
BEREC
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Table of Contents

The outcomes of the 25th plenary in London

BEREC held its final Plenary meeting of the year in London, UK, on 10 and 11 December, during which it elected its Board for 2016: Wilhelm Eschweiler (BNetzA) will be the Chair, and will be joined by Angelo Cardani (AGCOM) and Henk Don (ACM), as well as outgoing 2015 Chair Fátima Barros (ANACOM) and 2017 Chair-elect Sébastien Soriano (ARCEP).

BEREC had the pleasure of welcoming Commissioner Günther Oettinger, who addressed Europe's regulators on the Commission's vision for a digital single market. Indeed, the main item of the Plenary's agenda was the adoption of BEREC's opinion on the review of the regulatory Framework, an important component of the Commission's overall Digital Single Market strategy.

BEREC also adopted a report on the regulation of oligopolies which fed into its opinion on the Framework review, and a report on IP-based interconnection for voice services. Following the recent adoption of the Telecoms Single Market Regulation, BEREC provided the Commission with input in relation to the wholesale international roaming market and "fair use" of international roaming services. BEREC also responded to a Commission questionnaire related to the evaluation of the Termination Rates Recommendation, and adopted a termination rates benchmarking report.

Following recent cooperation with the ERGP, BEREC adopted a joint BEREC-ERGP opinion on cross-border parcels delivery.

Finally, BEREC adopted its work programme for 2016, a year which it expects will be dominated by the start of legislative negotiations on the Framework review. A full list of the documents adopted for publication at the BEREC Plenary, including its second report on the implementation of its broadband common positions, is available here.

The day before the Plenary, on 9 December, it was organised an internal joint BEREC – FCC Workshop on Net Neutrality, which counted with the participation of Tom Wheeler, FCC's Chair.

This was the last BEREC Plenary meeting under the chairmanship of Fátima Barros, President of the Portuguese regulator, ANACOM.

BEREC Report on transparency and compatibility of the international roaming tariffs

The report focuses on two possible key issues for consumers when selecting international roaming tariffs: transparency and comparability. Transparency refers to the availability of clear information on prices and conditions for each tariff provided by the operators and the availability of simple procedures to switch between tariffs. Comparability refers to the ability of customers to compare different tariffs, allowing them to select the one best suited to their needs and pattern of consumption.

In order to investigate whether consumers face transparent conditions and are able to compare different tariffs, BEREC prepared two questionnaires addressing the operators and NRAs respectively. Operators were requested to describe the variety of tariffs they offer to their customers, the information they provide to their customers on the use of those tariffs, how to switch between tariffs and any further information and tools which allow customers to compare tariffs and to estimate their consumption. NRAs were asked to provide details of any complaints they had received with regard to transparency as well as any information on methods for consumers to compare different roaming tariffs, e.g. comparison tools provided by consumer associations or any other organization. The questionnaire to NRAs also included questions on any recommendation that may be available to customers on how to select the most suitable tariff and any hints on methods for customers to estimate their data consumption.

When BEREC asked whether NRAs had received transparency related customer complaints, 50% of the NRAs confirmed that this was the case. Among these, the number of complaints per NRA is very low.

Most of the operators report that they provide extensive information on the conditions and prices for each tariff on their websites and inform customers about tariffs by sending out SMS or USSD (Unstructured Supplementary Service Data) messages. However, the responses indicate that quite a number of operators who offer alternative tariffs do not actively inform their customers when they reach a time or volume limit and how services are charged when the usage has reached this limit.

The most popular way among the providers to supply data on real-time consumption is via call centre agents (67%). The second choice of providers to delivering data on real-time consumption to their customers is publication of information in customer areas on providers' websites (52%), followed by interaction via the mobile phone using short codes (51%).

Specially designed applications available on smartphones or tablets do not seem to be very popular compared to call centres, websites and SMS.

Customers generally have a good knowledge about the roaming charges and the volumes of the regulated roaming services they consume, as about 94% of the operators deliver the necessary service records to their customers in their monthly bills, both for service charges and volumes. In addition, only 38% provide itemized charges and volumes in real-time for calls and 36% for SMS. 59% of the operators provide real-time information concerning charges for data services.

With regard to the comparability of tariffs, the responses received show that there is a large variety of different types of tariffs, ranging from linear tariffs (such as the Eurotariff) to daily/weekly or monthly bundles of different services and specific tariffs where domestic prices are combined with different kinds of additional fees.

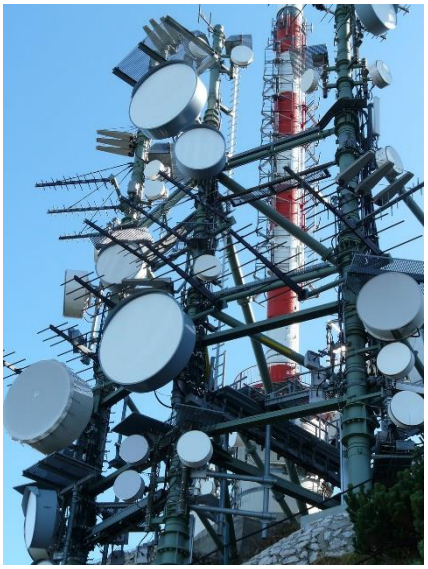
More than a quarter of responding operators have at least one “RLAH-like” offer. These are mainly domestic offers including a certain number of minutes, SMS and/or MB, i.e. a limitation in terms of volume (32% of European operators). This trend could be partly due to the impact of political negotiations at the European level to end roaming surcharges as of mid-2017.

BEREC's analysis shows that customers do not have straightforward and simple access to information and tools to estimate their consumption of data traffic (MB) and prices for the using roaming services. Although some of the providers supply convenient tools and clear information, this is not the case in general and the situation has not changed significantly since the previous reviews made in 2014 and 2013.

In general, apart from some isolated cases, NRAs and consumer organizations do not provide tools to help customers to estimate data traffic, but some of them supply information and hints on how to estimate traffic consumption. BEREC identified some good examples such as tools using icons and other customer-friendly interfaces which estimate data consumption that could be used as a reference for the further enhancement and development of new and existing tools that may help customers to make informed decisions. Additionally, something considered as advisable would not only be to provide data traffic estimates in MB, but also the maximum price that customers would have to pay under the Eurotariff. This could help users to better compare the Eurotariff with alternative tariffs.

BEREC will repeat this exercise each year to assess the evolution and advances in increasing transparency and comparability of tariffs.

BEREC Report on the outcomes of the public consultations on oligopoly



The European electronic communications sector has seen the emergence of oligopolistic markets, i.e. markets with a limited number of operators. This phenomenon could be explained by several market tendencies, such as the deployment of NGA networks, technological convergence, the increase move to supplying bundle services, and mergers and acquisitions operations, which are reducing the number of operators in markets.

In order to analyse this phenomenon, BEREC had drafted a Report on Oligopoly Analysis and Regulation and then submitted it for a public consultation in June 2015. By August BEREC received 20 contributions, all non-confidential versions may be found at BEREC's websites. BEREC has carefully reviewed all the received contributions and publishes a summary of contributions, in which it provides responses to most of the questions and remarks made.

Stakeholders generally welcome BEREC´s proposal of structuring the criteria to be used to assess joint dominance around the criteria used in the Airtours case and update the Annex II of the Framework Directive accordingly. On the contrary, majority of stakeholders (except for ECTA and other alternative operators) are not supportive of the proposal of taking into consideration the case for potential intervention in relation to tight oligopolies when reviewing the framework. They raise a number of concerns as to (i) whether evolving the regulatory framework in order to address tight oligopolies would be justified in light of the observed market trends and the current level of competition, (ii) the ambiguity of criteria proposed by BEREC to identify such tight oligopolies and the resulting increased risk of intervening on an ex-ante basis when it is not required, (iii) the risk for double jeopardization resulting from potentially intervening in markets where the Competition authorities would have assessed in the context of mergers and (iv) the detrimental impact on investment and the development of the single market that regulating tight oligopolies could have. Many stakeholders do not consider either the SIEC test applied under the merger framework, or other tools that may currently in place to address gap cases (tight oligopolies) constitute a valid reference to be used in the context of the telecommunications regulatory framework and its revision.

BEREC is fully aware that the observed trend towards an increasing emergence of oligopolistic settings within electronic communications sector does not necessarily lead to efficient outcomes in terms of price, quality and product choice. However this trend does not ensure, in all circumstances, that the affected markets will be effectively competitive from both theoretical and practical points of view as it is thoroughly described in the report.

In light of the structural features that electronic communications markets exhibit and the risk that tight oligopolies may arise, BEREC believes that the current regulatory framework, as it now stands, as well as competition law, may prove insufficient to address the challenges that tight oligopolies would eventually pose on the electronic communications markets. This is however an issue that requires further reflection from all stakeholders.

In sum, this report should be seen as a first BEREC contribution to the debate on the revision of the existing legislative framework, that the EC has recently launched[1], and that also enquires about the possible existence of a regulatory gap in the treatment of oligopolistic market structures[2]. BEREC is committed to engage in a constructive dialogue with the EU institutions as well as stakeholders, to ensure that all the different angles to this important issue are fully reflected and duly taken into account. Setting the terms of the debate in the context of the current review of the legislation ensures the level of transparency and consistency that is required to prevent that any decision might be detrimental to the correct functioning of the electronic communications markets and the promotion of investments in the long run.

BEREC Report on Termination rates at European level July 2015

The aim of this report is to offer a picture of the interconnection and termination prices as well as the methodology used to set those termination rates in the cases of mobile, fixed and SMS communications in Europe, thus continuing the work started by ERG (European Regulators Group). Overview reports on FTRs, MTRs and SMS TRs are carried out twice a year.

The BEREC Report on Termination rates at European Level (July 2015) provides an overview of Mobile Termination Rates (MTR), Fixed Termination Rates (FTR) and SMS Termination Rates (SMS TR) per country, based on the results of a request for information sent to all National Regulatory Authorities (NRAs). The data reflects the situation as of 1 July 2015, it includes rates from 36 NRAs that provided responses.

As of July 2015, the situation regarding Termination Rates in Europe is as follows:

[1] See in particular EC's public consultation on the evaluation and the review of the regulatory framework for electronic communications networks and services, September 2015, available at https://ec.europa.eu/eusurvey/runner/TelecomFrameworkReview2015

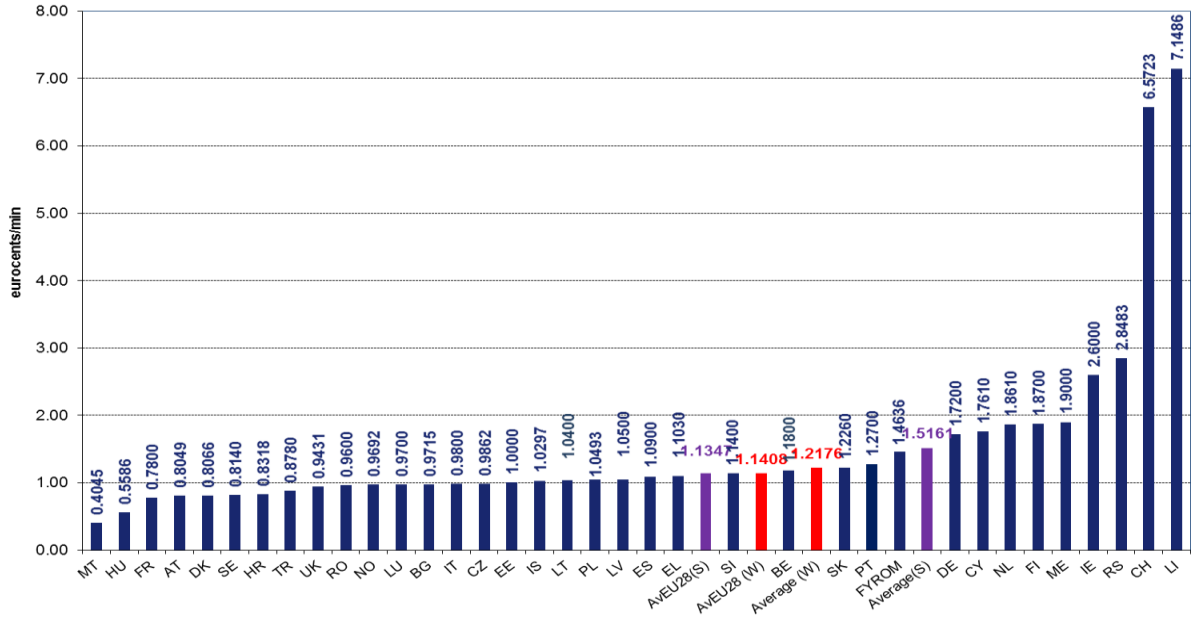
[2] See in particular Question 42: *"Should there be exceptions to the principle that ex ante access regulation can only be imposed in circumstances where regulators can demonstrate SMP, individual or joint?"* and Question 43: *"In the event that the wholesale access market in a given area is deemed no longer subject to SMP, or that access remedies are no longer deemed appropriate in that area, by virtue of ongoing infrastructure-based competition on quality and price between a limited number of operators, would you consider it justified in the interests of market stability and existing levels of competition to maintain for some period wholesale access comparable to that previously enjoyed by access-based operators?"*

Mobile Termination Rates

Mobile termination rates (MTRs) are regulated in all countries of the EU(28) and in the additional members of BEREC. The highest Mobile Termination Rates originating operators still face in Lichtenstein with 7.1486 eurocents per minute, though the lowest rates for mobile termination services or 0.4045 eurocents per minute can be found in Malta.

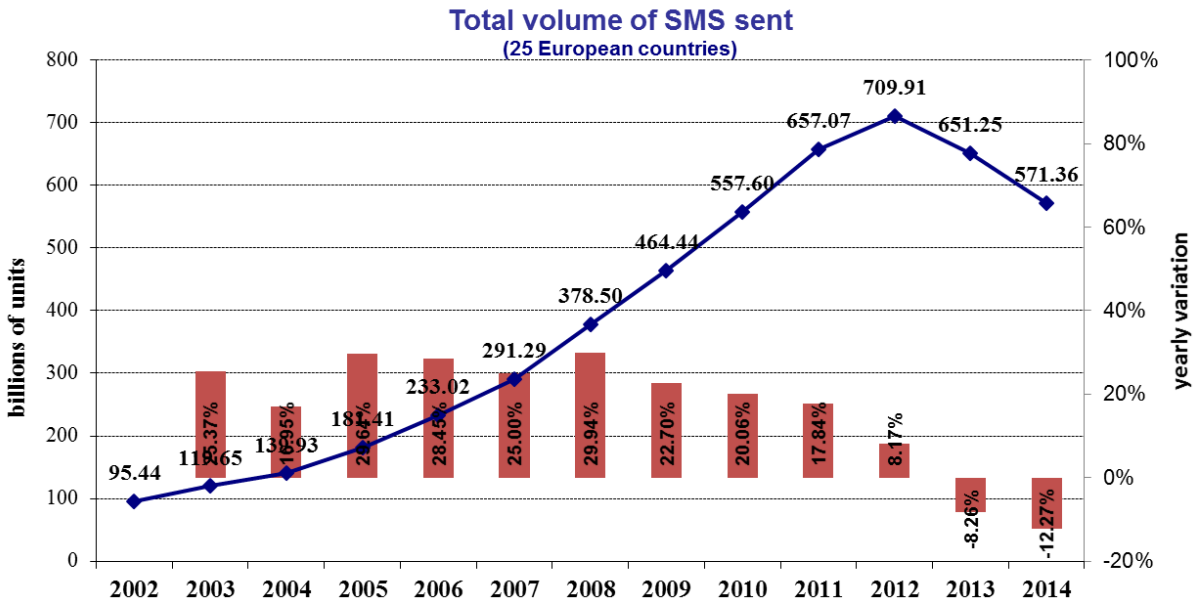
MTR averages:

- MTR simple average A(s) at European level (all 36 countries) stands at 1.52 eurocents per minute, whereas weighted average A(w) at European level is estimated at 1.22 eurocents per minute.
- MTR simple average A(s) at EU level (only EU member states) stands at 1.13 eurocents per minute, whereas weighted average A(w) at EU level is estimated at 1.14 eurocents per minute.



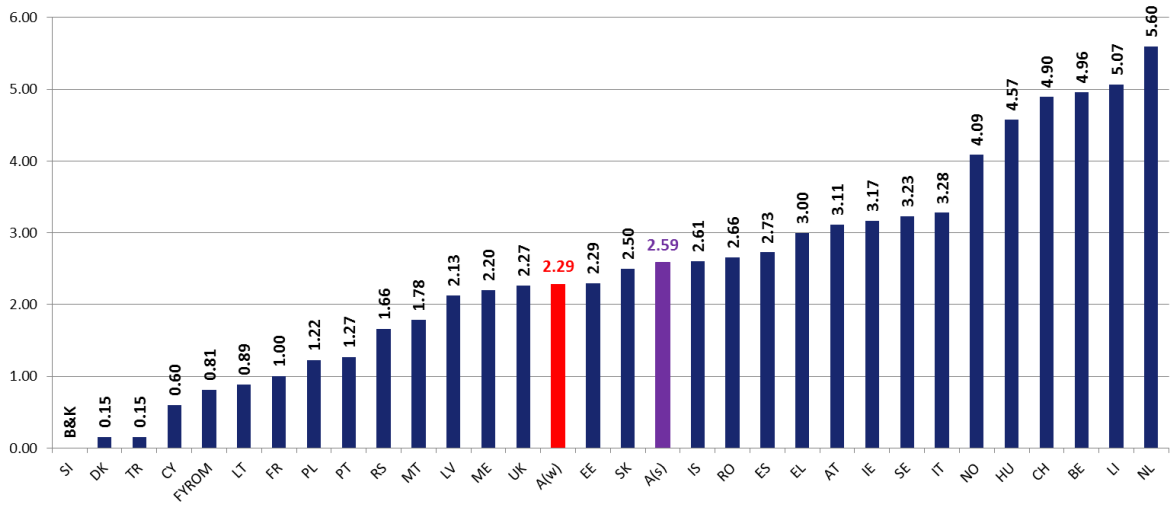
SMS Termination Rates

Even though short message service (SMS) offered by operators is becoming less important in the last two years, it is still used every day by millions of people all over the world.



This figure is based on the time series of the countries from which information was available from 2002 to 2014. These countries are: Austria, Belgium, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Lithuania, Malta, Norway, Poland, Portugal, Romania, Slovak Republic, Spain, Sweden, Switzerland and UK.

This service is not regulated in most EU countries, but the evolution of wholesale SMS termination rates is monitored in most cases by NRAs. If to compare the SMS termination rates, the highest rates are still in the Netherlands, where the originating operators have to pay 5.60 Eurocents per short message. The cheapest SMS termination rates can be found in Denmark and Turkey, so as the operators are paying 0.15 eurocents per SMS in both countries. Since Serbia introduced bilateral SMS TRs in June 2015, Slovenia is now the only country where “Bill & Keep” agreements are in place for traffic between all domestic operators. The EU simple average is Eurocents 2.59 per SMS, whereas the weighted average is reported to be Eurocents 2.29 per SMS.

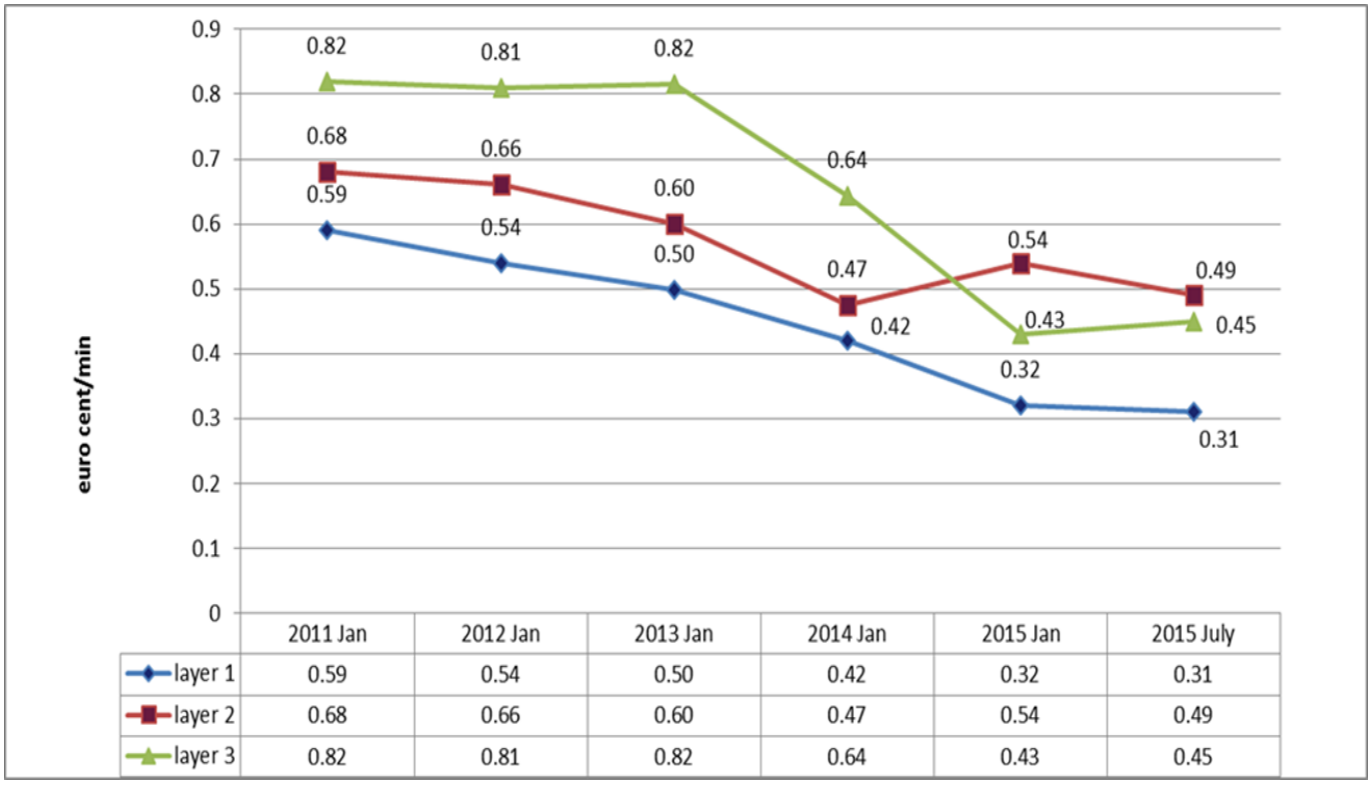


Fixed Termination Rates

Fixed termination services in Europe are subject to price regulation. The regulation of Fixed Termination Rates has been harmonized by the Recommendation of 7.5.2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU (C (2009) 3359 final). However, some differences can be found across the national regulatory regimes:

1) In some cases the termination rate is a two-part tariff, i.e. composed of a variable part (to be paid for each minute of a call) plus a set-up or fixed part (to be paid for each call). In other cases, termination prices consist only of the variable part.
2) Interconnection services in fixed networks are provided at different levels in the hierarchy of the incumbent´s networks, called layers. Even though some peculiarities in specific countries are present, in general three main layers for interconnection are defined: i) layer 1, or local level service provision, ii) layer 2, or regional level service provision (single transit), and iii) layer 3, national level service provision (or double transit).

Figure 4 Simple averages[12] of incumbents' fixed termination rates at the European level per layer



	2011 Jan	2012 Jan	2013 Jan	2014 Jan	2015 Jan	2015 July
layer 1	0.59	0.54	0.50	0.42	0.32	0.31
layer 2	0.68	0.66	0.60	0.47	0.54	0.49
layer 3	0.82	0.81	0.82	0.64	0.43	0.45

[1] The average of Layer 2 is slightly higher in January 2015 compared to January 2014, due to the inclusion of additional countries that did not provide information for January 2014.

[2] The average of Layer 3 in July 2015 is slightly higher compared to January 2015, due to the inclusion of different countries that did not provide information for January 2015.

The report also indicates, that the termination rates for incumbent operators of fixed networks keep the decreasing tendency in general.

Taking into account the three main levels of fixed interconnection layers, Layer 1 simple average as of July 2015 stands at 0.31 Eurocents per minute. Regarding Layers 2 and 3,the simple averages stand at 0.49 Eurocents per minute and 0.45 Eurocents per minute, respectively.

Additional information concerning the regulatory models used, wholesale revenues, short-term evolution of termination rates as well as information on numbers of lines and symmetry applicable across operators of the respondent countries is available in more detail in the report.

BEREC Report "Case Studies on IP-based Interconnection for Voice Services in the European Union"

In recent years several network operators (fixed and mobile) in EU Member States started to migrate their networks to Next Generation Networks or all-IP networks. When networks are migrated to NGN or all-IP networks, it is "natural" and efficient that also the interconnection for voice services is based on IP (and no longer on legacy technology). In order to get a deeper insight into the IP-based interconnection for voice services (IPvIC) already in place and to foster the exchange of experiences, this document has the following two objectives. Firstly, it aims to give an overview of the status of IPvIC in Europe on a general level based on information of 32 European countries. Secondly, it aims to give an overview of the IPvIC currently in place based on the experiences of ten countries (Bulgaria, Croatia, Denmark, Finland, France, Germany, Italy, Slovenia, Spain and Sweden). The latter covers IPvIC offered by fixed network incumbents (FNI, 8 countries), other fixed network operators (OFNO, 3 countries) and mobile network operators (MNO, 2 countries), i.e. in total 13 cases. The analysis of the report is descriptive and does not aim at being normative. It is not intended to recommend a best practice.

The BEREC report on IPvIC revealed the status of the IPvIC in Europe on a general level as follows. The type of operator, which most often offers IPvIC, is the OFNO followed by the FNI and the MNO. NRAs imposed the obligation to offer IPvIC most frequently on FNI (13 countries) followed by OFNO (11) and MNO (5).

The BEREC report on IPvIC shows that in the ten countries analysed the general characteristics of the IPvIC are as follows:

- Obligation to offer IPvIC: All operators considered offer IPvIC based on an obligation except for the MNO in Finland.
- National specification(s): In order to support a common solution for several or all operators at the national level most countries analysed (7 of 10) have developed one (or more) national specification(s) defining the characteristics of the IPvIC in detail.
- Transitional period: The countries (9) which have imposed that the operators analysed have to offer IPvIC support the migration of the voice IC from legacy technology to IP with the obligation that both types of voice IC have to be offered. In most of these countries (6 of 9) a transitional period is not (yet) defined, and therefore the operators are free to migrate to IPvIC when it is best for them. The other three countries have already defined the transitional period.
- Period of notice of phasing out voice IC based on legacy technology: This period has already been defined in three countries. In the other countries this is not the case and in most of them the operators analysed have not made formal announcements to phase out voice IC based on legacy technology so far.

In the thirteen cases analysed important technical characteristics of the IPvIC are as follows:

- Number of points of interconnection (PoI) of the IPvIC: The minimum number of PoIs of the IPvIC which enable operators to handover voice traffic for national destinations based on the regulated termination rates (without additional charges) has been reduced to one or two (8 of 13 cases). This reflects the trend that the number of PoIs is usually reduced with the migration to NGN and all-IP networks.
- Signalling protocol: The signalling protocol to be used at the PoI is SIP (11 of 13). In most of these cases (7 of 11) the use of SIP is further defined with 3GPP specifications (related to IMS). In the two cases with MNO SIP-I (and not SIP) is used at the PoI which is also used within mobile networks.
- Number ranges, codecs and supplementary services supported by IPvIC: The IPvIC supports the same number ranges as the voice IC based on legacy technology (10 of 13), the audio codec G.711 (all cases) which is typically used in fixed networks and also further audio codecs (9 of 13) as well as fax services (all cases) which all together facilitate the migration of the voice IC from legacy technology to IP. However, the same supplementary services as voice IC based on legacy technology are only supported in about the half of the cases analysed.
- Quality of service (QoS): The IPvIC has a defined QoS with regard to certain QoS parameters (at least 11 of 13), whereby different QoS parameters are used in different cases.
- Redundancy and network security of the IPvIC: The networks are interconnected with the networks of the IC partners with direct physical IC links (12 of 13) or via (domestic) exchange points (1 case) and not over the public Internet which provides a significant protection against threats from the Internet. In order to increase the availability, redundancy is used at the level

of the physical IC link (12 of 13) and at the level of the border gateway (8 of 13). The operators also apply further security measures (at least 12 of 13).

It can be concluded that from an overall perspective the IPvIC are rather similar. However in detail the characteristics may differ reflecting national circumstances.

Price transparency and regulatory oversight of cross border parcels delivery, taking into account possible regulatory insights from the electronic communications sector – Joint BEREC-ERGP Opinion

Earlier this year, BEREC and ERGP (the European Regulators Group for Postal Services), set up a joint working group in order to provide an opinion to the EC on price transparency and regulatory oversight of cross border parcels delivery, taking into account possible regulatory insights from the electronic communications sector. To this end, the Joint BEREC-ERGP Opinion discusses the potential problems facing the sector and potential measures that could be considered to enhance business and consumer benefits, particularly in view of experience from the telecoms sector.

The proper functioning of the e-commerce sector is instrumental for European economic growth, in particular considering its potential to decrease retail prices, widen consumer choices, reduce transaction costs and, hence, contribute towards the deepening of the internal market. In this respect an affordable and reliable parcel delivery services is considered extremely important for retrieving the huge potential of e-commerce.

However, some empirical evidence suggests that a number of relevant barriers related to public policy aspects as well as to commercial conduct of companies may be hindering the adequate functioning of this sector.

Particularly, one of the fundamental factors influencing a consumer's decision to shop online relates to the physical delivery of the goods ordered via the Internet. In this regard the Commission Green Paper of 29 November 2012 on "An integrated parcel delivery market for the growth of e-commerce in the EU" points out that delivery concerns and those relating to returning products are the top two concerns of consumers in relation to online shopping.

Concerning public policy aspects, the European Commission's (EC) Digital Single Market (DSM) Strategy of 6 May 2015 has proposed several actions to overcome related barriers towards affordable

high-quality cross-border parcel delivery. The DSM inter alia stipulates that “affordable, high-quality cross-border delivery services can build consumer trust in cross-border online sales. Stakeholders complain about a lack of transparency, the excessive costs of small shipments and the lack of inter-operability between the different operators typically involved in a cross-border shipment and the resulting lack of convenience for the final consumer.”

With regard to barriers related to the commercial conduct of companies, the EC launched an anti-trust inquiry on e-commerce in May 2015, with a preliminary report for consultation expected by mid-2016 and a final report expected in the final quarter of 2017.

In this context, BEREC and ERGP, agreed – based on the results of a meeting between the EC VP Andrus Ansip, the BEREC Chair and the ERGP Chair on 15 June 2015 and a letter from the European Commission (DG GROW) of 29 June 2015 - to work closer to provide inputs until end-2015 to the discussion regarding cross-border parcels delivery in the context of DSM, namely creating a joint working group, to advise the EC and, taking into account potential regulatory transfers from the electronic communications sector, accomplish the tasks of:

a) Identifying the powers that NRAs must have to monitor and intervene regarding price transparency and promote regulatory oversight on cross border parcels delivery;

b) Outlining specific measures/policy options to be created by the EC to tackle the problems in this market concerning price transparency for European deliveries, including for prices of small shipments.

On 30 September a joint BEREC-ERGP workshop was held in Riga, where a number of issues were discussed, including the main problems affecting cross border parcels delivery, similarities/differences between the two sectors, the proportionality of monitoring the market (e.g. prices), the EC legal framework, potential measures that could be taken and the powers of NRAs to monitor and intervene. The outcomes of the workshop are one of the inputs to the Opinion.

As for potential measures to improve the functioning of the sector, the Joint BEREC-ERGP Opinion compares similarities and differences between international roaming and cross-border parcels delivery and considers measures related to monitor cross-border parcels delivery, price transparency and other regulatory interventions, if problems are identified and evidenced.

The comparison of cross-border parcels delivery and international roaming has shown that some similarities but also relevant discrepancies between the two problem areas, exist. In any case, it seems clear that should any competition issues become evident in the parcels sector, including cross-border parcels, NRAs need the appropriate regulatory powers to intervene and such powers do not seem to be present in all Member States.

Price transparency is considered to be particularly important and the Joint BEREC-ERGP Opinion discusses measures to increase both consumer and supplier information and awareness, such as information platforms for (small) e-retailers on the available delivery services, price comparison websites, enhanced 'track and trace' systems and scoreboards on delivery performance.

With regard to regulatory oversight and monitoring, the Joint BEREC-ERGP Opinion discusses the potential to develop principles or guidelines to improve monitoring in the sector, the powers of NRAs to collect relevant data, the development of 'quality of service' indicators and reinforcing cooperation among the NRAs, the European Commission and other relevant stakeholders.

Finally, the Joint BEREC-ERGP Opinion considers that incentives could be provided to the e-sellers and other entities in order to reduce the shipping costs, such as access of small e-sellers to bulk shipments by cooperating with a local postal operator or a postal operator active in another country and the application of efficient cost orientated terminal dues for shipments collected and delivered within the EU Member states.

BEREC future events

On **21 January 2016** in Brussels the public BEREC expert workshop on "Regulatory Implications of Software - Defined Networking and Network Functions Virtualisation" will take place. In recent years the electronic communications sector, together with the IT sector, have worked very intensely on two new fundamental technological developments: Software-Defined Networking (SDN) and Network Functions Virtualisation (NFV). Both have the potential to completely change the way networks are built and operated today. From a regulatory perspective it is important to anticipate the regulatory impact that SDN and NFV will have. Therefore, BEREC will hold a public expert workshop on "Regulatory implications of SDN and NFV" on 21 January 2016 in Brussels. At this one-day BEREC expert workshop, standard development organisations, network operators and vendors will present their views on SDN and NFV with a focus on their regulatory implications. The workshop will end with a panel discussion with the speakers at the workshop. The agenda of this workshop is available here. The workshop will help BEREC to form its opinion on the topic of SDN/NFV in the context of the Review of the Regulatory Framework, and this opinion will then be communicated to the European Commission.If you are interested in this workshop, please register by emailing workshop@berec.europa.eu**.** Please note that in order to enable a highly interactive workshop the total number of participants is limited and participation is based on a first-come, first-served basis.

On **4-5 February 2016** the first meeting of the BEREC Contact Network will take place in Krakow, Poland and will be kindly hosted by the Polish Office of Electronic Communications (UKE). The CN meeting will be attended by the senior representatives of the National Regulatory Authorities (NRAs)

with primary responsibility for overseeing the day-to-day operation of the markets for electronic communications networks and services.

On **24-26 February 2016** in Rotterdam, Netherlands the 26th BEREC plenary meetings will take place. The meeting will be hosted by the Dutch Authority for Consumers and Markets (ACM) and is open for participation only to BEREC Members and Observers and to invited experts.

For more information on other BEREC events in 2016, please consult here.

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