

Body of European Regulators for Electronic Communications

Annual Report 2011

24 May 2012

Report adopted by the Board of Regulators pursuant to Article 5.5 of Regulation No 1211/2009 of the European Parliament and of the Council

Contents

Foreword by the BEREC Chair 2011	3
1 Introduction	5
2 Work programme 2011	5
2.1 Improving Harmonisation.....	6
2.1.1 Consistency of Remedies.....	6
2.1.2 Implementation of Recommendations.....	6
2.1.3 Implementation of Key-remedies	7
2.1.4 International Roaming.....	7
2.1.5 Business Communication Services	8
2.1.6 Access to Value Added Services	8
2.2 Emerging Challenges	9
2.2.1 Promotion of Broadband.....	9
2.2.2 Network Neutrality	9
2.2.3 Bridging market evolution and the objectives of spectrum management	10
2.3 Implementation of the Revised Framework	10
2.3.1 Cross-border and end-user	10
2.3.2 Functional Separation	11
2.3.3 Benchmarks.....	11
2.3.4 Article 7 procedures	11
2.3.5 Co-operation.....	12
3 Representation and cooperation.....	12
3.1 Events, speeches and presentations.....	12
3.2 Workshops	13
3.3 International cooperation	14
4 Organisational issues	15
Annex 1: Plenary meetings.....	17
Plenary Meetings	17
Annex 2: Membership of Board of Regulators and Management Committee ...	18

Foreword by the BEREC Chair 2011

2011 was a dynamic and successful year for BEREC. The revised regulatory framework came into force in May and BEREC Office obtained full autonomy in September.

Before describing the activities of BEREC in 2011 in the next chapters, I would like to put these topics into perspective by going back to BEREC's objectives and giving some highlights for 2011.

First objective: advice to policymakers

BEREC's first objective is to provide advice on electronic communications policy to the European Institutions. For instance we advise the Commission on Universal Service or measures to support the roll-out of broadband. Apart from the Commission, we also advise the European Parliament and the Council.

The Commission asked BEREC in 2011 to gather information on net neutrality; information that could be used as a basis for a decision to develop a policy on net neutrality, or abstain from it. BEREC provided the Commission with the information that we were able to find within the time constraints given.

As further BEREC's advice was regarded indispensable, the Commission and BEREC agreed to do a follow-up of this exercise. BEREC, together with the Commission, issued a questionnaire on net neutrality issues that was sent to operators and other stakeholders at the end of 2011. The result of this exercise is important with a view to the Digital Agenda, because if we want to foster the uptake of broadband and broadband services, we need to make sure that consumers and businesses know what their rights are.

Another issue that BEREC gave advice on was international roaming. The Digital Agenda stipulates that the difference between roaming and national tariffs should approach zero by 2015. BEREC not only advised the Commission, but also got into a dialogue with both the European Parliament and the Council Working Group on this topic. Thanks to BEREC's efforts, consumers in the EU will benefit from lower roaming rates.

Second objective: develop best practice

The second objective of BEREC is to develop and disseminate best practice on the implementation of the EU regulatory framework. This is a very important objective, because agreement between national regulatory authorities on coherent regulation is indispensable for attaining the internal market – yet another goal of the regulatory framework.

Net neutrality provides us with another example of what BEREC does. In September the Board of Regulators of BEREC agreed to publish for consultation a document on guidelines on net neutrality and transparency. These guidelines emphasise the importance of effective transparency for end users and the best approaches to achieve it. In BEREC's view, transparency will empower consumers by enabling them to compare conditions and tariffs. This will exert pressure on the market players to provide competitive products, realising the full potential of the new regulatory framework. With this consultation we solicited for the views of stakeholders on these draft guidelines. With over 70 responses received, I think we may conclude that BEREC succeeded in that. We have used the results of the consultation to finalise the guidelines.

Third objective: delivering opinions

A third objective of BEREC is to deliver opinions on draft decisions, recommendations and guidelines. BEREC gives advice on individual NRA decisions in market analyses, market definitions and SMP designations, as part of the article 7-procedures. In my view it is very much in the interest of harmonisation that BEREC should play a significant role. This is also possible because we now have our support staff in Riga, BEREC Office, up and running.

The second phase of the article 7 procedures starts when the Commission expresses it has serious doubts regarding decisions of individual NRAs. BEREC will have to express its opinion to the Commission in these cases. In 2011, there were two Phase 2 cases. We have formed teams of experts that have assessed the Commission's serious doubts and they succeeded to finish the work within the deadline.

As BEREC Chair 2011, I would like to thank all NRAs who participated in the various Expert Working Groups. The completion of the work programme and of other tasks and functions of BEREC depend very much on the preparatory work conducted by the Expert Working Groups. The positive role that BEREC plays, for the benefit of industry and consumers, derives from the collective knowledge and expertise of all NRAs and this is focussed within the various Expert Working Groups. I would also like to pay tribute to support staff in Brussels, The Hague and Riga who provided professional and administrative support to the work of the Expert Working Groups as well as providing invaluable assistance to the Chair.

It is my honour to present the Annual Report on BEREC activities for the year 2011. I would also like to wish my successor, Mr Georg Serentschy, every success in chairing BEREC and overseeing its further development during 2012.

Chris Fonteijn

BEREC Chair 2011

1 Introduction

This report aims to report on the activities of BEREC in 2011 according to Article 5.5 of the BEREC Regulation. BEREC has an obligation to adopt both an annual report on the developments in the electronic communications sector (see Article 3.1 (a) of the BEREC Regulation) and an annual report on the activities of BEREC.

BEREC – and before that ERG – has published annual activities reports before. This report tends to be backward looking and based on the Work Programme for that specific year. The developments report however is new. This report consists of an independent view of BEREC about the developments of the sector, and thus is more forward looking.

As this report is based on the Work Programme 2011 it is worth mentioning that the Board of Regulators decided at the end of 2011 to set out a strategic outlook for the coming 3-5 years. This strategic outlook was subject of consultation in the beginning of 2012 and was agreed upon at the meeting of the Board of Regulators in February 2012. With this document BEREC has committed itself to focus its work on three main themes, which will be at the core of BEREC's work programmes for the next years. Although the work programme 2011 was not based on such a strategic outlook, it was based on the work programme and executed in 2010 and served itself as a basis for the work programme 2012. One could say that the implicit coherence between the consecutive work programmes is now made more explicit with the publication of the BEREC midterm strategy outlook.

The core of this annual report is to look back and report on the Work Programme 2011. This will be part of Chapter 2. In Chapter 3 the report will describe the more strategic activities of BEREC, such as representations and co-operation. In Chapter 4 organisational issues will be highlighted.

2 Work programme 2011

The main elements of the 2011 Work Programme of BEREC were a continuation of, or follow-up to, work which was initiated before 2011 by BEREC and ERG. The Work Programme was set out in three separate but related strands:

- Improving harmonisation
- Emerging challenges

- Set-up of BEREC and implementation of revised framework

Over the course of 2011 BEREC made major progress in these three areas. The Board of Regulators published more than 40 documents, while the Management Committee published 8 documents. The Work Programme 2011 was the start of a multiannual Work Programme, which means that certain products are to be completed in 2012.

2.1 Improving Harmonisation

BEREC's main task is to promote the consistent application of the European Regulatory Framework and thereby contribute to the development of the internal market for electronic communications. The following products have contributed to this task.

2.1.1 Consistency of Remedies

BEREC has produced a monitoring report on its Broadband Common Positions, which will also serve as input for the review of the Common Positions in 2012.

BEREC has also produced an overview on remedies and EC comments made as a useful tool to support NRAs drafting their market analysis decisions. Furthermore BEREC has delivered input and support for the study commissioned by the Commission called "Steps towards a truly Internal Market for e-communications".

Documents:

- BoR (11) 20 Monitoring report on Broadband Common Positions
Delivered in Plenary 2 2011
- BoR (11) 71 Overview on remedies and EC comments made during the previous rounds of market analysis procedures
Delivered in Plenary 4 2011

2.1.2 Implementation of Recommendations

In previous years the Commission issued recommendations on Termination Rates and Next Generation Access.

In 2011 those Recommendations were part of analysis by BEREC.

BEREC continued the exchange of views on mobile and fixed termination rates, with the goal of strengthening BEREC's views on practical implementation issues and monitoring, with particular regards to the Commission's Termination Rates Recommendation.

Considering the NGA Recommendation and its own Common Position, BEREC published its collection of factual information and new issues of NGA roll-out. BEREC

reported on the implementation of the NGA Recommendation. Furthermore BEREC decided to publish the draft report on NGA Co-investments for public consultation.

Documents:

- BoR (11) 06 Next Generation Access - Collection of factual information and new issues of NGA roll-out
Delivered in Plenary 1 2011
- BoR (11) 43 BEREC Report on the Implementation of the NGA Recommendation
Delivered in Plenary 3 2011
- Draft Report BoR (11) 69 on competitive effects of NGA Co-Investments for public consultation
Decided in Plenary 4 2011

2.1.3 Implementation of Key-remedies

The Commission announced in the European Digital Agenda that it would focus on the key-remedies Non-discrimination and Regulatory Accounting. In 2011 it became clear that guidance by recommendations is to be expected. Besides the informal co-operation (meetings, workshops) with the Commission on these subjects, BEREC also formally responded to the Public Consultations launched by the Commission.

Documents:

- BoR (11) 64 BEREC's answer to the Commission's public consultation on non-discrimination
Delivered in Plenary 4 2011
- BoR (11) 34 Regulatory Accounting Report in Practice
Delivered in Plenary 3 2011
- BoR (11) 65 BEREC response to Commission's public consultation on costing methodologies
Delivered in Plenary 4 2011

2.1.4 International Roaming

As the Roaming Regulation was due to be revised, BEREC delivered its input for this revision. At the end of 2010 BEREC Responded to the Commission consultation, followed by an annex in the beginning of 2011. In the summer of 2011 the Commission launched another consultation on the Review of the Roaming consultation, to which BEREC send a formal reply. Besides these formal documents and informal contacts with the Commission, BEREC also got involved with the European Parliament and the Council (Working Group) to present its advice and viewpoints.

BEREC continued the monitoring of the implementation of the Roaming Regulation and published the 7th and 8th biannual data reports.

Documents:

- BoR (11) 09 BEREC response to public consultation on roaming
Delivered in Plenary 1 2011; the annex 1 of the BEREC's answer to the public consultation on the revision of the Roaming regulation, following the adoption by e-clearance of the main text.
- BoR (11) 46 BEREC Response to the European Commission 'Public Consultation on a Review of the Functioning of Regulation (EC) No 544/2009 (the "Roaming Regulation")'
Published in August 2011
- BoR (11) 08 BEREC report on alternative roaming tariffs
Delivered in Plenary 1 2011
- BoR (11) 21 7th IR Benchmark Data Report July-December 2010
Delivered in Plenary 2 2011
- BoR (11) 22 International Roaming compliance report
Delivered in Plenary 2 2011
- BoR (11) 51 International Roaming BEREC Benchmark Data Report January 2011 – June 2011
Delivered in Plenary 3 2011

2.1.5 Business Communication Services

The possibility to offer business communication services on a European scale depends very much on the consistent regulation in member states. In the beginning of 2011 BEREC finished its report on the relevant market definition. In its 2011 work programme BEREC announced to shift its focus on the inefficiencies market players claim to experience. This has resulted in a report which was subject of public consultation.

Documents:

- BoR (10) 46 Rev 1 Report on relevant market definition for business services
Delivered in Plenary 1 2011
- BoR (11) 56 BEREC Report on existing restrictions concerning the provision of business services
Delivered in Plenary 4 2011, after Public Consultation
- BoR (11) 55 BEREC Report on the public call for contributions on possible existing legal and administrative barriers with reference to the provision of electronic communications services for the business segment
Delivered in Plenary 4 2011

2.1.6 Access to Value Added Services

After BEREC first analysed the problems regarding Special Rate Services in an internal Report, it decided to continue the work on this subject. The draft report was published for consultation at the end of 2011.

Documents:

- BoR (11) 24 Internal Report on Special Rate Services
- BoR (11) 68 Draft Report on Special Rate Services for Public consultation.
Decided in Plenary 4 2011

2.2 Emerging Challenges

2.2.1 Promotion of Broadband

In its Work Programme 2011 BEREC announced that it would look at this from a broader point of view. In 2011 BEREC finished its report on specific aspects of broadband commercialisation.

In the beginning of 2011 BEREC finished its report on Open access which also served as a basis to advise the Commission on the revision of the state aid guidelines.

BEREC started to work on a report that looks into the different policy initiatives to promote broadband. This work was also based on a study performed by the Florence School of Regulation.¹

Documents

- BoR (11) 25 Specific aspects of broadband commercialization
Delivered in Plenary 2 2011
- BoR (11) 05 Draft BEREC Report on Open access
Delivered in Plenary 1 2011
- BoR (11) 42 BEREC Response to EC Questionnaire of the revisions of state aid guidelines
Delivered in Plenary 3 2011
- BoR (11) 70 Draft Broadband Promotion Report for public consultation
Decided in Plenary 4 2011

2.2.2 Network Neutrality

In 2011 BEREC continued to analyse net neutrality after having identified a number of key-issues, such as transparency, quality of service and competition.

BEREC delivered guidelines on transparency as a tool to achieve net neutrality. These guidelines were subjected to public consultation and raised a lot of interest. BEREC also published a framework for quality of service, which will serve as input for the work in 2012.

¹ CN (11) 81 - FSR Study on Broadband Diffusion: Drivers and Policies, [http://www.irg.eu/streaming/CN%20\(11\)%2081_FSR_Study_on_BB_Promotion_FINAL.pdf?contentId=547201&fileId=ATTACHED_FILE](http://www.irg.eu/streaming/CN%20(11)%2081_FSR_Study_on_BB_Promotion_FINAL.pdf?contentId=547201&fileId=ATTACHED_FILE)

In 2011 BEREC started working on a study on competition issues related to Net Neutrality, which is to be consulted in 2012. In November 2011 BEREC, in co-operation with OECD, organised a workshop on IP Interconnection.

On top of the planned activities, BEREC also executed a rigorous fact-finding exercise on traffic management at request from the Commission. The results of this exercise are to be expected in the first half of 2012.

Documents:

- BoR (11) 67 Guidelines on transparency as a tool to achieve net neutrality: Best Practices and Recommended Approaches
Delivered in Plenary 4 2011, after Public Consultation
- BoR (11) 44 Draft BEREC Guidelines on Net Neutrality and Transparency
Delivered in Plenary 3 2011, followed by Public Consultation
- BoR (11) 53 A framework for quality of service in the scope of net neutrality
Delivered in Plenary 4 2011

2.2.3 Bridging market evolution and the objectives of spectrum management

BEREC decided in the Plenary meeting in December to send the Report BoR (11) 54 on the impact of Fixed-Mobile Substitution in market definition for public consultation.

2.3 Implementation of the Revised Framework

In May 2011 the revised Regulatory Framework came into effect, increasing BEREC's role. The following activities were undertaken to further professionalise the functioning of BEREC.

2.3.1 Cross-border and end-user

At the beginning of 2011 BEREC finalised its report on measures to ensure equivalence in access and choice for disabled end-users. BEREC also finished its report on cross-border issues in the light of Article 28 (2) of the Universal Service Directive regarding fraud and misuse of numbering resources. BEREC kept on analysing Article 28 (1) of the US Directive with a study of the current cross-border accessibility of numbering resources and for which it consulted market parties. Both items of this Article 28 will be looked at further in 2012.

Documents

- BoR (10) 47 Rev1 BEREC report on measures towards disabled end-users accessibility to electronic communication services
Delivered in Plenary 1 2011, after Public Consultation

- BoR (10) 62 Rev1 BEREC report on cross-border issues under Article 28(2) USD
Delivered in Plenary 1 2011, after Public consultation

2.3.2 Functional Separation

In the beginning of 2011 BEREC finished its guidance on functional separation. In its 2011 Work Programme BEREC announced that it would continue working on this remedy of last resort once it would become clear that an NRA will come forward with such proposals. This did not seem to be necessary.

Document:

- BoR (10) 44 Rev1 BEREC Guidance on functional separation under Articles 13a and 13b of the revised Access Directive and national experiences
Delivered in Plenary 1 2011, after Public Consultation

2.3.3 Benchmarks

BEREC kept on producing benchmarks in 2011.

Documents :

- BoR (11) 27 MTR Benchmark report as of January 2011
Delivered in Plenary 2 2011
- BoR (11) 35 MTR Benchmark snapshot as of July 2011
Delivered in Plenary 3 2011
- BoR (11) 36 SMS Benchmark snapshot as of January 2011
Delivered in Plenary 3 2011
- BoR (11) 57 FTR Benchmark snapshot as of January 2011
Delivered in Plenary 4 2011

2.3.4 Article 7 procedures

Since 26 May 2011 the new European regulatory framework has entrusted BEREC with a formal advisory role within the regulatory process. BEREC shall, in particular, issue an Opinion on the Commission's notification of its serious doubts indicating whether it considers that a draft national measure should be amended or withdrawn and, where appropriate, provide specific proposals to that end. In the BEREC Plenary meeting in May 2011 BEREC adopted amendments to the Rules of Procedure for the implementation of its new powers. Under the new provisions BEREC Office keeps track of regulatory measures notified by the National Regulatory Authorities to the European Commission under Article 7 Framework Directive, as well as the Commission's concerns as expressed in their comments letters.

BEREC exercised its new powers to contribute to the consistency of regulatory practice by issuing opinions in two cases, the combined Polish cases PL/2011/1255-

1256-1257-1258 and the Polish case PL/2011/1260. The first case was opened on 4 November 2011 and the second case was opened on 17 November 2011, when the Commission sent the Serious Doubts Letters to the Polish National Regulatory Authority, UKE. BEREC adopted the formal opinions in both cases on 9 December 2011. In its opinions BEREC mainly agreed with the Commission's concerns concerning the appropriateness of the proposed regulatory obligations. After issuing the opinions BEREC continued to cooperate with the Polish regulator and the Commission with the aim of identifying the most appropriate and effective measures.

In 2011 BEREC also discussed the options for an involvement in an advisory role already in the first steps of the regulatory process, and decided to start a trial period to obtain experience in carrying out advisory tasks already in the first phase of the procedures under Article 7 Framework Directive.

Documents:

- BoR (11) 23 Amendments to the BoR RoP (article 13 RoP concerning Article 7.a)
Delivered in Plenary 2 2011
- BoR(11) 75 BEREC Opinion Phase II investigation pursuant to Article 7a of Directive 2002/21/EC as amended by Directive 2009/140/EC: Case PL/2011/1255-1258
Delivered in Plenary 4 2011

2.3.5 Co-operation

In co-operation with RSPG, BEREC finalised a number of documents in 2011. The combined Expert Working Group also started working on the economic and social value of spectrum.

Documents:

- BoR (11) 07 BEREC-RSPG report on transitional issues
Delivered in Plenary 1 2011
- BoR (11) 26 Draft report on infrastructure and spectrum sharing in mobile/wireless networks
Delivered in Plenary 2 2011

3 Representation and cooperation

3.1 Events, speeches and presentations

Due to the short existence of BEREC, the Chair and Vice-Chairs devoted a lot of their time to enhancing BEREC's profile by representing BEREC on more than 40 events

and meeting with numerous stakeholders. The table below gives an overview of the most remarkable events and meetings.

Date	Event	Location
5 January 2011	Visit to the Hungarian Minister of State for Infocommunications and Chairperson of the Telecommunications Council of the EU in the first half of 2011	Budapest
10 and 11 January 2011	Visit to the Undersecretary of state Ministry of Poland in the frame of the Council Presidency in the second half of 2011	Warsaw
28 January 2011	Keynote speech at MCA Annual Conference	Malta
2 February 2011	Presentation at the ALDE Group Seminar "The Digital Highways of Europe in 2020 - speed, access, security" at the European Parliament	Brussels
10 February 2011	Keynote speech at the Fibre to the Home Council	Milan
23 March 2011	Representation at ETNO working dinner	Brussels
12 April 2011	Keynote speech at Regulating Broadband Roaming Charges event by Forum Europe	Brussels
13 April 2011	Keynote speech IIC Brussels Telecommunications and Media Forum	Brussels
16 May 2011	Keynote speech at 22 nd Annual Communications and Competition Law Conference	Vienna
24 May 2011	Contribution to APCO lunch debate on Telecommunications Regulation	Brussels
30 May 2011	Keynote speech WIK conference on "New regulatory challenges in a convergent world"	Brussels
3 June 2011	Keynote speech about BEREC and the future of regulation at EETT Conference on "Advanced Communication Infrastructures as a cornerstone for Europe's Digital Agenda"	Athens
16 June 2011	Digital Agenda Assembly, opening speech for workshop "Financing and facilitating broadband projects"	Brussels
24 June 2011	Keynote speech at the Florence School of Regulation Annual Conference	Budapest
29 June 2011	Keynote speech "BEREC's view on NGA strategy" at ECTA Fibre Event	Brussels
30 August 2011	Presentation on international roaming at ITRE Committee meeting	Brussels
5 October 2011	Presentation on international roaming IMCO Committee meeting European Parliament	Brussels
14 October 2011	Opening speech at official Opening of BEREC office	Riga
19 October 2011	Keynote speech at Polish conference "Perspectives for the development of the electronic communications market in the EU"	Warsaw
26 October 2011	Keynote speech at Annual IBC Conference on Competition Law & Regulation	Brussels
28 November 2011	Presentation at the Seminar for Judges by the European Law Academy	Brussels
29 November 2011	Keynote speech at ECTA conference about "Priorities for BEREC in 2012" and "BEREC's views on roaming"	Brussels
29 November 2011	Speech at the European Internet Foundation working dinner	Brussels

3.2 Workshops

During 2011 BEREC continued to organise public and closed workshops to exchange views among its members on a more strategic level, not bounded by individual products and topics.

The first workshop took place the day before the plenary meeting in Porto in May 2011. The theme of the workshop was “Convergence of electricity and telecommunications networks and the role of the regulator”. Matthias Kurth (BNetzA) introduced the workshop by sharing his experiences as the president of a multi-sector regulator. Marc Furrer (BAKOM) presented the Swiss model of Swisscom and electricity grid operators to jointly roll-out. The presentations were followed by a panel discussion lead by Georg Serentschy.

The official opening of BEREC-Office in Riga in October was combined with a workshop to exchange views about the strategy outlook for telecom regulation in Europe. This workshop was attended by a number of stakeholders and moderated by Hrafnkell Gíslason (PTA). Göran Marby (PTS) talked about the effects of IP development on the telecom industry and regulation. Erka Koivunen (CERT-Finland) gave a strategic outlook on Information security regulation and operations. Torstein Olsen (NPT) talked about Content Distribution Networks, while Asta Sihvonen-Punkka (FICORA) elaborated on the question whether a supply-push or a demand-pull strategy was needed to promote broadband. The workshop was concluded by Chris Fonteijn, stating that BEREC had to broaden its perspective. All different developments show that BEREC has to look beyond market entry at the consumer and what this consumer is facing. This workshop was input for the strategy paper that was published for consultation at the end of 2011.

The last BEREC workshop that took place in 2011, was in the margin of the Contact Network in Fiesole in November. This workshop was hosted by the Florence School of Regulation and the theme was “Promotion of Broadband”. During this workshop several parts of the study by FSR (as mentioned in section 2.2.1) were discussed.

3.3 International cooperation

As the European electronic communications markets do not function in sole isolation, BEREC has been working on its international profile in the course of 2011. BEREC has enhanced its relationship with the Federal Communications Commission (FCC) as well as with regional regulatory networks Regulatel and the Eastern Partnership.

In November 2011, a BEREC delegation visited the FCC. Objectives of this visit were to enhance the co-operation and to exchange views on main issues and regulatory strategies. It was agreed upon that the co-operation of BEREC and the FCC will be confirmed with the signing of a Memorandum of Understanding.

BEREC and its predecessor ERG have a strong relationship with the platform organisation of Latin American regulators, Regulatel. In November 2011 the annual BEREC-Regulatel Summit took place in Barcelona. The subject of this summit was “Regulation in the XXI century, a forward looking debate”. Also the EU Eastern

Partnership countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine) participated in the Summit, which resulted in a joint declaration.

4 Organisational issues

At the last meeting of the Board of Regulators and of the Management Committee in 2010, the following were elected as Vice-Chairs next to the Chair 2011, who was elected at the inaugural meeting in January 2010:

- Chris Fonteijn, OPTA, Chair 2011
- Georg Serentschy, RTR, Chair 2012, to act as Vice-Chair 2011
- Leonidas Kanellos, EETT, Vice-Chair 2011
- Ladislav Mikus, TU SR, Vice-Chair 2011

In the course of 2011 BEREC welcomed EKIP, the NRA from Montenegro, as a new observer.

The Board of Regulators and the Management Committee met on 4 occasions during 2010. Special thanks are due to the relevant NRAs, BEREC Office and other Brussels based support staff which organised facilities and hosted those meetings.

BEREC also held a number of public hearings in Brussels during the year to supplement public consultations as well as debriefings following each Plenary meeting of the Board of Regulators and the Management Committee.

The Contact Network met on 4 occasions in order to make the necessary preparations for the regular meetings of the Board of Regulators and the Management Committee. Again special thanks are due to the relevant NRAs who facilitated these meetings.

In order to carry out the Work Programme, the Board of Regulators decided² to maintain the practice adopted previously and allocated individual elements of the Work Programme to Expert Working Groups (EWG). The EWGs for 2011 were:

- Benchmarking expert working group
- BEREC-RSPG cooperation expert working group
- Convergence and Economic Analysis expert working group

² http://bereg.europa.eu/doc/bereg/bor_11_04.pdf

- Framework Implementation expert working group
- End-User expert working group
- International Roaming expert working group
- Net Neutrality expert working group
- Next Generation Networks expert working group
- Remedies Monitoring expert working group
- Regulatory Accounting expert working group
- Termination Rates expert working group

Participation by national experts in Expert Working Groups represents a significant commitment by NRAs to the work of BEREC.

The Contact Network questionnaires are another example of cooperation amongst BEREC members. Through the questionnaires, the members have a platform for the exchange of regulatory information between members and can address questions about general regulatory issues not covered by the Work Programme.

The objectives of the questionnaires are: ensuring the exchange of best practices, guaranteeing the harmonisation of the regulatory framework and the consistency of the decisions taken amongst member states and creating regulatory benchmarks.

From 2001 to 2011, 1091 questionnaires were created, representing an average of 99 questionnaires per year and an average annual rate of 1.5%.

Number of CN questionnaires created from 2001 until 2012

Questionnaires IRG/BEREC	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total	Average 2001-2011	Average annual rate 2011/2001
Total	108	51	69	57	88	98	95	140	136	124	125	1091	99	1,5%

Annex 1: Plenary meetings

BEREC met in Plenary session on 4 occasions during 2011:

Plenary Meetings

Date	Location	Agenda		Conclusions	
		Board of Regulators	Management Committee	Board of Regulators	Management Committee
24-25 Feb	Riga				
26-27 May	Porto				
29-30 Sept	Barcelona				
8-9 Dec	Bucharest				

Annex 2: Membership of Board of Regulators and Management Committee

(M)embers and (O)bservers

	NRA	Board of Regulators	Management Committee
Austria	RTR	M	M
Belgium	BiPT	M	M
Bulgaria	CRC	M	M
Croatia	HAKOM	O	O
Cyprus	OCECPR	M	M
Czech Republic	CTU	M	M
Denmark	NiTA	M	M
Estonia	ECA	M	M
European Commission	-	O	M
Finland	Ficora	M	M
Former Yugoslav Republic of Macedonia	AEC	O	O
France	Arcep	M	M
Germany	BNetzA	M	M
Greece	EETT	M	M
Hungary	NMHH	M	M
Iceland	PTA	O	O
Ireland	ComReg	M	M
Italy	Agcom	M	M
Latvia	SPRK	M	M
Liechtenstein	Office for Communications	O	O
Lithuania	RRT	M	M
Luxembourg	ILR	M	M
Malta	MCA	M	M
Montenegro	EKIP	O	O
Netherlands	OPTA	M	M
Norway	NPT	O	O
Poland	UKE	M	M
Portugal	Anacom	M	M
Romania	Ancom	M	M
Slovakia	TU SR	M	M
Slovenia	APEK	M	M
Spain	CMT	M	M
Sweden	PTS	M	M
Switzerland	BAKOM	O	O
Turkey	BTK	O	O
United Kingdom	Ofcom	M	M



**Annual Report on developments in the
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- 2011 -**

May 2012

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Contents

1. INTRODUCTION: THE ANNUAL REPORT AND THE KEY-AREAS OF SECTOR DEVELOPMENTS	3
2. TERMINATION RATES	4
2.1 General overview	4
2.2 Mobile Termination Rates (MTRs).....	4
2.3 Fixed Termination Rates (FTRs)	5
2.4 SMS Termination Rates (SMS TRs).....	6
3. INTERNATIONAL ROAMING	6
3.1 Roaming prices vs. national prices.....	6
3.2 The implementation of structural solutions	7
3.3 BEREC Benchmark Report on International Roaming.....	8
4. PROMOTION OF BROADBAND	9
4.1 The European Broadband policy	9
4.2 The BEREC report on Broadband promotion	10
4.3 Key-findings on BB promotion: obstacles and supporting measures	12
5. NEXT GENERATION NETWORKS AND ACCESS	15
5.1 Regulatory principles of NGA	16
5.2 Impact of the NGA-Recommendation and status of its implementation	16
5.3 Different deployment strategies.....	17
5.4 Preliminary conclusions and observations.....	18
6. NET NEUTRALITY	19
6.1 Latest developments around net neutrality	19
6.2 Transparency in the scope of net neutrality	21
6.3 Quality of Service (QoS) in the scope of net neutrality	21
6.4 An assessment of IP-Interconnection in the context of net neutrality	22
6.5 Competition issues related to net neutrality	23
6.6 Investigation on traffic management practices and restrictions to open internet ..	234
7. USE OF KEY-REMEDIES	25
7.1 General Principles.....	25
7.2 BEREC and the imposition of Remedies	26
7.3 BEREC's opinions.....	28
ANNEX I: BEREC methodology for TR benchmarks	30
ANNEX II: Roaming data collection (2011)	303
ANNEX III: Initiatives and actions undertaken with regard to Net Neutrality.	35

1. INTRODUCTION: THE ANNUAL REPORT AND THE KEY-AREAS OF SECTOR DEVELOPMENTS

During 2011, Europe faced a deteriorating economic and social situation, with Real GDP growth in the European Union at a standstill and with intensified concerns about the sovereign-debt crisis in the euro-zone Member States. Encouraging more growth and more jobs is a strategic priority for both the EU and the Member States, and is part of the Europe 2020 Strategy.

The electronic communications sector is critical to boost productivity and to bring the EU back to a road of growth. Completing the single market in electronic communications is thus a crucial part of the European Commission's overriding objective of stimulating economic recovery in Europe.

BEREC is committed to this goal and recognizes and assumes its central role in ensuring greater regulatory consistency across Europe. With this aim, BEREC closely monitors and reports on the developments of the sector and publish this Annual Report, which legal basis is provided for in Article 3.1 n) of the BEREC Regulation (EC) No 1211/2009.

The main aim of this first report is to present a view on the sector's developments based on the BEREC expertise and knowledge and at the same time to reflect BEREC's own contribution and role in the development of the sector. BEREC's approach will focus on analysing to what extent the regulatory environment remains in line with the evolving market circumstances.

This first annual BEREC Report on sector developments will establish the foundations for future editions of the report but its structure will remain open to accommodate additional sections and further elaboration on specific areas.

In this report, BEREC looks at the developments in 2011 of some of the sector most relevant key-areas: Termination Rates; International Roaming; Promotion of Broadband; Next Generation Networks; Net Neutrality and Use of key remedies. This report includes qualitative data, high level reflections on the development of the sector, together with quantitative data, focused on the two main BEREC data collection exercises (Termination Rates and International Roaming).

2. TERMINATION RATES

2.1 General overview

BEREC constantly monitors the Termination Rates dynamic in Europe. Regarding the monitoring of Mobile Termination Rates (MTRs), BEREC continues the work started by ERG in 2004 with a twice yearly overview report. Regarding the monitoring of Fixed Termination Rates (FTRs) and of SMS Termination Rates (SMS TRs), BEREC has started its own data collection in 2011 with the aim of facilitating this benchmarking comparison to NRAs.

Following NRAs interventions in Market 3 "Call termination on individual public telephone networks provided at a fixed location" and Market 7 "Voice call termination on individual mobile networks" and the implementation of Commission Recommendation on Termination Rates by 31 December 2012, the rates for interconnection (wholesale level) have substantially decreased.

Lower wholesale rates encourage not only competition and innovation (greater flexibility of business models, new offers in the market including bundles), but also a greater usage of telecommunication services, increasing overall consumer welfare.

In order to gauge the impact on the industry of lower MTRs and FTRs, given that Termination Rates are a source of revenue and costs for operators, the decrease in tariffs should be studied in conjunction with the traffic flows and the degree of symmetry between networks.

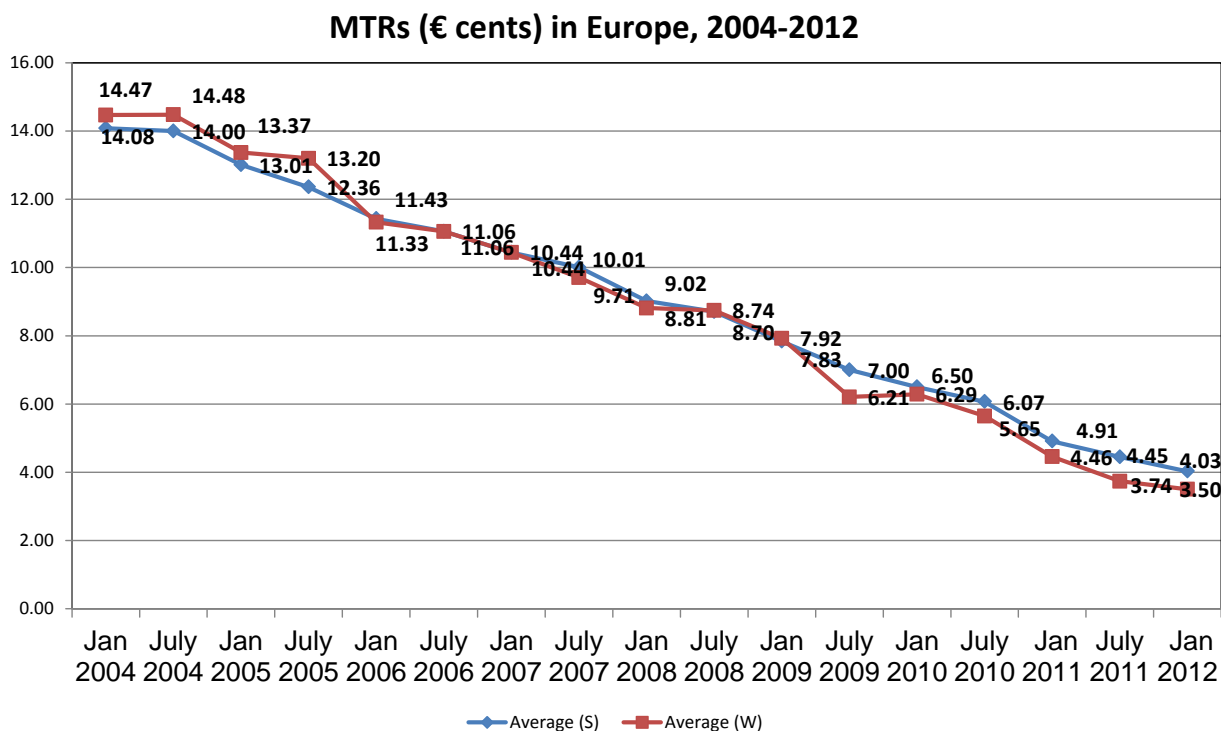
NRAs, while modelling the networks to implement the EC Recommendation, when making a choice on different parameters (such as cost accounting principles) and when defining the efficient generic operator, have to take account of the market developments and situation in their respective countries. Moreover, regulators face the challenge of ensuring the coherence between fixed and mobile LRIC models, given the different fixed mobile network developments in their territory (roll-out of IP networks).

2.2 Mobile Termination Rates (MTRs)³

As shown in the graph, wholesale interconnection rates for mobile telephony service in Europe have decreased strikingly by 71% from January 2004 to January 2012. Within this time series, the more significant drop took place in January 2011, with a 19% decrease with respect to July 2010 and with a 25% decrease with respect to the previous year, January 2010.

³ For an explanation of BEREC's methodology and assumptions followed when benchmarking MTRs, please refer to the Annex I.

Similar positive developments are expected in the near future as the date for implementation of the EC Recommendation on Termination Rates, December 31st 2012, comes closer and NRAs notify further reviews of market 7.

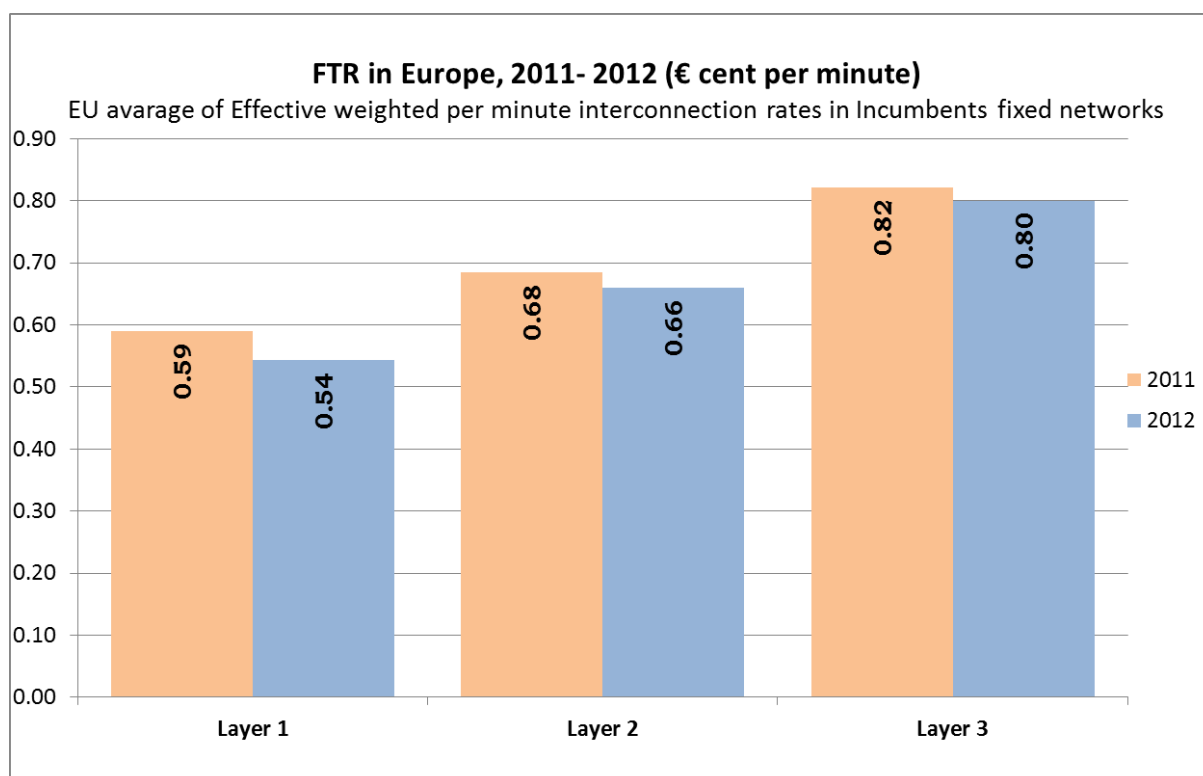


2.3 Fixed Termination Rates (FTRs)⁴

Compared to MTRs, the decrease in FTRs is smaller, as the level of tariffs is significantly lower. BEREC analysis is based on differentiation of network hierarchies and in particular on three different network layers as for the relative distance of the interconnection level to the termination point⁵, tariffs in Layer 1 experienced biggest drop, 8.5% from January 2011 to January 2012. As NRAs notify further market 3 analyses with a view to implementing the EC Recommendation on Termination Rates, these positive decreasing developments in tariffs are expected to continue.

⁴ For an overview of BEREC's methodology and assumptions followed for the benchmark of FTRs, please refer to the Annex I.

⁵ Layer 1 is the closest possible interconnection level to the network termination point (e.g. local termination); Layer 2 is the second one (e.g. regional level) and Layer 3 is the third one (e.g. national level). However Layers and coverage are not necessarily related.



2.4 SMS Termination Rates (SMS TRs)⁶

From January 2011 to January 2012, wholesale SMS termination rates slightly declined from 3.52 to 3.27 € cents (8.2% decrease), in terms of simple average. This downward trend is expected to continue, following the general decline in Termination Rates (FTRs, MTRs).

3. INTERNATIONAL ROAMING

3.1 Roaming prices vs. national prices

According to BEREC analyses, there is still a gap between domestic and roaming retail prices, which is not completely explained by the difference in the underlying costs of provision. At the same time, there are substantial differences in the ways in which domestic and roaming retail services are bought and sold.

With regard to domestic services, there is a wide choice of tariffs available suitable for different consumer patterns of consumption. Many services are sold in bundles and consumers can choose the bundle that matches their preferences in terms of cost and quality. Bundles of domestic SMS, voice and data services can be purchased either prepaid or postpaid. At the same time there are special offers for new and loyal clients. An important

⁶ BEREC's methodology applied for the benchmark of SMS TRs is detailed in the Annex I.

element of domestic telecommunications offers are discounts that can significantly reduce the costs of services. Undertakings also target smartphone users with bundles which offer discounted Internet access and other data services. All these different factors greatly influence consumers' choice and the costs of services and can make comparisons difficult.

Against this background, in the case of roaming services, consumers' choice is highly limited. It is not usually convenient for consumers (particularly light and moderate users) to take roaming services from a different provider to their normal domestic service provider. Moreover, the range of roaming tariffs on offer tends to be much more restricted. Roaming services are usually sold as additional services in a bundle which includes domestic mobile access. In the retail market, the focus of competition is on domestic services, due to consumer preferences and the fact that the bulk of most consumers' spend is on domestic services.

Lack of effective competition on the roaming market can be concluded from BEREC Benchmark reports. Eurotariff prices are all clustered in much the same place, despite a generous margin between wholesale prices and retail caps which would allow plenty of scope for competition. Although undertakings are free to offer alternatives to the regulated Eurotariffs, BEREC analyses show that such tariffs very frequently leave consumers worse off than under the Eurotariff and it appears there is little incentive to offer more attractive roaming tariffs. This is probably the main reason why 91.64% of prepaid and 82.9% of post-paid roaming subscribers in EEA countries were using the Eurotariff. Eurotariff subscribers were generating more than half of the voice traffic through 2011. Only 26.8% of calls made and 29.1% of calls received were based on non Eurotariffs. In 2011 SMS services followed the same trend. For text messages sent while roaming within EEA countries, only 14.42% represented non-Euro SMS tariff of the total volume. This shows that alternative tariffs offered by the operators do not meet the needs and expectations of the consumers. At the same time it reinforces the importance of measures to prevent bill shock.

3.2 The implementation of structural solutions

BEREC is actively involved in the analysis of the different alternatives to implement the structural solutions that are considered by the European Commission as a key tool to encourage competition in international roaming services at the retail level. BEREC has arranged an active programme of meetings with different stakeholders in order to gather information and get feedback on the main issues implied for implementing these retail structural measures.

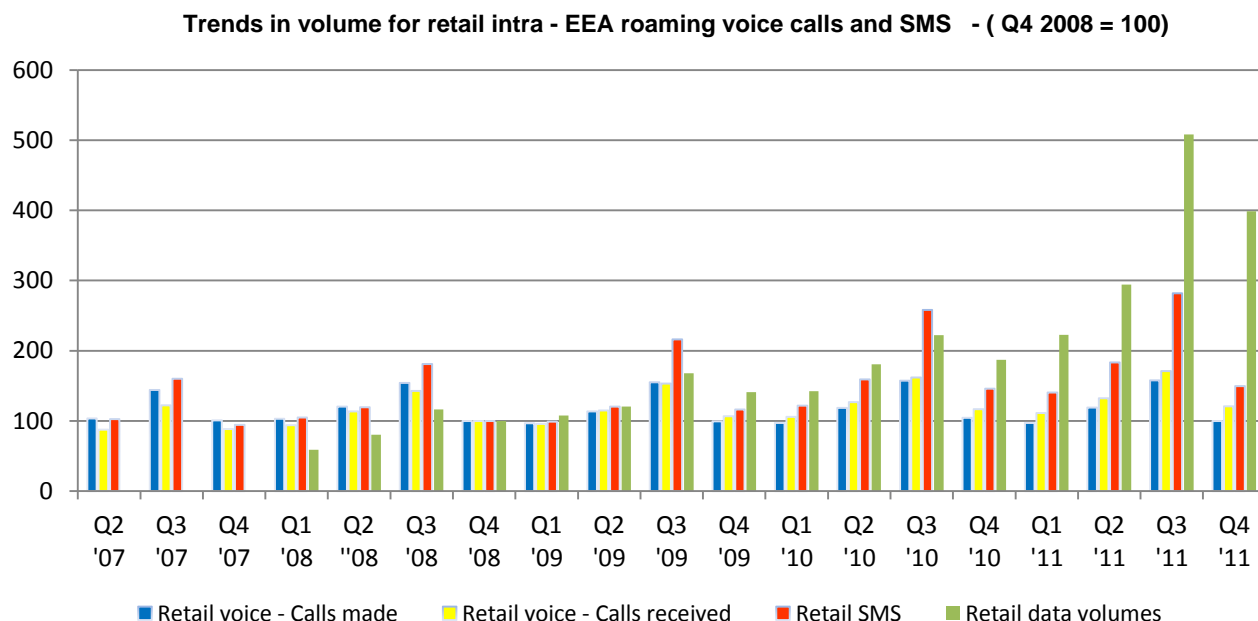
BEREC plans to provide during the first half of 2012 an input to the European Commission on the relative merits of the different technical solutions which will inform the Implementing Act which the draft Regulation provides for and which the Commission will then prepare to give effect to the requirement for structural measures to bring about competition at the retail level. After consulting stakeholders, BEREC will also publish guidelines on the practical implementation of these structural solutions. Many issues need to be resolved on the detailed implementation parameters in order to assure a consistent, cost-effective, user-friendly and robust implementation of decoupling solutions throughout Europe. The alternatives under consideration differ considerably in their detail, ranging from the original dual IMSI solution proposed initially by the EC, to different flavours of single IMSI solutions proposed by some operators, as well as the Local Break Out (LBO) solution, allowing local data services provision for roaming consumers.

3.3 BEREC Benchmark Report on International Roaming

BEREC Benchmark Reports on International Roaming presents the results of data collections on European international roaming services.

In general, average Eurotariff retail voice roaming rates remained fairly near the regulated caps in most EU Member States during the data collection period. The new price caps have led to a reduction in the average EU prices. In particular, the EU average Eurotariff retail voice roaming for outgoing calls decreased from 0.351 euros per minute in Q1 2001 to 0.3131 euros per minute in Q4 2011, while the cap varied from 0.39 to 0.35 euro per minute. Regarding incoming calls, the retail roaming price was 0.132 euro per minute in Q1 2011 and it was 0.097 in Q4 2011. Their cap was respectively 0.15 and 0.11 euro per minute. Further details can be found in the Annex II and series of BEREC Benchmark Reports cited.

In the following figure, the average trends in volume for roaming voice call, sms and data can be found.



4. PROMOTION OF BROADBAND

The economic, social and cultural benefits of broadband adoption are evident and broadband development is increasingly seen as an instrument to promote economic growth and to contribute to new and more productive forms of labour organisation. These benefits include namely the: (a) outcome of e-government activities; (b) overcoming of technological barriers to the expansion of educational services; (c) possibility of remote medical consultations; (d) safer and more intelligent transport; (e) overall reduction of energy consumption; (f) contribution to cost-efficiencies in social work; (g) growth of the entertainment and media industries; (h) creation of whole new businesses and companies taking advantage of the opportunities offered by increased bandwidth.

4.1 The European Broadband policy

These factors have contributed to the fast pace of broadband adoption in the Member States of BEREC. According to the most recent statistics, fixed broadband penetration in the EU is approximately 25 out of every 100 inhabitants (80% of which use DSL), whereas the penetration of mobile broadband for dedicated data services is around 6 out of every 100 inhabitants. When looking at household penetration, and considering EC survey data⁷, 55%

⁷ Fieldwork conducted in February and March 2011.

of EU households have broadband access. The development of NGA networks (that will allow much greater speeds) is visible, but the number of subscribers to NGA-supported services is still not very large.

The EC acknowledges the multiple advantages of broadband adoption, the benefits of a massive adoption of broadband and the role of public policy to achieve that mass adoption. In this context, it has asked Member States to elaborate national broadband strategies and to set national targets for broadband usage. At the Competitiveness Council of March 2009, the Member States agreed to a common indicative goal of 100% coverage of broadband by 2013. Furthermore, the Digital Agenda is considered a “flagship” initiative in the EU 2020 growth strategy to transform Europe into a “smart, sustainable and inclusive economy”⁸.

In achieving these objectives, Member States could use a number of public policy and regulatory tools (at EU, national, regional and local level) such as loans, subsidies to public-private partnerships (PPPs), fiscal incentives to subscribers (for instance, to support broadband in under-served areas), State Aid and the use of the digital dividend.

The European legal and regulatory framework is a cornerstone for the swift development of broadband, facilitating the adoption of a series of appropriate measures to that effect. This includes the measures adopted in the second half of 2010 by the EC on spectrum availability in the 900/1800 MHz bands, the Position of the Council adopted in December 2011 at first reading with a view to the adoption of a decision of the European Parliament and of the Council establishing a multiannual radio spectrum policy programme, the extension of broadband by means of national broadband operational plans, and actions to incentivise private investment compatible with State Aid provisions. Regarding the development of NGA, the EC’s attention focuses mainly on access to passive infrastructure and broadband products in Market 4 (wholesale physical network infrastructure access) and in Market 5 (wholesale broadband access).

The inclusion of broadband connectivity as part of the Universal Service remains within the remit of the Member States, while the EC, in its Communication issued on 23rd of November 2011 announced there is currently no need to change the basic concept, principles or scope of EU rules on Universal Service to include mobile telecommunications services and broadband connections at EU level.

4.2 The BEREC report on Broadband Promotion

⁸ http://ec.europa.eu/information_society/digital-agenda/index_en.htm.

In this context, BEREC published in early 2012, after a public consultation where the support of the stakeholders was evident, its Broadband Promotion Report⁹.

With regard to the nationwide development of broadband, 17 NRAs¹⁰ reported the implementation of a national broadband strategy in their countries¹¹. The objectives of those strategies are mostly related to connection and coverage targets.

Rural areas are a main concern when considering broadband roll-out, with 16 NRAs¹² reporting government-initiated strategies to increase broadband penetration in areas where it is unlikely that the market will generate the incentives necessary for operators to invest in new infrastructure for the provision of broadband access services in the near future (especially high-speed broadband). This was explained by factors which are critical to such investment, including population density (which determines the cost of bringing the network to households) and socio-economic factors such as age, education level and *per capita* income (which determine the potential revenue generated by the network).

Fifteen NRAs¹³ noted that, in their countries, consumers benefit from strategies aimed at increasing broadband penetration, including namely: (a) subsidies to reduce monthly subscription fees or for purchases of computers (b) campaigns to raise awareness regarding the benefits of broadband. In most cases, those strategies are targeting vulnerable categories like senior citizens, low-income families or people with disabilities.

NRAs employ a variety of strategies to promote the adoption of broadband. On the supply-side these relate to the deployment of NGA networks, inclusion of broadband in the scope of universal access, advising role or funding decisions related to subsidies and State Aid, and evaluation of broadband targets. On the demand-side, strategies primarily relate to providing: (a) information for educational purposes; (b) information about services and (c) tools designed to increase consumer security and confidence.

Throughout all BEREC Member States, operators have strategies to promote both fixed and mobile broadband services and to compete in the broadband markets. In general, those promotional activities differ broadly between operators and between countries, for instance with regard to their duration, the services encompassed, the targeted population and the

⁹ Available at http://www.erg.eu.int/documents/berec_docs/index_en.htm#board.

¹⁰ From the Czech Republic, Estonia, France, the Former Yugoslavian Republic Of Macedonia, Germany, Greece, Italy, Lithuania, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Turkey and the UK.

¹¹ For details see also BoR (11) 06, Chapter 7 “National next generation broadband initiatives/measures“ and the comprehensive Annex BoR (11) 06b.

¹² From Bulgaria, Finland, France, Germany, Greece, Hungary, Ireland, Latvia, Lithuania, Poland, Portugal, Romania, Slovenia, Spain, Latvia, Sweden and the UK.

¹³ From Belgium, Croatia, Denmark, the Former Yugoslavian Republic of Macedonia, France, Germany, Hungary, Italy, Malta, Portugal, Romania, Spain, Sweden, Turkey and the UK.

proportion of discounts given. Price reductions are common and can apply to the connection fee and equipment as well as the monthly fee.

Almost all NRAs reported that both fixed and mobile broadband services are commonly offered in bundles. An interesting finding is that, in many countries, bundling seems to be a key selling argument for fixed broadband services but not as much for mobile broadband services (although in a limited number of countries, bundling strategies are applied to both fixed and mobile broadband services).

NRAs reported that in 16 European countries¹⁴, PPPs had some role to play in the development of broadband. Although the mechanisms of PPPs differ from country to country, those are generally aimed at: (a) making broadband available to all the citizens in the whole or in a substantial part of the relevant territory; (b) disseminating broadband in rural areas; (c) deploying particular technologies that could stimulate broadband development (e.g. FTTH); (d) educating the population to use ICTs and encouraging the use of e-services; (e) putting in place public Internet access points.

4.3 Key-findings on BB promotion: obstacles and supporting measures

In terms of the supply-side obstacles to the promotion of broadband in Europe, the major factors (both for the country in general and for rural areas), from the perception of NRAs seem to relate to the low expected return on investment (due to the average revenue per unit (ARPU), the levels of demand-side take-up and the costs of network roll-out on the supply-side); and to a possible lack of access to financial resources and access to spectrum. Naturally, the relevance of those obstacles will vary from country to country, as will the appropriate measures to respond to those obstacles.

As for the demand-side obstacles to the promotion of broadband, NRAs perceive the main reasons for not adopting broadband to be: (a) people do not see a need to do so; (b) people see it as costing too much; (c) NGA is still in an initial stage of its product life cycle and (d) the low level of computer adoption. In rural areas, the limited choice between different service providers is also perceived as a relevant obstacle.

To identify those demand-side measures, BEREC drew upon the perception of the NRAs (as gathered via a BEREC questionnaire), on views from stakeholders and also on a study that

¹⁴ Estonia, France, Germany, Greece, Italy, Latvia, Lithuania, Malta, the Netherlands, Poland, Romania, Slovenia, Spain, Sweden, Switzerland and Turkey

the IRG commissioned in 2011 to the Florence School of Regulation, Communications & Media (FSR) at the European University Institute¹⁵.

One of the key findings of the FSR study is a suggestion that the sequencing of public policy measures and regulatory actions is extremely important in determining how effective they are.¹⁶ Therefore, to optimise the impact of public policies on broadband promotion, the study suggested that supply-side policies should come first, followed by a focus on demand-side policies at a subsequent stage (albeit this was not considered consensual between the stakeholders).

The FSR model also predicts that the larger is the level of broadband adoption in a given European country, the larger will be the impact arising from the application of an additional demand-side policy. Moreover, the model also highlights that sustained competition in the broadband markets contributes to broadband diffusion; therefore it should also be considered a major factor in promoting broadband adoption.

In this context, BEREC recognized the relevance of demand side broadband promotion measures, in particular those summed up in Table 1 below.

Table 1 Summary of demand-side measures to be considered regarding the promotion of broadband adoption

Obstacle	Measure	Implementation
High costs of broadband adoption	Subsidies and tax incentives towards the cost to end-users of connecting to and or subscribing to broadband services, especially with regard to those with low incomes	Governments and local authorities
	Subsidies and tax incentives to those on low incomes and or to students which purchase a computer	Governments and local authorities
	Demand-aggregation measures may contribute to an efficient resource allocation and to economies of scale	Operators
Lack of consumer confidence in contractual	Implementation of transparency obligations at national levels either through primary law or through decisions of the NRAs	Governments and NRAs

¹⁵ The study (available at <http://www.irg.eu/render.jsp?contentId=547212>) includes an original econometric analysis, performed using a novel dataset on demand-side and supply-side policies on 23 European countries, over a period of 15 years, from 1995 to 2010.

¹⁶ In this regard, the study highlights that the analysis performed is necessarily backward-looking, so caution should be adopted in making inference on NGN policy on the basis of mostly first-generation broadband data

relationships and perceived low level of consumer safeguards	Clarification to consumers of most relevant contractual clauses	Governments, NRAs and consumer associations
	Promotion and monitoring of mechanisms which ensure correct billing	Governments, NRAs, operators and equipment manufacturers
	Improvement of the effectiveness of complaint handling procedures	Governments, NRAs and operators
Lack of choice between different broadband service providers	Implementing initiatives that contribute to provision of reliable information, that increase transparency and that facilitate the comparison of essential service characteristics, such as price and quality of service ¹⁷	NRAs and consumer associations
Citizen perception of lack of need to adopt broadband	Measures to encourage the production of contents in the country's native language(s)	Governments, local authorities, operators and content suppliers
	Promote e-government and the provision of on-line public services	Governments, local authorities, NRAs and operators
	Promote electronic commerce, for instance by increasing the security of transactions	Governments, local authorities, equipment manufacturers, NRAs, international <i>fora</i> (e.g. ITU, ETSI, ENISA)
Low rates of digital literacy	Information and digital literacy campaigns to educate end-users on advantages of broadband adoption	Governments, local authorities, NRAs, consumer associations and operators
	Connection of schools to broadband at a discounted price	Governments, local authorities, NRAs, consumer associations and operators

¹⁷ Although these measures do not address directly the lack of choice that arises from the actual absence of alternative operators in the broadband markets (which are more effectively dealt with by supply-side measures), they can contribute to the minimisation of instances where lack of choice derives from lack of perceived choice, either because the end-users are not aware of alternative options or because the end-users do not perceive (or are unable to compare) relevant differences among the different products being offered in the broadband markets.

	Digital literacy and broadband adoption clearinghouses	Governments, local authorities, NRAs, consumer associations and operators
	Support to training institutes which educate people with low digital literacy and training teachers (considering the impact this could have on students' training)	Governments, local authorities, consumer associations and operators
Access to broadband by disabled people	Guides / leaflets regarding concrete broadband services of particular interest to disabled citizens	Governments, local authorities, NRAs, service providers, consumer associations, associations representing disabled citizens
	Promoting universal design, in order to render equipment suitable for use by citizens with disabilities more accessible and more affordable	Governments, NRAs, service providers, consumer associations, associations representing disabled citizens, equipment manufacturers, international <i>fora</i> (e.g. ITU, ETSI, etc)

5. NEXT GENERATION NETWORKS AND ACCESS

The migration towards Next Generation Networks (NGN), leading to a multi-service network allowing for cost savings due to increased economies of scale and scope as well as investment in next generation access (NGA) is an ongoing challenge in the communications sector. These developments have given rise to innovation opportunities at both the service and infrastructure level and may subsequently impact significantly on market structure.

NRAs have carefully assessed to what extent regulation needs to be adapted to reflect these changes accordingly in order to assure that NRAs meet the aims of promoting competition, sustainable and efficient investment in high-speed broadband network, and innovation to the benefit of consumers, while fostering the single market and enhancing legal certainty.

To meet the challenges arising from the migration to NGA networks, first ERG and then BEREC has taken up the topic at an early stage and has produced a number of documents developing regulatory principles including a Common Position as early as 2007.¹⁸

¹⁸“ERG Opinion on Regulatory Principles of NGA” (2007 (16)rev2), “ERG Report on Next Generation Access – Economic Analysis and Regulatory Principles” (ERG (09) 17), BEREC Report “Next Generation Access – Implementation Issues and Wholesale Products” (BoR (10) 08), “Next Generation Access – Collection of factual information and new issues of NGA roll-out” (BoR (11) 06)

5.1 Regulatory principles of NGA

BEREC's analysis continues to be based on the ladder of investment principle that regulated access promotes competition and investment, thus fostering a competitive NGA roll-out. The principle of promoting competition to the deepest level possible is still considered appropriate. In the NGA environment this level may change due to the increasing economies of scale or the change of the possible access points.

Given that the multiplicity of architecture in an NGA environment had led to an increased number of access products, the ladder has become more sophisticated, with changes in the relative importance of their rungs and, in general, different dynamics, as a consequence of a shift in the economic bottlenecks and a change of the most suitable access points. The ladder consists of access products at specific access points (access to inhouse wiring, the terminating segment at the first concentration point, fibre unbundling sub-loop-unbundling, Ethernet-, ATM- IP bitstream at different access points ranging from DSLM, parent node, distant node) and wholesale products to reach these access points (ducts, dark fibre, wholesale leased lines).

5.2 Impact of the NGA-Recommendation and status of its implementation

In September 20 2010 the Commission issued the NGA Recommendation as one of the key measures of the Digital Agenda. Already about one year later BEREC has published its *"BEREC Report on the Implementation of the NGA-Recommendation"* (BoR (11) 43). In this report BEREC has looked at how this Recommendation has been implemented in Member States as of September 2011.

Based on the principles derived BEREC's Implementation Report has assessed the availability of access products and the status of implementation of the relevant provisions of the NGA Recommendation (access to civil engineering, access to the terminating segment, unbundled access to the fibre loop in the case of FTTH, access obligation in the case of FTTN, backhaul dark fibre, wholesale broadband access). Furthermore, BEREC in this Report has addressed migration issues as well as pricing principles, more particularly the issues of risk premium, long term access pricing a volume discounts in the case of FTTH.

Since September 2010, when the Recommendation came into force, there have been 20 notifications concerning Market 4 and 18 notifications concerning Market 5.

In BEREC's view it goes without saying that fulfilling the NGA Recommendation does not imply imposing all remedies in all Member States. Rather in line with the ladder of investment principle NRAs have implemented those combinations of remedies in Markets 4 and 5 that properly reflect their national circumstances and are proportionate to remedy the competition problems identified in the market analysis. This involves reflecting the actual competitive situation including different architectures (e.g. FTTH/B, FTTC).

Consistency and regulatory certainty require that NRAs continue to apply the Recommendation and gain more experience with the effects of certain sets of remedies on investment initiatives and competition. BEREC is therefore committed to continue its analysis of proportionate remedies deriving best practice based on the trends identified last year's implementation report.

5.3 Different deployment strategies

As stated in previous BEREC reports and confirmed by the data collection performed for this report, operators in different Member States do follow different NGA deployment strategies (involving different degrees of using own infrastructure or focus on using active and/or passive wholesale products etc.) due to a number of factors and characteristics:

The business case for NGA roll-out is driven - or at least influenced - by inter alia the following factors:

- population density, geographies etc.;
- costs of deployment influenced inter alia by factors such as availability of ducts, access to sewage system;
- (lack of) demand;
- willingness to pay for higher bandwidth/ARPU;
- competitive conditions regarding inter platform competition, more specifically the presence of cable networks and intra platform competition;
- penetration achievable for NGA networks;
- speed of migration towards NGA networks.

In some Member States incumbents tend to invest heavily in NGA roll-out, however focusing on different architectures and technologies.

The current state of deployment in each Member State also reflects the "history" with regard to both market developments and current generation remedies. This may impact on the migration towards NGA and NGA remedies. Some important factors are listed hereafter:

- "path dependence" in the sense that LLU countries are more likely to want to continue with this approach;
- costs of NGA deployment vs. cost of current generation deployment (opportunity costs of no longer paying for LLU as a driver) impacts on the roll-out incentives of both incumbents and competitive operators;
- current generation price is generally geographically averaged. In case next generation access prices are geographically de-averaged (e.g. dense/non-dense) it is a challenge to ensure consistency of wholesale access prices across the value chain and conduct margin squeeze tests;

Differences in national circumstances may justify different combinations of remedies that are tailor-made for the national market as reflected in Recital 3 of the Recommendation.

5.4 Preliminary conclusions and observations

Since regulation of NGA networks is still in its early stages there is up to now little experience on the effects of certain sets of remedies on investment incentives and competition. More specifically it is an issue whether either LLU unbundling and/or duct access will be a success or more active type remedies or a combination of both are necessary to maintain competition in an NGA environment. While the report has aimed at best practice it was too early to come to definite conclusions. BEREC has however been able to already produce a number of preliminary conclusions regarding specific wholesale products. Furthermore some more general observations have been identified.

In general NRAs prefer intervention at the deepest level possible as reflected in the NGA-Recommendation. Whether a business case based on passive remedies is considered feasible will however differ between geographical areas in Europe.

Increased complexity and uncertainty

SMP regulation is becoming more complicated due to the fact that the wholesale access products need to be newly designed and adjusted to different NGA network architectures.

While technological neutrality is endorsed as a principle, the detailed specification and implementation of wholesale products such as fibre unbundling depend on the architecture chosen by the SMP operator (e.g. PON versus P2P).

NGA roll out depends on a number of factors that are highly uncertain such as demand, willingness to pay, ARPU and penetration as well as technological developments impacting on costs. Therefore all actors in the market have to base their decisions on estimates which may later turn out to have been too high or too low.

Therefore BEREC concluded that each NRA should estimate investment risk by carefully assessing the “*factors of uncertainty*” listed in Annex I (Section 6) of the NGA Recommendation, rather than make an *a priori* classification of risk. This approach to risk assessment allows the calculation of an appropriate risk-reflective premium for NGA roll-out on a case by case basis, providing the necessary investment incentives by distinguishing between different roll-out scenarios.

Variety of local market conditions

The variety of local market conditions is reflected in the fact that remedies are increasingly (explicitly or implicitly) differentiated between different geographical areas, most importantly between densely populated and less densely populated areas in terms of access points and prices.

Besides density of population, fragmentation of the market (and regulation) is also due to other factors. In most countries there will not be one uniform infrastructure rolled out by the incumbent, growing importance of local fibre networks by municipalities/local authorities and/or utilities. This implies that more potential actors at the wholesale level and a chance that the incumbent may also become a buyer of wholesale products.

6. NET NEUTRALITY

6.1 Latest developments around net neutrality

Relevant provisions in the revised regulatory framework

The majority of developments on net neutrality across Europe are conducted having as main background the interpretation and national implementation of the revised 2009 regulatory framework. The core provisions concerning net neutrality are contained in:

- Article 8 Framework Directive (FD), which includes the aim to promote the ability of end-users to access and use contents, applications and services of their choice, as well as important related objectives such as interoperability of services, ensuring that the integrity and security of networks, and fostering completion competition and innovation both at infrastructure level and for the delivery of content. This encompasses a strong presumption in favour of the “open and neutral character of the Internet”.
- Article 20 Universal Service Directive (USD), which imposes that operators inform on quality of service and traffic management policy within end-users contracts.
- Article 21 USD, which empowers NRAs to impose transparency requirements, on the same items, along service life.
- Article 22 USD, which deals with Quality of Service (QoS), both in terms of transparency (publishing of information about quality) and concerning the possibility to set minimum requirements.

A comprehensive overview of the relevant regulatory provisions can be found in the documents on net neutrality produced by BEREC during 2011, in particular: “A framework for Quality of Service in the scope of net neutrality”¹⁹ and “Guidelines on Transparency in the scope of net neutrality: Best practices and recommended approaches”²⁰, both reports published on December 2011.

The BEREC approach

BEREC strongly emphasizes the role of competition and effective switching procedures for allowing the end-users to access the content and applications of their choice. It also puts forward more general principles (applicable to both fixed and mobile services and networks) on the desirable outcome of the market, and considers that measures’ acceptability are in general to be assessed rather on a case-by-case basis

As a result of its previous work in 2010, BEREC identified the key issues which needed further analysis. These key issues have structured the work carried out along 2011²¹:

Transparency: BEREC indicated in the December 2011 guidelines that transparency is a necessary key pre-condition for end-users to compare offers and make well-informed choices. This would be the first of several regulatory remedies to promote net neutrality.

19 http://berec.europa.eu/doc/berec/bor/bor11_53_qualityservice.pdf

20 http://berec.europa.eu/doc/berec/bor/bor11_67_transparencyguide.pdf

21 See BEREC Work Programme 2011 available on its website <http://berec.europa.eu>.

However, transparency alone is probably insufficient to achieve net neutrality, other factors such as competition and reduction of barriers to switching are required.

Quality of Service requirements: imposition of minimum QoS requirements may be undertaken, and should result in preventing the degradation of the service in the context of the policy objectives in Article 8 Framework Directive. A harmonised approach is necessary to avoid creating inefficiencies for operators, which ultimately have to be compensated by end-users. In 2011, BEREC was focusing on a generic framework of evaluation and analysis. The work is continued in 2012, elaborating further on guidelines for NRAs.

Discrimination: in 2011, BEREC also initiated an economic analysis of the potential and theoretical effects of differentiated treatment of traffic, particularly with regards to impact on competition in the markets.

IP interconnection: BEREC had started to look into the current IP interconnection agreements (peering/transit) between market parties, which may affect net neutrality issues.

6.2 Transparency in the scope of net neutrality

In December 2011 BEREC decided to issue the above mentioned guidelines on transparency in the context of net neutrality. The guidelines were subject to consultation with stakeholders during last October and November. The report on the consultation elicited approximately 80 responses published on BEREC's website alongside the guidelines.

The guidelines underline the responsibility of NRAs to ensure that end users are benefitting from effective transparency and analyses some possible approaches and tools that could be put in place to help reach this goal. BEREC stresses the importance of *understandability* and *comparability* – for which common frames of references and users involvement are needed.

Important aspects set out by the Guidelines are: i) the type of information that should be provided – the scope of the service (e.g. typical speeds), general limitations (e.g. usage caps), and specific limitations (e.g. traffic management practices); ii) which bodies should provide information – as well as the Framework requirements on ISPs, various third parties provide an important complementary source of information; iii) how this data should be conveyed, with recommendations on providing various levels of information and empowering users through shared concepts; iv) lastly, different case studies – in electronic communications as well as in other sectors – are described.

6.3 Quality of Service (QoS) in the scope of net neutrality

As stated earlier, quality of service was identified as one of the key issues for 2011. BEREC QoS Framework report of December 2011 focuses on a background of concepts and processes related minimum quality of service requirements, providing a basis for interpreting and implementing Article 22 (3) USD.

More specifically, this report describes a framework for quality of service in relation to net neutrality, elaborating on quality related concepts and quality evaluation methods that are relevant to an understanding of Article 22 (3) USD. Furthermore, a general procedure is presented for NRAs to carry out their functions in relation to this provision.

One finding about this procedure is that two main phases (detection of “triggers” – specification of minimum QoS requirements) would be convenient for ensuring compliance with Article 22 (3) USD, possibly followed by a third phase (assessment).

Imposition of minimum quality requirements may be undertaken, and should result in preventing degradation of service in the context of the policy objectives in Article 8 FD. Frequent occurrences of degradation of the general internet electronic communications service, or the hindering (blocking) or slowing down (throttling) of traffic from individual applications are of particular concern. Further work for elaborating detailed guidelines on these aspects is currently on going.

At present, there are a number of measurement tools available or under development. Some examples are:

- NRAs initiatives on QoS measurement tools, either for performance evaluation by the regulator (e.g. through dedicated lines), or to be used by end-users (e.g. software tools made available),
- A Commission’s measurement project, using technology (probes) from SamKnows²²,
- Private initiatives, such as the research-focused platform M-Lab (measurementlab²³) .

Finally, it could be mentioned that other bodies or organisations are carrying out different developments on QoS, for example ENISA, or CEPT-TRIS²⁴ technical working group, mainly focusing on QoS parameters and measurement tools and procedures.

6.4 An assessment of IP-Interconnection in the context of net neutrality

22 <http://www.samknows.com/>

23 <http://measurementlab.net/>

24 <http://www.cept.org/ecc/groups/ecc/wg-nan/pt-tris>

Another BEREC project provides “An assessment of IP-Interconnection in the context of net neutrality”. This project starts from the observation that Interconnection arrangements (transit, peering, IXPs) developed without any regulatory intervention although the obligation to negotiate for interconnection applies to IP networks as well.

The project aims at providing a better understanding of interconnection arrangements between IP networks. To this end different kinds of deliverables have been foreseen.

In order to initiate the discussion BEREC held a well-received expert workshop on IP-interconnection in cooperation with the OECD in November 2011, bringing together experts of the IP-interconnection community with experts from NRAs to discuss future interconnection in an all-IP world.

Secondly the project will result in a report covering the role of different players across the value chain (Content and application providers, end-users, ISPs and CDNs) as well as qualitative information on the different types of the commercial IP interconnection agreements such as peering and transit. It will provide both a rationale as well as an analysis of economic effects of recent developments and changes of the related markets regarding: i) traffic evolution, ii) pricing developments, iii) revenue flows, iv) changing role of players such as CDNs and their interrelationships as well as more recent forms of IP interconnection such as paid peering, partial transit).

In particular it has to be assessed whether the market changes of recent years have given rise to an increased market power of (eyeball) ISPs exerting “*control over the access to a great number of end users*”.²⁵ Finally the regulatory context of IP-interconnection will be assessed including identifying potential problems with regard to preserving net neutrality in the context of IP interconnection having occurred in practice.²⁶ This report will be subject to a public consultation in Q3 2012. Final publication of the report is envisaged in Q4 2012.

A follow-up BEREC expert workshop on IP interconnection in cooperation with the OECD will take place in June 2012 to discuss in particular the BEREC consultation document. Furthermore some NRAs and the European Commission will provide their views on current issues of IP-interconnection.

6.5 Competition issues related to net neutrality

Finally, BEREC is also analysing from an economical point of view the differentiation in management traffic that could be implemented by operators. The aim of the analysis is to

²⁵ BoR (10)42, p.16

²⁶ See also BEREC Internal Report on net neutrality, BoR (10) 60, December 2010

determine when this differentiation could become a discriminatory practice potentially affecting the competitive situation and reducing consumers' welfare in the short and long term. Assessing this aspect is the most difficult challenge faced by this report as - outside the clearest situations - traffic management could be either welfare enhancing or a tool to unduly discriminate.

In this work stream, BEREC has focused on the relationship between end users, internet service providers (ISP) and content and application providers (CAPs), describing the interactions among them and listing the possible markets that could be affected by traffic management.

In this report, BEREC is defining a framework for the analysis these practices, based on the ability to affect the market by the operator (therefore, related to its market power) and the vertical integration, which gives incentives to unduly discriminate in favor of its own downstream services.

The report describes potential effects of three concrete differentiation practices: Voice over IP, Peer to Peer and CAP differentiation.

This report is aimed to be submitted to public consultation on Q2 to be finalized in the last quarter of 2012.

6.6 Investigation on traffic management practices and restrictions to the open Internet

The investigation was initiated after a Commission request addressed to BEREC. In particular, the Commission was interested in having more information regarding blocking or hindering of applications, and throttling or degrading of traffic.

Over 400 operators (fixed and mobile), as well as other organisations and individuals, responded to the questionnaire launched in December 2011. This large scope inquiry seeks to obtain some more insight on the variety of traffic management practices as well as contractual restrictions implemented (or planned) by the major ISPs in the markets across Europe. In particular:

Application-agnostic/application-specific traffic management practices: different kinds of blocking or hindering of applications, and throttling or degrading of traffic;

Most relevant particularities and differences in fixed/mobile networks regarding traffic management practices, and how they are included in the various types of offers;

Implementation of business models: data caps, specialized services.

The results of this investigation feed into the various net neutrality related work streams mentioned above. BEREC submitted some preliminary findings of the investigation to the Commission on 6 March 2012.²⁷

After having validated and consolidated the data, BEREC published the investigation snapshot report on 29 May²⁸. According to the traffic management data gathered by BEREC, a majority of ISPs offers Internet access services with no application-specific restrictions. But specific practices, such as blocking or throttling of peer-to-peer traffic or VoIP (which occur more often in mobile than in fixed networks), could create concerns for end-users. One of BEREC's findings is that at least 20% of mobile Internet users in Europe experience some form of restriction on their ability to access VoIP services, although there are differences by country (depending for example on the number of operators providing unrestricted access). The findings show that it is difficult to draw general conclusions, since there are very different national situations and methods of implementation.

7. USE OF KEY-REMEDIES

7.1 General Principles

NRAs intervene in markets to address clearly identified market failures or in the light of some overriding public policy concern. In the context of the Framework, the most important market failure is that associated with market power. The underlying source of most of the competition problems related to market power in communications markets, in turn, are barriers to entry. Wherever high barriers to entry exist and where the cost and demand structure is such that it supports only a limited number of firms, incumbent undertakings may have significant market power (SMP).

The aim of the Framework is to provide a harmonised approach for the regulation of electronic communications that will result in sustainable competition, interoperability of services and provide consumer benefits. The Framework sets out a three stage process in relation to regulatory obligations linked to SMP which includes market definition, market power analysis and the imposition of remedies. Where market analysis reveals that competition in a given market is not effective, and the NRA designates one or more operators as having SMP in that market, at least one appropriate ex-ante remedy must be applied.

²⁷ http://berec.europa.eu/doc/2012/TMI_press_release.pdf

²⁸ Press release is available at: http://berec.europa.eu/doc/whatsnew/pr_29_05_2012.pdf. Report on traffic management investigation can be found at: http://berec.europa.eu/doc/consult/bor_12_30_tm-i_snapshot.pdf.

Principles for imposing remedies

When imposing the appropriate set of remedies, NRAs need to work towards the policy objectives and regulatory principles set out in Article 8 of the Framework Directive, which includes the: i) promotion of competition; ii) contribution to the development of the internal market; and promotion of the interests of the citizens of the European Union.

Article 8 of the Access Directive also requires that remedies must be based on the underlying (competition) problem identified, proportionate and justified in light of the objectives set out for NRAs in Article 8 of the Framework Directive.

The suites of available remedies

NRAs look at the entire (product) value chain from passive infrastructure to retail services when deciding where, and how, to give access to alternative operators such that they can enter the relevant market. It is best practice for remedies to be applied as high as possible in the value chain (further from the end user), as wholesale regulation leaves more room for competitive entry into the market. Regulatory controls on retail services can only be imposed where relevant wholesale or related measures would fail to achieve the objective of ensuring effective competition.

The standard remedies provided by the new Framework are set out in Articles 9 to 13 of the Access Directive and 17 of the Universal Service Directive. The following wholesale obligations are set out in the Access Directive: i) Transparency; ii) Non-discrimination; iii) Accounting separation; iv) Access; v) Price control and cost accounting.

In addition, the Access Directive enables NRAs to impose remedies other than the standard remedies enumerated in the Directive in exceptional circumstances, such as functional separation.

7.2 BEREC and the imposition of RemediesBEREC's key task is to contribute towards the implementation of best practice remedies

As set out in Article 2 of the BEREC Regulation, BEREC is required to identify and promote best regulatory practices in the specification of SMP remedies. This is a key harmonisation activity for BEREC to support the creation of a single European market. BEREC has achieved this objective by:

- issuing Common Positions (CPs) consistent with the spirit of the Directives and monitoring their consistent application;
- providing a formal Opinion on draft Commission Recommendations; and
- providing a formal Opinion to the Commission on any Phase II investigation the latter starts in relation to the remedies notified by NRAs.

BEREC monitored compliance with its CPs

BEREC has the power to issue CPs on any area of importance to it and which, under the new Framework, NRAs are obliged to take into the “utmost account” in their respective decisions. This requires NRAs to provide objective justifications for any deviations.

BEREC has already adopted a number of CPs concerning the harmonised application of remedies. The four general principles regarding the application of standard remedies are set out in ERG(06)33. These principles form the basis of any additional BEREC CP in the area of remedies and are as follows:

- *“NRAs must produce reasoned decisions in line with their obligations under the Directives.*
- *Where infrastructure competition is not likely to be feasible, due to persistent presence of bottlenecks associated with significant economies of scale or scope or other entry restrictions, NRAs will need to ensure that there is sufficient access to wholesale inputs.*
- *Where as part of the market definition and analysis process, replication of the incumbent’s infrastructure is viewed as feasible, the available remedies should assist in the transition process to a sustainable competitive market.*
- *Remedies should be designed to be, where possible, incentive compatible. Thus, NRAs should, wherever possible, formulate remedies in such a way that the advantages to the regulated party of compliance outweigh the benefits of evasion...”*

Other (relevant) CPs are market specific and cover the following areas: i) Wholesale unbundled access²⁹; ii) Wholesale broadband access³⁰; iii) Wholesale leased lines³¹; iv) Symmetry of fixed call termination rates and mobile call termination rates³².

²⁹ ERG (06) 70 Rev 1 Common position on Wholesale local access

http://erg.eu.int/doc/publications/erg_06_70_rev1_wla_cp_6_june_07.pdf

³⁰ ERG (06) 69 Rev 1 Common position on Wholesale broadband access

http://erg.eu.int/doc/publications/erg_06_69rev1_wba_cp.pdf

³¹ ERG (07) 54 Common Position on Best Practice in Remedies Imposed as a Consequence of a Position of Significant Market Power in the Relevant Markets for Wholesale Leased Lines

http://erg.eu.int/doc/publications/erg_07_54_wll_cp_final_080331.pdf

³² ERG’s Common Position on symmetry of fixed call termination rates and symmetry of mobile call termination rates http://www.erg.eu.int/doc/publications/erg_07_83_mtr_ftr_cp_12_03_08.pdf

In 2010 BEREC undertook a monitoring exercise to review NRA conformity with the above mentioned first three market specific CPs (Markets 4, 5 and 6 respectively) and summarised the results in a report it published in 2011 (the Monitoring Report).³³ One of the overall conclusions of this exercise was that NRA conformity with the current CPs is quite good. In particular:

- All NRAs considered that there was reasonable certainty of ongoing access (in these markets) for the time being, although several noted that nothing was guaranteed beyond the lifetime of the current Market Review. This is inherent in the Regulatory Framework and beyond the control of NRAs.
- A non-discrimination obligation is almost universal where SMP remedies are in place. A big majority of NRAs couple this obligation with complementary measures in the form of “explicit guidance” to indicate to the market how the non-discrimination obligation will be interpreted in practice and “prohibition”, via the wording of the non-discrimination obligation, of certain forms of behaviour considered to be discriminatory.
- The majority (of NRAs) employed some method for guaranteeing coherence of pricing, for example cost orientation across the board or, if not, some form of ex-ante margin squeeze test.

As part of its commitment to drive consistency and dissemination of best practices, BEREC has also identified the key areas where the CPs could be improved. As set out in the BEREC WP for 2012,³⁴ the above mentioned three CPs will need to be reviewed both to take on board the lessons as set out in the Monitoring Report and to bring them up to date with latest market developments. In particular, the current CPs will need to be updated to make them more concrete, clear and to also take recent technological developments (e.g. NGA) into account as much as it is realistically possible.

7.3 BEREC’s opinions

BEREC provided an Opinion on draft Commission Recommendations

Under the new Framework, BEREC is required to provide an opinion on draft Commission Recommendations and the Commission are required to take “utmost account” of such BEREC opinions. In 2011 BEREC provided responses to two Commission questionnaires in the area of non-discrimination³⁵ and NGA costing methodologies³⁶. In 2012 BEREC will issue

³³ BoR (11) 20 BEREC monitoring report on Broadband Common Positions
http://erg.eu.int/doc/berec/bor_11_20.pdf

³⁴ BoR (11) 62 2012 BEREC Work Programme (WP)
http://erg.eu.int/doc/berec/bor/bor11_62_berec2012wp.pdf

³⁵ http://www.erg.eu.int/doc/berec/bor/bor11_64_nondiscrimination.pdf

³⁶ http://www.erg.eu.int/doc/berec/bor/bor11_65_costingmeth.pdf

a formal Opinion on relevant draft Commission Recommendations in these two areas. BEREC will comment on the form, content and level of detail included in these draft recommendations. It will also share its technical knowledge and country specific expertise in these two areas.

BEREC provided an Opinion on Commission's Phase II investigations

Under the new Framework, the Commission has one month to assess the market analysis and regulatory remedies proposed by an NRA (Phase I). If the Commission considers that the proposed measures would create a barrier to the single market, or has serious doubts as to their compatibility with EU law, the Commission has the power to raise serious doubts and start a Phase II investigation. In the latter case, by regulation BEREC is required to provide a formal Opinion to the Commission which the latter needs to take "utmost account" of. Where BEREC shares the Commission's serious doubts, the Framework Directive requires the Commission and BEREC to work closely with the notifying NRA to find the most appropriate and effective remedies to implement.

In 2011 BEREC provided a formal Opinion to the Commission on the following cases:

- PL/2011/1255-1256-1257-1258 – Polish notification in Market 7 – BEREC Opinion sharing the Commission's serious doubts was published on 15 December.
- PL/2011/1260 BEREC – Polish notification on Market 7 – BEREC Opinion sharing the Commission's serious doubts was published on 15 December.
- PL/2011/1273 – Polish notification in Market 7 - BEREC Opinion not finalised, as Polish regulator withdrew the draft measure during the Phase II investigation period.

By providing its Opinion BEREC contributed to the harmonisation of remedies across Member States and, at the same time, ensured that the proposed remedies were based on the relevant economic, technical and country specific issues. In 2012, BEREC will continue to provide such Opinion on other relevant Phase II cases.

ANNEX I: BEREC's methodology for the TR benchmarks

1. MOBILE TERMINATION RATES

The assumptions used in the MTR benchmark exercise are the following:

-the benchmark includes fixed to mobile termination charges, in case there is a difference between mobile to mobile termination charges;

-a three-minute-average-call duration has been assumed in order to obtain a homogenous comparison;

-only nominal tariffs are presented in the report, defining them as "The price (in euro/minute) set out by the regulator that works as the maximum price per minute which operators may charge each other (without any adjustment for purchasing power parity or real effects – inflation)";

- for those countries that have not set an average tariff and, additionally, apply distinct rates - one for the peak period, and another one for off-peak period-, total average tariff per operator has been calculated with the distribution of peak and off-peak traffic (in case traffic data and peak/off peak ratio has not been made available a 50/50 distribution has been assumed);

-average MTR per country have been obtained by adding each operator's average MTR multiplied by its market share, measured in terms of subscribers (it must be taken into account that different methods to evaluate it are used among European countries (especially in the case of pre-paid consumers);

-in the case of the European weighted average, only countries reporting the number of subscribers have been taken into account;

-MTR charges are those applicable on 1st January 2012, though assumptions to calculate average charges (for example number of subscribers) may not be as of 1st January 2012;

-operators with a market share below 1.5% have been excluded from MTR average calculation;

-for non-Euro countries, the average for the last quarter of the year, Q4 2011, exchange rate was used (source: European Central Bank).

2. FIXED TERMINATION RATES

Since interconnection services are usually defined on the base of different layers, or levels of service in the network hierarchy, the benchmark report refers to:

-Layer 1: local level interconnection in fixed networks;

-Layer 2: single transit interconnection service;

-Layer 3: double transit interconnection service.

In some cases, an additional interconnection service may also be regulated, where an additional layer is introduced. Additionally, some countries use only one or two layers of interconnection.

For those countries that only regulate interconnection with the Time Based Interconnection (TBI) model, the average price is a weighted average between the peak and off- peak rates, where weights are based on the distribution of traffic between time periods.

For those countries that have both the TBI and the Capacity Based Interconnection (CBI) regimes, given the different tariff outlays, a weighted average between the CBI and the TBI regimes prices is provided.

Nominal tariffs are presented in the report only in case regulators set out the maximum price per minute that operators may charge each other.

The effective weighted per minute interconnection rate for the incumbents have been constructed as a weighted average, taking the different components into account:

(1) Peak / off- peak rates for interconnection rates based on time (per minute charges). In case this distribution is not available, a 50%-50% distribution for peak and off-peak traffic has been assumed.

(2) Set- up charge, distributed over a 3 minutes /average duration) call, for the time based interconnection model

(3) Capacity based (CBI) and time based (TBI) interconnection charges, where the per circuit price has been translated into an average per minute price taking into account the price of the 2 Mbps circuit, on the one side, and the effective volume of minutes used by an average 2 Mbps circuit over the year.

For each of these components, the weights used are based on the proportion of traffic at the wholesale level that applies to one or the other model of interconnection (peak/ off- peak, capacity vs time based).

For non-Euro countries, the average for the last quarter of the year, Q4 2011, exchange rate was used (source: European Central Bank).

3. SMS TERMINATION RATES

By comparison with voice MTR, SMS TR are easier to understand and to compare:

- Most countries do not differentiate between peak time, off-peak time and weekend hours. According to the responses received, there is no exception in Europe.

- SMS TR are applicable to each off-net SMS that is well delivered, so there is no assumption regarding set-up charges or average call durations. Slovenia and Latvia are the only countries that apply a "Bill & Keep" system for SMS. The scope of the benchmark is confined to national termination prices.

- In some countries, different rates depending on the total number of SMS sent are applied. For those countries, the rates corresponding to the biggest volumes (i.e. lowest rates) are selected to make European comparisons.

- Average SMS TR per country are obtained through pondering the SMS tariff of each operator by its market share, measured in terms of subscribers.

- Two European averages based on the answers received are calculated, as it is also done for voice MTR benchmark: a simple average and a weighted average, pondering each country's average with the share of the country's subscribers (Total subscribers per country / Total European subscribers). In the case of the European weighted average, only the countries that reported the number of subscribers are taken into account.

- In the case of Switzerland, SMS TR are not wholesale interconnection prices but rather the result of an SMS-Interworking agreement among operators. P2P-SMS-Traffic is assumed symmetric. Therefore, there is a kind of 'Bill & Keep' system established between Swiss MNOs.

- Regarding the number of subscribers, it must be taken into account that different methods to evaluate it are used among European countries (especially in the case of pre-paid consumers).

- For non-Euro countries, the annual exchange rates for 2011 were used.

ANNEX II: Roaming data collection (2011)

Table 1: Average retail price per minute for intra-EEA roaming calls made

Quarter	Q1 2011	Q2 2011	Q3 2011	Q4 2011
Eurotariff				
Cap:	€0.39		€0.35	
EU average	0.351	0.346	0.32	0.313
EEA EFTA average	0.349	0.344	0.32	0.312
Alternative tariffs				
EU average	0.365	0.367	0.378	0.366
EEA EFTA average	0.365	0.367	0.378	0.366

Table 2: Average retail price per minute for intra-EEA roaming calls received

Quarter	Q1 2011	Q2 2011	Q3 2011	Q4 2011
Eurotariff				
Cap	€0.15		€0.11	
EU average	0.132	0.130	0.099	0.097
EEA EFTA average	0.132	0.130	0.100	0.098
Alternative tariffs				
EU average	0.150	0.155	0.158	0.145
EEA EFTA average	0.150	0.155	0.158	0.145

Table 3: Average price per minute for wholesale non-group roaming voice calls

Quarter	Q1 2011	Q2 2011	Q3 2011	Q4 2011
Cap	€0.22		€0.18	
EU average	0.183	0.183	0.168	0.172
EEA EFTA average	0.183	0.182	0.168	0.172

Table 4: Average price per retail SMS (Euro + Non Euro SMS tariffs)

Quarter	Q1 2011	Q2 2011	Q3 2011	Q4 2011
Cap	€0.11			
EU average	0.104	0.102	0.104	0.105
EEA EFTA average	0.104	0.102	0.104	0.104

Table 5: Average wholesale price per intra-EEA roaming SMS: charges to non-group companies

Quarter	Q1 2011	Q2 2011	Q3 2011	Q4 2011
Cap	€0.04			
EU average	0.038	0.037	0.037	0.037
EEA EFTA average	0.038	0.037	0.037	0.037

Table 6: Average price per Mb for data

Quarter	Q1 2011	Q2 2011	Q3 2011	Q4 2011
Non group retail data (prepaid + postpaid)				
EU average	2.132	1.972	1.567	1.426
EEA EFTA average	2.090	1.923	1.533	1.406
Group retail data (prepaid + postpaid)				
EU average	0.305	0.331	0.320	0.231
EEA EFTA average	0.304	0.329	0.318	0.231
Retail RoW (prepaid + postpaid)				
EU average	5.441	5.528	3.941	4.039
EEA EFTA average	5.441	5.528	3.941	4.039
Wholesale non-group				
Cap	€0.80		€0.50	
EU average	0.293	0.267	0.213	0.204
EEA EFTA average	0.292	0.267	0.213	0.204
Wholesale group data				
EU average	0.170	0.133	0.131	0.115
EEA EFTA average	0.171	0.134	0.132	0.115

ANNEX III: Initiatives and actions undertaken with regard to Net Neutrality

The European Commission has found it necessary to perform a cautious in-depth assessment of the situation regarding net neutrality and the potential need of additional guidance. In its Communication of 19 April 2011³⁷ the main conclusions on the way forward were that:

- Transparency has to be effectively implemented;
- Easy switching and traffic management measures remain under close scrutiny;
- The European Commission, at that stage, did not find the evidence for the need of further legislative measures at European level, which may be taken depending on the outcome of BEREC's investigations.

The European Parliament has reaffirmed its strong commitment to the key principles in its Resolution adopted on November 17, 2011³⁸: "Serious risks of departing from net neutrality (...) will be detrimental to businesses, consumers and democratic society as a whole"

The Council of the European Union has expressed a close involvement in the recent debate. In the Conclusions adopted on 13 December 2011³⁹, the Council stressed the importance of transparency and the ability of users to make informed choices and switch provider. It also called upon national authorities to consider net neutrality as a general objective.

At the national level the transposition of the Telecom Package is the most remarkable development in the majority of countries, where it was either recently achieved, or is currently ongoing (in 12 Members States).

Some more proactive initiatives have been undertaken by public authorities in certain countries (mostly at regulatory level), either through soft regulation or through quality monitoring. In The Netherlands, specific legislation was both proposed and approved by the Dutch Parliament in June 2011, and is scheduled for plenary debate in the Senate in May 2012. The proposal aims at preventing Internet Service Providers (ISPs) from hindering or slowing end-users traffic and applications, as well as price differentiation based on the applications and services used or offered via the Internet Access Service. Exceptions apply

37 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0222:FIN:EN:PDF>

38 <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P7-TA-2011-0511+0+DOC+XML+V0//EN>

39 http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/trans/126890.pdf

allowing measures aimed to manage network congestion or preserve security and integrity of the network, and implement provisions in law or court orders.

As far as stakeholders are concerned, following Commissioner Kroes “CEO round table” initiative, the involved parties have produced a joint document, whereas some of them have launched, in parallel, various initiatives in the field of net neutrality. These developments reflect the views and basis for the different arguments, contributing to inform the debate. Hereunder are some initiatives worth to name:

- From the ISP side: “A viable future model for the Internet” by A.T.Kearney (a Deutsche Telekom, France Telecom, Telecom Italia, Telefónica-commissioned study)⁴⁰
- The response from Robert Kenny, 14 August 2011: “Are traffic charges needed to avert a coming capex catastrophe? – A review of the AT Kearney paper A Viable Future Model for the Internet”⁴¹
- From the CAP side: “The open Internet – a platform for growth” A report from Plum Consulting for the BBC, Blinkbox, Channel 4, Skype and Yahoo! October 2011⁴²
- Mobile network specificities: “The future of mobile voice: scenarios for market evolution” Analysys Mason report, 13 September 2011⁴³ and also “The collapse in the value if the mobile gigabyte: myth and reality”⁴⁴

From the users side: the “Respect my Net” initiative (<http://www.respectmynet.eu>), which is a website where users can “name and shame” operators restricting access to Internet; also some organisations such as ISOC⁴⁵ (Internet Society) or LQDN (La Quadrature du Net)⁴⁶ have taken active positions in favour of a neutral and open internet.

The Federal Communications Commission (FCC) of the United States of America approved its “*FCC 10-201, Report and Order*” on December 2010⁴⁷ aimed to preserve the open and neutral internet. The three key rules of this decision are, first: “Transparency”, second: “No blocking”, third: “No unreasonable discrimination”.

The Federal Communications Commission approach gives prominence to transparency, and stresses the importance of monitoring closely potential discriminatory practices and possible constrictions of best-effort internet capacity in favour of specialized services.

40 <http://www.atkearney.com/index.php/Publications/a-viable-future-model-for-the-internet.html>

41 <http://www.commcham.com/traffic-charges>

42 http://www.plumconsulting.co.uk/pdfs/Plum_Oct11_The_open_internet_-_a_platform_for_growth.pdf

43 http://www.analysismason.com/Research/Content/Reports/RRV07_future_mobile_voice_Sep2011/

44 http://www.analysismason.com/About-Us/News/Insight/Insight_collapse_value_GB_Jan2012/

45 <http://www.internetsociety.org/net-neutrality>

46 http://www.laquadrature.net/en/Net_neutrality

47 Report available at: http://transition.fcc.gov/Daily_Releases/Daily_Business/2010/db1223/FCC-10-201A1.pdf.
Press release: http://transition.fcc.gov/Daily_Releases/Daily_Business/2010/db1221/DOC-303745A1.pdf.

On the other hand, FCC rather precisely defines the terms “broadband internet access service” and “reasonable traffic management practices” (those to preserve security and integrity of the network, block unwanted traffic, congestion management). Content, applications or services shall not be blocked, out of the scope of these reasonable practices. Mobile networks are given a distinct exception in this approach.