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**COMMISSION STAFF WORKING DOCUMENT**

**Europe's Digital Progress Report 2017**

# Europe's Digital Progress Report (2017)

## Telecom chapter

### Czech Republic

#### 1.

#### Competitive environment

Coverage	CZ-2015	CZ-2016	EU-2016
Fixed broadband coverage (total)	98%	99%	98%
Fixed broadband coverage (rural)	90%	97%	93%
Fixed NGA coverage (total)	73%	75%	76%
Fixed NGA coverage (rural)	27%	52% <sup>1</sup>	4 %
4G coverage (average over all operators)	no data	94%	84%

Source: Broadband Coverage Study (IHS and Point Topic). Data as of October 2015 and October 2016.

While the target for fixed broadband full coverage was almost met, next generation access (NGA) coverage remained rather static at a level slightly below the EU average. On the other hand, the country was well above the EU average for 4G coverage (94%). The digital divide is best illustrated by NGA coverage, where urban areas are much better served than rural ones. In rural areas, the lack of infrastructure is expected to be tackled with structural intervention co-financed by EU funds.

#### Fixed Broadband market

Fixed broadband market share	CZ-2015	CZ-2016	EU-2016
Incumbent's <sup>2</sup> market share in fixed broadband	27.7%	26.4%	40.7%
Technology market shares			
DSL	32.2%	31.0%	66.8%
Cable	17.9%	18.1%	19.1%
FTTH/B	14.8%	16.8%	10.7%
Other	35.1%	34.1%	3.4%

Source: Communications Committee. Data as of July 2015 and July 2016.

Charges of Local Loop Unbundling (monthly average total cost in €)	CZ-2015	CZ-2016	EU-2016
Full LLU	7.6	1.1	9.2
Shared Access	2.1	2.1	2.4

Source: Communications Committee. Data as of July 2015 and July 2016.

The Czech telecoms market has a number of notable features. The historical incumbent's delayed broadband deployment on its DSL network saw the emergence of a large number of local alternative operators (more than 1000) that use Fixed Wireless Access (FWA) technology, including WiFi technology. These operators exert considerable competitive pressure on the incumbent, with FWA representing one-third of the technology used in the broadband market. It is worth noting that the deployment of FTTH/B networks was driven by these local operators, while the incumbent only started deploying FTTC in the last two years. Cable companies — CATV providers — have had a stable number of subscribers and market share in recent years. The main CATV provider enjoys a market share of more than 80% in

<sup>1</sup> The main driver of NGA coverage in rural areas is the VDSL deployment by the incumbent.

<sup>2</sup> Under the term 'incumbent', the data in the table refers to O2 Czech Republic that is present only on the fixed retail market. CETIN is the incumbent on the wholesale market as explained in the section on the voluntary separation

this segment. Its urban footprint is a major competitive constraint for the retail incumbent. There are no wholesale access products available via cable.

The percentage of broadband subscriptions with a speed higher than 30 Mbps increased to 37 % (up from 30 % in 2015), which is close to the EU average of 36%. The lowest fixed broadband price (12 Mbps or above) is €19.49, compared to the €21.33 EU average.<sup>3</sup>

<b>New entrants' DSL subscriptions by type of access (VDSL excluded)</b>	<b>CZ-2015</b>	<b>CZ-2016</b>	<b>EU-2016</b>
Own network	1%	1%	0.7%
Full LLU	28.6%	25.5%	75.3%
Shared access	0.4%	0.3%	4.1%
Bitstream	70.3%	73.5%	13.4%
Resale	-	-	6.6%

*Source: Communications Committee. Data as of July 2015 and July 2016.*

73.5% of the new entrants' DSL broadband subscriptions use bitstream access (much higher than the EU average of 13.4%). However, those using xDSL account for only a small share of the fixed broadband market (5%). On the other hand, the retail incumbent O2 relies heavily on the bitstream access lines supplied by the wholesale incumbent CETIN.

In June 2015, O2 Czech Republic a.s. (the former vertically integrated incumbent) voluntarily separated into two companies:

- Česká telekomunikační infrastruktura a.s.(CETIN), which retained the infrastructure of the former vertically integrated incumbent and now acts solely as a wholesale service provider; and
- O2 Czech Republic, which provides retail services on the fixed market and is also a mobile network operator (holder of frequency licences and owner of mobile exchanges) that offers both retail and wholesale services on the mobile market.

CETIN owns network infrastructure (mobile and fixed) covering almost the whole of the Czech Republic. Both CETIN and O2 Czech Republic belong to the PPF Czech investment Group.

2016 was the first full year in which CETIN operated solely as a wholesale company, with significant market power (SMP) in markets 3a and 3b. The impact of the voluntary separation of the incumbent was viewed as positive by parts of the industry, while some operators complained about it not being genuine (at capital group level, both companies are still under the same ownership). On the wholesale market, CETIN offers a range of services on the following markets: voice, internet access, leased lines and multimedia services (as multicast and unicast).

CETIN launched three-year and seven-year contracts with long-term volume commitments for wholesale bitstream access seekers. Eight companies used the bitstream reference offer ('mass market offer') available from November 2015, concluding relevant agreements.

<sup>3</sup> Source: Fixed broadband prices in Europe in 2016 (Empirica). Prices expressed in EUR/Purchasing Power Parity (PPP), VAT included. Data as of autumn 2016.

In the relatively short period since the voluntary separation, CTU (the Czech national regulatory authority - NRA) did not identify effects in the market that would warrant regulatory intervention. However, under the SMP regulation the structural change that affected the incumbent prompted the NRA to launch an analysis of broadband markets 3a and 3b.

## Mobile market

Mobile market shares	CZ-2015	CZ-2016	EU-2016
Market share of market leader	41%	39%	34%
Market share of second largest operator	32%	31%	28%
Number of MNOs	4	4	-
Number of MVNOs	3	1	-
Market share of MVNO (SIM cards)	N/A	N/A	-

*Source: Communications Committee. Data as of October 2015 and October 2016.*

There are three GSM/UMTS/LTE network operators and one CDMA network operator in the Czech mobile market. Under the LTE licences obtained as part of the 2013 spectrum auction, MNOs are obliged to provide regulated access to their LTE networks at wholesale prices which will enable profitable replicability of their retail services. In 2016 CTU requested compliance with the regulated wholesale prices through notification sent to the MNOs.

According to the NRA, the most common technology for mobile backhaul was microwave lines (77%), while fibre made up only 19% of the available backhaul. In 2016, CTU carried out a preliminary assessment of the mobile backhaul market following a complaint from an MNO regarding the limited fibre wholesale leased lines available for mobile backhaul. It concluded that the microwave lines for mobile backhaul should be able to meet the growth in data traffic on mobile networks until 2020 and will not necessarily need to be replaced by fibre across the Czech Republic. Apart from MNOs, there are also mobile backhaul service providers using microwave and fibre solutions. CTU concluded that the wholesale market carried no risks that could lead to distortions of competition and that would have justified including the mobile backhaul market in the national list of relevant markets susceptible to ex-ante regulation.

A network sharing agreement between O2 Czech Republic/CETIN and T-Mobile CZ has been in place since 2011, and its scope has been expanding. It currently covers all mobile technologies (2G, 3G and 4G) and the entire Czech Republic apart from Prague and Brno (which means it covers the other cities and all rural areas, which together account for about 85% of the population). The European Commission opened an investigation<sup>4</sup> into the network sharing agreement on 25 October 2016 and will examine whether the agreement restricts competition and thereby breaches EU antitrust rules.

Mobile broadband prices	CZ-2015	CZ-2016	EU-2016
Least expensive offer for handset (1 GB + 300 calls basket)	48	46	30
Least expensive offer for tablet and laptop (5 GB basket)	31	26	18

<sup>4</sup> IP/16/3539, [http://europa.eu/rapid/press-release\\_IP-16-3539\\_en.htm](http://europa.eu/rapid/press-release_IP-16-3539_en.htm).

Source: Mobile Broadband Price Study (Van Dijk). Prices expressed in EUR/PPP, VAT included. Data as of February 2015 and February 2016.

Overall, mobile broadband prices remained high<sup>5</sup> in the Czech Republic in 2016. Prices for both handset offers (€46 versus €30) and tablet/laptop offers (€26 versus €18) were significantly above the EU average.

## 2. Supporting deployment and investment in high-speed networks

### a. Spectrum

Harmonised band	MHz spectrum assigned <sup>6</sup>	% of the harmonised band assigned
700 MHz	0	0
800 MHz	60	100
900 MHz	70	100
1500 MHz	0	0
1800 MHz	150	100
2000 MHz paired	120	100
2600 MHz	190	100
3400-3600 MHz	82	41
3600-3800 MHz	0	0

The Czech Republic assigned 61 % of the harmonised spectrum for wireless broadband.

The remaining seven LTE frequency ranges from the 2013 auction in the 1800/2600 MHz band were auctioned on 14 June 2016. O2, T-Mobile and Vodafone will pay CZK 2.64 billion (approx. €100 million) for the licences.

The Czech Government approved the Digital Terrestrial Television (DTT) strategy in July 2016. Accordingly, the 700 MHz band is envisaged to be freed for mobile services by February 2021. The 3.6-3.8 GHz band expected to be auctioned in 2017.

### b. EU and national investments in broadband

In the Operational Programme Enterprise and Innovation for Competitiveness, €521 million (CZK 14 billion) is planned to support the NGA roll-out plan in rural areas. Call for tender is being expected in the first half of 2017. Providers of telecom networks and services are the main beneficiaries of the programme. The programme is expected to allocate grants to deploy NGA and backhaul. Financial support can only be used for areas without NGA (white areas).

<sup>5</sup> Based on a February 2016 price survey.

<sup>6</sup> Including guard bands.

On 5 October 2016, the Czech Government approved the National Plan for the Development of Next Generation Networks (NGN) that contributed to the fulfilment of an ex-ante conditionality in the programme. The adoption of the Plan was followed-up by the improvement of the white area mapping.

In addition to publicly financed broadband deployment, private investment is also contributing to the roll-out of NGN in the Czech Republic. In 2015, CETIN announced plans to invest CZK 22 billion (approx. €800 million) in developing NGNs over the next seven years, mainly by upgrading its network to VDSL2, VDSL3 and vectoring technology. The investments will therefore focus on bringing the fibre to the cabinet so as to shorten local loops. In line with this investment plan, CETIN continued upgrading its DSL network to NGN with VDSL technology.

**c. State of transposition of the  
Broadband Cost Reduction Directive**

After the deadline for transposing the Broadband Cost Reduction Directive expired on 1 January 2016, the Commission opened infringement proceedings against the Czech Republic for failure to notify transposition measures. National legislation aiming to transpose the Directive is under discussion in Parliament.

**3. Regulatory function**

The Commission was notified of the fourth review of Market 1 (wholesale markets for voice call termination on individual mobile networks) and Market 2 (wholesale markets for call termination on individual public telephone networks provided at a fixed location) in February 2016.<sup>7</sup> Subsequent remedies were notified in October 2016. In Market 1, accounting separation was imposed on CETIN along with other remedies. To calculate both fixed and mobile termination rates, the NRA applied a pure BU-LRIC cost model in accordance with the 2009 Recommendation on Termination Rates. The mobile termination rate in force since December 2016<sup>8</sup> is CZK 0.248 per minute (approx. €0.918 per minute, down from CZK 0.27 per minute). The fixed termination rate in force since December 2016 (notified under case CZ/2016/1928) is CZK 0.033 per minute (approx. €0.122 per minute; previously CZK 0.03 per minute).<sup>9</sup>

Even after the 2014 Relevant Market Recommendation had been published, former markets 1 (access to the public telephone network at a fixed location) and 2 (Wholesale call origination on the public telephone network provided at a fixed location) contained in the 2007 relevant market recommendation continued to be regulated. In February 2016, CTU submitted to the Commission a short notification of the proposed measure to deregulate the markets, as the three-criteria test had not been met. Unlike its previous market analysis, CTU included not only retail access to the public telephone networks provided at a fixed location (both PSTN and VoIP based services) in the relevant retail access market, but also retail access to the mobile telephone networks on the basis of an observed fixed-to-mobile substitution at retail level. The Commission had no comments.<sup>10</sup> As a result, CTU lifted all the obligations it had

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<sup>7</sup> Cases CZ/2016/1842 and CZ/2016/1842.

<sup>8</sup> Notified under case CZ/2016/1928.

<sup>9</sup> CTU explains in the answer to a Request for Information (RFI) that the slight price rise is due to depreciation of the Czech currency, and that this fact translates into the cost model used as a rise in cost inputs of network items purchased in EUR but expressed in CZK.

<sup>10</sup> Commission Decision on cases CZ/2016/1844 and CZ/2016/1845.

imposed on former SMPs in these markets in September 2016 (O2 Czech Republic a.s. in former market 1 and Česká telekomunikační infrastruktura (CETIN) in former market 2).

Following the voluntary separation of the former incumbent (see section 1) CTU is preparing the review of broadband markets 3a and 3b under the 2014 Relevant Market Recommendation. The public consultation was launched on 25 October 2016 with the publishing of the draft analysis by the NRA, and it ended on 25 November 2016. CTU was also preparing the review of market 4 against the backdrop of the reviews of markets 3a and 3b.

CTU carried out as well a three-criteria test on the mobile broadband market, which falls outside the scope of the relevant markets contained in the Recommendation on relevant markets.<sup>11</sup> CTU concluded that the first criterion (high and non-transitory barriers to entry) was not met. It noted that structural barriers to entry are present on the wholesale market, nevertheless, their nature do not prevent MNOs, MVNOs and MVNEs from entering the market. The analysis of CTU was not notified to the Commission.

### New competence of the NRA

As of February 2016, CTU has become a national dispute resolution body under Directive 2013/11/EU on alternative dispute resolution for consumer disputes.<sup>12</sup>

## 4.

## Consumer issues

### Portability

Number portability		CZ-2015	CZ-2016
Fixed	Number of transactions <sup>[1]</sup>	-	400,103
	Transactions as a % of total numbers <sup>[1]</sup>	21.0%	22.2%
	Maximum wholesale price <sup>[2]</sup>	12	12
	Maximum time under regulation (number of working days) <sup>[2]</sup>	4	4
Mobile	Number of transactions <sup>[1]</sup>	380,000	311,200
	Transactions as a % of total numbers <sup>[1]</sup>	2.7%	2.2%
	Maximum wholesale price <sup>[2]</sup>	7	7
	Maximum time under regulation (number of working days) <sup>[2]</sup>	4	4

[1] Source: Communications Committee. Data as of January to September 2015 and January to September

[2] Source: Communications Committee. Data as of October 2015 and October 2016.

### Bundles

Ever greater product complexity (double and triple play as well as traffic bundles) means that consumers' perception of transparency and contract clarity is increasingly important. The 2015 Eurobarometer survey revealed that 72% of Czech consumers consider that they can easily compare bundle offers (down from 77% in the previous 2014 survey) and can better

<sup>11</sup> Commission Recommendation 2014/710/EU of 9 October 2014 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services.

<sup>12</sup> Directive 2013/11/EU on alternative dispute resolution for consumer disputes and amending Regulation (EC) No 2006/2004 and Directive 2009/22/EC.



monitor mobile telephony usage (80%, EU average 69 %) than fixed telephony (72%, EU average 71%), while satisfaction in terms of contract information is slightly above the EU average of 84% (85% declared high and medium satisfaction).

All major operators provide bundled offers. These include communications services, both electronic and non-electronic (e.g. energy, VoD TV content, Premium TV channels, hotspot or hotspot access). CTU applies a forward-looking approach when defining relevant products and services markets, but did not find sufficient evidence to establish a separate market for bundled offers. The penetration of bundled services in the Czech Republic is low compared to the EU average.<sup>13</sup>

## **Transparency**

There was no major progress on transparency in 2016. Operators are obliged to provide detailed information on the contractual terms of their services, but not in a centralised public register. Operators are obliged to notify CTU of the geographical range of their services, which is publicly available in its database.<sup>14</sup> CTU published a recommendation on the terms of contracts on its website. Independent price calculators are available free of charge, and some of them have been approved by the NRA. The accreditation criteria also require the provision of qualitative parameters such as speed of service and network coverage.

There is no centralised tool for consumers to consult the quality of the service that is offered by service providers. Operators generally provide such information on a voluntary basis. However, CTU adheres to the BEREC<sup>15</sup> guidelines on speed and quality parameters, and published a national Quality of Service measurement methodology.

## **Roaming**

Before the entry into force of the transitional Roam Like at Home + system on 30 April 2016, the average retail Eurotariff price for roaming in the first quarter of 2016 was €0.165 per minute for outgoing calls and €0.035 per minute for incoming calls (with alternative tariffs less expensive — €0.072 — for outgoing calls and more expensive for incoming calls — €0.050). Text messages cost €0.046. However, €0.115 per MB for data was well above the EEA average (€0.047 per MB).

CTU may impose fines of up to CZK 10 million (€370,370) for breaching the provisions of the Roaming Regulation 2015/2120/EU.<sup>16</sup>

## **Net neutrality**

In November 2016, the NRA started to draw up guidelines on the rules applicable to net neutrality, for example on the issue of zero rating, ad blocking and parental control.

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<sup>13</sup> E-Communications and the Digital Single Market, Eurobarometer 2015, [http://ec.europa.eu/information\\_society/newsroom/image/document/2016-22/eb\\_ecommunications\\_and\\_the\\_digital\\_single\\_market\\_cz\\_en\\_15836.pdf](http://ec.europa.eu/information_society/newsroom/image/document/2016-22/eb_ecommunications_and_the_digital_single_market_cz_en_15836.pdf).

<sup>14</sup> Such information is very general and has regional/NUTS 3 level accuracy.

<sup>15</sup> Body of European Regulators for Electronic Communications

<sup>16</sup> Subsection 12 and 22 of section 118 of the Act No. 127/2005 Coll. on Electronic Communications and on Amendment to Certain Related Acts

Article 6 of Regulation (EU) 2015/2120 stipulates that EU countries are to lay down the rules on penalties applicable to infringements of Articles 3, 4 and 5. The deadline to notify the Commission of these rules and measures was 30 April 2016. The Czech Republic did not notify the penalties referred to in Article 6 of the Regulation. The Commission is looking into the matter.

### **Universal service**

There was no change in the scope of universal service in 2016. The following services are covered in the Czech Republic: provision of public pay phones; access for disabled end-users to publicly available telephone services (PATS); and special tariff plans.

Following the voluntary separation of the historic incumbent, O2 Czech Republic remained the designated universal service provider and submitted a request for compensation for the net cost of the universal service obligation in July 2016; the procedure for certifying the net cost was still ongoing at the end of the reporting period. The universal service cost is covered by the state budget.

### **112 and access for disabled end-users to emergency services**

Caller location requirements are provided in Decree No. 238/2007 on the transmission of data for the purpose of emergency calls. Caller location accuracy is based on the Cell ID provided by the mobile network operator or on the installation address for calls from a fixed network. According to the COCOM report<sup>17</sup> on the implementation of 112, access to emergency services for disabled end-users is ensured through SMS service. The SMS service is established as a universal service accessibility solution.

## **5.**

## **Conclusion**

The Czech Republic is well positioned in terms of 4G coverage, with 94% coverage of its territory (ranking it 9th in the EU). However, FTTB/FTTH deployment is still lagging behind. While ESIF Funds are used to deploy NGA in rural areas, demand-side measures should also be in place to achieve the National Broadband Plan target of 50% household penetration with a 100 Mbps service by 2020. Swift transposition of the Cost Reduction Directive might help increase fixed NGA coverage and bridge the digital divide.

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<sup>17</sup> The Communications Committee (COCOM) report available at: <https://ec.europa.eu/digital-single-market/en/news/implementation-european-emergency-number-112-results-tenth-data-gathering-round>.