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PART 62/62

COMMISSION STAFF WORKING DOCUMENT

Europe's Digital Progress Report 2017

Europe's Digital Progress Report - 2017

Telecoms chapter

United Kingdom

1.

Competitive environment

Coverage	UK-2015	UK-2016	EU-2016
Fixed broadband coverage (total)	100%	100%	98%
Fixed broadband coverage (rural)	100%	100%	93%
Fixed next generation access (NGA) coverage (total)	91%	92%	76%
Fixed NGA coverage (rural)	47%	78%	40%
4G coverage (average of operators)	no data	93%	84%

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

Fixed broadband market

Alongside the incumbent BT, alternative providers compete in the retail provision of fixed services (including telephony and broadband). These providers include the cable operator Virgin Media and smaller niche networks, as well as other operators using a variety of wholesale inputs purchased from BT (such as Sky and TalkTalk) and resellers.

There are four main fixed broadband network operators in the UK: BT, Sky, TalkTalk and Virgin Media.

New entrants' DSL subscriptions by type of access (VDSL excluded)	UK-2015	UK-2016	EU-2016
Own network	1%	1%	0.7%
Full LLU	73.5%	79.9%	75.3%
Shared access	10.9%	11.6%	4.1%
Bitstream	-	-	13.4%
Resale	14.9%	7.5%	6.6%

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

Fixed broadband market shares	UK-2015	UK-2016	EU-2016
Incumbent's market share in fixed broadband	32.4%	36.6% ¹	40.7%
Technology market shares			
DSL	80.7%	80.1%	66.8%
Cable	19.0%	19.3%	19.1%
FTTH/B	0.3%	0.5%	10.7%
Other	0.1%	0.1%	3.4%

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

Charges of Local Loop Unbundling (monthly average total cost in €)	UK-2015	UK-2016	EU-2016
Full LLU	11,1	10,8	9,2
Shared Access	1,6	1,4	2,4

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

¹ The 2016 figure includes EE as well.

There were just under 25 million fixed broadband connections in the UK at the end of July 2016. Of these, 4.8 million were Virgin Media cable connections. The vast majority of the remaining connections (about 20 million) were ADSL (14 million²) or VDSL connections provided over BT's network.

There has been a significant increase in the uptake of retail bundles by consumers in the UK. In the first half of 2016 68% of households bought bundled services, with 29% taking fixed voice and broadband, 28% fixed voice, broadband and TV, 2% fixed voice, broadband, mobile and TV, 1% fixed voice and TV, 1% mobile and broadband and 7% other bundled services.³ Telecommunications providers now focus more on selling bundles than standalone services.

The cheapest fixed broadband retail price (for 12-30 Mbps or above) for a standalone offer was €24.99 in the UK compared to the EU average of €21.33.⁴

Mobile Market

Mobile market	UK-2015	UK-2016	EU-2016
Market share of market leader	-	-	34%
Market share of second largest operator	-	-	28%
Number of mobile network operators (MNOs)	4	4	-
Number of mobile virtual network operators (MVNOs)	28	30	-
Market share of MVNOs (SIM cards)	-	-	-

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

There are currently four main mobile network operators (MNOs) in the UK: BT/EE, Vodafone, O2 (Telefónica) and 3 (H3G). There are also several mobile virtual network Operators (MVNOs). Competition among MNOs allows MVNOs to obtain wholesale network access through commercial negotiation. There is currently no regulation on wholesale access to mobile networks or MVNO agreements. All MNOs are currently hosting at least one MVNO. Including hosted MVNOs, H3G and O2 have increased their market share of subscribers over the past few years, mostly at the expense of BT/EE and Vodafone.⁵

BT's acquisition of EE was completed in 2016. BT acquired frequencies in the 2.6 GHz band in the 2013 auction, although it had not previously operated as an MNO after the sale of what became O2. Therefore, the merger did not materially increase EE's market share but as a result of the merger EE's useable spectrum share increased from 37% to 45%.⁶ There have been no other significant new entrants or changes in market share.

On 11 May 2016 the European Commission decided⁷ not to authorise the merger between Telefónica UK Limited (O2) and Hutchison 3G UK (Three) Limited under the EU Merger

² Ofcom: Telecommunications market data tables Q3 2016

(https://www.ofcom.org.uk/__data/assets/pdf_file/0037/96994/Q3-2016-telecoms-tables.pdf).

³ Ofcom: Communications Market Report ('CMR'), August 2016, page 13

(https://www.ofcom.org.uk/__data/assets/pdf_file/0024/26826/cmr_uk_2016.pdf).

⁴ Fixed broadband prices in Europe in 2016 (Empirica). Prices expressed in EUR/PPP, VAT included. Data as of autumn 2016.

⁵ https://www.ofcom.org.uk/__data/assets/pdf_file/0026/93545/award-of-the-spectrum-bands-consultation.pdf.

⁶ Award of the 2.3 and 3.4 GHz spectrum bands. Competition issues and auction regulations, page 18 (https://www.ofcom.org.uk/__data/assets/pdf_file/0026/93545/award-of-the-spectrum-bands-consultation.pdf).

⁷ http://ec.europa.eu/competition/elojade/iseef/case_details.cfm?proc_code=2_M_7612.

Regulation. It had strong concerns that UK mobile customers would have had less choice and paid higher prices as a result of the takeover, and that it would have harmed innovation.

4G grew rapidly in the UK in 2016. While in Q4 2015 4G accounted for almost half of all mobile subscriptions (46%), 4G take-up increased across all ages, genders and socio-economic groups in 2016. The availability of 4G mobile services has also increased, with the UK having 97.8% outdoor premises coverage by at least one operator in May 2016.⁸ Ofcom launched the broadband and mobile checker app in December 2016,⁹ where people can check predicted mobile coverage and fixed broadband speed and availability by postcode.

Mobile broadband prices	UK-2015	UK-2016	EU-2016
Least expensive offer for handset (1 GB + 300 calls basket)	15	18	30
Least expensive offer for tablet and laptop (5 GB basket)	16	16	18

Source: *Mobile Broadband Price Study (Van Dijk)*. Prices expressed in EUR/PPP,¹⁰ VAT included. Data as of February 2015 and February 2016.

The least expensive mobile broadband handset offer increased in 2016, but remains below the EU average. The least expensive price for tablets and laptops is stable, and it is slightly below the EU average.

2. and investment in high-speed networks

Supporting the deployment of

a.

Spectrum

Harmonised band	MHz spectrum assigned ¹¹	% of the harmonised band assigned
700 MHz	-	0%
800 MHz	60	100%
900 MHz	70	100%
1 500 MHz	40	100%
1 800 MHz	150	100%
2 000 MHz paired	120	100%
2 600 MHz	190	100%
3 400-3 600 MHz	40	20%
3 600-3 800 MHz	84	42%

⁸ Ofcom: Communications Market Report ('CMR'), August 2016, page 135 (https://www.ofcom.org.uk/_data/assets/pdf_file/0024/26826/cmr_uk_2016.pdf)

⁹ <http://maps.ofcom.org.uk/check-coverage>

¹⁰ Purchasing power parity.

¹¹ Including guard bands.

The UK has assigned 69.2% of the overall harmonised spectrum for broadband, compared to the EU average of 67.7%.

The UK has not made any new wireless broadband (WBB) assignments in 2016, but Ofcom has carried out a consultation¹² on the 1781.7 – 1785 MHz block paired with the 1876.7 – 1880 MHz block (the digital enhanced cordless telecommunications (DECT) guard band) to ascertain if the current assignments are the most efficient use of spectrum.

As at 1st January 2017, Ofcom was preparing an award of 150 MHz in the 3400 – 3600 MHz band, and 40 MHz at 2.3 GHz. It carried out consultations for these two bands in 2016.¹³ It is also considering making 5.8 GHz (5725 – 5850 MHz band) available on a licence-exempt basis for Wi-Fi/radio local area networks (RLANs).

Ofcom's 2013 Mobile Data Strategy¹⁴ was updated on 30 June 2016. The UK's position on the use of the 700 MHz band is set out in the 700 MHz Statements.¹⁵ It is planned to make the duplex pair available for mobile data and 20 MHz of the centre gap available for downlink-only mobile data from mid-2020. Ofcom also published a discussion document¹⁶ setting out its expectation that digital terrestrial television (DTT) would continue until at least 2030.

In 2016 Ofcom carried out a consultation¹⁷ on improving consumer access to mobile services at 3.6 GHz to 3.8 GHz. The consultation ended on 1 Dec 2016. The regulator identified 3.6 GHz to 3.8 GHz as a high-priority band for future mobile use, due to the large amount of spectrum available and the interest in the band for the roll-out of future 5G services. In Ofcom's view, above 6 GHz, the pioneer band of 24.25 – 27.5 GHz will be the focus for 5G deployment.

In 2016, the government implemented Decision 2016/687 on 2010-2025 MHz through the 2010-2025 MHz Frequency Band (Management) Regulations 2016.¹⁸

b. **EU and national investments in broadband**

The UK has reached 100% fixed broadband rural coverage, compared to the EU average of 93%, in line with its national broadband strategy.¹⁹ The aim of the strategy was to provide virtually all homes with access to a minimum level of service of 2Mbps by 2015 and to have superfast broadband coverage (defined by the government as > 24Mbps) reach 90% by early 2016 and 95% by December 2017.

¹² <https://www.ofcom.org.uk/consultations-and-statements/category-1/DECTGB>.

¹³ Ofcom: Award of the 2.3 and 3.4 GHz spectrum bands. Competition issues and auction regulations. The consultation was closed on 31 January 2017. (<https://www.ofcom.org.uk/consultations-and-statements/category-1/award-of-the-spectrum-bands>).

¹⁴ <https://www.ofcom.org.uk/consultations-and-statements/category-1/mobile-data-strategy>.

¹⁵ <https://www.ofcom.org.uk/consultations-and-statements/category-1/maximising-benefits-700mhz-clearance>; <https://www.ofcom.org.uk/about-ofcom/latest/media/media-releases/2014/700-mhz-statement>.

¹⁶ <https://www.ofcom.org.uk/consultations-and-statements/category-1/700mhz/ftv>.

¹⁷ <https://www.ofcom.org.uk/consultations-and-statements/category-1/future-use-at-3.6-3.8-ghz>.

¹⁸ http://www.legislation.gov.uk/ukxi/2016/886/pdfs/ukxi_20160886_en.pdf.

¹⁹ 'Britain's Superfast Broadband Future', December 2010

(<https://www.gov.uk/government/publications/britains-superfast-broadband-future>) and 'Superfast Broadband Programme', February 2013 (<https://www.gov.uk/guidance/broadband-delivery-uk#superfast-broadband-programme>).

The government's Superfast Broadband Programme provided for approximately GBP 1.7 billion in public funding from local authorities, devolved administrations, the government and European funding programmes. Broadband Delivery UK (BDUK)²⁰ is responsible for implementing the government's policy on superfast broadband roll-out developed in different stages: Phase 1 to provide 90% of premises in the UK with superfast broadband and provide universal access to basic broadband of 2Mbps; Phase 2 to extend coverage to 95% of the UK; and a stage to consider ways of providing the parts of the UK that are hardest to reach - 'the final 5%' - with superfast broadband.²¹

On 22 December 2016 the UK authorities announced that GBP 442 million resulting from cost savings and a claw-back clause²² will be reinvested in additional projects.²³

The UK's first State aid scheme, approved in November 2012, ran until June 2015. As stipulated in the Commission's Decision, an evaluation of the scheme by an independent body was completed in March 2015 and published.²⁴ On 26 May 2016 the European Commission endorsed the UK National Broadband Scheme for 2016-2020.²⁵ The new scheme was designed bearing in mind the experience acquired implementing the previous one. Aid will be spent to procure infrastructure capable of delivering speeds above 30Mbps in underserved areas, after detailed mapping and extensive public consultation. It will be granted by way of tenders that adhere to EU public procurement rules and are designed to facilitate bids by smaller operators. All interested operators will be able to access the subsidised infrastructure on equal and non-discriminatory terms and various mechanisms will prevent wholesale access prices from being excessive. The scheme is also accompanied by a detailed evaluation plan to assess its impact, the findings of which will be submitted to the Commission by December 2020.

In its Autumn Statement of November 2016²⁶ the government announced a nationally-coordinated programme of 5G testbed facilities and application trials to support fibre and 5G deployment. It will invest over GBP 1 billion by 2020-21, including GBP 740 million through the National Productivity Investment Fund (NPIF), to support the market in rolling out full-fibre connections and future 5G communications.^{27 28}

²⁰ Part of the Department for Culture, Media and Sport.

²¹ <https://www.gov.uk/guidance/broadband-delivery-uk#superfast-broadband-programme>.

²² As set out in Commission Decision SA.33671 (2012/N) to ensure that State aid beneficiaries are not overcompensated.

²³ <https://www.gov.uk/government/news/440-million-broadband-boost-to-benefit-more-than-half-a-million-premises>.

²⁴ <https://www.gov.uk/government/publications/the-uks-national-broadband-scheme-an-independent-evaluation>.

²⁵ SA. 40720 (2016/N) – National Broadband Scheme for the UK for 2016-2020

(http://ec.europa.eu/competition/state_aid/cases/263954/263954_1760328_135_4.pdf).

²⁶

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/571559/autumn_statement_2016_web.pdf.

²⁷ The Spring Budget of March 2017 set out further details, and announced that up to GBP 16 million will be made available from the National Productivity Investment Fund for leading UK research institutions to cooperate on a new 5G facility to trial and demonstrate this technology. DCMS has created a new centre of 5G expertise within government to drive forward this work through a programme of testbeds and trials.

(https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/597467/spring_budget_2017_web.pdf)

Alongside the Spring Budget, the government launched its new 5G Strategy. (<https://www.gov.uk/government/publications/next-generation-mobile-technologies-a-5g-strategy-for-the-uk>)

²⁸ On 1 March 2017 the government published an umbrella strategy to support the digitalization of the country. The strategy sets out the government's aim of completing the roll-out of 4G and superfast broadband and of

In 2016 the European Investment Bank (EIB) agreed to provide GBP 21 million for investment by Hyperoptic to provide 1 Gbps fibre broadband to more than half a million homes in cities across the UK.²⁹ Since 1975 the EIB has provided more than GBP 5 billion for broadband and telecoms across the UK and has supported investment by Vodafone, EE, BT, Gigaclear, Arqiva and Inmarsat.

In addition, the European Regional Development Fund is supporting broadband roll-out to the tune of €176 million in England, Scotland and Wales until 2020. The European Agricultural Fund for Rural Development is also supporting broadband roll-out in rural areas of England, Scotland and Wales, to the tune of €25 million.

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

In March 2016 infringement proceedings were opened against the UK for not having completed the transposition of the Broadband Cost Reduction Directive by the deadline of 1 January 2016. Most of the Directive was implemented on a UK-wide basis, through the Communications (Access to Infrastructure) Regulations 2016 (SI 2016/700).³⁰ By contrast, Article 8 was transposed separately in England, Wales, Scotland and Northern Ireland by way of amendments to the building regulations³¹ applicable to each administration.

The UK has not set up a centralised single information point. This function remains with the local planning authorities, because they already carry out the functions required under the Directive. Under the Communications (Access to Infrastructure) Regulations 2016,³² Ofcom has new powers to resolve disputes related to the sharing of physical infrastructure and/or civil works between telecoms networks operators and utilities providers. Ofcom does not monitor how utilities and telecoms operators map their passive infrastructure. Nor does it monitor the ‘permits’ process.

3. Regulatory function

Ofcom has taken regulatory decisions in relation to the business connectivity market,³³ the broadcasting transmission market³⁴ and minimum standards for wholesale line rental (WLR) provision.³⁵ These are alongside Ofcom’s wider Strategic Review of Digital

enforcing a broadband universal service obligation (USO) by 2020. It also reconfirmed the GBP 1 billion programme of investment in full fibre broadband and 5G. Source: DCMS, ‘UK Digital Strategy’, 1 March 2017 (<https://www.gov.uk/government/publications/uk-digital-strategy>).

²⁹ <http://www.eib.org/infocentre/press/releases/all/2016/2016-181-hyperoptic-to-expand-1gbps-network-with-gbp-21-million-backing-from-eib>.

³⁰ Entered into force on 31 July 2016.

³¹ The Building (Amendment) Regulations 2016 (SI 2016/490) (entered into force on 9 May 2016);

The Building (Amendment) (Wales) Regulations 2016 (W. 113) (WSI 2016/361) (entered into force on 8 April 2016);

The Building (Scotland) Amendment Regulations 2016 (SSI 2016/70) (entered into force on 1 July 2016);

The Building (Amendment) Regulations (Northern Ireland) 2016 (SR 2016/412) (entered into force on 28 November 2016).

³² http://www.legislation.gov.uk/uksi/2016/700/pdfs/uksi_20160700_en.pdf.

³³ <https://www.ofcom.org.uk/consultations-and-statements/category-1/business-connectivity-market-review-2015>.

³⁴ <https://www.ofcom.org.uk/consultations-and-statements/category-1/broadcasting-transmission-services>.

³⁵ <https://www.ofcom.org.uk/consultations-and-statements/category-3/wlr-mpf-quality>.

Communications.³⁶ This strategic review sets out Ofcom's approach to regulating communications markets for the next decade. It explains how Ofcom will promote investment and competition to ensure that people and businesses get the phone, broadband and mobile services they need in the coming years, wherever they live and work. One of the proposals related to reforming Openreach's governance and making it more independent from BT (Update on plans to reform Openreach,³⁷ published on 29 November 2016).³⁸

Ofcom is getting new powers under the Digital Economy Bill³⁹ currently going through Parliament. The change regarding the standard of appeal is one of the most important in the Bill. Until now, appeals against Ofcom's decisions were made based on merit (full assessment of the facts). From now on only a judicial review will be possible (limited to the interpretation of the law, without assessing the substance). The Bill will allow Ofcom to introduce gaining provider-led switching, where it sees that this suits the telecoms market. It will also introduce automatic compensation for consumers for failure to meet telecoms performance standards.⁴⁰

Ofcom will support infrastructure-based competition by making access to BT's ducts and poles easier. It has set out proposals to develop an effective physical infrastructure access (PIA) remedy in its consultation document on Openreach's duct and pole access product. The consultation closed on 31 January 2017.⁴¹

Ex-market 2 under the 2007 Recommendation⁴² is still regulated in the UK. In 2016 the Commission received two notifications of full market review from Ofcom: regarding ex-market 18 of the 2003 Recommendation⁴³ and market 4 of the 2014 Recommendation.⁴⁴

In its approach to regulating mobile termination rates (MTRs) and fixed termination rates (FTRs), Ofcom follows the 2009 Termination Rates Recommendation, i.e. pure BU-LRIC. There is a slight delay in the market analysis of market 1 (fixed termination rates). The previous measure was adopted in September 2013 and the review was due by September 2016. Ofcom is carrying out a consultation⁴⁵ on the next market review and proposes to maintain regulation of FTRs on a LRIC basis.

³⁶<https://www.ofcom.org.uk/phones-telecoms-and-internet/information-for-industry/policy/digital-comms-review>

³⁷ <https://www.ofcom.org.uk/about-ofcom/latest/media/media-releases/2016/update-on-plans-to-reform-openreach>.

³⁸ BT notified Ofcom on 10 March 2017 that it had agreed to legal separation of Openreach (<https://www.ofcom.org.uk/about-ofcom/latest/media/media-releases/2017/bt-agrees-to-legal-separation-of-openreach>). Ofcom considers that BT's notification sufficiently addresses the competition concerns as set out in Ofcom's Strategic Review of Digital Communications. Subsequently, Ofcom published a consultation on releasing BT from its Undertakings (<https://www.ofcom.org.uk/consultations-and-statements/category-3/delivering-a-more-independent-openreach>).

³⁹ <http://services.parliament.uk/bills/2016-17/digitaleconomy.html>

⁴⁰ Ofcom is consulting on proposals to introduce automatic compensation for residential landline and broadband tariffs until 5 June 2017 (<https://www.ofcom.org.uk/consultations-and-statements/category-1/automatic-compensation>).

⁴¹ Ofcom: Wholesale Local Access Market Review: Initial proposals to develop an effective PIA remedy. The consultation ran from 6 December 2016 until 31 January 2017 (<https://www.ofcom.org.uk/consultations-and-statements/category-2/wholesale-local-access-market-review-proposals-PIA>).

⁴² Call origination on the public telephone network provided at a fixed location.

⁴³ Broadcast transmission.

⁴⁴ Wholesale high-quality access.

⁴⁵ Narrowband Market Review consultation from 1 December 2016 until 29 March 2017 (https://www.ofcom.org.uk/__data/assets/pdf_file/0016/95011/Narrowband-Market-Review.pdf).

Ofcom did not fully comply with the Non-discrimination and Costing Methodologies Recommendation. In its notification on remedies in market 3a (VULA margin, January 2015), Ofcom based its assessment for the economic replicability test on a portfolio approach, instead of the recommended ‘flagship approach’. It also used a static, instead of a dynamic, multi-annual approach.⁴⁶

In May 2016 Ofcom carried out a consultation on a bottom-up NGA modelling approach⁴⁷ consistent with the Non-discrimination and Costing Methodologies Recommendation.⁴⁸ It has not yet notified its draft measure concerning NGA modelling to the Commission.

4. Consumer issues

Nuisance calls continue to be a major consumer issue. There are more complaints on nuisance calls than on any other issue. According to the consumer organisation Which?,⁴⁹ people receive on average 26 nuisance calls a month. In April 2016, the government introduced regulations to force marketing companies to use calling line identification (CLI). In October 2016 it announced plans to empower the Information Commissioner’s Office (ICO) to fine each director of a company responsible for nuisance calls and texts up to GBP 500,000.⁵⁰ The Digital Economy Bill mandates the ICO to create a statutory code of practice providing practical guidance on direct marketing.⁵¹

While consumers who purchase bundled voice and broadband services, have choice and can achieve value if they shop around, Ofcom is concerned that increasing line rental prices have meant that consumers purchasing standalone landline voice services have less choice and hence experienced significant price increases. Many of these consumers are elderly and on low incomes. Ofcom is currently reviewing the retail market for standalone landline telephone services.⁵²

Portability

Number portability		UK-2015	UK-2016
Fixed	Number of transactions [1]	-	-
	Transactions as a % of total numbers [1]	-	-
	Maximum wholesale price [2]	-	-
	Maximum time under regulation (number of working days) [2]	-	-

⁴⁶ Commission Decision concerning Case UK/2015/1692: Wholesale local access at a fixed location in the United Kingdom — Remedies
Comments pursuant to Article 7(3) of Directive 2002/21/EC, Brussels 13.2.2014.
(https://www.ofcom.org.uk/__data/assets/pdf_file/0025/74365/ec_response_to_draft_statement.pdf).

⁴⁷ <https://www.ofcom.org.uk/consultations-and-statements/category-3/wholesale-local-access-market-review-fibre-cost-modelling>

⁴⁸ On 30 March 2017, Ofcom published a consultation on WLA and associated Charge Control, including the bottom-up NGA modelling of costs (<https://www.ofcom.org.uk/consultations-and-statements/category-1/wholesale-local-access-market-review>).

⁴⁹ ‘Wall-to-wall nuisance calls’, Which?, June 2016.

⁵⁰ <http://researchbriefings.files.parliament.uk/documents/SN06033/SN06033.pdf>.

⁵¹ <http://services.parliament.uk/bills/2016-17/digitaleconomy.html>.

⁵² On 28 February 2017 Ofcom published a national consultation which proposes a £5 to £7 cut on the monthly prices charged by BT for line rental and a basket of calls (<https://www.ofcom.org.uk/consultations-and-statements/category-1/review-of-landline-telephone-services>).

Mobile	Number of transactions [1]	-	4,425,317
	Transactions as a % of total numbers [1]	-	-
	Maximum wholesale price [2]	-	-
	Maximum time under regulation (number of working days) [2]	-	-

[1] Source: Communications Committee. Data as of January to September 2015 and January to September 2016.

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

In 2016 no new switching measures were introduced. However, Ofcom published consultation documents⁵³ because it had concerns that certain difficulties were deterring consumers from switching. It plans to publish statements on switching in summer 2017.

Transparency

Ofcom's Connected Nations Report⁵⁴ provides information on the UK's communications infrastructure. This includes sections on fixed broadband, mobile voice and data, internet access, resilient communications in emergencies, security and resilience, and television. The 2016 report was published on 16 December 2016.⁵⁵

In the light of joint research carried out by the Advertising Standards Authority (ASA) and Ofcom, the ASA has changed its guidelines⁵⁶ on the advertising of broadband prices. Since 31 October 2016, adverts must do the following: show all-inclusive monthly charges (no more separation of the line rental); give greater prominence to the contract length and any post-discount pricing; show all-inclusive up-front charges and give them greater prominence.

Ofcom continues to publish quarterly reports⁵⁷ giving details of telecoms and pay-TV complaints data by provider. The Consumer Complaints Team uses the reports to help consumers make better informed decisions. Ofcom plans to publish, in spring 2017, its first Service Quality report which will compare the performance of providers on a range of metrics that affect the consumer experience including fault resolution, complaints handling and customer service.

Roaming

In Q1 2016, just before the introduction of RLAH+, the average retail Eurotariff price for roaming was €0.068 per minute of outgoing calls (lower than the EEA average of €0.112 per minute) and €0.013 per minute of incoming calls (half the EEA average of €0.026 per

⁵³ Consultation on mobile switching published in March 2016 (https://www.ofcom.org.uk/__data/assets/pdf_file/0025/82636/consumer-switching-mobile-consultation.pdf) and further consultation in July 2016 (https://www.ofcom.org.uk/__data/assets/pdf_file/0023/83453/Consumer-Switching-Further-proposals-to-reform-switching-of-mobile-services-July-2016.pdf); Consultation on cross-platform switching published in July 2016 (https://www.ofcom.org.uk/__data/assets/pdf_file/0030/58845/making-switching-easier.pdf).

⁵⁴ <https://www.ofcom.org.uk/research-and-data/infrastructure-research/infrastructure>.

⁵⁵ <https://www.ofcom.org.uk/research-and-data/infrastructure-research/connected-nations-2016>.

⁵⁶ <https://www.asa.org.uk/News-resources/Media-Centre/2016/Insight-We-confirm-tougher-approach-to-broadband-price-claims-in-ads.aspx#.WDR7DbKLT4Y>.

⁵⁷ <https://www.ofcom.org.uk/research-and-data/multi-sector-research/telecoms-complaints-data>.

minute), €0.043 per Euro-SMS (close to the EEA average of €0.047) and €0.030 per MB (significantly lower than the EEA average of €0.047).⁵⁸

The Mobile Roaming (European Communities) Regulations 2007/1933 (the UK Implementing Legislation) have designated Ofcom as the UK's national regulatory authority for the purposes of the EU Mobile Roaming Regulation. The UK Implementing Legislation was amended in 2009 (SI 2009/1591),⁵⁹ 2013 (SI 2013/822)⁶⁰ and 2014 (SI 2014/2715).⁶¹

When the EU Mobile Roaming Regulation was amended by Regulation (EU) 2015/2120, the UK Implementing Legislation (as amended) remained in force and continues to set out Ofcom's powers and duties in relation to the EU Mobile Roaming Regulation. It sets out the steps that Ofcom should take if it considers that a breach of the Roaming Regulation (as amended) has occurred. If the transitional roaming rules are breached Ofcom may, when issuing a final breach determination, require the roaming provider to pay the penalty specified in the provisional breach determination or such lesser penalty as Ofcom considers appropriate given that provider's representations or the steps taken by the person concerned to fulfil the obligation in question or remedy the consequences of the breach. The maximum penalty for breaching an information requirement (i.e. a failure by the operator to provide information to Ofcom, when requested to do so) is GBP 2,000,000. For any other breach of the Roaming Regulation (as amended), the penalty is an amount not exceeding 10 % of the turnover of the roaming provider's relevant business for the relevant period. Within these limits Ofcom determines the penalty at a level appropriate and proportionate to the breach for which it is imposed. Ofcom has not taken any formal action against a roaming provider in relation to the transitional roaming rules.

Net neutrality

In the Open Internet Access (EU Regulation) Regulations 2016,⁶² the UK has laid down the rules on penalties applicable to infringements of Articles 3, 4 and 5 of Regulation (EU) 2015/2120 in accordance with Article 6 of Regulation (EU) 2015/2120. The Open Internet Access (EU Regulation) Regulations 2016 came into force on 17 June 2016. A penalty of up to GBP 2,000,000 may be imposed for breaching an information requirement and a penalty of up to 10% of the turnover of the provider's relevant business for the relevant period in the case of other breaches. If Ofcom has given a notification for more than one breach, a separate penalty may be specified for each breach. Additionally a daily penalty can be imposed for each day when the breach continues after the period specified in the main penalty, but it should not exceed GBP 500 per day for a breach of information requirement and GBP 20,000 per day in case of other breaches.

The Open Internet Code of Practice is a self-regulatory Code, produced by the Broadband Stakeholder Group (BSG).⁶³ It commits signatories to non-discriminatory traffic management practices. The BSG has revised the Code to bring it into line with Regulation (EU) 2015/2120.

⁵⁸ International Roaming BEREC Benchmark Data Report October 2015 – March 2016, BoR (16) 160.

⁵⁹ <http://www.legislation.gov.uk/uksi/2009/1591/made>.

⁶⁰ <http://www.legislation.gov.uk/uksi/2013/822/made>.

⁶¹ <http://www.legislation.gov.uk/uksi/2014/2715/made>.

⁶² <http://www.legislation.gov.uk/uksi/2016/607/contents/made>.

⁶³ <http://www.broadbanduk.org/2016/06/14/bsg-new-open-internet-code-clarifies-the-rules-on-internet-traffic-management-for-all-players/>.

There are also self-regulatory schemes under which fixed and mobile ISPs allow consumers to activate a ‘parental filtering service’ to restrict access to selected categories of content inappropriate for minors. The UK has notified its position to the Commission regarding this self-regulatory scheme under Article 10(3) of Regulation (EU) 2015/2120. The government has announced legislation authorising ISPs to block access to content or services for child protection or other purposes, if this is in accordance with the terms of the contract with the end-user. The legislation also imposes other specific requirements in this context on ISPs. These provisions are contained in the Digital Economy Bill.⁶⁴ The BEREC Guidelines on the Implementation by National Regulators of European Net Neutrality Rules⁶⁵ confirm that the third subparagraph of Article 3(3) of Regulation (EU) 2015/2120 prohibits any blocking of internet traffic save for the three specific exceptions under Article 3(3) (a), (b) and (c) (compliance with law, network security, exceptional congestion). BEREC gives blocking advertising as an example for such prohibited practices, unless the conditions of one of the three exceptions are met in a specific case.

Another self-regulatory scheme in operation in the UK involves blocking child sexual abuse content identified by an independent body (the Internet Watch Foundation).⁶⁶ The government’s position is that this scheme does not need to be adapted to be brought into line with Regulation (EU) 2015/2120.

The UK has a voluntary Broadband Speeds Code of Practice, developed by Ofcom. It commits signatory ISPs to providing information on the speed and other relevant characteristics of their internet access services. Ofcom is revising the Code to reflect the relevant transparency obligations in Regulation (EU) 2015/2120.

Ofcom has not yet opened any formal investigations in relation to compliance with Regulation (EU) 2015/2120. However, it is looking at a range of practices, including some zero-rating offers, on the UK market. Ofcom has not considered imposing any quality of service obligations on ISPs.

Scope of the universal service

The scope of universal service did not change in 2016. BT and Kingston Communications (KCOM) continue to be the designated universal service providers due to their wholesale narrowband significant market power status. There is no universal service cost-sharing mechanism in the UK. The designated universal service providers bear the costs. Ofcom is not considering changing the regulations. BT is converting some public payphones into Wi-Fi hubs, but this is within the current obligations.

Broadband is currently not part of the universal service obligation (USO). However, in November 2015 the Prime Minister announced the government’s intention to implement a

⁶⁴ <http://services.parliament.uk/bills/2016-17/digitaleconomy.html>.

⁶⁵ http://berec.europa.eu/eng/document_register/subject_matter/berec/regulatory_best_practices/guidelines/6160-berec-guidelines-on-the-implementation-by-national-regulators-of-european-net-neutrality-rules.

⁶⁶ Article 25, ‘Measures against websites containing or disseminating child pornography’, of Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on combating the sexual abuse and sexual exploitation of children and child pornography, and replacing Council Framework Decision 2004/68/JHA (<http://data.europa.eu/eli/dir/2011/93/oj>).

new broadband USO to be set at 10 Mbps.⁶⁷ In March 2016 the DCMS asked Ofcom to provide technical analysis and recommendations to support the design of a broadband USO. Ofcom gave its final advice to the government on 16 December 2016 in the document entitled ‘Achieving decent broadband connectivity for everyone’,⁶⁸ including an assessment of the availability and affordability of basic broadband. Provisions enabling broadband USO are contained in the Digital Economy Bill.⁶⁹

112 and access for disabled end-users to emergency services

Alternative means of access for disabled users are 112 or 999 SMS and text relay services. Approximately 6,250 emergency SMS were sent in 2016 (2,950 in 2015). Since October 2014, text relay has been available through a free app on mainstream equipment such as smartphones, tablets and PCs. It is no longer necessary to have a textphone to use the service.

A real-time text service using the ITUv21 protocol is available for deaf users with special terminals to call 18000. There were an estimated 12,550 communications to the number 18000 from such terminals in 2016 (4,250 in 2015).

In July 2014, the Advanced Mobile Location (AML) service was launched, making it possible to identify a person’s location more precisely by sending an SMS to public safety answering points. AML location typically provides a radius smaller than 50 metres. The number of AML-supported calls a week reached about 4,000.

5.

Conclusion

There are several challenges for NGA roll-out. Although total NGA coverage of households is 92%, there is still a tangible digital divide, with only 78% coverage in rural areas. xDSL technologies are the main source of connectivity with very limited presence or very high capacity networks. The measures the government has taken to facilitate NGA roll-out (the UK’s National Broadband Scheme for 2016-2020) and the support for fibre deployment announced in the Autumn Statement will help the UK reach the proposed targets.

⁶⁷ <https://www.gov.uk/government/news/government-plans-to-make-sure-no-one-is-left-behind-on-broadband-access>.

⁶⁸ https://www.ofcom.org.uk/__data/assets/pdf_file/0028/95581/final-report.pdf.

⁶⁹ <http://services.parliament.uk/bills/2016-17/digitaleconomy.html>.