despite the fact that fixed portability currently takes 23 days on average, the number of fixed ported numbers quadrupled in 2008, to reach 294 691 numbers as of October 2008.

The number of mobile ported numbers increased more slowly, and only reached 228 055 numbers as of October 2008. This represents only a small share (1.2%) of total mobile numbers and is also due to the lengthy procedure of some 38 days for post-paid, and approximately one week for pre-paid numbers. Efforts to improve the situation by secondary legislation have failed so far.

Consumer complaints and out-of-court dispute resolution

While Polish consumers are becoming increasingly assertive and carefully monitoring their spending, they have also been taking advantage of the NRA's services such as the call centre or the mediation service.

PORTUGAL

INTRODUCTION

The Portuguese electronic communications markets, in particular the broadband market, started being positively affected by the spin-off of the incumbent's former cable subsidiary, which has brought more infrastructure competition. The number of subscribers using an alternative operator for direct access in the fixed market was the highest in the EU again in 2008. Local loop unbundling (LLU) investments have stabilised, pending the definition of a regulatory approach towards next generation access networks. While usage of mobile broadband in Portugal is amongst the highest in the EU, the fixed broadband market has one of the lowest growth rates.

Over the last few years, the national regulatory authority, ICP-ANACOM, has implemented a functioning regulatory framework for the Portuguese electronic communications markets. However, as most markets were last analysed before July 2005, it appears that the regulator should review all the relevant markets as a matter of urgency in order to adapt regulation to the new market conditions. ICP-ANACOM notified two draft market analyses at the end of 2008 and is expecting to finish reviewing all the relevant markets by mid-2010. Alternative operators have requested more timely regulatory intervention, in particular the revision of the rules for porting numbers and LLU in the context of the installation of remote nodes in the incumbent's fixed network, and have signalled asymmetry of information as one of the critical problems, particularly in relation to access to ducts and LLU.

REGULATORY ENVIRONMENT

Main regulatory developments

The national regulatory authority (NRA) has started the second round of market analyses and, in December 2008, it notified to the Commission the draft analyses of markets for physical network infrastructure access and wholesale broadband access (markets 4 and 5 of the Commission Recommendation), where it has proposed the introduction of geographic segmentation in market 5. In October 2008, the regulator launched a public consultation on modifications required to streamline different aspects of the number portability process (such as deadlines, compensation, wholesale prices, etc.). Portugal has moved forward with its digital switch-over policy with the launch of a tender for assignment of frequencies both for free-to-air and for pay-TV channels, although the decision on pay-TV channels has been suspended following an appeal to the Court.

Electronic communications services are now considered to be essential public services (Lei n°12/2008 amended by Lei n°24/2008), thus adding some additional rules on operators for billing and suspension procedures.

Two infringement proceedings are currently pending in relation to the Universal Service Directive: one on the designation of universal service providers and one on the availability of a comprehensive directory and directory enquiry service (C-458/07).

Organisation of the NRA

ICP-ANACOM has regulatory competence in the postal and electronic communications sectors, and it is developing an accounting separation system for these different activities. In

December 2008, Portugal adopted legislation (Portaria n° 1473-B/2008) approving the fees to be paid by postal and electronic communications operators, such as the administrative charges and rights of use for spectrum and numbering resources.

There were no improvements in the effectiveness of the appeals mechanism, which is one of the slowest in the EU. No final decisions on the substance of the cases have yet been taken by the national courts in relation to appeals against NRA decisions, while some appeals are still pending since 2001, thus creating legal uncertainty in the sector. Moreover, the level of litigation has increased in the past year.

Decision-making

In 2008, ICP-ANACOM notified two market analyses and amended some of the regulatory obligations previously imposed on operators with significant market power (SMP). However, a review of all the relevant markets is increasingly urgent, as most markets were analysed before July 2005 under the first Commission Recommendation and remedies might have become outdated. During the last year, the regulator has been focusing on the review of markets for physical network infrastructure access and wholesale broadband access (markets 4 and 5), which are the most affected by the spin-off of the incumbent's cable subsidiary in November 2007. ICP-ANACOM is expecting to finalise the review of all relevant markets by mid-2010.

Stakeholders have been requesting a more active role on the part of the regulator, in particular where implementation of number portability and LLU is concerned, and a review of much of the regulation already in place. In this regard the NRA has already initiated the procedure to modify portability rules and will revise the reference unbundling offer (RUO) after the analysis of market 4. They have also complained about the lack of control activity and response by the regulator to some of their complaints. For example, a number of complaints concerning fixed termination rates introduced by the incumbent have been pending since May 2006 and, following the lack of progress, the matter was brought to court in July 2008. Moreover, dispute resolution procedures are taking on average much longer than four months.

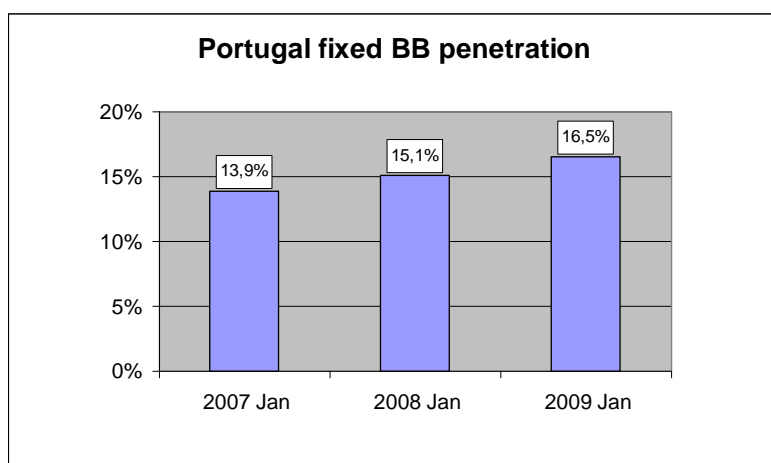
The deployment of fibre by the incumbent together with the installation of remote nodes is considered critical for alternative operators' business plans. The public debate about next generation access (NGA) networks has started with the launch by ICP-ANACOM of a public consultation on NGA networks in June 2008 in order to enhance regulatory certainty. In addition, following a Resolution of the Council of Ministers adopted in July 2008, the regulator is currently drafting legislation in order to tackle vertical barriers to the installation of fibre and provide solutions for sharing in-building infrastructure.

MARKET AND REGULATORY DEVELOPMENTS

Portugal has one of the highest figures in the EU for total revenue and investment as a percentage of gross domestic product (GDP), which highlights the importance of the electronic communications sector in this country. According to estimates from ICP-ANACOM, investment in the electronic communications market in Portugal totalled €1.19 billion, a 52% increase compared to the previous year and 16.4% over revenue. This was mainly fuelled by investment by mobile operators (€736 million) and fixed alternative operators (€224 million). However, compared to the previous year there was a slight decrease in market turnover, which amounted to €7.26 billion in 2007, of which fixed revenues accounted for €1.15 billion and mobile revenues €3.57 billion.

In November 2007, as a follow-up to the plan to fend off a hostile bid, the incumbent spun off its cable subsidiary. There are now two separate undertakings with different boards of directors, although with a partly common shareholder structure. There are strong signs of increased competition in the Portuguese fixed and broadband markets, in terms of network investments and new offers. It should be noted that the Portuguese Government still holds a 'golden share' in the incumbent, and an infringement proceeding is pending in this regard. Moreover, there has been consolidation amongst fixed operators in the Portuguese market.

The percentage of voice traffic originating on mobile networks (62%) compared to fixed networks (38%) is relatively high in Portugal. There is a trend towards the use of bundled services: 5.32% of the population had subscribed to a bundled offer at the end of 2007.



Broadband

Market situation

Fixed broadband penetration grew to 16.5%, which is still below the EU average (22.9%). The Portuguese fixed broadband market has one of the lowest growth rates in the EU, while usage of mobile broadband is increasing with a penetration rate of 12.1% of the population as of January

2009 (8.3% when taking into account only datacards). Operators have launched innovative offers for prepaid mobile broadband services.

There is a slight increase in the percentage of cable lines (38.1%), although DSL is still the main means of access (60.3%). Offers of up to 100 Mbps have been launched in the market, following FTTH deployments in limited areas by some alternative operators and the recent upgrade of the main cable operator's network. Meanwhile, the incumbent has conducted a test on FTTH but claims that its investment in fibre deployment should be subject to more favourable regulatory treatment.

As of December 2007, the digital divide between urban and rural areas in Portugal in terms of DSL coverage has remained more or less stable (13 percentage points), and cable coverage in rural areas is still one of the highest in the EU at 50%.

Following separation of the incumbent's copper and cable networks in November 2007, the market share of the incumbent operator decreased significantly from 70.1% in July 2007 to 40.7% in January 2009. The incumbent's former cable subsidiary has approximately a quarter of the broadband market share.

LLU continues to be the preferred wholesale option for alternative operators. Investment in fully unbundled lines (shared access is still not used) for the provision of broadband services have stabilised at around 300 000 unbundled lines, while the number of bitstream accesses (49 620 lines) is now decreasing.

Regulatory issues

LLU prices continue to be among the lowest in the EU (the weighted monthly average total cost was €10.05 for full unbundling and €3.57 for shared access in October 2008). The regulator is now implementing the ‘use it or lose it’ principle in relation to collocation space in local exchanges after a six-month period, which is considered by operators to be a good measure.

Alternative operators have raised concerns about the Reference Unbundling Offer (RUO), known as ORALL. In particular, they claim that the incumbent is deploying remote nodes in its fixed network, thus reducing the number of lines subject to unbundling from local exchanges and, therefore, creating uncertainty for their business plans. This is of particular relevance in a country where most of the investment in LLU has been committed in the last two years. ICP-ANACOM has been requested to revise urgently the current RUO in order to adapt it to the new market situation.

Unbalanced access to information appears to be a major obstacle as, on the one hand, the incumbent receives forecasts for LLU deployment by alternative operators and, on the other hand, alternative operators lack essential information, such as the characteristics of the loops, the addresses of some local exchanges and the incumbent's plans for modification of the copper networks.

In April 2008, ICP-ANACOM issued a decision establishing that the spin-off company no longer formed part of the incumbent's group and, therefore, was exempt from the obligations imposed on that group following market analysis. Later on, in June 2008, the regulator amended the obligations imposed on the incumbent following the analysis of former market 12 (changing from prior notification of offers to notification up to five days after the launch and modifying the retail-minus calculation).

The incumbent is now offering ‘naked DSL’ in the bitstream reference offer (known as Rede ADSL PT). One operator is negotiating an agreement, whilst others seem to take the view that offer conditions are not satisfactory enough. The incumbent is of the opinion that the low usage of bitstream services in Portugal is due to the combination of LLU deployment and the availability of a duct offer.

In June 2008, ICP-ANACOM launched a consultation on NGA networks in order to enhance regulatory certainty. In July 2008, the Portuguese Council of Ministers adopted strategic guidelines in order to promote investment in new generation networks and requested ICP-ANACOM to define a regulatory approach in this regard. Following that, the regulator is currently drafting legislation in order to tackle vertical barriers to the installation of fibre and provide solutions for sharing in-building infrastructure.

Finally, in December 2008 the regulator notified to the Commission the draft analysis of the markets for physical network infrastructure access and wholesale broadband access (markets 4 and 5 of the Recommendation), where it has proposed the introduction of geographic segmentation in market 5. In January 2009, the regulator adopted final measures on markets 4 and 5.

Mobile markets

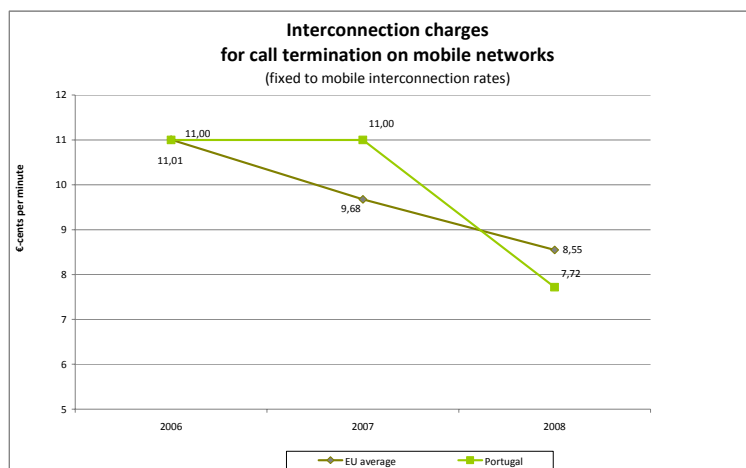
Market situation

During the last year, mobile penetration has grown significantly in Portugal (14.63 percentage points) amounting to 136.96% in October 2008, which is above the EU average (118.9%) and shows the intensive use of mobile services by Portuguese subscribers. The average price per minute for mobile voice services in Portugal is €0.14, which equals the EU average, and the annual average revenue per user (€276.99) is slightly below the EU average (€282.49).

The proportion of prepaid customers (72%) is still one of the highest in the EU, although it has slightly decreased. The Portuguese mobile market is also characterised by low churn and high customer loyalty, and the figure for ported mobile numbers is still low at 212 406 as of October 2008.

Regulatory issues

In October 2007, ICP-ANACOM notified to the Commission a glide path ending in October 2008, which reintroduces asymmetric regulation of mobile termination rates (MTRs) with the aim of addressing network effects and traffic imbalances. The Commission commented that this represented a substantial change from the obligations previously imposed and noted that cost orientation, as envisaged in the first notification of 2004, had not yet been implemented, although the further price reductions were welcomed.



that cost orientation, as envisaged in the first notification of 2004, had not yet been implemented, although the further price reductions were welcomed.

Following these comments, in July 2008 the regulator adopted final measures in the voice call termination market including symmetric prices (€0.0065 by October 2009) at the last step of the glide path, which has been extended by one more year. This decision by ICP-ANACOM has been appealed by two mobile operators. Moreover, the regulator plans to develop a methodology for cost accounting during the next year while, in the meantime, MTRs are still based on benchmarking. Following the latest price reductions, MTRs in Portugal (€0.0772) are now below the EU average (€0.0855).

The NRA has not notified the mobile access market (former market 15 of the Recommendation), but it is still evaluating the possible existence of SMP in this market and possible approaches to mobile origination. In addition to a number of agreements signed by mobile service providers and by the postal incumbent, the main cable operator signed an agreement with the second mobile network operator (MNO) and launched commercial services in October 2008. However, their market share is not yet significant.

In August 2008, the regulator launched a public tender for frequencies in the 450-470 MHz band for the provision of mobile services at national level, which was technologically neutral. A decision by the regulator is expected soon.

International roaming

In July 2008, Portugal amended the Lei das Comunicações Electrónicas n°5/2004 in order to provide for a sanctioning regime in the event of non-compliance with the Roaming Regulation, establishing sanctions up to €5 million⁸⁶. In August 2008, ICP-ANACOM took steps to raise mobile subscribers' awareness of inadvertent roaming in border areas.

Fixed

Market situation

The incumbent still has a very large share of the fixed voice market, with 68.80% in terms of revenue in December 2007 (compared to an EU average of 64.76%), although its share continues to decrease gradually. This decline may accelerate in the future following the entry of the main cable operator into the fixed voice market.

As of July 2008, 36.5% of subscribers were using a provider other than the incumbent operator for direct access, which constitutes a significant increase compared to 23% one year earlier and the 18.6% EU average. This figure shows that the use of alternative operators for the provision of fixed voice services has significantly increased in recent years, due to the existence of cable providers, LLU operators, and above all the provision of fixed telephone services using mobile frequencies.

The use of carrier pre-selection (194 000 lines by mid-2008) is decreasing due to the increased use of LLU and the consolidation in the market.

Regulatory issues

The interconnection charges for terminating calls in the incumbent's network are just below EU average, following the most recent modification of the Reference Interconnection Offer (RIO) by the regulator in March 2008. Since the beginning of 2007, the incumbent is offering capacity-based interconnection in addition to the metered interconnection model, and so far one alternative operator is using it.

Owing to increased use of LLU and consolidation in the market, the use of wholesale line rental (WLR), which enables alternative operators to provide access together with telephone services, has decreased (106 000 lines by mid-2008).

Broadcasting

Market situation

The main platform for the provision of broadcasting services is analogue terrestrial TV (32.96% of households over population), with cable (14.13% of subscribers over population) as the second most important means of access followed by satellite (4.71% of subscribers over population). The number of IPTV subscriptions is marginal (0.94% of subscribers over population). In addition to two analogue terrestrial networks, Portugal has very high cable network coverage, covering almost three in every four households, with some regional cable operators and one main nationwide cable operator.

⁸⁶ Lei n°35/2008.

In April 2008, ICP-ANACOM ruled that the rights of use of spectrum for the public analogue broadcaster should finish with the switch-off date without compensation. In February 2008, two public tenders were launched for the assignment of frequencies for digital terrestrial television (DTT) both for free-to-air (including certain must-carry obligations) and for pay TV channels. The decision to award the frequencies for the pay TV channels to the incumbent has been suspended following an appeal by one bidder. While a final decision by the courts is still pending regarding pay TV channels, the incumbent has already been granted a frequency right of use with national scope and should start broadcasting the digital free-to-air channels by August 2009, in order not to compromise the implementation of the switch-off by 2012.

Regulatory issues

In 2007, ICP-ANACOM adopted final measures regarding the market for broadcasting transmission services. The regulator considered only the analogue terrestrial television broadcasting to be a wholesale market susceptible to *ex ante* regulation. As a result, the obligations under the concession granted to the incumbent until 2025 have been maintained and further obligations to ensure transparency and accounting separation have been imposed.

Horizontal regulation

Spectrum management

The regulator has begun gradual introduction of technological neutrality in terms of spectrum use in the recent spectrum assignments in Portugal, such as in the tenders for frequencies in the 450-470 MHz (mobile services at national level) and 3.4-3.8 GHz (Broadband Wireless Access segmented at regional level) bands. For the assignment of frequencies in the 3.4-3.8 GHz band, ICP-ANACOM envisages a two-phase auction with the second phase open to all operators. Regarding the 450-470 MHz band, some operators have expressed concern about possible changes by the regulator to the scope of an existing licence of one operator, which currently provides services to closed groups in that band. Moreover, in December 2008 the regulator launched a public consultation on rights of use of frequencies in the 2.6 GHz band.

Portugal has implemented the most recent Commission Decisions adopted under the Radio Spectrum Decision up until the end of 2007 (2007/98/EC and 2007/131/EC), while the implementation of Commission Decision 2007/344/EC is still under way. The regulator submitted a new national frequency allocation plan (known as QNAF) to public consultation in October 2008. The regulator repealed the exclusive use of 900 and 1800 MHz bands for GSM technologies, although those bands are still reserved for mobile services.

ICP-ANACOM will launch a public consultation on the digital dividend during the next year. Stakeholders continue to request specific conditions for spectrum trading, although under the QNAF all rights of use for frequencies may be transferred.

Rights of way and facility sharing

Under national law, the incumbent, as holder of a concession, is obliged to provide a reference offer for access to ducts and associated infrastructure (known as ORAC), which is currently used by 16 undertakings. Since the reference offer was introduced, operators have submitted more than 4 800 information requests and 10 000 viability requests. Alternative operators are pointing to service-level agreements and information on duct availability as the two areas for improvement and where they feel discriminated against by the incumbent. In

August 2008, the price for access to the duct database was established by ICP-ANACOM at cost-oriented prices.

THE CONSUMER INTEREST

Tariff transparency and quality of service

In March 2008, Portugal adopted general consumer legislation, Decreto-Lei 57/2008, transposing Directive 2005/29/EC on unfair commercial practices. Following ICP-ANACOM's interpretation regarding electronic communications operators, mobile operators are offering at least one opt-in tariff under which calls are billed on a per-second basis after a single initial period of ten seconds for all types of calls. In 2008, the regulator published two reports on the quality of service of mobile and access to Internet services.

Universal service

In 2005, the Commission started infringement proceedings because of its concern that the current concession contract, whereby the incumbent operator will continue to provide universal service until 2025, unduly excludes any other operator from being designated as a universal service provider.

In this context, in February 2008 the regulator launched a public consultation on a comprehensive list of topics related to the designation of universal service providers. Subsequently, in July 2008 ICP-ANACOM submitted to the Government a summary of the contributions to the public consultation, which was published in September 2008, and a document with recommendations. However, the calendar that was notified to the Commission in 2007 is not being fulfilled and it remains to be seen how the current concession contract can be adjusted to the new circumstances. In January 2009, the Commission referred Portugal to the European Court of Justice.

So far the regulator has rejected the incumbent's claims for compensation for the cost of universal service: prior to 2001 on the basis that the market had not been fully liberalised, and subsequently on the basis that the data provided were incomplete. The current universal service provider has requested ICP-ANACOM to develop a methodology for assessing the unfair burden.

A comprehensive directory and a directory enquiry service covering all subscribers of telephone services are still not available in Portugal. Although there were bilateral negotiations and a proposal from one of the relevant operators during the last year, two mobile operators have not yet supplied their subscriber data to the universal service provider. At national level the appeal introduced by ICP-ANACOM against the decision of the Lisbon Administrative Court of 28 March 2006 is still pending, and at EU level infringement proceedings were brought before the European Court of Justice in June 2007 (C-458/07).

Number portability

The volume of ported fixed numbers continues to grow with 868 029 numbers ported by October 2008. However, the use of mobile number portability remains low (212 406 numbers ported by October 2008). There is currently an average period of 13 days for porting fixed numbers and eight days for porting mobile numbers in Portugal, measured as from the date when the recipient operator submits the request to the donor operator, which are amongst the

longest periods in the EU. The maximum price for a ported fixed number had further decreased by March 2008 to €4.01 and further reductions are expected.

Some alternative operators raised concerns that the incumbent was obstructing the process of fixed number portability by massively rejecting requests without adequate grounds, which significantly increased the average time taken for porting fixed numbers (average of two months). The regulator is currently investigating this issue.

ICP-ANACOM has proposed to amend the rules for number portability, including, amongst other issues, a reduction to two working days for the minimum period between the submission of the electronic request to the donor operator and the implementation of portability by the recipient operator, both for fixed and for mobile numbers. It is also proposed to broaden the scope to include, for instance, VoIP services, to eliminate the capacity limit for ported numbers per day and to simplify conditions for verification of subscriber's request and compensation rules.

Consumer complaints

The NRA seems to be paying increased attention to consumer issues. The unit in the NRA dealing with complaints and requests for information received 15 257 complaints in the first half of 2008, which represents a significant increase from previous years. For the complaints directly addressed to ICP-ANACOM, the main issues relate to contracts and billing. It should be noted that the regulator cannot issue binding decisions on conflicts between end-users and operators. In order to get a binding decision, consumers should turn to arbitration centres, which are voluntary for operators, or to the courts.

European emergency number 112

Currently, calls to the emergency number 115 are subject to the same treatment as calls to the single European emergency number 112. The Portuguese authorities are considering an overall reorganisation of the 112 service by 2009, aimed at reducing the number of answering centres and including improved backup services and linguistic capabilities, access for disabled users and treatment of hoax calls.

In relation to the above, in October 2008 ICP-ANACOM launched a public consultation in order to specify the already implemented technical solutions for the provision of caller location information to the authorities handling emergencies, in particular in relation to the location information's accuracy for mobile 112 calls and the information format for the database for fixed 112 calls.

Must-carry

In addition to the current must-carry obligations imposed on cable operators to provide two national and two regional public channels, the incumbent has been awarded DTT frequencies for free-to-air channels, which include certain must-carry obligations.

Data protection

The transposition of the Data Retention Directive (2006/24/EC) was completed in July 2008 (Lei n° 32/2008 of 17 July), although it is not yet in force pending the publication of a separate piece of legislation. Since Portugal did not request a postponement of the application of this directive for Internet data, its provisions will apply to all network operators and service

providers. The retention period is one year and costs will be borne exclusively by market players.

ROMANIA

INTRODUCTION

The electronic communications market is still at an early stage of development in Romania, following the liberalisation of the market in 2003. However, the trends identified in previous years have continued in 2008, in particular in terms of growth of the mobile and broadband markets. These positive trends have mainly been driven by market forces. Some of the measures taken so far by the National Regulatory Authority, such as reducing termination rates, have also supported the development of the market. However, there have been no significant government measures, such as a national broadband strategy, to provide guidance and support to the market players and to overcome the obstacles due to low penetration of PCs, lack of connections at a fixed location and low income levels⁸⁷.

Romania still has the lowest fixed line and one of the lowest broadband penetration rates in the EU-27. The late take-up of broadband is reflected in usage of online services, for which Romania is one of the lowest ranking countries. Nevertheless the new CDMA licence which has been granted to the fixed incumbent and the opening of the spectrum for Wi-Max communications might provide the basis to close the rural gap. There is a strong preference in the Romanian electronic communications market for bundled services, which include four-play offers.

Access to infrastructure bottlenecks is still limited in Romania; however there are signs of significant platform competition. Only one market analysis has been notified to the Commission in 2008. Ensuring the provision of universal service is a task which is yet to be completed by the Romanian authorities and no substantial progress can be reported within the last year, although several preparatory measures have been taken. The implementation of the rights of way regime continues to raise difficulties in practice. A major development is the availability of number portability since October 2008.

The emergent Romanian telecoms market was also marked during the last four years by substantial changes affecting the Romanian Regulatory Authority for Communications (ANC), such as replacement of two of its Presidents before the end of their mandates and reorganisations. This has not helped to establish legal certainty and stability in the market.

REGULATORY ENVIRONMENT

Main regulatory developments

The primary legislation transposing the 2002 regulatory framework on electronic communications was amended to ensure the proper enforcement of the Roaming Regulation as well as proper functioning of the European Emergency number in Romania⁸⁸. In addition, the Emergency Ordinance restructuring the National Regulatory Authority, which was passed by the Government in September 2008, should be mentioned as a significant change.

Organisation of the NRA

On 18 August 2008 the Prime Minister of the Romanian Government decided to remove the President of the Romanian Regulatory Authority — the National Regulatory Authority for Communications and Technology Information⁸⁹ (ANRCTI) on various grounds including

⁸⁷ Romania scores the lowest in the EU with 232 PPPs (Purchasing Power Parities) an indicator which measures the purchasing power of the minimum wage (€137 in July 2008). However it also has the highest minimum wage growth rate in the EU for the last 8 years — *Source: EUROSTAT, Statistics in focus, 105/2008*.

⁸⁸ Government Emergency Ordinance No 60/2008 amending Government Emergency Ordinance no. 79/2002 and the Government Emergency Ordinance No 34/2008 for the organisation and functioning of the Single National System for Emergency Calls.

⁸⁹ Decision of the Prime Minister no.165/18.08.2008.

violations of the Electronic Communications Act⁹⁰, before the end of the 5 year mandate provided for by the law. On 20 August 2008 the Prime Minister appointed a new President of the Regulatory Authority⁹¹.

On 17 September 2008, the Bucharest Court of Appeal suspended both the Decision of the Prime Minister of 18 August 2008 dismissing the president of the National Regulatory Authority and the Decision of the Prime Minister of 20 August 2008 appointing the new President⁹². However, the court ruling could not be enforced due to the fact that on the same day the Romanian Government adopted Emergency Ordinance No 106/2008⁹³, which restructured and renamed the Regulatory Authority as the National Authority for Communications (ANC).

The Commission sent two administrative letters on 19 September and on 14 October to the Ministry of Communications asking for clarifications relating to the measures taken by the Romanian Government to restructure the National Regulatory Authority, in order to assess their compliance with the EU regulatory framework for electronic communications.

The Commission was informed that the urgency requirement established by the Romanian Constitution for adopting such an emergency act was fulfilled by the need to allow the new authority to fight more effectively against internet fraud and to improve the coherence in the management of internet resources in Romania; for this purpose it was vested with the responsibility to manage the .ro and second level .eu domains, and with additional jurisdiction in the internet security area.

In January 2009, the Commission initiated the infringement proceeding against Romania for non-compliance with the Framework Directive.

Decision making

In 2008 ANC continued mainly with preparatory work for the market review process with the only notification to the Commission being the fixed call termination market. The broadcasting transmission services market review was submitted to public consultation between October and November 2008; the voice call termination on individual mobile networks market review was submitted for public consultation between November and December 2008. The other market reviews were under preparation at the end of 2008 following two pre-notification meetings with the Commission that took place in 2008. The consultation within the market review process is considered appropriate by the market players. Nevertheless some of them complained that ANC seemed to lack the ability or interest to have a real dialogue in relation to the decision making process⁹⁴. ANC is cooperating on a permanent basis with the Competition Council in the course of the market review process.

The decisions of ANC may be challenged by any interested party both on their merits and on legal grounds, firstly before the Bucharest Court of Appeal, and secondly before the High Court of Cassation and Justice. According to ANC, an appeal takes in the first instance, on average, 6 to 16 months, whereas the procedure before the High Court of Cassation and Justice takes, on average, 4 to 10 months. The appeals for suspension of ANC decisions must be ruled on by the courts in an emergency procedure, therefore they last about 3 months for the first stage before the Bucharest Court of Appeal, and 4 months in the second stage, before the High Court of Cassation and Justice.

⁹⁰ Government Emergency Ordinance No 79/2002 on the general regulatory framework for communications.

⁹¹ Decision of the Prime Minister no.168/20.08.2008.

⁹² Decision no. 2352/17.09.2008 of the Bucharest Court of Appeal.

⁹³ 'Ordonanta de urgenta No 106/2008 privind infiintarea Autoritatii Nationale pentru Comunicatii'.

⁹⁴ ANC pointed out that the fact that it does not always accept the views expressed by the market players does not mean that the Authority does not analyse or take into account their comments; on the contrary ANC mentioned that it had always published its detailed response to the comments received during the consultation process, together with the arguments for taking them on board or not, and has thoroughly discussed them during meetings held with the industry before the adoption of each decision.

Several market players deplored the length of the judicial proceedings, which has caused them to give up legal actions. The judicial proceedings can be prolonged by various procedural means, such as constitutional challenges and the periods between the procedural cycles (i.e. between the first and the second appeal) which can take a long time, sometimes due to lengthy delays caused by the time needed by the courts to draw up the grounds for their decisions.

MARKET AND REGULATORY DEVELOPMENTS

Revenues in the telecommunications sector in 2007 totalled €4.2 billion, an increase of 14.4% as compared with the figures reported for the previous year. This is made up of revenue from the fixed markets (including broadband and leased lines) amounting to €1.3 billion and revenue from the mobile markets totalling €2.4 billion. The total value of tangible investment in telecommunications networks during 2007 was €910 million. The investment-over-revenues ratio in the Romanian electronic communications sector was 21.5% in 2007 compared to an EU average of 14.74%.

Fixed-line penetration remains low, although the decreasing trend observed in the last two years has been slightly reversed. Nevertheless fixed outgoing voice traffic is less than half that of mobile, as the mobile penetration rate has increased considerably. The broadband penetration rate has continued to increase steadily in 2008, but it is still only half of the EU-27 average.

Romanian market players seem to have a clear preference for deploying their own infrastructure, while access to other networks is still under-developed. This generates considerable platform competition, although mostly in urban areas. A major reason is the rather low costs for deploying new networks, especially neighbourhood networks (using UTP/FTP technology) and overhead coaxial cables and fibre. It remains to be seen how platform competition would be affected should the authorities take a stricter attitude towards overhead cabling.

Some operators complained about the high contributions they are required to make to ANC's budget, which is reportedly not always used directly for the Telecom market, but sometimes for related projects of general public interest. The 112 service was cited as an example in this context⁹⁵ for a number of reasons. Firstly the provision of caller location was subsidised from the NRA's budget. Secondly all operators have to support the costs of 112 calls originating in their networks, and finally, an obligation has been imposed on the MNOs to send warning SMSs (short messaging service) in bulk to those who call 112 abusively, at the MNO's own expense⁹⁶.

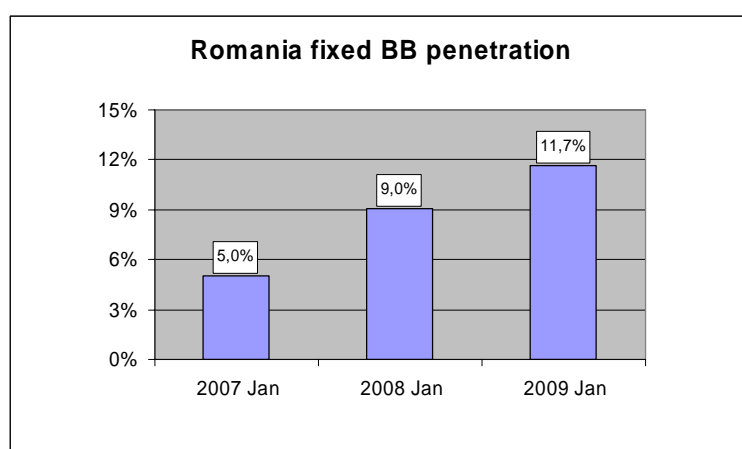
Broadband

Market situation

⁹⁵ The ANC's budget is mainly funded from the monitoring tariff which covers exclusively the administrative costs for the functioning of the Authority, and the tariffs for the use of scarce resources (spectrum and numbers). These resources are considered public property and, according to the law, part of the money collected from these tariffs is transferred to the state budget which funds the 112 service.

⁹⁶ According to ANC, this temporary obligation is in line with the national legislation and was imposed based on operators' voluntary commitment, expressed during the preliminary consultations, to bear the SMSs costs for an experimental, temporary measure intended to limit abusive calls. In addition, taking into account that in Romania more than 90% of the calls to 112 are reportedly abusive, the measure is considered to benefit the operators too, by reducing the origination costs borne by each of them.

The fixed broadband penetration rate, although steadily increasing, is one of the lowest in the EU — 11.7% in January 2009 from 9% in January 2008. There are several reasons for this, such as the later liberalisation of the market (2003), the late launching of DSL by the incumbent (late 2005), the low usage of personal computers (PCs) (only 35% households have access to a PC), the lack of broadband coverage (26% population lived in localities without broadband coverage in December 2007) and low income, especially in rural areas. The Romanian fixed broadband market has an interesting competing platform structure. By far the largest share among the fixed broadband technologies is represented by the UTP/FTP connections (the neighbourhood networks) which amount to 52.6% of the broadband access lines, increasing by 16% in the first half of 2008. Secondly, broadband access is provided through xDSL connections, which increased substantially in the same period, accounting for 22.5% of the market⁹⁷ and surpassing for the first time the coaxial cable which represents 19.6% of the market. Fibre connections, which can provide high quality service and high speeds, represent 3.9% of the Romanian broadband retail market and fibre continues to be rolled out. Although not yet representing a significant market share, the approximate 89 000



FTTH lines is the fifth largest in the EU in absolute terms.

The broadband market share of the incumbent operator was 26% in January 2009, which is still among the lowest figures in the EU; however it is a considerable increase from 17.2% one year earlier. The new entrants seem to have no share in the DSL market in January 2009. The low DSL penetration ratio means numerous other broadband platforms are

being deployed, which could provide a basis for strong platform competition as a future driver of broadband growth. Although mobile solutions for providing broadband Internet (HSDPA) are used in Romania, these technologies are seen by the market as less reliable and as having lower capacity than fixed lines (in particular fibre optic and VDSL)⁹⁸. This partly explains why there is a genuine interest by MNOs in the fixed market.

As regards the broadband access market, new entrants state that it is difficult to compete mainly due to the high prices for accessing other networks in a market with fierce price competition, lack of regulatory measures and wholesale offers which lack clarity. Deployment of fibre optic (FTTC) in the access network, while bringing clear advantages for the end-users, could also have a considerable impact on the future demand for wholesale access. There are nevertheless high expectations in the market, also relating to the results of the ongoing market review process.

In terms of the digital divide, while figures were not available for DSL, in December 2007 the rural cable coverage was 25% while the rural cable gap with national coverage was 10.7%. Urban cable coverage was 50%⁹⁹.

Regulatory issues

The Romanian wholesale broadband access market is not regulated under the 2002 regulatory framework and the market analysis has not yet been completed. Bitstream access is still

⁹⁷ 26% of the market in January 2009.

⁹⁸ The mobile broadband penetration rate was 5.6% in January 2009, less than half of the EU average – 13%. The number of mobile broadband connections using only dedicated data cards/modems/keys, typically allowing mobile Internet via laptops, was significantly lower standing at 1.3% in January 2009, while the EU average stood at 2.8%.

⁹⁹ IDATE Study 2008 - 'Broadband coverage in Europe' — data for end of 2007.

unavailable. However, ANC considers that is not necessary to mandate the introduction of Bitstream access.

As regards the local loop unbundling (LLU) market, the designation in 2004 of the fixed incumbent as an operator with significant market power (SMP) is still valid. Transparency (publication of the reference unbundling offer (RUO) for both full and shared access, and of internal reference conditions for access to local loop), non-discrimination, cost-orientation, accounting separation and access obligations were imposed. The LLU tariffs in the RUO of the fixed incumbent were determined on the basis of retail minus methodology. By July 2008, only 1 460 local loops were fully unbundled and 390 local loops were used for shared access. While the wholesale fees for LLU are approximately at the EU average, alternative operators complain that the level is too high to allow them to compete on the market¹⁰⁰. ANC plans to build a cost-oriented calculation model for the access network services and related facilities using external consultancy.

As regards the planned national broadband strategy, a first draft was finally submitted for public consultation in October 2008.

Mobile markets

Market situation

There are five active mobile network operators (MNOs); two of these operate both GSM and 3G networks; one operates exclusively a GSM network; the fourth operates both CDMA and 3G networks and the fifth is exclusively a UMTS operator (3G). In 2008 the fixed incumbent was awarded a CDMA licence for 410-415/420-425 MHz bands, following a public tender organised by ANC.

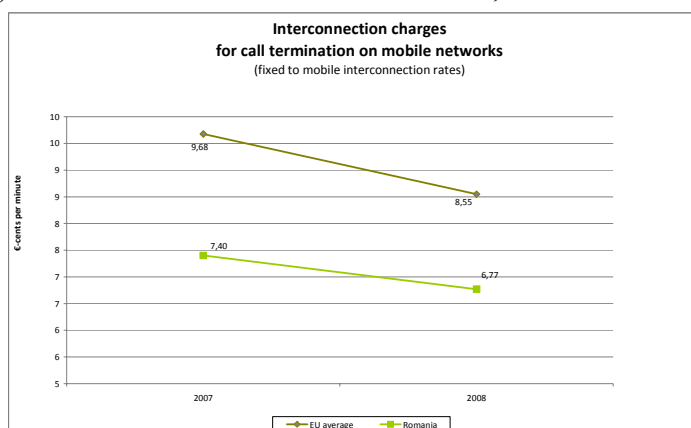
The Romanian mobile market has been highly dynamic, reaching a penetration rate of 103% in October 2008 (86% — 1 year earlier). There are over 22 million SIM cards, out of which

59% are pre-paid. There are no virtual mobile network operators (MVNOs) in Romania. The first two MNOs together hold 76% of the market. The third MNO increased its share by 53%, now exceeding 5 million subscribers. The fifth operator in the market, which launched its mobile services in 2007, announced in November 2008 that its subscribers now exceed 1.2 million.

The average price per minute of voice communications was €0.08 in 2007, below the EU average of €0.14. The average mobile termination rate (MTR) in Romania in 2008 stood at €0.0677, decreasing from €0.074 in 2007, and below the average MTR in the EU which stood at 0.0855 in 2008.

Regulatory issues

The wholesale voice call termination on individual mobile networks market was submitted for public consultation between 20 November 2008 and 22 December 2008. The two leading MNOs are already subject to a glide path which was imposed by ANC before Romania's accession to the EU, leading to symmetry of their MTRs. Only transparency and access obligations were imposed on the third and fourth MNOs. The application of the last stage of the glide path, which had been postponed by one year in December 2006, starts in January 2009. MTRs which were fixed at €0.064 in 2008 for the two market leaders decrease to €0.0503 from 1 January 2009 and should remain at this level until 2011.



¹⁰⁰ The full unbundling tariff is €8.37/month and €77 connection fee, excluding VAT. The shared access fee is €4.20/month and €59 connection fee, excluding VAT.

Nevertheless, the draft new market analysis identified all five mobile network operators as having significant market power for call termination on their own networks. According to documents submitted for national consultation, the maximum interconnection tariffs applied by the previously non-regulated MNOs should decrease in the next 2 years towards €0.0503 based on a gradual glide path, taking into account the date of entry into market. In addition, the obligation to provide interconnection services under transparent non-discriminatory conditions should also be imposed.

Roaming

The mobile network operators are reported to have implemented the Roaming Regulation¹⁰¹ in a timely manner. The CDMA operator in the 450MHz band does not provide international roaming services within the meaning of the Roaming Regulation.

The tariffs were set at the maximum ceilings or slightly below both for receiving and making roaming calls within the EU. The data available for 2008 indicate that Romania is close to the EU average values and patterns as far as voice roaming and SMS is concerned, while the tariffs for data roaming are higher than the EU average. Out of the 5 million roaming subscribers, 98% use the 'eurotariff'.

Fixed

Market situation

There are 4.41 million fixed telephony lines, of which 31.3% are provided by the alternative operators. In July 2008, there were 35 alternative fixed operators providing access using their own infrastructure. Romania is one of the leading Member States in managed VoIP originated calls, which account for 24% of the traffic in the fixed sector. The price for most type of calls made from the fixed networks seems to have decreased considerably in 2008.

The market share (direct access lines) of the incumbent continued to decrease, reaching 68.70% in July 2008 (71.30% in December 2007) while that of the alternative operators increased to 31.30% (28.70% in December 2007)¹⁰². Based on their wireless networks, by July 2008 two MNOs had launched fixed access solutions ('Home zone' services), which for the moment have captured less than 1% of the fixed access market, but which could have considerable growth potential since their providers cover 98% of the population.

There has been no change in the last 12 months in the shareholding structure of the incumbent, although further privatisation of the State's remaining ownership rights (45.99%) was announced in 2005 and more recently at the beginning of 2008; a consultant may be appointed to advise the Government on the next steps. It is too soon to assess the impact of the takeover by Deutsche Telekom of the incumbent's main shareholder (OTE Greece).

Regulatory issues

The market for call termination on individual public telephone networks provided at a fixed location was notified to the Commission. ANC identified 38 relevant markets and 38 SMP operators. Various remedies were imposed such as provision of access to and the use of specific network facilities, non-discrimination, transparency and cost orientation¹⁰³. In addition, accounting separation was imposed on the incumbent.

Carrier pre-selection (CPS) became effective in July 2006 and the interconnection tariffs for call origination (including CS/CPS) are set by ANC based on a LRIC model. Nevertheless, the alternative operators (24 CS providers and the three CPS providers) continue to provide electronic communications services via these facilities for only 73 000 CS customers and 9 000 CPS customers.

Broadcasting

Market situation

¹⁰¹ Regulation 717/2007/EC of 27 June 2007 on roaming on public mobile telephone networks within the Community and amending Directive 2002/21/EC (OJ L 171 of 29 June 2007 p. 32 – 40).

¹⁰² The incumbent's market share is higher in terms of retail revenue accounting for 81% in December 2007, but decreasing from 89% one year earlier.

¹⁰³ The application of the cost orientation obligation previously imposed on the incumbent was modified in that the LRIC-based caps differentiating between peak and off-peak were replaced by a single cap on the average tariff for each level of interconnection with the incumbent's network (€0.0084 /min – local, 0.0097 – regional and 0.0106 – national, from 1 September 2008). For the other operators, the average tariffs are being reduced along a glide-path in order to reach symmetry in 2009 at the level of the incumbent's regional termination tariff (0.0115 from 1 September 2008 and 0.0097 from 1 July 2009).

In Romania there are 7.2 million households with TV services (out of 7.32 million households), of which approximately 3.6 million are cable-based (16.72% population/ 49.1% households), 2 million satellite-based (DTH — analogue and digital signal) (9.29% population/ 27.3% households) and 1.6 million analogue terrestrial (7.43% of population/ 22% households). The cable market is still fragmented among more than 500 service providers, but the two major cable operators provide services to over two-thirds of cable subscribers. The main platform for broadcasting services is analogue cable. IPTV services are only provided in the Bucharest area and seem to be having a slow take-off in Romania generally due to the relatively lower investment costs for cable and DTH.

Digital switchover is expected to be implemented by 2012, but a national strategy for digital switchover does not yet exist. In the meantime, the Ministry of Communications has selected a consultant to help draft the strategy for the switchover in order to meet the 2012 deadline. The consultant's report was delivered in December 2008.

The Government adopted Emergency Ordinance No 181/2008 amending Audiovisual Law No 504/2002 which establishes certain principles and competences relating to the digital switchover and provides that the switchover strategy be issued within 12 months (by the end of 2009). Before the adoption of this emergency ordinance, several media organisations, unions and employers' associations publicly protested against another initiative with a similar object, claiming that it would have allowed the Government to decide alone on the entire allocation mechanism for digital frequencies.

Several experimental DVB-T projects are being run now by publicly and privately owned operators in Bucharest and Sibiu. Two DVB-T multiplex licences could be granted at the beginning of 2009 to operate in simulcast with analogue terrestrial television channels until 2012.

Regulatory issues

The broadcasting market review was subject to public consultation in October — November 2008. According to the preliminary conclusions, Radiocom's legal monopoly¹⁰⁴ creates potential competition problems affecting the analogue terrestrial transmission of public television and radio services. That is why the obligation to develop and implement a costing model with appropriate remedies was proposed.

Horizontal regulation

Spectrum management

Responding to a recent proposal from the Commission¹⁰⁵, the Minister of Communications amended the National Table of Frequency Band Allocations in 2008 to make available GSM radio spectrum bands for UMTS systems¹⁰⁶. Accordingly, in October 2008, ANC submitted for public consultation a draft decision which aims to allow the operators in the GSM bands the possibility of offering 3G (multimedia and data transmission) services in the GSM spectrum they are already using, by means of UMTS systems. Nevertheless, the possibility of distorting competition in the Romanian mobile market cannot be ruled out, since it benefits the three MNOs already holding GSM licences, one of which has not managed to acquire a UMTS licence in the licencing tender procedures organised so far.

Fixed wireless access is expected to provide increased broadband access in particular in those areas which are not covered by the traditional fixed networks. In July 2008, ANC launched a public tender procedure to grant two national licences for broadband wireless access (BWA) systems in the 3.6 GHz and the 3.7 GHz bands. These bands have been made available

¹⁰⁴ The National Radio-communications Company (Radiocom), which is 100% owned by the Romanian State, enjoys a legislative monopoly to provide, on an exclusive basis, transmission services for the public broadcasters, whereas the public broadcasters are obliged by law to purchase transmission services from Radiocom.

¹⁰⁵ COM(2008) 762 final.

¹⁰⁶ Order of the Minister of Communications and Information Technology no.432/2008.

according to a Government Emergency Ordinance adopted in 2008¹⁰⁷, which restricted the state-owned National Radio-communications Company's (Radiocom's) rights of use for the 3.6 – 4.2 GHz band. The same act provided an additional licence to Radiocom to be used for BWA communications, formally granted to Radiocom by ANC on 28 November 2008. Finally, the Emergency Ordinance requires ANC to adopt a strategy and an action plan to implement the BWA systems countrywide.

The tender procedure for the CDMA 410-415/420-425 MHz bands was subject to discussions between the Regulatory Authority and the Competition Council, which interpreted in a different manner, the restriction¹⁰⁸ imposed by the Government Decision No 61/2008¹⁰⁹ regarding ability to compete in the tender. ANC decided to interpret the decision narrowly and consequently allowed the fixed incumbent, which is a shareholder in one of the MNOs active in the Romanian market, to compete. Consequently, several MNOs requested the Courts to suspend the Decision of the Government on which the selection procedure was based.

Implementation of spectrum decisions

Decisions 2004/545/EC on 79GHz automotive short-range radars (SRRs), 2005/50/EC on 24GHz auto SRRs, 2005/928/EC ex-ERMES, 2006/771/EC on short range devices (SRD), 2006/804/EC on radio spectrum for radio frequency identification devices (RFID), 2007/90/EC on 5GHz Wireless Access Systems including Radio Local Area Networks (WAS/RLANs) were transposed in the Romanian legislation by an order issued by the minister of communications in December 2008¹¹⁰, following an administrative letter sent by the Commission in February 2008. Decision 2007/131/EC on ultra-wideband technology (UWB) has not yet been transposed.

Numbering

From May 2008, fixed telephone numbers are composed of 10 digits for all types of calls. Before this change in the National Numbering Plan, Romanian fixed telephony users used several dialling formats, which generated confusion and could have favoured the providers of shorter numbers composed of six and seven digits.

In August 2008, ANC opened non-geographic numbers included in the National Numbering Plan (PNN) for the use of mobile virtual network operators. The numbering resources are allotted in blocks of 100 000 numbers.

In addition, in December 2008 ANC assigned the first national numbers for directory enquiry services within the 118 (xyz) ranges to 11 companies and allocated the National Short Numbers for Harmonised Services of Social Value 116000 and 116111 and several Short Geographic Numbers for local public interest.

Rights of way and facility sharing

The application of the rights of way regime has raised certain difficulties in practice in Romania. Electronic communications providers have reportedly faced obstacles to rolling out their networks, claiming that the main cause is the lack of an appropriate regulatory regime for rights of way which would allow a streamlining of the authorisation procedure for rolling out cable networks as well as the possibility to install equipment such as masts and antennas. The proposal for a 'Law on the electronic communications networks infrastructure' aimed at establishing a clear procedure for granting rights of way, which was supposed to be submitted to the Parliament, has made no further progress since November 2007.

¹⁰⁷ 'Ordonanță de urgență nr. 18/2008 privind stabilirea unor măsuri pentru reorganizarea utilizării spectrului radio în banda de frecvențe 3600-3800 MHz'.

¹⁰⁸ Operators already holding a mobile telephony licence were not allowed to participate.

¹⁰⁹ 'Hotărârea Guvernului nr. 61/2008 privind procedura de selecție pentru acordarea unei licențe naționale de utilizare a frecvențelor radio în vederea furnizării de rețele de date și servicii de comunicații electronice mobile în benzile de frecvențe 410-415/420-425 MHz'.

¹¹⁰ Order of the Minister of Communications and Information Technology no 693/2008 on the amendment of the National Table for Frequency Bands Allocation. The Order was published in the Romanian Official Gazette in January 2009.

The lack of an appropriate legal framework for granting rights of way has reportedly led to non-transparent and lengthy procedures, tariffs which are determined on a discretionary basis by the local authorities, and discriminatory practices. In this context, the inconsistent enforcement of the existing authorisation requirements has led to the proliferation of electronic communications networks which do not fulfil the legal requirements. This is the case for the overhead cable networks, which have been rolled out in cities such as Bucharest, using the poles available in the streets, many of which are not suitable for such purposes. The situation has been tolerated by the local authorities, mainly owing to the lack of viable alternatives, to respond to the rapid development of the cable networks in the 90s. Finally, the local authorities now find themselves in a situation where they have to intervene, at a stage when their actions could distort an already developed local electronic communications market.

The Netcity network planned by the municipality of Bucharest in 2007 is a project designed to offer an incentive to electronic communications providers to move their overhead networks underground. The project aims to set up a metropolitan electronic communications network to cover Bucharest with duct and optical fibre, under a public-private partnership between the Municipality of Bucharest and the operator selected following a tender procedure at the end of September 2007. The procurement contract for setting up the metropolitan network was approved by the Bucharest General Council in March 2008.

Even if the new decision¹¹¹ adopted by the Bucharest General Council following the court ruling seems no longer to provide exclusivity for the Netcity network, its wording is open to interpretation and there are serious doubts in the market that the Municipality would authorise rolling out new parallel networks. The new decision has also been reportedly challenged in court.

When the project started to be implemented in mid 2008, it became more transparent, especially as the operator of Netcity engaged in consultations with the market players most affected by the metropolitan network. However, the market players have continued to complain about the lack of essential information, such as specific data on access to the Netcity network, the working procedures and the development plans.

Nevertheless the implementation phase is raising issues of concern such as the capacity to accommodate all reasonable requests to use the Netcity network, the level of tariffs, and technological neutrality. As regards the latter, some operators signalled that the exclusive use of micro-duct and micro-fibre in the Netcity network makes it difficult to connect to other types of networks such as those relying on coaxial cables. This could mean higher costs for any operators who have to change their equipment.

The Commission services are following all these matters closely.

THE CONSUMER INTEREST

Tariff transparency and quality of service

ANC prepared and submitted for public consultation in November 2008 a draft decision on the obligations of electronic communications providers to inform end-users of their tariffs. Taking account of the increasing complexity of the tariff packages and schemes available in the telecoms market, the draft decision proposes that telephony providers should, before concluding the contract, give their subscribers detailed information on pricing, charging terms, and other conditions for using the services and for extending or terminating contracts. Furthermore the draft proposes a minimum set of information to be included in the detailed invoice issued by electronic communications providers.

¹¹¹ Decision of the General Council of Bucharest no. 252/2008.

In addition, ANC plans to develop an interactive application to enable users to compare offers for mobile and fixed telephony as well as broadband Internet access, and to choose the most suitable.

If adopted, these initiatives, which are in line with the EU trends, will place telecoms consumers in a better position to decide which offer suits them best and should improve competition in the Romanian market.

Universal Service

No substantial development can be reported in the last year regarding the already delayed compliance with the Universal Service Directive, in particular with Article 4 (Provision of access at a fixed location) and Article 5 (Directory enquiry services and directories). However preparatory measures were taken in 2008 to implement Article 5, in that ANC prepared and consulted publicly on the draft tender documents for designating the universal service provider and allocated the 118(xyz) range numbers to several companies.

The 'Tele-centre' project continued in 2008 and in total over 633 Tele-centres were opened, providing telephone, fax and internet connections at one fixed location, in rural and remote areas, thus meeting the initial target. Although a useful initiative in a country with the lowest fixed line penetration rate in the EU, the Tele-centre approach does not completely satisfy the requirements of the Universal Service Directive to provide access at a fixed location to meet reasonable requests. In addition, the sustainability of the Tele-centres, which are under the universal service regime for a limited period of three years, remains to be seen in practice. The Romanian authorities are considering a shift from the Tele-centre approach to properly transpose the Universal Service Directive and for this purpose, a Universal Service policy paper is under preparation and a tender procedure is planned for early 2009 to commission a supporting study.

As far as the directory enquiry services and directories of subscribers are concerned, following the public consultation on the draft tender documents, held in August and September 2008, ANC initially planned to launch the tender to designate the universal service provider in the second half of November 2008. Exchange of information between ANC and the Commission in November 2008 has ensured that the principles set by the Universal Service Directive are duly observed. The Romanian authorities expect to have the directories functional in 2009.

According to the legislation, the Universal Service Fund set up by ANC is financed by those market players with an annual turnover exceeding €3 million (for 2006 maximum 0.5% of their turnover, limited to €3 million; the actual percentage is 0.398% in 2006). Although the Universal Service Fund has been active, the ANC decided not to collect the contributions for 2007 and 2008. The contributions collected from the market players are calculated based on the estimated net cost for that year. In practice, the contributions are therefore collected before the real net cost is determined. The surplus is reported for the following years. Such a compensation mechanism generates disproportionate contributions and raises concerns about its compatibility with the Universal Service Directive.

The Commission services are following these developments in order to support Romania in its speedy and complete compliance with the Universal Service Directive.

Number portability

Number portability was launched by ANC on 21 October 2008 and the first number was ported on 29 October 2008. In the first two months about 15000 numbers, mostly mobile, were ported. It is regarded as the most positive development in the Romanian telecoms market within the last year. Some market players view it as a promising way to increase their customer base, and consequently have started advertising campaigns.

Number portability is centred on a database managed by ANC to which all operators are connected. The maximum legal time limit allowed to port a number is 10 working days. The wholesale tariffs are 11 Euro for mobile and 13 Euro for fixed numbers and for the moment

the receiving operator is supporting the cost of the porting. Several telephony operators consider that the contractual obligations or bundled services which tie subscribers to their providers, and the level of the porting tariff, could act as disincentives to number portability. However it is too early to assess the functioning and the impact of number portability in Romania.

As regards informing consumers, ANC launched a dedicated website www.portabilitate.ro where it can be verified whether a telephone number has been ported. ANC also organised a media campaign aimed at informing consumers of the new possibility to port their numbers to another provider. Furthermore, each telephony provider has to offer information relating to porting a number by means of its customer care service, on its website, in its commercial premises and in writing upon request and free of charge. A distinctive tone must be inserted at the beginning of each call to a ported number to warn the end-user that the call terminates on another network.

Consumer complaints

ANC is competent to settle disputes between users and providers if rights provided by the Law on universal service have been breached. ANC issues an opinion (recommendation) but cannot impose individual obligations on a provider in its relations with a user.

In 2008, the number of consumer complaints addressed to ANC increased 3.8 times. This trend was driven by complaints against unsolicited commercial communications (spam) and it might have been helped by the more active approach taken by ANC in March 2008 when the first sanction (fine) for unsolicited commercial material sent by e-mail was applied. This was followed in May 2008 by fines applied to another eight companies for sending unsolicited commercial messages via e-mail. No further developments have been reported since May 2008.

European emergency number 112

In Romania the 112 system is operated by the Service for Special Telecommunications (STS)¹¹². In 2007, the Commission commenced infringement proceedings against Romania for non-compliance with the Universal Service Directive, as caller location information could not be made available to the emergency authorities in the case of calls from mobile networks. In September 2008, the Commission decided to refer Romania to the European Court of Justice, but to allow a three-month period in order to give the Romanian authorities, which had made considerable progress in 2008, time to comply with the provisions of the Directive. Following consistent implementation of the action plan adopted by the Romanian Government in January 2008, the preliminary testing pursued at the end of October 2008 indicated that caller location for calls to 112 can be provided to the emergency authorities in a satisfactory manner. The telephony operators reported that caller location information was made available on their side. The Romanian authorities notified the full implementation of caller location in Romania to the Commission at the end of November 2008, whereas the infringement proceeding was subsequently closed in January 2009.

Given the high number of abusive calls made to 112 from mobile networks (over 90% of the total), upon the initiative of the Ministry of Communications and Information Technology, ANC launched a three-month pilot project in October 2008. Users who make 5 to 10 abusive calls per day receive 20 SMSs warning them of the legal consequences, while users making more than 10 abusive calls per day will receive 50 SMSs warning them of the legal consequences.

¹¹² According to the Government Emergency Ordinance No 34/2008 on the organisation and operation of the European emergency number 112.

Must-carry

The general interest objectives are not defined by the Romanian legislation establishing the must-carry regime and no periodic review of the must-carry obligation is provided by the law¹¹³. Despite these inconsistencies with the provisions of the Universal Service Directive and the unclear wording of the law¹¹⁴, no practical difficulty or complaint relating to the implementation of the must-carry obligations has been reported so far. The most likely reason for this is that TV programs (with the exception of the two public programs) are included under the must-carry regime on the basis of their audience rating in order of popularity. Therefore the distributors have in any event an incentive to include most of these programs in their commercial offers.

Data protection

In June 2008 ANC and the Romanian Data Protection Authority (ANSPDC) signed a cooperation protocol aimed at enhancing the protection of personal data in the field of electronic communications. The two institutions exchanged information and opinions relating to complaints filed by end-users against the e-communications providers, even before the conclusion of the Protocol.

The Data Retention Directive was reported to be transposed in November 2008¹¹⁵; the Commission had previously opened infringement proceedings and had sent a reasoned opinion to Romania in September 2008.

The Directive on privacy and electronic communications was transposed and notified to the Commission before the accession of Romania to the European Union. In practice, as no comprehensive directory has so far been in place in Romania, it is not yet evident that Romania has managed to achieve the right balance between the data protection requirements and the obligations provided by the Universal Service Directive, such as the obligation to make available at least one comprehensive directory to end-users. The national legislation transposing the Directive on privacy and electronic communications requires the providers of directories or directory enquiry services to inform subscribers about the purposes of directories giving their personal data and of any further usage possibilities based on search functions embedded in the electronic versions of directories. Specifically, subscribers should also be given the opportunity to decide whether their personal data are to be included in a public directory of subscribers. These obligations have to be fulfilled before subscribers are included in the directories. The Commission services will closely follow the implementation process.

¹¹³ Law No 504/2002 on Radio and Television Broadcasting.

¹¹⁴ It seems that there is no clear interpretation of the meaning of the 'within 25% limit' must-carry threshold established by the law.

¹¹⁵ Law no. 298/2008 on data retention.

SLOVENIA

INTRODUCTION

With a growing number of mobile networks, increased competition and consumer choice, mobile traffic in Slovenia grew significantly in 2008. In contrast, the fixed voice telephony market remained stable. Fixed-to-mobile substitution is gaining momentum. Broadband growth remained stable, partly owing to successful local loop regulation, with a focus on a growing number of mobile high-speed connections.

The national regulatory authority has already examined several important markets in the second round of market analyses. The most significant challenge for the regulator remains the regulator's supervisory market activities. A new competition law has introduced stricter system of fines.

REGULATORY ENVIRONMENT

Main regulatory developments

With the exception of some minor secondary legislative changes (e.g. data retention issues), the sector-specific regulatory environment remained essentially unchanged from a year ago. At a general level, however, a new competition law adopted in April 2008 increased the powers of the Competition Protection Office (the NCA). By increasing the penalty thresholds applicable to market players (including fines for non-cooperation with the NCA), this law now makes it easier to implement the telecom regulator's decisions.

In contrast, a draft legislative proposal for the new Act amending the Electronic Communications Act was prepared by the Ministry of the Economy, building on the growing experience with the application of the regulatory framework in Slovenia. The draft legislation contains consumer protection provisions suggested by the Agency for Post and Electronic Communications (APEK), the national regulatory authority (the NRA). These include, for example, the creation of a consumer board allowing consumers to be actively involved in the regulatory debate and the market analysis process. A new regime of penalties includes fines up to 10% of the operator's annual revenue in cases of non-compliance with the remedies imposed.

In July 2008, the government adopted a new broadband strategy, setting out broad political goals to be attained as soon as 2010. One aim of the strategy is to ensure broadband for all by 2010, and access speeds of at least 2 Mbps to 98% of the population by 2012, and at least 20 Mbps to 90% of the population by 2015. The strategy also specifies that competition is the key to achieving these goals, coupled with measures such as openness of networks and participation of the local municipalities. The strategy is, however, less specific on the measures to be taken in order to address underlying market deficiencies.

Organisation of the NRA

For a number of years the NRA's independence to exercise its statutory tasks has not been an issue. During 2008, however, its performance was challenged on several occasions. In particular, the NRA was accused by several operators of favouring one market player on several occasions for the management of scarce resources. However, the Commission services have not found any clear violation of the regulatory framework. Other examples include the alleged lack of initiative regarding dispute settlement and supervisory activities. Nevertheless, the NRA's track-record in dispute resolution remains good (between 1 July 2007 and 1 July 2008, 85% of all cases, including inter-operator disputes, were resolved). Supervision, either at the request of operators or on its own initiative, remains a challenge for the NRA, not least

due to its limited resources (three people work on the supervision of electronic communications).

The new government staff regulations for public employees, which entered in force in 2008, appear to provide less flexibility as to the funding of the Slovenian regulatory authority's human resources. It remains to be seen whether this new arrangement will provide the mechanisms needed to help the regulator carry out its assigned tasks within the regulatory framework.

Cooperation between APEK and NCA remains to a large extent limited to the market analysis process, mainly due to insufficient human resources. Only one employee in the NCA is dealing with cases relating to electronic communications.

Decision making

The NRA is well into the second round of market analyses, having issued decisions relating to four product markets, concluded analyses of eight markets, and started with an analysis of one market.

As regards the supervision of operators' obligations, the NRA's work focused on verifying compliance with regard to the quality of service of emergency calls, fault repairs, confidentiality and security of e-communications, and non-discriminatory conditions associated with collocation and unbundling of local loop (LLU), e.g. requests for access and enquiry systems, information on projects and planning activities. Decisions have generally been observed by their addressees and have contributed to improving market access.

An alternative operator complained about non-compliance of the incumbent and the failure of the NRA to intervene effectively in 2006 and 2007, but APEK seems to have adopted several interim measures in the meantime which have addressed the most pressing issues.

There seems to be an issue regarding rights of appeal, as it appears that operators which are not addressees of the regulator's decisions seldom succeed in demonstrating their interest as an affected party. The Commission services are looking into the matter.

In all but four cases, disputes between operators have been resolved within the four-month deadline since 2006. As an illustration of dispute resolution procedures, in January 2008, the NRA in cooperation with the NCA, successfully resolved a dispute regarding SMP's alleged non-compliance with the remedies imposed concerning access to collocations.

In March 2008, the NCA concluded an investigation concerning the incumbent's alleged abuse of a dominant position during the years 2001-2005 (regarding the bundling of ADSL with ISDN). No fine was imposed, given that the case was considered too old and was dealt with under a defunct misdemeanour procedure. In addition, a formal procedure has been started by the NCA based on a complaint from an alternative operator about the incumbent's alleged abuse of a dominant position in the wholesale broadband access market (regarding naked DSL offered to the SMP's self-supply, but not to its competitors). Since in this case the NRA's independence is also challenged, the case handlers requested external help from experts, and expect to conclude the investigation within two years.

MARKET AND REGULATORY DEVELOPMENTS

A total of €245 million was invested in the electronic communications sector (28.3% more than in 2006) in Slovenia in 2007, of which the incumbent invested €116 (€36 million more than in 2006), fixed alternative operators invested €50 million (€11.5 million more than in 2006) and mobile operators contributed €79 million (€6 million more than in 2006). The investment in the electronic communications sector thus stood at 0.73% of GDP, with an increase of 28.44% compared to 2006. Revenue in the electronic communications sector in 2007 totalled €1 101 million, which was €53 million more than in 2006. As to the 2007 electronic communications sector revenue, the fixed market contributed €389 million, while the mobile market generated €579 million. Similarly to the 2006 performance, the '2007

electronic communications sector revenue/GDP' ratio, which stood at 3.28%, outperformed the EU average rate, which stood at 2.90%.

According to the NRA, both traffic and length of calls in mobile networks have grown during 2005-2007 by 7.4% on average. On the other hand, traffic in the domestic calls market on fixed locations decreased by 6.4% per year on average. Approximately 10% of the traffic originating in fixed networks was terminated in mobile networks, whereas only 5% of the traffic originating in mobile networks was terminated on fixed networks.

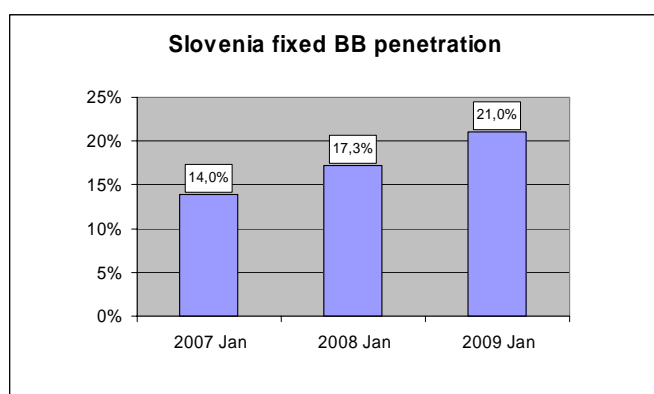
In November 2008, the Slovenian government announced that its 2007 plan to privatise 49.13% of the incumbent had finally fallen short of a deal, the main reason being insufficient financial proposals and the underlying economic conditions.

Broadband

Market situation

There were 426 070 fixed broadband lines in January 2009, compared to 347 492 lines in January 2008, which represents an increase of 22.6%. The penetration of fixed broadband lines is 21.0%, which places Slovenia right in the middle of the EU range. However, this average performance in fixed broadband is more than complemented by a strong mobile broadband take-up. With a 22.0% penetration Slovenia is the third in the EU.

The overall market share of the incumbent operator in January 2009 is 49.2%, whereas the share of the closest competitor in July 2008 was 17%. Take-up of coaxial cable is stagnating, whereas growth of LLU-based products has slowed down due to next generation access (NGA) developments and the fact that bitstream-based products have finally become more available. The number of fibre-to-the-home (FTTH) lines continues to grow, and stands at approximately 45 000 lines, which is one of the best relative performances in the EU. However, Slovenia fares less well as far as connections involving speeds of 2 Mbps and above are concerned. With only 37.3%, Slovenia is far behind the EU average for high-speed Internet, which stands at 74.9%. Finally, some 14.5% and 70% of the population in rural areas has no DSL or cable coverage, respectively. National DSL coverage increased from 88% at the end of 2006 to 92% at the end of 2007, and DSL coverage in rural areas stood at 86%, an increase of 7 percentage points over a year. For cable, rural coverage increased from 24% to 30%, and the national coverage soared from 49% to 54% over a year. Slovenia managed to narrow the digital gap for DSL and cable coverage over a year, from 9 to 6 percentage points



and from 25 to 24 percentage points, respectively. It remains to be seen whether the broadband strategy adopted will more specifically address the issues of low average speeds, and of the relative digital gap.

Largely as a result of successful regulation of the last mile segment in the copper network, 25.7% of all DSL connections are based on LLU (compared to 22.7% in January 2008 and 14.2% in January 2007).

Regulatory issues

Price regulation has brought about significant positive results in terms of numbers of fully unbundled lines and shared access lines. Prices have decreased below EU averages. For example, the monthly average total cost for fully unbundled local loop is €9.6 compared to €10.2 during 2007, whereas the EU average is €10.9. The monthly average total costs for shared access remain slightly above the EU average (€4.1), at €4.8.

Despite collocation access regulation, alternative operators have continued to report difficulties when attempting to connect their networks (remote collocation, in particular). Alternative operators associate these difficulties with frequent changes to the reference unbundling document (RUO) document (seven times since the NRA's LLU decision in January 2007), changes to technical parameters and to conditions of access in particular, as well as the inability of the NRA to address the issues effectively. However, the Commission service note that the NRA has not been idle. Based on the compliance enforcement decision from 2007, it finally succeeded, to a certain extent, to address the long-standing issue of discriminatory treatment of alternative operators as far as information regarding the availability of collocations is concerned. Until its enforcement, some 40% of collocation enquiries were systematically refused by the incumbent.

In the absence of dark fibre backhaul regulation, for a majority of the market players, access to many locations, due to the high level of fibre wholesale prices, is off-limits. In order to be able to justify their investments, they would have to capture at least 50% of the customer base in a particular geographic area. In addition, the incumbent's competitive retail prices based on fibre, coupled with triple play offers, represent a further obstacle for the competitors willing to compete on a basis of significantly slower and relatively dearer LLU lines as compared to fibre.

With its October 2007 retail-minus decision, the NRA attempted to go the extra mile as regards regulating the wholesale broadband access market. The SMP operator, which has challenged the extent of the remedies imposed, has an obligation to provide access to alternative operators in a manner that will allow functional IP telephony, IPTV and video on demand (VoD), in view of the fact that the same services have been provided to the customers by its retail unit. Despite the fact that alternative operators are not able to diversify their offers from the incumbent's content, this puts the SMP operator in a unique situation within the EU. Furthermore, based on a complaint by an alternative operator, APEK reconsidered the scope for application of its October 2007 decision, and mandated the incumbent, *inter alia*, to replicate its upper frequency-band bitstream product, which was offered to its retail unit. Naked DSL offered at a price of retail minus up to 66% plus a surcharge for the lower-frequency band of the local loop thus became a part of the reference bitstream offer as of November 2008.

It came as a surprise to some alternative operators to find out that despite the NRA's recent mandate to the SMP incumbent operator with regard to leasing of its IP capacity, enabling competition for business clients (VPN) using IP/MPLS protocols, the incumbent had no technical possibility to provide this type of product at the wholesale level. Also, as a result of the NRA's wholesale leased lines market analysis in the spring of 2008, Ethernet lines are now subject to regulation based on technology neutrality.

More generally, operators are calling for introduction of key performance indexes (KPI) to be considered by the NRA. Inclusion of KPIs in the inter-operators' service level agreements (SLA) would, according to market players, foster cooperation with the SMP operators and would facilitate the monitoring of compliance with remedies.

Mobile market

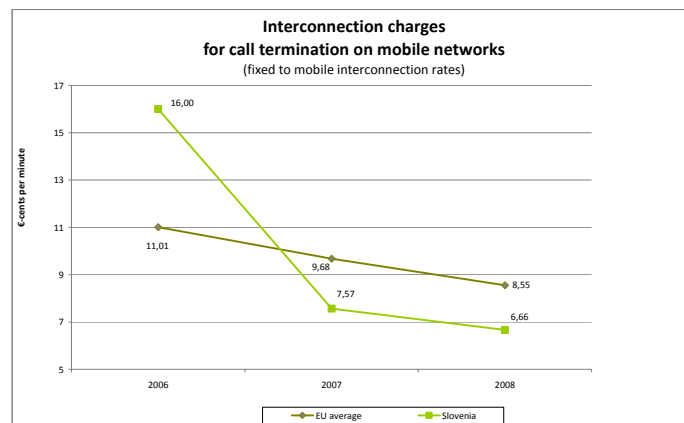
Market situation

Six operators are active on the market. The penetration is 99.7%, which is below the EU average of 118.9%, and the average revenue per user (ARPU) in 2007, at €276, is also slightly below the EU average of €282.

The incumbent's mobile arm continues to dominate the market with 60% of the customer base, even though this is 7 percentage points less than in 2007, while the main competitor controls nearly 27% of the market. The incumbent's mobile arm remains strong in the

business segment and free handsets coupled with significant discounts are a key to its 80% market share. The number of pre-paid users stands at less than 37% of all customers, compared to 40% in 2007. Two new entrant mobile network operators (MNO), which started providing services in the fourth quarter of 2007 and second quarter of 2008 respectively, have acquired important market shares. The former has a 3.4% customer base, 90% population coverage and the highest ARPU amongst the operators. Both operators have been successful primarily as a result of attractive pricing regimes, based on an optimising combination of regulated national roaming agreements and use of newly built fractions of their own networks. The share of the two resellers remains stable, around 5% and 2% respectively.

Responding to competitive pressure, some market players have started to imitate the market leader's aggressive marketing campaigns to win back customers, offering flat-rate packages, free calls within closed user groups, coupled with attractive bundles for fixed-mobile calls. However, some of the incumbent's mobile arm services seem difficult to replicate, such as free of charge mobile TV offers using its High Speed Downlink Packet Access (HSDPA) technology.



Amongst the UMTS operators, the market leader is the only operator with a rollout obligation currently providing coverage to 70% of population. Coverage figures of the other three operators are significantly lower, and stand at 25% and 6% of the territory, whereas the holder of the fourth UMTS licence plans to start providing services only by the end of 2009. Consumption patterns, based on OECD usage basket definitions, reveal that consumers spent less on average in 2008 than in 2007.

Regulatory issues

The wholesale mobile call termination market is characterised by growing asymmetries between the regulated and non-regulated operators. The largest two operators are mandated to follow the glide-path dictated by annual reductions of rates. The rates should stabilise around €0.047, whereas the asymmetry ratio of the two SMP operators will have decreased from the initial 1:1.65 in 2006 to 1:1 in March 2009. The newcomer is not regulated, however (the difference between the leading operator and the newcomer stands at 1:1.95) and is able to offer extremely competitive retail prices. APEK started with the new analysis of the wholesale mobile call termination market in the autumn of 2008.

The resellers would like to see future regulation of the mobile access and mobile call origination markets beyond voice in order to replicate attractive offers of network operators comprising SMS and advanced data services.

The NRA's intervention in October 2007 in an inter-operator dispute clarified that wholesale mobile access also included a national roaming obligation. This encouraged the main competitor, no longer deploying new base stations, to request a national roaming facility from the SMP operator. It is also becoming increasingly difficult to obtain building permits for new base stations.

The NRA faced a great deal of discontent from operators in connection with the free of charge granting of the fourth UMTS licence, which took place in the beginning of 2008. In the earlier licensing procedures, the first three UMTS licence holders had to pay significant sums of money. Concerned operators have appealed either the process or the outcome of the NRA's decision, while the Commission services have investigated the matter and found no clear

violation of the regulatory framework. The NRA intends to award another UMTS licence early in 2009, presumably this time for a fee, since several operators have already expressed their interest in obtaining the licence.

In August 2008, the Administrative Court upheld a decision of the NRA regarding the granting of an extended GSM band to a new entrant in 2007, which was challenged by another alternative operator. This makes the decision final, as it is not possible for operators to appeal decisions of the Administrative Court if it upholds the appealed decision of the NRA.

Roaming

All GSM operators appear to have implemented to a satisfactory level the requirements set in the Roaming Regulation. According to APEK, in the second half of 2008 retail international roaming prices were falling slightly below the regulated Eurotariff levels, while in the case of one operator they were even up to 25% below the marker.

Fixed market

Market situation

Publicly available telephony services at a fixed location were provided by ten operators at the end of 2007, including nine with own or leased infrastructure. In addition, there were 11 service providers using the services of carrier pre-selection (CPS) and/or carrier selection (CS).

The incumbent's fixed market share, measured in terms of revenue for national calls, at the end of 2007 had grown compared to a year ago, and stood at 97%. More recent data, from the second quarter of 2008, reveal a reversing trend, with the incumbent's share falling for the first time below 90%. Competition is traditionally much stronger in the international calls segment, where alternative operators hold a 21% share as far as revenue is concerned. Growth of IP-based traffic remains strong, and currently some 20% of calls are purely IP-based, with the incumbent's market share being below 50%. There are 170 000 VoIP users in Slovenia. More than 11% of subscribers use alternative providers for voice telephony services, a significant increase of more than 6 percentage points from last year.

Residential charges for 10-minute national calls remain on the level of those in 2007 (€0.288 for the incumbent), whereas monthly rentals decreased marginally from €11.69 in 2007 to €11.12 in 2008.

Regulatory issues

In 2008, the NRA successfully resolved the issue of discriminatory rates for the termination of IP traffic on the incumbent's network. The incumbent has since been charging the same amount for traditional TDM-based and IP-based termination.

As to the asymmetric price regulation on the market for call termination on public telephone networks at a fixed location, all but one alternative operator continue to benefit from the fact that operators convey their traffic through local interconnection points and the fact that the level of asymmetry (1.40) is administratively calculated at the national interconnection level. This increases the incumbent's actual paying rate for termination of its traffic by a factor of three.

The introduction of wholesale line rental (WLR) in 2007 appears to have arrived a little late for alternative operators, given that the incumbent already had switched one-sixth of its customers to the IP platform. Only 800 customers have chosen this type of product since it has been regulated.

Wholesale interconnection charges in general remain above the EU average.

Broadcasting

Market situation

The share of terrestrial TV connected households has dropped from 48% to 43.5%, whereas cable is viewed by 46.4% of homes. IPTV has demonstrated substantial growth and its share is reaching 15.1% of the market, placing the IP platform on a par with satellite.

The 2007 Law on Digital Radio Broadcasting provides for a switchover period to start in June 2009, and anticipates a gradual switch-off of local areas. At the end of 2010 all analogue licences will be revoked, and this will create a dividend accommodating room for eight new digital networks (currently there is a room to allocate three multiplexers).

Only one DVB-T multiplexer, which has been directly assigned to the incumbent transmission service provider and which covers 80% of the population, is currently in operation in Slovenia. In October 2008, the NRA announced that the tender for the assignment of radio frequencies for the second commercial digital video broadcasting terrestrial (DVB-T) network (multiplexer B) failed, given that no technically compliant offer was received from any of the participating bidders. APEK subsequently re-launched the tendering procedure for the multiplexer B and in December 2008 awarded an operating licence to one of the bidders for a period of ten years.

The Ministry of the Economy was actively working out the details of a future government digital TV strategy at the time this report was drafted.

Regulatory issues

Difficult commercial negotiations between the SMP operator and broadcasters on the digital wholesale broadcasting services market led the NRA to intervene in June 2008 in one dispute concerning the reasonable pricing of access for broadcasters, resulting in the transmission service provider's costs being recognised but only as far as they were compatible with the NRA methodology.

Horizontal regulation

Spectrum management

The incumbent operator and one alternative operator both benefit from the NRA's 2006 decision on granting of frequencies suitable for WiMAX. The incumbent has already started providing ISP services (256/128 kbps, 512/128 kbps and 1024/256 kbps) and has met geographical coverage obligations defined in the WiMAX licence, whereas the alternative operator plans to launch the services in 2009. Two frequency blocks are still available and six operators have so far expressed interest in offering WiMAX services.

Slovenia has implemented all the Commission spectrum harmonisation decisions adopted before the end of 2007.

THE CONSUMER INTEREST

Out-of-court dispute resolution

In the period from July 2007 to July 2008, APEK dealt with some 300 disputes, of which 85% were successfully resolved. A consumer hotline number has been introduced to provide guidance to consumers on how to proceed with their claims.

Tariff transparency

APEK has increased the scope and improved the visibility of its web-based price comparison platform (www.komuniciraj.eu), which provides comparison facilities for end-users. The NRA plans to undertake further steps to increase the public awareness of this particular service.

Universal service

Universal service (US) obligations will expire next year. It was not clear how the NRA intends to define the new scope of the US obligation and to select the operators, notably in view of the broadband strategy.

The incumbent, having been appointed as the US provider in 2004, plans to provide wireless mobile access solutions for some 200 standing requests in remote areas. The incumbent's solution would permit no further unbundling, thereby excluding competition in this particular network segment.

A special inter-ministerial working group, together with the Association of societies of deaf and partially deaf was set up to provide further guidance on how to further improve services and equal access for disabled users. Disabled users currently benefit from a limited set of activities based on the ECA and the 2005 Government Decree on measures for disabled users, which amongst others provide for a possibility of Braille usage in the context of the US obligation.

Number portability

Since the introduction of number portability in 2006, more than 218 000 numbers (100 400 fixed and 118 008 mobile) have been ported, which represents some 7% of all available numbers, an increase of 3 percentage points since last year.

Consumer complaints

The NRA has set up a toll-free call-centre 'Modra številka 080 APEK', providing consumers with advice and information on how to proceed in cases where consumer rights relating to the rules on electronic communications appear to have been infringed.

European emergency number 112

Approximately 70 000 calls per month are made to the 112 emergency number in Slovenia; the share of hoax calls is less than 10%. Only 67% of citizens are aware that 112 is a domestic emergency number, and only 13% are familiar with the fact that the 112 emergency number is available across the EU.

Public safety answering points (PSAP) can forward calls to other call centres when another emergency service is more competent to deal with the emergency in question.

'Push' is the required forwarding technique for the provision of caller location information to PSAPs. The technical impossibility of providing this information has to be proved by the operators.

The Ministry of the Economy was planning to improve the requirements for the quality of answering emergency calls and reaction times, and is currently working on new rules on the quality of service for the single European emergency call number 112 together with the Ministry of Defence.

Must-carry

Must-carry obligations have in practice been extended to mobile operators, given that mobile TV is a novelty of 2008. Only the television channels of the national broadcaster have to be transmitted free of charge. This obligation has not, on the other hand, been raised by concerned mobile operators as representing any practical implementation issue.

Data protection

According to industry players, the implementation of the Data Retention Directive (Directive 2006/24/EC) has created additional financial burdens for operators to compensate for the

operating costs of data retention (e.g. for police investigations, Court orders). It appears that these requirements affect smaller market players unevenly.

SLOVAKIA

INTRODUCTION

The fixed broadband market growth has slowed down and the fixed broadband penetration rate is the lowest in the EU. DSL remains the main broadband platform where the incumbent maintains a significant market position, however, there are certain increasing signs of inter-platform competition. Mobile broadband services are growing in importance. The entry of a new mobile player has intensified the level of competition on the mobile voice market and is facilitating greater consumer choice and price reductions. The incumbent's position in the fixed market remains largely unchallenged. The largest mobile operator and the incumbent are continuing to roll-out FTTH infrastructure.

The regulator's efforts have been focused on the establishment of a price control mechanism intended to redress the ineffectiveness of previous price regulation obligations. However, the overall process of further market reviews has not progressed to a great extent, and the fixed markets as well as the wholesale broadband market are yet to open to effective competition. Carrier pre-selection and local loop unbundling is not taken up. Regulation on the bitstream market had been withdrawn by a court decision. Price regulation has been proposed for mobile termination rates with a new round of market analysis.

REGULATORY ENVIRONMENT

Main regulatory developments

In August 2008 the Slovak regulator Telekomunikačný úrad Slovenskej republiky (TÚSR) notified the Commission of the proposed price regulation obligation based on the results of the second round of the market review for the fixed wholesale call origination market. Following an appeal from the incumbent, the Supreme Court suspended in February 2008 TÚSR's decision on determination of undertaking with significant market power (SMP) and remedies imposed on the wholesale broadband access market. Finally, in August 2008, the Supreme Court withdrew the decision of appeal and returned the matter to TÚSR for a second-instance internal decision. As a result, this key market was unregulated during the reporting period.

The NRA continued to take steps towards ensuring the transition from analogue terrestrial to digital terrestrial broadcasting. The NRA issued a new measure, effective from May 2008, detailing the conditions for digital transition. A call for tender for the first two digital multiplexes was initiated in August 2008. However, following a preliminary injunction issued in October 2008 by a district court prohibiting TÚSR from continuing with the tender process, the NRA cancelled the tender procedure in December 2008. A new call for tender is to follow early in 2009.

The ownership and management of the State's shareholding in the incumbent was transferred from the Ministry of Post, Transport and Telecommunications to the Ministry of Economy in January 2008.

Organisation of the NRA

TÚSR notes continuing difficulties related to budgetary and personnel resources. The regulator is financed from the budget chapter of the Ministry which provided for a partial modification of the regulator's budget. TÚSR stresses that budgetary constraints prevent the use of external consultants to assist with certain regulatory tasks. The regulator is constrained from acquiring good quality personnel, mainly due to salary differences between the public and private sector.

In November 2008, the Government approved a proposal to dismiss TÚSR's Chairman from office. The proposal was approved by the Parliament in December 2008. The reasons behind the proposal appear to be related to an alleged failure by the regulator to respect certain provisions of the national legal framework and to ensure a timely and appropriate transition to digital broadcasting. The Commission is following developments closely and will examine the implications of this matter with respect to the NRA's independence.

Decision making

The main regulatory focus throughout the reporting period appears to have been directed at the establishment of a price control mechanism methodology aiming to redress the lack of effectiveness of price regulation imposed in the first round of market reviews. The other principal focus of regulatory effort was directed towards facilitating the digital switchover process.

The SMP obligations imposed with regard to the retail fixed access markets remain unchanged following the second round of market reviews. Overall, the NRA has made little progress with the market review process. Only one draft measure, namely price regulation for the fixed wholesale call origination market, was notified to the Commission in 2008. The final price regulation measure was imposed in November 2008. The Commission welcomes the efforts to establish a detailed cost orientation methodology, although there is still a need for a more advanced market review process.

As regards the decision-making procedure following the second round of market reviews, the Commission notes that the NRA has not taken new decisions on SMP undertakings and remedies if intended remedies and SMP designations are the same as those established following the first round of reviews. Instead, decisions made after the first round are kept effective even after the second-round market review has been finalised. The Commission services are looking into this matter, especially with respect to implications for the right of appeal.

TÚSR has not yet initiated a comprehensive process of reassessment of the incumbent's reference offers. Prices and other practices, in particular as regards facilities collocation, remain an issue of concern for alternative operators. Specifically, carrier pre-selection (CPS) and wholesale access to unbundled local loop (LLU) are still not taken up in practice, and the remedies in place seem not to have efficiently addressed the competition deficiencies identified. To counterbalance this situation, the NRA has also used informal tools to exert pressure on the incumbent in order to achieve voluntary price adjustments and modifications of certain practices. Nevertheless, such an approach cannot compensate for the lack of formal action.

MARKET AND REGULATORY DEVELOPMENTS

Turnover and investment figures have increased compared to those of 2006. The total turnover of the telecommunications sector was €1.8 billion as of 31 December 2007. Revenue from the fixed market was €505.6 million, while mobile market revenues reached €1.2 billion. The revenue from the telecommunications market overall increased by almost 8% compared to 2006, totalling 3.4% of national GDP in 2007. The total value of tangible investments was €387.7 million, of which €177.9 million came from mobile operators, €54.4 million from fixed alternative operators (almost three times the figure for 2006), and €45.2 million from the incumbent operator.

There are signs of fixed and mobile convergence with two major players present both on the fixed and mobile markets. These operators are still the main investors in next generation network (NGN) infrastructure. The biggest mobile operator is concentrating on FTTH/G-PON (Fibre to the Home/Gigabit Passive Optical Network) deployment. The achieved coverage reported by the operator in November 2008 was 265 000 households (approximately 15% of households) with the target of reaching 30% of households in urban areas. Triple-play services are offered over its next generation network (NGN) network (broadband, fixed voice and IPTV). Additional areas might be covered using LLU in the future. The fixed incumbent, holding a 100% share in the second biggest mobile player, is directing its FTTH deployment efforts at 'greenfield' areas such as new business centres. There has been no agreement concluded on duct sharing for NGN deployment between these two players.

The number of providers offering bundled services has risen to nine for triple-play services (fixed voice, broadband and TV), and 17 for double-play services. These developments reflect the increasing efforts by local cable operators to offer broadband and fixed voice services.

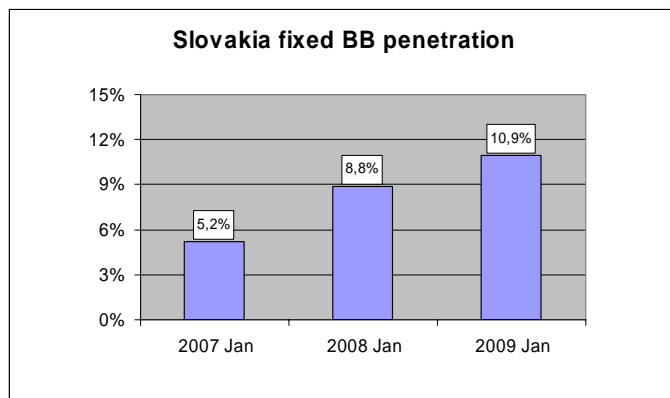
Mobile broadband services have started to develop a role for broadband access. It appears that some customers regard mobile broadband services as a substitute product for fixed broadband access (especially those living outside main urban areas).

Mobile operators note intensifying competition between 3G offers with a trend towards increasing speed levels and declining retail prices. However, the development of 3G infrastructure has been limited and consequently there was only a minimal increase in coverage. The new entrant is testing 3G on a small scale using basic UMTS (Universal Mobile Telecommunications System) technology.

Broadband

Market situation

In 2008, the Slovak broadband market grew by 113 231 fixed retail broadband access lines, from 476 666 in January 2008 to 589 897 in January 2009. The fixed broadband penetration rate has increased by 2.1 percentage points, but at the rate of 10.9% as of January 2009 it is the lowest in the EU, well below the EU average of 22.9%. On the other hand, if broadband connections by households are compared, performance is improved to penetration of 35% of households against the EU average of 48%. Mobile broadband, with a high penetration rate of 14.9% (above the EU average of 13%), and reaching 4% in January 2009 for dedicated data



services (above the EU average of 2.8%), appears to be an important means for gaining internet access. In terms of various platforms, DSL has 55.9% of total fixed retail lines, wireless local loops (WLL) 13.9%, FTTH 11% and cable 10.5%. DSL is still the technology with the highest net subscriber gain, followed by FTTH and cable. The new entrants' share of all fixed retail access lines grew by 2.8 percentage points to 48% in January

2009. However, taking into account the incumbent's unchallenged status on the DSL market with 92% of all DSL retail lines, the incumbent still holds a very significant position in the fixed broadband market overall. 64% of the fixed retail broadband lines deliver the speed range of 2-10Mb/s, while almost 14% deliver the speed range of 10 Mb/s and above. National DSL coverage increased from 66% in 2006 to 73.9% in 2007, an increase of 7.9 percentage points. DSL coverage in rural areas reached 38.5%, which represents an increase of 8.5 percentage points compared to the previous year. The average national cable coverage was 24%, while the cable coverage in rural areas reached 0.2% in 2007. It should be noted that broadband access in rural areas is in some instances also available via other technological means, such as mobile broadband and WiMAX services.

LLU is not being taken up in practice. The NRA notes that this situation is partly caused by the ongoing consolidation process on the fixed market as the market players are not likely to go ahead with strategic decisions.

Regulatory issues

The average total monthly LLU cost fell in 2008 both per fully unbundled loop and for shared access, but the costs are still above the EU average. Price regulation is not imposed in this market although TÚSR continues to exert pressure to reduce prices, and as a result, the incumbent reduced prices with effect from June 2008.

Despite the price drops, there has been no progress towards LLU take-up. Lack of clarity regarding prices for collocation is considered to be the main obstacle in the LLU implementation process. The incumbent states that it has already addressed certain concerns of alternative operators in this respect. Negotiations on LLU are pending with one alternative operator.

The second round of review of the LLU market is in the final stages. The NRA signalled its intention to propose price regulation with a detailed cost methodology. The NRA expects such price regulation to resolve the issue of collocation prices.

A full set of remedies (access, transparency, non-discrimination, accounting separation and price regulation) was imposed on the wholesale broadband access market in April 2007. However, the NRA's decision on remedies was suspended by the Supreme Court in February 2008 and the matter was returned to the NRA later in August 2008. The grounds for this action appear to be procedural. As a result, this key market had been unregulated during most of the reporting period; a new second-stage administrative decision on SMP and remedies was taken by the NRA only in January 2009.

As LLU is yet to be taken up and bitstream regulation has only been recently imposed, clear detailing of the proposed remedies along with dedicated enforcement action by the regulator on reference offers should help to reduce the competition barriers identified.

Mobile markets

Market situation

The entry of the third player is facilitating more intense competition on the mobile market. The competitive pressures appear to have started to trigger retail price falls, usually implemented in practice by adding extra minutes to post-paid offers of the two bigger operators, but more pronounced tangible effects of reinforced competition remain to be seen. At €0.16 per minute in 2007, the average mobile price per minute was slightly above the EU average of €0.14. The total annual average revenue per user at €258.7 in 2007 was slightly below the EU average of €282.5.

The mobile penetration rate has decreased slightly, to 98% in October 2008, due to deactivation of some SIM cards that were bought with the entry of the new operator and not used later. The market shares of individual operators based on the number of subscribers are approximately 55%/40%/5%. The new entrant continues to roll out its own infrastructure. The current coverage at the level of 80% of population is above the limit set in the licence conditions. It provides data services using EDGE (Enhanced Data Rates for GSM Evolution) and GPRS (General Packet Radio Service) technology.

The market underwent a further shift from pre-paid to post-paid customers, with 60% of subscribers now opting for a post-paid contract.

There are no mobile virtual network operators (MVNO) present in the market.

Regulatory issues

Price regulation was not imposed in the first round of market review for the wholesale mobile call termination market. Mobile termination rates for 2008 (slightly asymmetric) were therefore negotiated commercially. The national average is €10.82, which is above the EU average of €8.55 for 2008. Negotiations for 2009 onwards have been concluded by the two major mobile operators between each other and with the other fixed operators, while the new entrant has not reached an agreement yet with any of the major mobile players. A dispute settlement mechanism on setting new termination rates was initiated by the new entrant in December 2009. The NRA has not issued a decision in this regard so far. All three players maintain interconnection between their networks.

In the ongoing second round of market review, the NRA proposes an imposition of price control for all three mobile operators. The results of the new market review are yet to be notified to the Commission.

The new entrant criticises the ineffectiveness of the dispute mechanism for mast sharing, especially since the time conditions linked to its GSM licence require prompt solutions.

Roaming

All three mobile operators appear to have complied with the price cap reductions for voice services required by the Roaming Regulation. The retail voice roaming prices were set under the required price cap. In this way, the operators were trying to avoid the risk of effectively increasing the roaming prices when the national currency changed to the euro in January 2009. One of the mobile players reduced data roaming rates from June 2008.

Fixed market

Market situation

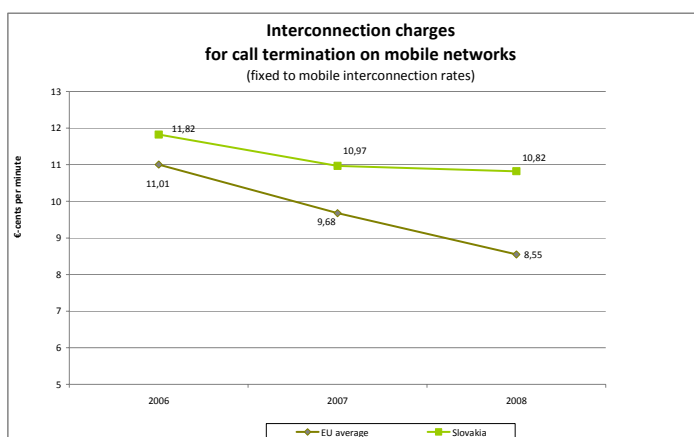
Fixed line penetration is at 21.1% of the population and 44.3% of households. The penetration level has stabilised after a period of continuous decline from 2002-2006. About 26% of total outgoing voice traffic being carried over fixed lines in 2007.

The process of market consolidation continued in 2008 with further acquisitions. Bigger

alternative players provide their voice services via CS (Carrier Selection), and partially via their own infrastructure. Wholesale line rental (WLR) is not offered by the incumbent. Despite the fact that the incumbent also offers carrier pre-selection (CPS) and its conditions are set in the reference offer, alternative operators show no interest in providing telephony service via CPS. Instead, so-called 'dialers' are used to avoid pre-dialing by customers. The alternative operators appear to be focussing on the business segment of the market, targeting mostly new business developments. The total number of voice over IP (VoIP) operators offering public telephony services has almost tripled compared to 2007. These players are mostly small local cable operators offering double-play or triple-play services.

The overall position of the incumbent on the fixed voice retail market remains largely unchallenged. With an 8% market share by retail revenue, the overall impact of the alternative operators on the retail fixed voice market remains fairly insignificant.

Regulatory issues



The second round of market reviews for the former fixed retail access markets was finalised in 2007. However, upon completion of the review process in February 2008, the NRA issued no new decisions on the final measures resulting from the analyses. Instead, notices informing the operators of the SMP findings were published on the website of the NRA in February 2008. These notices also informed the market players of the fact that the SMP determination and remedies imposed in the first round of the review remain effective via formal validity. The NRA carried out a second round of market review for the fixed wholesale call origination market in 2007. In addition to the remedies already established, the NRA proposed new price regulation. WLR was not included in the scope of remedies as invited by the Commission in its comments. However, in a similar manner to the approach taken with regard to the retail access markets, SMP findings and remedies other than price regulation were not determined by a new decision of the NRA based on this new analysis. The decision on the price regulation methodology (FL-LRIC) became effective in November 2008, decreasing the applicable average origination rate by 34% down to the level of the termination rate. The NRA expects that such price cuts will in turn trigger an increase in competition through CS use.

The incumbent has appealed to the Supreme Court against the decision on price caps and subsequent change of the reference offer for the fixed wholesale call termination market. While the Court's decision is pending, the decision on price caps has been suspended, but the SMP decision and other remedies in this market remain in place. The average interconnection prices for call termination at peak times are above the EU average, but it should be noted that the peak time in Slovakia is a shorter period than in other Member States.

In an appeal of the incumbent concerning remedies related to the fixed wholesale transit market, the Supreme Court returned the matter back to the NRA for a new decision in October 2008. The Court did not suspend the effectiveness of the remedies prior to its decision on the appeal.

The retail market for the minimum set of leased lines was taken out by the NRA from the national list of relevant markets susceptible to ex ante regulation in March 2008, hence the remedies set for this market are no longer applicable. This has been done without any analysis or notification to the Commission. The Commission services are looking into the matter. The incumbent had previously appealed at the Supreme Court against the obligations imposed on this market.

TÚSR has initiated the three-criteria test for the former fixed retail markets for local and/or national calls, and international calls, as well as for the former wholesale markets for the fixed transit and broadcasting transmission services. Nevertheless, the results still remain to be notified.

Overall, the remedies imposed on the market to date do not appear to address the competition shortcomings efficiently. The fixed market is yet to open to effective competition and consumer choice.

Broadcasting

Market situation

In the TV broadcasting market, terrestrial transmission provides services to 15.2% of households over population. For terrestrial transmission, the estimated share of digital and analogue transmission is 2.4% and 12.8% of households over population respectively. Cable TV holds a strong position with 14.6% of subscribers over population, followed by satellite TV with 10.4%.

While pilot terrestrial digital TV broadcasting continues, a regular digital broadcasting service has not been launched yet. There are several urban geographical areas with a high level of triple play competition which includes IPTV or HDTV. However, the take-up of IPTV remains rather low at 0.54% of households over population.

Regulatory issues

The national strategy for the digital switchover is based on a gradual phasing out of analogue broadcasting. The Ministry is in the process of preparing a proposal to the Government on subsidies for digital equipment.

A call for a DVBT (Digital Video Broadcasting-Terrestrial) tender was launched by TÚSR for two commercial multiplexes. The deadline for submissions was 20 November 2008. The licences for the first two multiplexes (single operator) using the MPEG-4 (Moving Picture Experts Group 4) standard were expected to be issued at the beginning of 2009. The terms of the tender specified that the service will have to be commercially launched within one year with a minimum coverage of 40% of the population. However, the tender process came to a standstill after a preliminary injunction to block the tender was issued by Bratislava District Court in October 2008. After the dismissal of the chairman in December 2008, the NRA cancelled the tender altogether. A new tender procedure has not been initiated yet.

The NRA noted difficulties with availability of frequencies for digital broadcasting; for example, frequencies for multiplexes such as DVBH (Digital Video Broadcasting-Handheld) will only be available after 2012.

Horizontal regulation

Spectrum management

A tender for 870 MHz frequencies launched in 2008 was won by the biggest mobile operator. The spectrum assigned is to be used via CDMA (Code Division Multiple Access) technology to provide complementary services for the existing 3G offer.

An informal public consultation on the future use of the digital dividend spectrum under preparation by the NRA is planned to be published in the first half of 2009.

Numbering

The EU harmonised numbers 116 000 and 116 111, reserved for missing children hotlines and child helplines respectively, have been assigned to UNICEF Slovakia. The biggest mobile operator is the network provider for both services.

Implementation of spectrum decisions

The Slovak authorities have notified the full implementation of the following Radio Spectrum Harmonisation Decisions adopted by the Commission (Decisions 2005/513/EC, 2005/928/EC, 2006/771/EC, 2006/804/EC, 2007/131/EC, 2004/545/EC, 2005/50/EC and 2007/98/EC).

Implementation of Decision 2007/344/EC on the harmonised availability of information regarding spectrum use, which ensures accessibility of the radio interface specifications on the EFIS database, as well as Decision 2007/90/EC is still under way.

THE CONSUMER INTEREST

Tariff transparency and quality of service

Both fixed and mobile operators apply the same tariff range system for premium rate services, thus allowing customers to recognise the tariff level of numbers dialled. The particular tariff levels are set through commercial negotiations with content providers based on their selection of a concrete tariff range.

An interactive web-based price comparison tool is not available on the market. Mobile operators are cooperating on the implementation of the Framework Code of Conduct on Safer Mobile Use by Children.

Universal Service

The incumbent provides universal service for all designated elements, including special services for disabled users. The latest amendment to the Electronic Communications Act modified the previously broader definition of 'access at a fixed location' to 'a reasonable access at a fixed location'. TÚSR has decreased the density requirements for public payphones in larger cities.

At the end of 2007, the incumbent requested compensation from TÚSR for the provision of universal service during 2005 and 2006. The biggest potential contributors note that the amount requested greatly exceeds the figures expected. The NRA has extended the deadline for decision on the net cost until the end of September 2009. TÚSR intends to initiate a tender

to select an external auditing company tasked with the net cost calculation. It should be noted that a compensation mechanism process should be transparent to all parties affected. Following an audit by TÚSR on the printed comprehensive directories, a fine was imposed on the incumbent. The decision on the fine has been appealed. Directories and directory enquiry services are not provided by third-party service providers.

Number Portability

More than 90 000 fixed numbers were ported during the reporting period. Both the retail and wholesale prices for fixed number portability are high (€33 retail and €49.7 wholesale). From the customer's viewpoint, porting usually takes between 10 and 20 days. The NRA has proposed a shortening of the maximum porting time set in the secondary legislation to a new time limit of 5 days, with a view to entry into force in the first half of 2009.

An automatic solution for mobile number portability became available for the new mobile entrant in May 2008. Overall, the consumer interest in the mobile number portability facility has not taken off yet, and the total number of mobile numbers ported between October 2007 and October 2008 is low (10 893). The retail price of €13-20 charged by the two major players is relatively high; the new entrant does not charge any retail fee. An average time to port a mobile number from the customer's viewpoint is reported to be 14 days. The new entrant reports 20 days.

Wholesale prices for number portability are negotiated commercially.

Consumer complaints

Mobile operators note that most consumer disputes involve alleged billing mistakes. A dispute with an operator may further be taken to TÚSR. The consumer protection authority Slovak Commercial Inspection actively encourages consumers to use the available out-of-court dispute resolution mechanism. The regulator finds that subscriber contracts are a frequent source of disputes. TÚSR received 80 consumer complaints in the first half of 2008.

European emergency number 112

In July 2008, the European Court ruled that, by not ensuring in practice that authorities handling emergencies are, to the extent technically feasible, given caller location information for all callers to the single European emergency call number '112', Slovakia had failed to fulfil its obligations under the Universal Service Directive. The Commission closed the case in January 2009 as the caller location information is now provided by all mobile and fixed players.

All national emergency coordination centres have been upgraded with new technology that allows receipt of caller location information. At present, the fixed incumbent provides the national emergency coordination centres with up-to-date information through an online interface with its databases; the databases of the fixed alternative operators are updated manually on a quarterly basis but the intention for the future is to launch an automatic update. The provision of caller location information has now become a part of the national roaming arrangement provided for the new mobile entrant by the second largest mobile operator. This operator provides caller location by a push method (cell ID, including SIM-less cards and roaming customers). The other two mobile players use a pull method. The incumbent acts as an aggregator for the caller location provision.

In December 2008, the Ministry of Interior adopted secondary legislation aiming at further improvement of the quality of caller location information. It obliges the mobile operators to provide the most accurate caller location which is already offered as a commercially service, and further clarifies the obligation with respect to the national emergency coordination centres. The proposal also extends the obligation to SIM-less phones and allows the centres to create a black list of hoax callers. A hoax caller could, however, still be allowed a connection to the emergency services. The current law allows the possibility of fining the hoax caller; individual cases are investigated by the police.

The information campaign continues via TV, public training and schools. The Ministry of Interior has launched a new dedicated 112 information website.

Must-carry

On the basis of the latest amendment of the Law on Broadcasting and Retransmission of 2007, the Broadcasting Council has already granted two exceptions to the must-carry regime. Three applications were denied. There are no capacity constraints reported with respect to channels with must-carry status.

Data protection

Operators have expressed concerns about amendment of the general authorisation imposing an obligation to provide equipment for legal interception at the operator's expense. The biggest mobile player appealed to the Supreme Court against an authorisation and won parts of the claim. TÚSR has already prepared a new authorisation proposal.

FINLAND

INTRODUCTION

Finland is the EU Member State with the fourth highest broadband penetration. In addition mobile broadband subscriptions have increased significantly in 2008. Competition in the mobile market has catered for intense usage of mobile communications as well as increasing fixed-to-mobile substitution. The switch-over to digital broadcasting has been completed. On the regulatory side, the NRA continued to address competition issues proactively. The second round of market analyses in the most substantial markets is finished, and the third round is ongoing. A significant development in 2008 was the development of the national broadband strategy, which was adopted by the Finnish Government at the end of 2008.

REGULATORY ENVIRONMENT

Main regulatory developments

A national Broadband Action Plan for 2009-2015 was adopted by the Finnish Government in December 2008. It mainly aims to ensure comprehensive broadband provision throughout the country. According to this plan, connections of on average 1 Mbps would be part of the universal service as of 2010, and very high speed (100 Mbps) should be available throughout the country from 2015.

Finland switched to all-digital television transmissions in March 2008, and thereby became one of the first European countries to switch over to all-digital television viewing including cable. In June 2008 the Finnish Government decided that the frequencies freed up — the digital dividend — will be used for the provision of mobile broadband services and new television channels.

Several important policy initiatives regarding e.g. high-speed broadband, the availability of basic electronic communications services, and market-based frequency management have followed on from studies carried out at the initiative of the Minister of Communications appointed in 2007.

Organisation of the NRA

The Finnish Communications Regulatory Authority (*Viestintävirasto*, FICORA) continues to carry out its regulatory tasks in both the postal and electronic communications fields and appears to have sufficient regulatory powers.

The Finnish Competition Authority (*Kilpailuvirasto*, FCA) is continuing to cooperate with FICORA on the new round of market analyses. Its investigation activities in the sector related mostly to issues of pricing in the LLU and broadband access markets, some dating back to 2002.

Decision-making

In general, market players felt that FICORA's work in 2008 had been quite efficient. The second round of market analyses has not yet been completed by FICORA, although the most substantial market analyses have been finalised. It also started the third round of market analyses with the LLU market (the physical network infrastructure access market) and the wholesale broadband access markets. The latter market reviews were notified to the Commission in December.

As of 2006 NRA decisions relating to SMP obligations are appealed directly to the Supreme Administrative Court in Finland, which seems to have had some positive effects in the market, as Court appeal handling times have been somewhat shortened, and are now between one and two years. The Court also suspends fewer decisions.

A specific data confidentiality appeal case is currently pending in the Administrative Court since June 2008. The case is about the interpretation of the concept of 'business secret', included in the Act on the Openness of Government Activities. The substance of the case relates to the NRA's decision to publish accounting separation calculations.

There is a significant number of long-drawn-out competition cases pending in the Finnish Competition Authority, the Finnish Market Court and the Supreme Administrative Court, mainly relating to pricing issues, such as margin squeezes or excessive pricing in the LLU and broadband access markets. While some of the issues at stake may have been overtaken by events, some operators are concerned about the lack of resources and the lack of sufficient expertise in the Market Court.

MARKET AND REGULATORY DEVELOPMENTS

As at 31 December 2007, the total turnover of the Finnish telecommunications sector was €4.48 billion, a slight decrease compared with the previous period (about 1%). Fixed market revenues have increased by 3.7% compared to 2006 (from €1.33 billion to €1.38) despite the overall decrease of the fixed market, while conversely revenues from the mobile market decreased slightly by 0.6% (from €2.26 to €2.25 billion). The share of telecommunications sector revenue in GDP was 2.49%, which is slightly below the EU average (2.8%).

The total value of tangible investments in electronic communications networks remained at almost the same level, and was €0.38 billion in 2007. The great bulk of investments were to develop mobile networks, as this was considered the most profitable and rapidly growing segment by operators. The ratio of investments over revenues was about 8.4%, which is below the EU average (11.5%).

While the structure of the Finnish market has not changed significantly in 2008, the telecommunications group created in 2006 as a result of a split-up of the association of local telephony operators has increased its market share considerably.

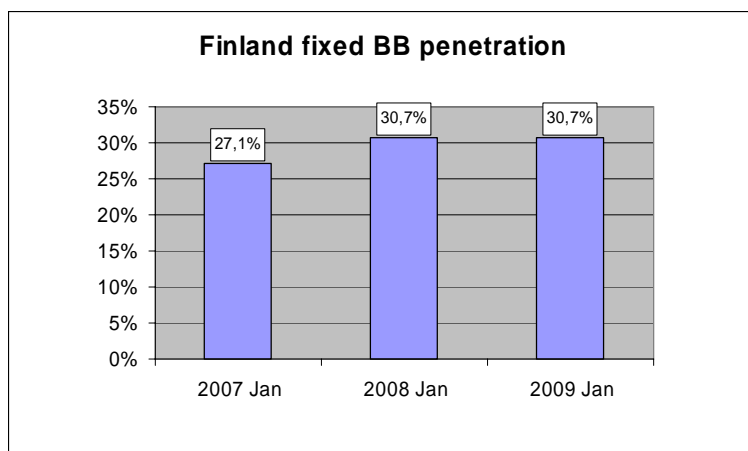
In December 2008, the Finnish Government adopted a national Broadband Action Plan for 2009-2015. Under this plan the Communications Markets Act would be amended so that connections of 1 Mbps on average are defined as a universal service; operators subject to universal service obligations would be obliged to provide this at a reasonable price by 2010 at the latest. The second target of this Strategy is an upgrade of public communications networks to ensure the availability of an optical fibre or cable network, supporting 100 Mbps connections, at a distance of maximum 2 km from every location in Finland, by the end of December 2015. It was also proposed that public funding be used for areas where network upgrade would not be commercially profitable. The subsidies would consist of a State contribution and a contribution by regions or municipalities, but a contribution from EU structural funds will also be requested. In the Broadband Action Plan it is also proposed that certain radio frequencies be auctioned even though there is no explicit link between broadband expenses and revenues from auctioning. If the Government expenditure for broadband exceeds €67 million, additional funding (compensatory payment) could be collected from operators. The financing of the plan was expected to require specific attention vis-à-vis competition rules including state aids. The financing plan, notably the compensatory payment collected from the operators, has created concerns among market players, some of whom also pointed out that the report gave no analysis of the actual demand for such services.

Broadband

Market situation

In July 2008 fixed broadband penetration in Finland was 30.7%, which places it fourth in the EU. By the end of the year 2008, Finland had a total of 1 625 745 fixed broadband access lines. For the first time the number of DSL broadband lines has decreased 2.5 percentage points over the last year, while the total number of broadband subscriptions has increased. The growth is largely explained by fixed-to-mobile substitution in broadband services. Mobile broadband subscriptions have increased rapidly, in particular mobile broadband active users accessing advanced data services via dedicated data modems/cards/keys, to reach a penetration rate of 9.1%, which places it as the second highest in the EU (the EU average being 2.8%). This is partially due to customers availing themselves of flat-rate prices for mobile broadband, and to subsidies for 3G handsets offered with contracts of maximum two years. In Finland 3G subscriptions generally have unlimited data transmission capacity with flat-rate pricing. Usage of the 900 MHz band for UMTS services, already launched commercially by the end of 2007, has increased data traffic thanks to higher data speeds and capacity in these bands.

Fixed broadband infrastructure competition has not improved significantly, especially in



several areas where the local incumbent also owns the local cable network offering broadband via cable. The prevailing technology is DSL, with a market share of 76.3% in January 2009. Despite the fact that some operators have rolled out WiMAX inside as well as outside their own incumbent areas, the market share of wireless local loop is only at about 1.5%. Regarding speeds,

about 50% of fixed broadband subscriptions had a connection speed of 2 Mbps or more, which is below the EU average (60.8%).

The market share of incumbent fixed network operators was 64.8% in January 2009, and the rate has not changed from January 2008. In January 2009 new entrants had 347 400 DSL lines in PSTN using full LLU (up from 305 626 in the previous year), while the shared access lines dropped from 76 164 in 2008 to 26 800 in 2009. (The main reason for these changes was the methodological change in data collection in Finland.)

The wireless network based on a 450 MHz licence was launched in April 2007. The provision of services is still rather limited, even though the network covers almost the whole country. The licence conditions exclude the provision of retail communications services by the licence holder itself, but the network is open for all other service providers to offer retail services. Deployment has been delayed by an appeal against the decision to grant the licence. The Ministry of Transport and Communications was expected to allocate an additional frequency channel to the licence holder to improve provision of the service.

Regulatory issues

FICORA started its third round of market analyses in the course of 2008 and notified the draft measures concerning the market for wholesale broadband access and the market for LLU (physical network infrastructure access market) to the Commission in December 2008. FICORA has intensely supervised the delivery times of LLU products in 2008. According to these investigations delivery times appear to have shortened by 10 per cent compared to the year 2007. FICORA claims there are no longer any significant problems concerning LLU product delivery times. FICORA has also checked the connection times of LLU products as part of the connection fee supervision. LLU connection fees have not fallen notably. A

summary of the investigation and of the NRA's view on this issue was expected to be published shortly.

Mobile markets

Market situation

The Finnish mobile market is developing rapidly and customers are benefiting from a number of advanced services offered by operators. Whereas the fixed market is continually decreasing, the total number of mobile subscriptions is increasing, and the mobile penetration rate reached 121.3% in October 2008, following another year of significant growth of about 11 percentage points. This places Finland above the EU average, which is 118.9%. Call minutes from mobile phones amounted to some 13.5 billion, which was nearly 3.3 times as much as the call minutes from fixed telephone networks during the year 2007.

The mobile market in Finland features three large operators providing mobile services — both voice and data services — with market shares by number of subscriptions of 39%, 37% and 22% respectively. The markets shares of the largest mobile operators have steadily stabilised, with a slight decrease in the market share of the top two operators, while the third operator's market share increased by 2% over the year. Despite several attempts there is only one mobile virtual network operator (MVNO) providing its mobile services, although its market share is still marginal.

According to the NRA about a quarter of all subscriptions during the first six months of 2008 were sold with long-term contracts tying in subscriptions with 3G handsets. Pre-paid card usage in Finland is 10%, the lowest in the EU. All major operators have also introduced flat-rate mobile internet access.

Regulatory issues

According to the commercial agreement facilitated by FICORA in 2007 and 2008,

asymmetric mobile termination rates of between €0.051 and €0.06 applied in 2008, and will be reduced to €0.049 and €0.054 in 2009. In addition, the operators have agreed that symmetric mobile termination rates will be applied from December 2009 onwards.

However, the level of the symmetric rate has not been decided yet by operators.

FICORA has developed its own version of a model for allocating costs (called the FIFAC model), which it uses for

assessing the pricing of call termination on mobile networks. In this model the operating and overhead costs are measured on the basis of historical costs, and capital costs on the basis of current costs. In July 2008 the NRA published the assessment principles of its methods for assessing the pricing of voice call termination and the calculations on which the assessment is based. FICORA has taken account of the consensus reached by Finnish mobile network operators on mobile termination rates for 2007-2009. According to FIFAC calculations, the level of mobile termination rates in 2010 and 2011 should be €0.04 and €0.035 respectively. Termination rates are already the third lowest in Europe, but in fact FICORA's assessment was that the level could be even lower.

The Communications Market Act allows price regulation to be imposed only on termination of calls originating on mobile networks, or on calls originating on fixed telephone networks using carrier selection ('CS') or carrier pre-selection ('CPS'), but not on calls originating on a fixed telephone line. For this reason the retail price of fixed-to-mobile calls not carried out via CPS or CS is considerably higher (i.e. €0.25 per minute plus the local network charge), than the prices charged for fixed-to-mobile calls originated through CPS or CS (i.e. €0.15) and for mobile-to-mobile calls (€0.07-0.08). While the operators mostly concerned continue to oppose the system, the ECJ rejected the case referred by the Commission on procedural grounds (case C-387/06) in January 2008.

Draft measures on the market for voice call termination in the MVNO network were notified to the Commission in May 2008. In its comments the Commission expressed its concerns on the issue of price differentiation of termination rates according to the origin of the calls and whether the operator's termination rates were proportionate to costs. However, in August 2008, FICORA designated a MVNO as having SMP in the market for voice call termination on its mobile network, and imposed obligations of interconnection, transparency and non-discrimination.

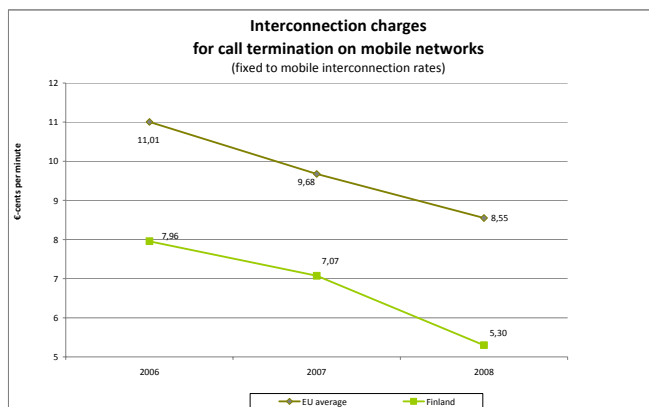
Roaming

Finland has notified to the Commission the transposition of the European Roaming Regulation (EC) 717/2007 into national law. The corresponding amendments entered into force on 1 March 2008, and will remain in force until 30 June 2010.

Fixed

Market situation

The traditional fixed market continues to shrink mainly to the benefit of mobile services. Fixed-to-mobile substitution is very high, with only 24% of all voice traffic originating in fixed networks, which is the lowest rate in the EU. The number of fixed call minutes dropped by 12% in 2007. In the meantime, the number of outgoing minutes of operators offering managed VoIP services grew, even though their market share remains low, at 2% in December 2007.



Due to the structure of the Finnish fixed market — a number of small local fixed incumbents operating in their traditional operating areas — the percentage of subscribers relying on the incumbent's infrastructure for direct access is traditionally very high (99% in July 2008).

Regulatory issues

In the first half of 2008, FICORA adopted final measures with regard to operators with SMP on the wholesale markets for call origination and termination on fixed networks, while the market for wholesale transit services was declared to be effectively competitive.

Broadcasting

Market situation

Digital switchover in Finland was completed nationwide in March 2008 and Finland thereby became one of the first European countries to switch over to all-digital television viewing, cable networks included. According to a report carried out by the working group set up at the initiative of the Ministry, nearly 42% of all households with a television set were using terrestrial TV reception as at 1 July 2008. The share of cable TV reception for the same period was about 50%. This latter number rose significantly during the first half of 2008 due to more attractive packages offered thanks to the digital switchover in the cable networks too. IP-TV remains at a low penetration percentage, at approximately 4% in the first half of the year. The penetration of digital set-top boxes in households with a television set was 99.6% in May 2008, whereas it was still 88.9% at the end of 2007.

Following the digital switchover there were 12 national free-to-air channels in the terrestrial digital broadcasting network, and up to 20 pay-TV channels in the packages of two operators. Two nationwide multiplexers out of five also carry radio programmes.

Regulatory issues

Following a complaint by broadcasting companies regarding the pricing of broadcasting transmission services provided by an operator with SMP, FICORA decided that some elements of the operator's price list were against the SMP obligations, and also against the Communications Market Act. While the operator with SMP has complied with FICORA's decision, the complainants appealed the decision, which was still pending before the Supreme Administrative Court.

Although the broadcasting market is not listed in the Commission's Recommendation 2007/879/EC as susceptible to ex-ante regulation, FICORA notified the market review to the Commission in July 2008, and after receiving the Commission's comments on this issue, adopted final measures in November 2008 by imposing some access, transparency and price control obligations on two separate markets: the market for national digital terrestrial television broadcasting transmission services and the market for analogue terrestrial radio transmission services. This was the second review of this market.

Horizontal regulation

Spectrum management

The Finnish Government has decided on the allocation of the digital dividend created by the switch-off of the analogue terrestrial television network in June 2008. The legal amendment came into effect on 1 July 2008. Frequencies freed up after the analogue switch-off will be used for the provision of mobile broadband services, and for new television channels, including high-definition television. The frequency band 790–862 MHz is planned for mobile broadband networks, since this frequency range is technically suitable for high-speed wireless broadband services, especially outside urban areas. For TV (470–790 MHz) one additional nationwide multiplexer will be set. In addition, two nationwide multiplexers are available for HD television broadcasting in the VHF band.

A working group tasked with preparing spectrum liberalisation by the Ministry of Transport and Communications issued its final report in April 2008. The working group proposed that licences for certain frequency bands could be issued on a commercial basis, particularly the frequency band of 2.50–2.69 GHz. On the basis of the working group report a draft bill was

being drafted. A total of 14 pairs of 2x5 MHz for FDD technologies and one 50 MHz band for TDD technologies could be granted on the basis of an auction for a 15-year period for providing electronic communications services within this band, following the principle of technology- and service-neutrality. The working group proposed granting at least one of the four licences to an operator not having an existing 3G mobile network licence, in order to increase competition. Commercial use of the 2.5–2.69 GHz frequency range was expected to be possible by the end of 2009.

Building on the Government's decision to amend the national frequency allocation plan, a spectrum assignment decision regarding the re-assignment of the 900 MHz band between existing licence-holders had been adopted in 2007, in order to ensure equal and sufficient spectrum resources. The decision was appealed by two operators and the administrative Court dismissed the appeal. The decision of the administrative Court was not yet final by end 2008. The 450 MHz licence holder established its network in 2007 in densely populated areas, and in parts of Lapland. To improve the service level, the Ministry has planned to allocate one additional frequency channel to the licence holder. As the technology used in 450 MHz bandwidth in neighbouring countries (Sweden and Norway) is different, coordination negotiations with these countries are ongoing.

While overall the usage and coverage of WiMAX has grown during the year under review, one of the largest operators returned its WiMAX licence in the end of September 2008 as it stated that 3G evolution had overtaken WiMAX as regards capabilities and costs.

There continue to be radio spectrum interferences issues with Russian mobile operators in the remote areas near Finland's eastern border. This has caused a number of Finnish operators' subscribers to involuntarily switch over to Russian GSM networks, which has led to higher roaming bills. The NRA has continued to try to resolve these issues, without any success so far.

The Finnish authorities have informed the Commission of the full implementation of Commission spectrum harmonisation decisions.

THE CONSUMER INTEREST

Until 1 April 2006 'tie-in sales' were prohibited in Finland. For a fixed period from 1 April 2006 until 1 April 2009, the amendment of the Communications Market Act allows 'tie-in sales' for 3G terminals. The original intention in allowing subsidising of handsets was to make 3G terminals more common. The proposed Law amendment will allow 'tie-in sales' on a permanent basis. However, the Finnish Consumer Agency (*Kuluttajavirasto*), the body to safeguard and strengthen consumers' rights in society, expressed concerns that it might make it difficult for consumers to terminate the contracts or to compare retail prices effectively. In addition, one operator claimed that tying the customer with long-term contracts might decrease competition.

Universal service

Since 2007 provisions on universal service have been included in Finnish legislation and in the course of 2007 FICORA analysed whether the designation of a universal service provider for telephone services was necessary. In January 2008, the NRA made final decisions on universal service providers. The obligation to provide universal telephone services was imposed on ten operators in 135 municipalities. No universal service provider was designated for directory enquiry and directory services.

At the end of 2008 the Finnish Government decided to extend the scope of universal service. According to the Finnish Government Resolution, connections of on average 1 Mbps would be defined as a universal service. The service in question will have to be provided at a reasonable price by the operators with a universal service obligation from the end of 2010 at the latest. Corresponding amendments should be made to the Communications Market Act.

The definition of universal service is technology-neutral, allowing the provision of services over fixed or wireless solutions.

At the end of 2007 a report commissioned by the Minister of Communications was carried out to examine the availability of basic electronic communications services in the event of the fixed network services being shut down. Certain measures were proposed to ensure the provision of basic telecommunications services. One basic requirement was that a replacement must be offered to customers. One operator with a universal service obligation had already launched the technology-change process in February 2008 by informing its customers at least one year in advance about the replacement of their fixed voice and broadband service with wireless solutions.

Number portability

The use of mobile number portability continues to be very high and this facility is used extensively by customers. The cumulative number of mobile ported numbers was 4 320 000 as at October 2008 compared to 3 487 000 one year earlier and the percentage of mobile numbers ported over total number of mobile subscribers was 68%, which continues to be the highest in Europe.

However, the use of fixed number portability remains low and mainly used by business customers. Only 446 000 fixed numbers were ported cumulatively as at 2008. The charge applied between the operators for porting fixed numbers is above the EU average (€17.95). The current statutory time for porting both mobile and fixed numbers is 5 days.

European emergency number 112

The single emergency number 112 has been available in Finland since 1993. Calls to 112 are handled by the Emergency Response Centres, which alert the ambulance, fire and police services. Operators at the call centre are able to answer calls in Finnish and Swedish. English is also widely available.

Caller location information is provided for both mobile and fixed calls. As an activity to raise people's awareness of the European emergency number, '112 day' is celebrated every year on 11 February in Finland.

Must-carry

Must-carry rules were already called into question by market players some years ago (in 2004) and the Commission opened an infringement proceeding in 2007. The complaint argued that the Finnish must-carry obligations were neither technologically neutral (as they only applied to cable-TV networks), transparent (as they did not specify the number of channels to be carried) nor proportionate (as they put an enormous burden on the capacity available on the cable networks). Based on the reply of the Finnish authorities, and taking into account the legal amendments dealing with must-carry rules adopted on 21 December 2007, the Commission terminated the case in September 2008. These new rules entered into force on 1 January 2008, and will have to be reviewed before their expiry on 31 August 2010.

Consumer complaints

The principal authority dealing with consumer complaints in Finland is the Consumer Disputes Board (*Kuluttajariitalautakunta*, CDB), which is an independent expert body whose members represent consumers and businesses. The Board issues recommendations concerning disputes. It can also issue statements to Courts handling cases which fall within its sphere of competence. In addition the Board guides municipal consumer advisers.

In 2007 the CDB received a total of 9000 consumer complaints, of which a third were related to telecommunications issues. The main reasons for concern among the consumers are overly large bills, or billing mistakes, unintentional roaming when close to the border, problems due to transparency and duration of contracts, confusion regarding the contracting partner and the

content of contracts. The amount of complaints regarding value-added and content services is increasing.

Data protection

The Finnish Government recently proposed an amendment to the Act on the Protection of Privacy in Electronic Communications which enables companies to examine the identification data of employees' e-mail messages. The amendment is awaiting approval by the Finnish Parliament.

FICORA's e-mail regulation has been revised. The regulation concentrates on the responsibilities of e-mail service providers in order to ensure information security and functionality of these services. The main developments in the regulation deal with protection of connections between customers and servers, the management of e-mail addresses and the filtering of harmful e-mail traffic.

SWEDEN

INTRODUCTION

During 2008, market trends continued to be positive in Sweden, as a consequence of relatively effective regulation. Competition in the mobile sector intensified, finally benefiting from the regulation of mobile call termination. Traffic in mobile data services has doubled since 2006.

Operators were looking forward to the finalisation of the second round of market analyses, since current regulation no longer seems suitable to address market deficiencies and technology developments, in particular as regards fibre. In the meantime, an amendment to the law on electronic communications entered into force enabling the regulator to take steps leading to imposition of functional separation.

REGULATORY ENVIRONMENT

Main regulatory developments

In June 2008, the national regulatory authority (NRA), Post- och telestyrelsen (PTS), published its next generation access (NGA) strategy on the regulation of dark fibre. Even though the outcome of the analysis falls short of the expectations of the alternative operators, the study, which was one of the first of its kind in the EU, analysed the current market situation, and concluded that, in the light of positive market trends such as the number of stakeholders providing dark fibre at the wholesale level, it was not justifiable to define a specific market for dark fibre. Nevertheless the market would require continuous monitoring. In July 2008 the new provisions empowering the NRA to impose functional separation on the incumbent entered into force. Under the national law, fibre access networks will not fall under the scope of functional separation. The Commission services are looking into this matter.

Organisation of the NRA

The enforcement of remedies remains a key challenge for a highly motivated NRA team of experts. However, although the regulator has shown proactivity in the area of mobile call termination markets (with mobile termination charges amongst the lowest in the EU), market players point to the lack of self-initiative on the complex broadband markets.

The National Competition Authority (NCA) is continuing to work with PTS on the second round of market analyses, while pursuing investigations launched during 2007 (e.g. non-provision of access to dark fibre).

In September 2008, the Commission initiated infringement proceedings against Sweden, based on a complaint from an operator. The national electronic communications legislation, as interpreted by Swedish Courts, appears to limit the authority of PTS to settle disputes regarding terms and conditions of interconnection agreements which are the subject of negotiations between undertakings. The Ministry of Enterprise, Energy and Communications has prepared legislative proposals to address this issue, as well as an issue regarding appeals, which is the subject of a pending infringement proceeding. The proposals are expected to be adopted in 2009.

Decision-making

No notifications were presented to the Commission services in 2008. Still within the context of the second round of market analyses, PTS continued to work on wholesale interconnection markets as well as on the market for access to the public telephone network at a fixed location, which were expected to be notified in the first half of 2009. The consultation of market players on draft decisions with market players began in the second half of 2008. The proposal to withdraw regulation from the market for transit services in the fixed public

telephone network received attention from a number of operators concerned that this would harm their future position on the market. In addition, PTS started preparations for the analysis of the three broadband-related markets in the context of its recent broadband strategy, with notifications expected in the first half of 2009, and also initiated the analysis of the broadcasting transmission services market. PTS intends to deal with the mobile market later on in 2009.

The second-round reviews of the physical network infrastructure access market (i.e. local loop unbundling (LLU) market) and the wholesale broadband access market appear to raise complex issues, such as geographic differentiation of national markets and the treatment of next generation access (NGA) investments. The regulator has contacted the Commission services on several occasions to exchange relevant information in this regard.

The first-round 'significant market power' (SMP) decisions on the wholesale mobile call termination market, which have been subject to lengthy appeals, have finally been upheld by the Swedish Courts.

The infringement initiated in October 2006, concerning the incorrect application of provisions of the regulatory framework on the right to appeal, was still pending. According to national law, conditions stricter than those provided by the Framework Directive do not allow all market players to appeal certain decisions of the NRA. The European Court of Justice preliminary ruling adopted in 2008 (C-426/05, Tele2 vs. TCK) provided some useful indications in a similar case. According to a government proposal made in 2008, the provisions on the right of appeal would be interpreted as also benefiting undertakings in competition with the addressee of a SMP decision. It remains to be seen whether such a solution, amending the ECA, would meet the requirements of the regulatory framework. More generally, systematic appeals and lengthy procedures continue to represent a major source of uncertainty in the marketplace, in particular since Court decisions on appealed SMP obligations cannot be enforced retrospectively. Also it would appear that the regulator has the authority only to settle disputes from the date when the disputes as such arose between operators, even though breaches of significant market power obligations were established prior to the launching of the dispute in question. An additional issue is that the Swedish Civil Courts would not be authorised to resolve the disputes. This would mean that SMP operators might have a very low incentive to comply with the imposed remedies before other operators had started any disputes. The Commission services are looking into the matter.

The NCA, as a result of an investigation in a margin-squeeze case concerning non-regulated retail products in 2001-2003, proposed to the Stockholm City Court to impose a fine of €13.7 million on the incumbent. While no decision has been taken yet by the Stockholm City Court, the proposed decision is not suspended.

MARKET AND REGULATORY DEVELOPMENTS

Revenue in the electronic communications sector in 2007 equalled €6 396 million¹¹⁶, an increase of 2.03% since 2006. Both the fixed and the mobile market registered slight declines compared to 2006, and generated €2 109 million and €1 820 million respectively. The share of the electronic communications sector revenue in GDP was 1.93%, which is below the EU average of 2.90%. With €1 157 million¹¹⁷ in 2007, the sector invested 4.27% more compared to 2006. The incumbent invested €331 million (€55 million more than a year ago) and mobile operators injected some €349 million (an increase of €113.5 million since 2006). The fixed alternative operators were the only category of market players with reduced investment, €134 million in 2007 compared with €192.5 million in 2006. The share of investment in GDP stood at 0.35%.

¹¹⁶ In addition to the reported revenue figures for the fixed and the mobile market, the figure for total revenue also includes revenue from wholesale operations.

¹¹⁷ In addition to the reported figures for investment by the incumbent, mobile operators and fixed alternative operators, the figure for total investment also includes investment by Internet-only operators and wholesale investment.

Despite the ever-increasing traffic on mobile networks, the total called minutes in the mobile networks (34%) still lag behind the number of total called minutes in the fixed networks (66%).

The government plan to sell off the remaining State holding in the incumbent failed after the Swedish incumbent's board rejected the French incumbent's initial €33 billion bid as substantially undervalued, thereby failing to produce an agreement on financial conditions.

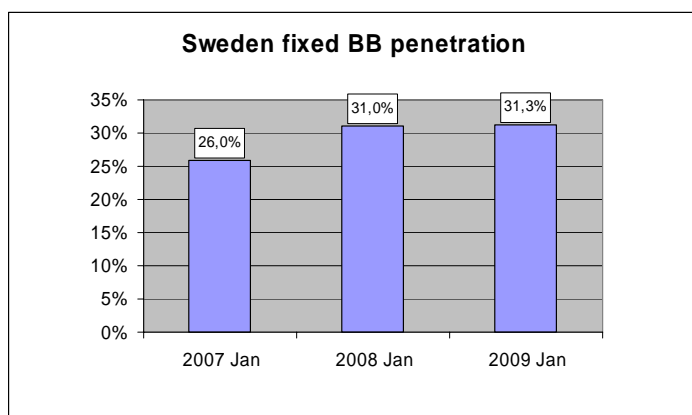
Broadband

Market situation

In January 2009 broadband penetration, in terms of fixed lines per 100 inhabitants, was 31.3%, placing Sweden third in the EU. The growth of fixed broadband lines slowed considerably, and grew by only 0.3 percentage points between January 2008 and January 2009, partly owing to a decrease in the number of unbundled local loop (LLU) lines. The share of technologies other than DSL grew from 37.7% to 38.3% in the last 12 months. The incumbent's share of retail broadband lines grew to 39.5% in January 2009 compared to 37.7% in January 2008, still well below the EU average. In addition, mobile broadband is delivered to an increasing number of end-users, and there were some 604 000 mobile broadband users using dedicated data service cards/modems/keys in January 2009, which represents 6.6% penetration. Some 84% of all fixed broadband lines are able to deliver speeds greater than 2 Mbps, and Sweden is the leading EU country in terms of connections permitting speeds exceeding 10 Mbps.

Ownership of broadband networks by municipalities has doubled from 2003 to 2007. Some 150 municipality-owned companies are also key investors in fibre. This increasing pace of investment, fuelled by considerable public financing, is in contrast to a slowdown in the growth of the rest of the economy.

National DSL coverage increased from 95% at the end of 2006 to 98% at the end of 2007, and



DSL coverage in rural areas stood at 90%, an increase of 6 percentage points over a year. For cable, coverage in rural areas is 17% compared to 48.3% at a national level (64% urban only coverage). Sweden managed to narrow the digital gap for DSL coverage over a year, from 11.3 to 7.8 percentage points, whereas cable coverage registered no progress over the same period.

Regulatory issues

In 2007, in the spirit of the voluntary separation announced, the incumbent had set up a new entity responsible for the management of a full set of passive products (i.e. copper products in particular and ducts). According to the SMP operator this should ensure equal treatment of all market players. Furthermore, in the summer of 2008, the incumbent established the 'Equality of Access Board', which initially aimed at increasing market certainty and transparency through the planned publication of regular reports on key performance indexes, also covering the activities of another wholesale unit of the incumbent, responsible for sales of active network elements (e.g. WLR and bitstream, but not fibre). However, later in 2008, the incumbent decided not to publish these reports.

Price regulation has been successful in several cases over recent years. For example, the total monthly cost for fully unbundled local loops fell to €9.2 in 2008 from €10.1 in 2007 and is below the EU average (€10.9). The monthly cost for shared access fell by 12.0% to €5.1, which is, however, still slightly above the EU-27 average (€4.1). Connection prices for fully

unbundled local loops (€44.6) finally dropped below the EU average of €57.5, while monthly rental fees (€7.9) decreased below the retail PSTN rental price of the incumbent (€9.7), as did installation and enquiry fees, further to the October 2008 decision of the Swedish Court. This was expected to prompt alternative operators to increase the number of fully unbundled local loops beyond that of shared access lines.

However, issues other than price appear to have a strong impact on the behaviour of the market players. Reported preferential treatment by the incumbent's retail unit (e.g. much longer delivery times for competitors) and non-availability of information on collocation sites, street-cabinets and backhaul appear to have placed significant limits to the planning activities of alternative operators. This has led PTS to impose obligations requiring the incumbent to regularly publish information, as part of the reference unbundling offer (RUO) remedies, facilitating migration of customers. PTS also issued injunctions requiring equal treatment and the obligation to handle manual order requests within two weeks, while recommending the setting-up of an automatic ordering process as soon as possible.

A number of operators consider prices for access to (unregulated) dark fibre as prohibitive. In addition, the incumbent has refused to provide access to fibre that would connect MDFs, enabling connections with alternative operators' DSLAMs and networks, and has not provided any access to ducts affected by new road works. In the summer of 2008, the Swedish Courts finally upheld the incumbent's appeal, which challenged a PTS decision during the first round of market analysis, and considered that fibre backhaul may not be a part of LLU, nor could it be regarded as an ancillary service.

While PTS pointed to the likely existence of significant market power, and acknowledged competition issues in its June 2008 study on dark fibre, it appears to prefer monitoring market developments, taking action only if competition does not materialise over a certain period of time. PTS intends to publish a follow-up to the study in the second quarter of 2009.

In the meantime, however, significant parts of Sweden (some 2.4 million households) do not enjoy any competition, and a number of alternative operators might initially prefer to seek a simpler access form such as reasonably priced bitstream access. There is still no effective uptake of the bitstream/wholesale broadband access market despite several existing framework agreements. According to alternative operators, high entry costs are a sizeable impediment, if one has to compete with the incumbent's low retail prices. Also, the content and quality of service cannot be replicated, given that the incumbent has no obligation to provide other data-based services on a wholesale level. PTS's binding opinions, ordering that bitstream products be offered to all competitors on an equal basis, were suspended when the incumbent contested the content of the reference broadband offer (RBO) before the Swedish Courts in the summer of 2008.

State-financed networks, which have a 12% retail market share, may represent another important challenge for the further development of the broadband market. Alternative operators are concerned that wholesale access is not always available to competitors. PTS has reinforced the dialogue with the Swedish Urban Network Association, pressing for conditions that would facilitate wholesale access to both ducts and municipality-owned dark fibre. In addition, some municipalities provide active, lit-fibre products that compete directly with market players at the retail level. The Commission services are looking into the matter.

Mobile markets

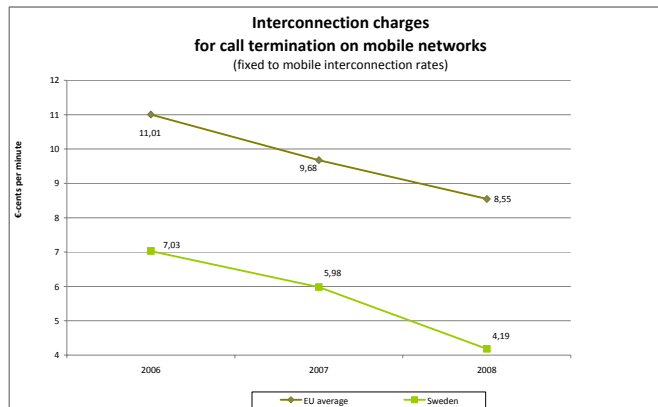
Market situation

Mobile market penetration increased by some eight percentage points to 114.6% over one year, which was under the EU average of 118.9%. The incumbent's market share (43%) in October 2008 was on a par with 2007. The average revenue per user (ARPU) across the sector in 2007 was €296, and above the EU average of €282, and reflects continuously falling call prices. Attractive price schemes, complemented by stronger use of data services, contributed to a three percentage point increase of post-paid subscriptions (56% in October 2008).

In July 2008, there were three operators offering both 2G and 3G (UMTS) services, one 2G operator and one 3G operator. In addition there was another 3G operator in the 450 MHz band which started to provide services in 2008, three MVNOs and a handful of small-sized resellers.

Regulatory issues

The 2004 SMP decisions on the wholesale mobile call termination market, which had been subject to lengthy appeals, have finally been upheld by the Swedish Courts thereby eventually casting some legal certainty on this market. The mobile termination rates (MTR), regulated by a decision of October 2008, which apply to all mobile network operators, stood at €0.0419, and for the first time, the mobile operators chose not to appeal the recommended level. This is significantly lower than the reference level of €0.0598 a year ago, and makes Sweden the second cheapest Member State.



Despite fairly low and symmetric MTRs, PTS is determined to step up the current price regulation, to narrow the gap between MTRs and fixed termination rates (FTR), which is currently disadvantaging fixed operators.

However, operators are concerned that further decreases of MTRs, in addition to current operating costs associated with the maintenance of numerous base stations, high usage fees for 3G and high auction costs for upcoming 4G licences, might endanger future investments, while fixed termination rates (FTR) are not subject to similar reductions.

Roaming

All GSM operators appear to have implemented the requirements set by the Roaming Regulation to a satisfactory degree. According to PTS, in the second half of 2008 retail international roaming prices were falling below the regulated Eurotariff levels, and in the case of one operator they were up to 30% below the marker.

As to data roaming, the retail prices of international transactions on average exceeded the prices for domestic traffic by four times. Accounting intervals for calls increased from 10 to 60 seconds, compensating for regulated voice call tariffs. Several consumers complained about issues of inadvertent roaming.

Fixed

Market situation

Around 40% of subscribers used an alternative service provider for national and international voice telephony services in July 2008, whereas the subscribers still choose the incumbent for direct access in 88% of cases (the EU average is 6.6 percentage points lower). In total there were 75 fixed operators, offering public voice telephony services, of which 60 were VoIP operators.

The incumbent controlled 58% of the fixed voice market at the end of 2007, measured in terms of revenue, one percentage point above the reference mark in the beginning of 2007. The share by revenue of alternative operators in the international calls market fell by four percentage points, compared to a year ago, and stood at 57%.

Regulatory issues

The appeal pending since 2006 against the decision on fixed call termination and its LRIC model has created further legal uncertainty in 2008.

Whereas retail price competition, leading to low price levels, has been quite intensive, wholesale competition still needs further improvements. As an illustration, the WLR product, priced at €8.2 (retail minus), and coupled with a €48.7 installation fee, does not sell well, given that the incumbent competes for the same customer base by charging no connection fee at all.

Broadcasting

Market situation

Competition between platforms continues to intensify, in particular at the expense of terrestrial and satellite TV. While analogue terrestrial broadcasting licences expired in February 2008, digital terrestrial TV was serving approximately 16% of Swedish households in 2008, and also about 16% of homes watched satellite TV. Cable TV with nearly 59% and IPTV with more than 8% of households have been the clear winners of 2008. IPTV subscriptions, with 3.88% of the population, represent the fourth highest figure in the EU.

Regulatory issues

The regulation of the wholesale broadcasting transmission market is the subject of ongoing appeals. As soon as the SMP operator in December 2007 withdrew its appeal from the highest Administrative Court regarding analogue terrestrial transmission obligations, the SMP operator in February 2008 asked PTS to revoke its recent SMP decision on digital terrestrial transmission. The SMP operator's request was dismissed but it further appealed the decision to the Supreme Court, the remedies not being suspended. On 11 September 2008 the Court decided to reject the appeal. The SMP operator also appealed another decision of the NRA in relation to price adjustments for the distribution of content for analogue radio and digital TV. This case is still pending.

The SMP operator's regulated transmission prices, which are based on a fully distributed cost (FDC) methodology, might have had some negative effects on the market. Recently, one of the free-to-air broadcasters opted to leave the broadcasting market.

In 2008, the focus of the Swedish Radio and Television Authority (RTVA) shifted towards resolving conditions and issues between the holders of application programming interface (API) and electronic programme guide (EPG) licences, including issues of conditional access, subscriber management services (SMS) and pay TV. Based on the amended legislation which entered into force in February 2008, RTVA in March 2008 granted licences for six frequency channels in the UHF band to 23 broadcasters nationwide and 13 broadcasters on a regional level. RTVA will further review licensing conditions in March 2009. Broadcasters are now in principle free to choose any network operator, even though only one operator is currently active in the terrestrial pay-TV market.

Horizontal regulation

Spectrum management

In December 2007, the government decided to dedicate part of the spectrum released as a result of the switchover to digital broadcasting transmission (the 'digital dividend'). It is expected that a multiplexer (MUX) 6 will be established in the 490-790 MHz band, while another MUX will be set up in the VHF band. Awarding of licences is tentatively scheduled for late 2009.

As for the 2.6 GHz band, which is suitable for 4G services, in the spring of 2008 PTS organised an auction (the first of this kind in the EU) which ended in May after 112 rounds. The total amount paid for licences was €226 million, with five bidders winning licences for provision of mobile and wireless broadband.

Another bandwidth, in the range of 28 GHz, suitable for High Speed Packet Access (HSPA), is available for re-planning and block licences were being prepared by the NRA at the time this report was drafted.

The GSM licensing regime expires in 2010 (except for one operator whose licence expires in 2017). There were currently no guidelines or legal provisions indicating how PTS would proceed. This raises concerns amongst the operators, forcing market players to reconsider their investment strategies. In November 2008, the existing GSM licence holders asked PTS for changes in their licensing conditions. Changes would permit the use of other technologies than GSM in the 900 MHz band, and would take account of the need for a redistribution of

the existing licences to make room for one additional 3G player, currently without a licence, in the 900 band.

The government initiated a spectrum/wireless policy review in 2007, which formally concluded in July 2008. The report suggests a number of proposals to amend the ECA and underlines key issues, such as enabling the use of mobile telephony and data communication services at an affordable price, anytime and anywhere, efficiency-guided spectrum licensing introducing block licences, together with new rules addressing the current uncertainty regarding licence renewal at expiry, and increased confidentiality at auctions.

Sweden has implemented all the Commission decisions on spectrum harmonisation.

THE CONSUMER INTEREST

Tariff transparency

PTS continued to run its web-based price comparison service successfully. The service includes price comparisons for fixed, mobile and internet for different user profiles.

Universal service

According to the NRA's June 2008 report to the government, the regulator does not intend to impose any universal service (US) obligations for areas where no fixed or wireless infrastructure is available. Such an obligation would constitute an unfair burden on a potential US operator, since it would entail creating new infrastructure in remote areas without compensation, as there is no funding mechanism in the Swedish legislation. Tendering procedures have traditionally not been used either, in order to guarantee access in remote areas.

Remote areas may however be increasingly short of access to voice communications as a result of the incumbent's plans to remove a large amount of landlines. The Ministry of Enterprise, Energy and Communications is currently working on a new Bill to provide solutions, such as satellite coverage or 450 MHz CDMA connection. In the long term (beyond 2010), a US fund may be introduced, with emphasis on technologically neutral obligations, and where fully functional Internet will replace analogue facsimile requirements.

Following an intervention of PTS earlier in 2008, three injunctions have been imposed on market players not complying with obligations concerning itemised billing during 2007.

These operators are now complying with the requirements in question.

Number portability

By October 2008, 3 074 325 mobile (29% of all mobile numbers), 863 769 fixed and 13 875 non-geographic number had been ported since its introduction, and prices for porting of numbers remain amongst the most attractive in the EU (from €2 for mobile to €4 for fixed numbers). Timing in particular appears to be an issue. Some alternative operators have voiced concerns that the time required for porting of numbers is too long (five working days for mobile and up to 15 working days for fixed numbers).

Consumer complaints

While no major issues have been reported by consumer protection authorities in 2008, certain problems concerning unsolicited mail, operators' marketing activities (e.g. silent telephone marketing calls) and contract terms (e.g. a notice of termination of the contracts) required their attention. In October 2008, the National Board for Consumer Complaints settled a complaint on inadvertent roaming. Owing to the operator's lack of transparency concerning information on the risk of international roaming and insufficient burden of proof, the consumer was not held liable to pay the amount invoiced for a connection via a Finnish network.

Discriminatory treatment in the provision of mobile telephony services in Sweden was reported to the Commission services. Allegedly, mobile operators refuse to provide voice or

data services in cases where the customer has no 'personal national registration number', which may be obtained only if the person is a permanent resident in Sweden or was born in Sweden.

In addition, the Consumer Protection Authority (CPA) performed a mobile phone content sweep, which revealed that the market requires more systematic investigation in 2009.

European emergency number 112

112 is the single emergency number in Sweden.

According to the Eurobarometer Flash survey on the European Emergency Number 112 in February 2008, Sweden has one of the highest rates of awareness of the number in the EU (96% of Swedish respondents said they would call 112 in an emergency in Sweden).

As a measure providing support to disabled people, a trial service has been set up introducing the possibility of sending SMS to 112. A text relay service is also available through a web interface and it is possible to call 112 using a relay service for video telephony and a relay service for users with speech impediments.

Data protection

A new 'Signals intelligence' legislation (FRA) has been adopted in order to strengthen the ability of public authorities to address terrorism and other national security threats in Sweden. Under the law, the Swedish national authority for signals intelligence will be able to monitor cross-border electronic communications, subject to certain restrictions with regard to privacy. However a number of market players, including some in neighbouring countries, were of an opinion that the law would create a barrier to trade and will result in operators losing a substantial number of business customers in particular.

In the meantime, infringement proceedings for non-communication of measures transposing the Data Retention Directive were ongoing.

UNITED KINGDOM

INTRODUCTION

In 2008, the electronic communications sector in the United Kingdom (UK) saw continuing progress in broadband take-up and local loop unbundling (LLU) and there were increasing moves by operators to offer higher broadband access speeds. A cable operator launched a major upgrade of its network and the fixed incumbent announced its investment plans in next generation access networks for the coming four-year period. On the retail side, an increasing number of consumers are taking up bundled offers from a single provider.

The performance of the fixed incumbent's functionally separated access division was broadly perceived to have improved over the past year. The UK regulatory authority — the Office of Communications (Ofcom) — completed the second review of the broadband access market, which resulted in partial deregulation of the market on a geographical basis. While Ofcom was one of the first national regulators to complete the first round of market reviews in 2003–2004, some second-round market reviews are still outstanding. The past year was also marked by a number of successful appeals against Ofcom decisions in the Competition Appeal Tribunal (CAT).

REGULATORY ENVIRONMENT

Main regulatory developments

A major development in the implementation of functional separation of the fixed incumbent was the adoption of service level agreements and service level guarantees SLAs/SLGs by Ofcom in March 2008, after voluntary negotiations between the fixed incumbent and alternative operators failed on this issue earlier in 2007. These new SLAs/SLGs were generally well perceived by alternative operators and are expected to contribute to reinforcing non-discriminatory treatment of these alternative operators regarding non-price elements in the provision of Wholesale Line Rental (WLR), LLU and Ethernet services.

In 2008, Ofcom completed the second-round review of the wholesale broadband access market. It was the first case in the EU where a regulator defined sub-national wholesale markets based on the level of competition, sustainable market entry and population density in exchange areas, and, in consequence, deregulated parts of the national territory. Furthermore, Ofcom continued working on its policy approach to next generation access networks and carried out a second-round review of the leased lines markets. On the other hand, 2008 saw the annulment by the CAT of Ofcom decisions regarding the UK number portability system. During the past year, Ofcom initiated several measures to enhance consumer protection, including strengthening of the regulation against consumer abuses in the mobile sector, improving the information to be provided to consumers about broadband speeds and about the quality of service as well as improving the accessibility of alternative dispute resolution mechanisms. On the other hand, definitive decisions still have not been taken regarding the charging for calls to certain non-geographic number ranges. A specific issue in the consumer protection context, which gave rise to particular concerns from a number of citizens and will continue to require attention by the UK authorities in the future, was the use of online behavioural advertising technologies by Internet Service Providers.

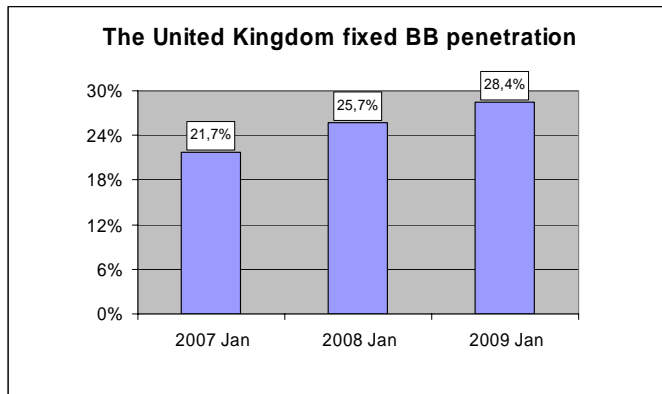
Organisation of the NRA

While Ofcom is perceived to be very well resourced as far as regulation of consumer issues is concerned it is considered by some operators to lack resources for dispute resolution. It was noted in this regard that, in 2008, some disputes were not resolved within the prescribed four months time limit and exceptional circumstances were invoked for the extension. Ofcom's work is characterised by thorough consultation procedures before taking decisions, which entail additional time needed for review of the submissions made to it by interested parties.

Decision making

During 2008, the CAT issued two judgments on appeals against Ofcom decisions, which, apart from dealing with the specific merits of the cases in question, also scrutinised the way Ofcom performs dispute resolutions and regulatory impact assessments.

The first relevant CAT judgment was passed in May 2008 and concerned Ofcom determinations from 2007 in disputes concerning Mobile Termination Rates (MTRs) in the time period from 2004 until 1 April 2007, the date on which current regulatory measures resulting from the second review of mobile call termination markets took effect. During the



period up to 1 April 2007, only 2G rates were subject to price control measures and not 3G rates. In consequence, mobile network operators (MNOs) introduced 3G/2G 'blended' MTRs for all calls, which exceeded the regulated 2G rates and gave rise to the disputes in question. Ofcom agreed in its 2007 determinations that 3G termination could cost more than 2G termination and that it did not need to be cost-oriented.

The CAT considered that Ofcom had not properly exercised its dispute resolution powers and that it should have determined fair and reasonable rates instead of relying on the 2004 decision not to regulate the 3G termination rates. In this respect, it should be noted that, when the relevant draft measure was notified in 2004, the Commission, in its comments, called for stronger regulation of 3G termination rates. In response to this CAT judgment, Ofcom is expected to issue new guidelines on dispute resolution.

The second relevant CAT judgment was issued in September 2008 and concerned Ofcom's decision of November 2007 concerning number portability, which obliged operators to establish a central number porting database to enable direct routing of calls to ported numbers and reduced mobile number porting times to two hours. The CAT set aside Ofcom's decision stating that the cost-benefit analysis performed by Ofcom was not carried out to the requisite standard and did not withstand the required level of scrutiny.

CAT is generally perceived as a competent and efficient body to which decisions of Ofcom can be appealed, but lodging appeals can involve significant costs. CAT judgments can be further appealed to the Court of Appeal.

MARKET AND REGULATORY DEVELOPMENTS

The total turnover of the United Kingdom telecommunications sector was about €56.7 billion as at 31 December 2007; the revenue from fixed services was about €30.25 billion, and that from mobile services was about €26.45 billion. The total value of tangible investments in telecommunications networks is estimated at €8.93 billion for 2007.

In 2008, 32.05% of the UK population used bundled services, which is the highest percentage in the EU. Specifically, 17.31% of the population had subscribed to double-play and 12.18% had subscribed to triple-play packages. Bundles are made attractive by offering discounted prices, commonly 'free broadband', but can also mean that customers are tied into longer contracts.

Broadband

Market situation

The UK broadband penetration rate rose to 28.4% in January 2009 compared to 25.7% in January 2008, which constitutes a growth rate of 2.7 percentage points that is close to the EU average growth rate of 2.8 percentage points. However, it is less than the growth of 4 percentage points reported for a similar period a year earlier.

National DSL coverage¹¹⁸ increased from 99.5% at the end of 2006 to 99.6% at the end of 2007 and DSL coverage in rural areas increased from 95.0% to 96.1% over the same period. The DSL rural gap with national coverage accordingly narrowed from 4.5 to 3.5 percentage points.

According to the Office of the Telecoms Adjudicator (OTA2), LLU continued to progress during 2008, with approximately 5.5 million LLU lines in January 2009 compared to slightly less than 4 million in January 2008. The fixed incumbent's share of the retail broadband market slightly decreased (25.4% compared to 25.8% a year ago) and is the lowest for a fixed incumbent in the EU. The market share of resale of the fixed incumbent's broadband offering continued to decrease reaching 17% in January 2009 compared to 23.1% a year ago. It nevertheless remains the largest resale market share in the EU countries. The UK did not provide information about the take-up of mobile broadband to the Commission. However, Ofcom reports on a substantial take-up of mobile broadband in the UK.

The ongoing core network upgrade by the fixed incumbent should allow up to 24Mb/s data rates over the existing copper loops. Points of interconnection have been agreed with alternative operators and the special industry body — NGN UK — works on migration arrangements. In 2008, a major cable company launched 50 Mb/s services to consumers while the fixed incumbent announced a 1.5 billion GBP investment into next generation access networks over a four year period up to 2012. It plans to implement a solution to allow data rates of about 40Mb/s. Two pilot sites have been announced for initial deployment in July 2009 and it is expected that half a million subscribers will be connected in the subsequent phases.

In addition, the fixed incumbent has deployed a fibre to the home (FFTH) solution in a first new build site, where residents will benefit from data rates of 100Mb/s. At the same time a number of other entrants are planning to deploy fibre to new build developments across the UK. However, these may be affected by a slowdown in construction of new homes given recent economic developments. The retail demand side for fibre access is also generally considered problematic because of competition from Digital Terrestrial Television (DTV) and satellite television as regards in particular the provision of High Definition services.

As of 1 January 2009 about half (56.5%) of the UK fixed broadband lines were in the access speed range between 2 and 10Mb/s, while 36% of lines were in the speed range below 2Mb/s. The reported share of high-speed lines of above 10Mb/s was 7.4%, which is below the EU average of 14.1%. As regards broadband pricing, providers are moving away from volume caps but maintain the 'fair usage clauses' in consumer contracts to prevent congestion.

Regulatory issues

In May 2008, Ofcom completed the second-round review of the wholesale broadband access market. It was the first case in the EU where a regulator defined sub-national wholesale markets based on the level of competition, sustainable market entry and population density in exchange areas. In consequence, Ofcom deregulated parts of the national territory where the fixed incumbent will no longer be subject to regulation after a 12-month transitional period. Following the failure of the negotiations in 2007 between the fixed incumbent and alternative operators, the determination of SLAs/SLGs for the provision of WLR, LLU and Ethernet services was referred to Ofcom. In consequence, Ofcom decided in March to require the fixed incumbent to pay alternative operators compensation for WLR2, WLR3 and LLU proactively and to re-structure Ethernet service compensation payments for late provision and repair. These SLAs/SLGs only apply to the wholesale products existing at the moment of their adoption. In this regard, Ofcom stated in its decision that these principles could apply equally to other products and services. It therefore expects that the SLAs/SLGs for any new products will be consistent with those mandated for existing products.

¹¹⁸ Source: IDATE reports 'Broadband coverage in Europe'.

In 2008, Ofcom continued the work on the system of remedies that could apply in the next generation access (NGA) environment. First, Ofcom issued a Statement in September, which focused specifically on NGA networks deployed in new housing developments. At the same time Ofcom issued another consultation concerning NGA networks more generally. In the meantime, the fixed incumbent is consulting with the industry on wholesale NGA products. In the course of 2008, Ofcom reviewed both wholesale and retail leased lines markets ('Business Connectivity Market Review'). Ofcom's final Statement published in December distinguished wholesale terminating segments of leased lines markets into separate product markets according to bandwidth. These product markets are then further distinguished geographically. Ofcom designated the fixed incumbent and the incumbent operator of the Hull area as SMP operators in some of these markets with different sets of remedies in each case. In addition, Ofcom maintained the SMP status of the fixed incumbent in the leased lines retail market and trunk segments of the leased lines markets after having shown that these markets meet the three criteria test, which regulators have to carry out if they wish to regulate markets, which have been removed from the new Commission Recommendation on the relevant markets adopted in December 2007.

Mobile markets

Market situation

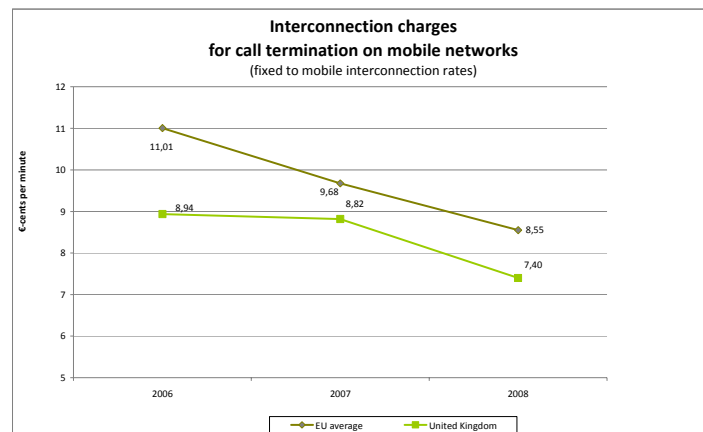
The UK mobile penetration rate increased slightly to reach 121.19% in July 2008. According to Ofcom, the take-up of 3G progressed to reach 12.5 million users, or 17% of all mobile subscribers, at the end of 2007. The leading mobile operator's market share by subscribers was 25%, which was the lowest for a leading mobile operator in the EU countries. The four established MNOs continued to have market shares within a few percentage points of each other, while the new entrant was the largest 3G operator in terms of subscribers.

The average consumer price for mobile services the UK was €19.76 per month, which is close to the EU average of €19.49. Price increases have been reported in 2008, in particular for pre-paid mobile services. The UK continues to have a strong mobile virtual network operator (MVNO) market presence. Successful MVNOs are generally companies which have already established good brand names in other sectors or can offer innovative products.

Regulatory issues

In August, Ofcom launched a public consultation on the assessment of the mobile sector outlining regulatory challenges in the mobile market. These include, in particular, the future regulation of termination markets after 2011, where Ofcom calls for a debate about the possible changes to the structure of mobile termination, such as 'bill and keep' arrangements. The mobile termination rates applied by the five MNOs in October 2008 were asymmetric and ranged from €0.0712 to €0.10, the average being €0.074, which is below the EU average of € 0.0855.

During 2008, the CAT continued its examination of appeals lodged by the fixed incumbent and the new mobile entrant against Ofcom decisions resulting from the second mobile termination market review, which had taken effect on 1 April 2007 to run for four years. The appellants challenged the levels of price caps imposed by Ofcom considering them to be too high. In March, the CAT referred price control elements of these cases to the Competition Commission. In addition, the new mobile entrant challenged its SMP designation and the imposition of the price control, on which the Tribunal's judgment is pending. Another MTR related dispute was launched in November 2008 by one the new entrant mobile operators



using the low-power GSM technology in the DECT guard band frequencies, which applied to Ofcom to resolve its dispute with one of the established MNOs.

In 2008, the CAT also examined the appeals which had been submitted in 2007 by the fixed incumbent, the new mobile entrant as well as a number of fixed operators against Ofcom dispute determinations concerning the MTRs applied up to 1 April 2007. By two separate judgments, one of which is referred to in the section on 'decision making' above, the CAT set aside the Ofcom decision and resolved the disputes on their merits. By a subsequent order, the Tribunal gave Ofcom specific directions as to the decision to be taken regarding each dispute and termination rate.

The long-standing case concerning Ofcom's policy on GSM gateways was still pending in the Court of Appeal following Ofcom's appeal against parts of the relevant CAT judgment dating from 2006.

Roaming

In December 2007, the High Court decided to make a reference to the ECJ for a preliminary ruling concerning the validity of the Roaming Regulation in the case brought by four MNOs against the Government's secondary legislation implementing the Regulation. This reference essentially concerns the legal basis and proportionality of the Regulation and the procedure before the ECJ is pending.

Fixed

Market situation

According to OTA2, in January 2009 there were 5.41 million WLR lines and 4.13 million telephone numbers using carrier pre-selection (CPS). The growth in the number of WLR lines has slowed considerably and the number of CPS enabled lines is declining increasingly faster as operators continue switching CPS and WLR customers onto their LLU networks. In addition it is due to resellers buying an end-to-end wholesale calls product from the fixed incumbent rather than CPS-based calls from a CPS operator.

The fixed incumbent's market share in the fixed telephony market slightly increased during 2007 both by retail revenue and volume of traffic and stood at, respectively, 58% and 56% in December 2007. It nevertheless remains one of the lowest market shares for an incumbent in the EU. Charges for call termination on the incumbent's fixed network are the lowest in the EU countries in all three categories (local, single transit and double transit) and on average two to three times lower than the respective EU averages.

The introduction of the WLR3 product, which the alternative operators initially viewed with reluctance because of concerns over its stability, was advancing in 2008. About 25% of the fixed incumbent's retail customers had been migrated to WLR3 by the end of 2008 and all new customers of all providers are currently being connected using WLR3. All PSTN customers are expected to be migrated to WLR3 by June 2010.

Regulatory issues

In 2008, Ofcom began the preparation for the second-round review of the retail and wholesale narrowband markets, which were reviewed by its predecessor Oftel back in 2003. A consultation is expected in the first quarter of 2009.

Broadcasting

Market situation

According to Ofcom, digital television take-up grew by 3.4 percentage points in the twelve months to reach 88.2% of households at the end of September 2008, delivered by various digital platforms. This increase was led by the popularity of the free-to-view DTT service but also by continuing growth in satellite and cable pay services. The approximate market shares of the digital television platforms in terms of households connected was 38% for DTT, 37% for satellite and 13% for cable. Finally, 0.3% of UK households subscribed to IPTV as their main television platform. The number of high-definition television (HDTV) subscribers, currently delivered by satellite or cable, doubled between Q3 2007 and Q3 2008, from 548 000 to 1 133 000 households out of the total 25.6 million households.

In terms of coverage, before the start of digital switchover 73% of UK households could access all available DTT services, with around 80% of households capable of receiving the digital equivalents of the analogue public service broadcasts. Digital switchover in the UK takes place TV region by TV region, and started in one region in 2008. Once the programme is completed by the end of 2012, the coverage of services from the public service broadcasters will be 98.5% households, matching that previously available for the analogue service.

Regulatory issues

The current DTT multiplex licences expire in 2010 or 2014 depending upon the date of issue and are renewable for a further 12 years. In 2008, Ofcom consulted on the renewal of two licences expiring in 2010 and consequently decided that they can be renewed on the existing terms. The conditions of the relevant licences will be amended accordingly.

Ofcom continued to work in 2008 on access to premium rate content, which is considered of primary importance in determining the customer's choice of pay TV services that can be provided over different platforms. Further to the investigation opened in 2007, Ofcom issued another consultation in September on the distribution of premium content. Under its sectoral competition powers, Ofcom proposes to require the dominant broadcaster to provide wholesale designated premium channels on regulated terms. In addition, it stated that there is a possibility of a reference to the Competition Commission under the Enterprise Act

Horizontal regulation

Spectrum management

During 2008, Ofcom assigned rights to use frequencies in the 10 GHz and 40 GHz bands, which are used for point-to-point transmission networks, and in the 'L' band (1452-1492 MHz), which the assignee plans to use for mobile TV services (using standards other than DVB-H). In April, Ofcom published procedures for the award of spectrum in the 2500 – 2690 MHz and 2010 – 2025 MHz ranges. However, these were appealed by two MNOs arguing that Ofcom should have first taken a decision in relation to the liberalisation and potential reallocation of spectrum in the 900 MHz and 1800 MHz ranges, in the absence of which they contend that it is not possible for them to assess the value of this proposed spectrum. The CAT decided that it does not have jurisdiction to hear these appeals, and the Court of Appeal dismissed appeals against this decision in December 2008. In addition, the same case has also been submitted for judicial review in the High Court which will be held on an expedited basis in early 2009.

Ofcom is consulting on proposals to withdraw a part of 2G spectrum at 900 Mhz and 1800 Mhz from existing holders with a view to opening it up for other uses (refarming). A further consultation is planned for early 2009.

During 2008, Ofcom continued preparations for auctioning a part of the digital dividend. A specific consultation on the auctioning of the cleared spectrum took place in June–August concerning the 550–630 MHz and 790–854 MHz bands, which could be auctioned in 2009. At about the same time, Ofcom also carried out consultations on the award of interleaved spectrum for use by local TV services.

Implementation of spectrum decisions

As far as the Commission spectrum harmonisation Decisions adopted up until 2007 are concerned, in the course of 2008 the UK notified the implementation of the remaining Commission Decisions 2007/98/EC and 2005/928/EC.

THE CONSUMER INTEREST

Tariff transparency and quality of service

In the course of 2008, Ofcom took a number of measures regarding consumer protection. In particular, it published a consultation in July on the review of quality of service information, which is provided to customers on-line through an Ofcom initiated scheme covering fixed voice service providers and a voluntary scheme covering four MNOs.

Regarding the mobile sector, a voluntary industry code of practice that aimed at tackling misleading sales and marketing practices was introduced by the mobile operators in 2007.

According to the MNOs, it resulted in significant reductions in the number of disputes.

However, Ofcom later came to the conclusion that reliance on this voluntary code was not sufficient and therefore launched a public consultation in March 2008, in which it proposed to introduce new obligations concerning mobile sales and marketing practices.

Regarding broadband, in July Ofcom published a new voluntary code on broadband speeds. Some 43 ISPs, covering over 90% of broadband customers, had signed up to it by December 2008. The Code requires them to give prospective customers an accurate estimate of the maximum speed that their line can support. This Code, however, applies only to fixed broadband and not to mobile broadband, where quality of service issues are also highly relevant in particular because of the instability of transmission speeds depending on traffic.

On the other hand, no definite decisions were taken regarding regulation of calls to non-geographic numbers, which are generally charged at higher rates and are not included in the common consumer calls packages. As a result, they still remain a cause for consumer protection concerns, in particular regarding the '0870' and '0871' ranges, which are particularly popular among UK businesses. In continuation of the work carried out in 2007 and to address the issues which previously led to revocation of some of its earlier decisions in this area, Ofcom published in 2008 further consultations concerning 087 and 070 numbers. In particular, it proposed that all calls to '0870' numbers should cost no more than calls to geographic numbers unless communications providers publicise higher prices. The final decision on this numbering range is delayed by the ongoing dispute on wholesale termination rates between the fixed incumbent and alternative operators, the resolution of which is still pending in Ofcom. As regards the more expensive 0871, 0872 and 0873 range numbers, Ofcom proposed in particular to bring them within the remit of PhoneyPayPlus, which will monitor compliance and will also be able to consider user complaints.

The PhoneyPayPlus regulation was originally designed to tackle services using the premium rate '09' number range, which are charged at significantly higher rates than calls to these non-geographic ranges. Therefore, concerns have been voiced about the proportionality of applying the entire set of PhoneyPayPlus rules and a more limited regulation is being discussed.

Universal Service

In March, Ofcom launched a consultation on the future regulatory treatment of directory information services and on the same day issued a final determination in the disputes filed by two directory service providers against the fixed incumbent. Both documents deal to a large extent with the current Universal Service Condition 7 (USC 7), which obliges the fixed incumbent to make available its comprehensive telephone subscriber database, which it aggregates by gathering data from all the other operators, to alternative directory service providers on fair, reasonable and cost-oriented terms. As a result, there are several competing directory service providers in the UK that rely on this database.

In Ofcom's opinion, there were no legal powers to impose USC 7 and it therefore proposed repealing it. Acknowledging the potential risks to competition in the directory services market

arising from the removal of the USC 7, Ofcom set out in its consultation four possible solutions, which included SMP obligations on the fixed incumbent in an appropriate market to be defined, access-related conditions or competition law remedies. However, by judgment passed in November on appeal against Ofcom's dispute resolution determination, the CAT decided that USC 7 was valid under domestic law.

Number Portability

Under the existing number portability system in the UK, calls to ported numbers are generally routed in the first instance to the donor network, which then routes the call onward to the recipient network. During 2007, Ofcom first decided that the donor mobile network had two business days to complete the porting process as from 1 April 2008. At the end of 2007, Ofcom further required the industry to set up a central database to ensure direct routing of calls to the ported numbers and reduced the length of time to complete the porting process for mobile numbers to two hours.

This second decision was appealed to the CAT, which, by its judgment referred to above in the section on 'Decision making', decided to set it aside and remit the matter to Ofcom for reconsideration. Ofcom was particularly requested to re-consult the industry on the basis of appropriate evidence and analysis in the light of the findings set out in this judgment. One of the disadvantages of the current UK number portability system is that it requires operators to negotiate arrangements and charges for call routing on an individual basis. It would appear that the new entrants in the mobile market (i.e. those who were awarded the DECT Guard band spectrum in the 2006 auction and use low-power GSM technology) still continue to negotiate with each of the five MNOs their arrangements for call routing to ported numbers and none of them is yet able to port numbers. The Commission is monitoring these developments as number portability is a significant enabler of consumer choice.

Consumer complaints

In July 2008, Ofcom launched a consultation on the review of alternative dispute resolution and complaints handling procedures. In this consultation Ofcom proposes to adopt a single Complaints Code of Practice for all providers to replace the existing individual codes of practice of each provider, approved by Ofcom. It will set minimum standards for complaints-handling. In addition, providers will be obliged to inform their customers about the availability of alternative dispute resolution (ADR) schemes to tackle their complaints. Furthermore, Ofcom is proposing to cut the waiting period before the complaint can be presented to ADR from the current 12 to eight weeks after a customer first makes a complaint.

European emergency number 112

In December 2007, Ofcom decided that VoIP services, which provide access to ordinary telephone numbers, must, as from 8 September 2008, also ensure access to emergency numbers 112/999 and provide caller location information to the extent technically feasible. To ensure implementation of these new requirements, Ofcom launched, on the day of their coming into effect, an enforcement programme collecting information and evidence from VoIP providers, network operators and call handling agents in order to monitor compliance and take enforcement actions if required. Furthermore, Ofcom issued a formal notification in November to a fixed line provider for failing to ensure the availability of caller location information for emergency services.

The previously mentioned comprehensive public consultation by Ofcom on the mobile sector referred to the need to reflect on 'emergency roaming'. The UK is currently one of the few EU countries where it is not possible for domestic mobile users to place emergency calls over another available mobile network when their home network is not available. This means in practice that domestic mobile users are disadvantaged compared to roaming visitors from abroad, who can normally roam onto any available mobile network.

116

Ofcom published a consultation in October on the assignment of the currently reserved 116 range numbers (116000, 116111 and 116 123). The consultation closed in December and

Ofcom plans to issue a call for proposals in February 2009 inviting organisations to apply for the operation of these numbers.

Data protection

In this domain, 2008 was marked by the concerns surrounding the deployment by ISPs of a behavioural advertising technology known as 'Phorm'. Shortly after the fixed incumbent announced its plans to use this technology, it was revealed that it had already trialled it in 2006 and 2007 without obtaining user consent. The European Commission received a great number of submissions from interested parties who felt that the UK authorities, in particular the national data protection authority — the Information Commissioner's Office (ICO) — was not sufficiently resolute in dealing with complaints about these past trials.

New primary legislation adopted in 2008 (Criminal Justice and Immigration Act 2008) provided for extension of the enforcement powers of the ICO. However, secondary legislation still needs to be enacted to give effect to these new provisions. ICO is responsible for the enforcement of the general Data Protection Act 1998 and of the Privacy and Electronic Communications (EC Directive) Regulations 2003, which transposes most of the provisions of Directive 2002/58/EC (the ePrivacy Directive). However, the provision of this directive concerning the confidentiality of communications is implemented in the UK through a different act, the Regulation of Investigatory Powers Act 2000, which is within the remit of the UK police. In consequence, the UK police also received complaints concerning Phorm and at least one of the police divisions concerned was reported to have rejected the complaints on the basis of lack of criminal intent and implied user consent. Moreover, at the end of September the fixed incumbent launched a new invitation-based trial of the Phorm technology, which brought about further complaints to the Commission, in particular concerning the obtaining of user consent.

In the light of the complaints received, in the course of 2008 the Commission sent two formal requests to the UK authorities requesting clarifications regarding the UK legal framework on e-Privacy and its enforcement in the Phorm case. Taking into account the answers provided by the UK authorities, the Commission will continue to monitor the application of the relevant EU law provisions in this case.