

Deutsche Telekom AG response to the European
Commission's public consultation on the

Revision of the Commission Recommendation on Relevant Product and Services Markets

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1. Executive Summary

Electronic communications markets are undergoing profound changes. The revision of the Commission Recommendation on relevant markets presents a unique opportunity to adapt ex-ante regulation to the needs of electronic communications markets in the EU in the coming years. Two trends affect e-communications markets and need for future ex-ante regulation in particular:

(i) **Increased platform competition in a converging NGA environment.** Technology developments in both fixed and mobile NGA and investments by different players driven by local market conditions in fixed NGA mean that platform competition between copper, fibre (FTTP/FTTC), cable and LTE networks is far more relevant today than it was in 2007. This trend will further increase in the time period for this review. At the same time, competition 'for the market' for ultra-fast broadband (e.g. FTTH, cable) results in different operators covering different parts of a national territory, region or city.

(ii) **Disappearing entry barriers for service provision on the IP service layer.** As the underlying platform becomes less relevant for providing IP-based services, entry barriers for competition on services markets are rapidly decreasing. OTT players and manufacturers, often holding a strong position in neighbouring markets, offer products such as VoIP, instant messaging or media content directly to end-users. Regulation aimed at individual retail services such as voice telephony becomes obsolete.

1. Required changes to current regulatory practice

In response to these market developments, the revision of the Commission Recommendation on relevant markets should not only adapt the scope of ex-ante regulation by reducing the number of markets subject to ex-ante regulation. It should also promote a consistent methodology for wholesale market definition in line with competition law principles and ensure that access regulation is targeted at preventing consumer harm on retail markets. The following elements should be reflected in the recommendation to foster certainty for investors and support the Commission's objective of providing a reliable regulatory framework for the timeframe up to 2020:

- Market definition for the purpose of identifying wholesale bottlenecks should be based on a 'greenfield' approach – i.e. a forward-looking analysis of retail competition absent regulation. Where alternative platforms exercise competitive constraints at retail level, they should be taken into account in wholesale market definition in order to duly reflect their impact on retail markets.
- Geographic differences in competition should become a pivotal element of regulation under the revised Recommendation as platform competition alleviates the need for ex-ante regulation in many geographic areas within the single market.
- The revision should be underpinned by a clear understanding of the purpose of access regulation, namely to grant access to the relevant bottleneck for ensuring competition on a given retail market, if any, and not to provide multiple access options at different network layers.

2. Proposed changes to list of relevant markets

2.1 Relevant markets to no longer be included in the list

Market 1 – Retail market for access to the fixed telephone network

In a forward-looking analysis of retail access markets, no significant entry barriers exist. For access to the public telephone network at a fixed location, substitution from broadband access and, to a different degree in different national markets, mobile access can be observed. Competitive constraints in the retail access market arise from competing platforms and/or from competition based on wholesale regulation where appropriate. No persisting competition problems exist for retail access offers that could not be solved by ex-post competition law or, where justified, ex-ante wholesale regulation.

Market 2 – Call origination

As services become ubiquitously available on any platform and entry barriers for service provision disappear in an all-IP environment, regulation to support competition in specific services will no longer be required. Voice services are becoming an integral part of access bundles both on fixed and mobile networks. Market data shows that the significance of carrier selection obligations decreases rapidly. The market for phone calls tends towards effective competition absent call origination obligations. Regulation of this market is no longer justified.

Markets 3, 7 – Call termination on individual fixed and mobile networks

Intense regulatory intervention in prices of termination rates in the past years has resulted in extremely low rates and has irreversibly changed market dynamics, which now allows competition law to take over. Voice termination - and, to an even larger extent, sms termination - are moreover subject to strong competitive pressure from free over the top application such as P2P VoIP, instant messaging etc., limiting the price setting freedoms for operators. NRAs can, where necessary, ensure continued symmetry and reasonableness of termination rates under Article 5 Access Directive following a deregulation of M3 and 7 in the present revision.

2.2 Future scope of markets 4, 5 and 6

Access to a wholesale product to provide fixed retail access services will at least in some parts of the single market continue to constitute a persistent bottleneck that may require ex-ante regulation in the period relevant for this review. Therefore, fixed wholesale access will remain part of the list of relevant market under the three criteria test.

Particularly within the scope of current markets 4 - 6, geographic differences in retail competition should be assessed in each case in order to target regulation to non-competitive areas.

(i) Delineation of current markets 4 and 5

Technologies widely used in the transition to NGA such as VDSL-Vectoring and G-PON FTTP will call into question the existence of a physical unbundling market in a number of Member States within the

relevant time period for this review. In other Member States, physical unbundling in the form of copper LLU will remain the relevant form of wholesale access also in the medium term.

The revised Recommendation should therefore leave NRAs the possibility to define a common wholesale broadband market instead of current markets 4 and 5 where appropriate in view of technology and market developments. Alternatively, NRAs should be allowed to maintain separate markets for unbundled physical access and wholesale broadband access where appropriate in view of the national market situation.

(ii) Terminating segment for Leased Lines (market 6)

Terminating segments of Leased Lines should be deregulated on a geographic basis wherever competitive conditions allow as well as on a product basis where specific bandwidths are provided in a competitive environment. The market for terminating segments of Leased Lines should remain separate from a wholesale broadband access market as Leased Lines continue to respond to a distinct demand and have distinct product characteristics from IP-based best-effort services.

2.3 No new markets should be included in the list

No additional markets display persistent competition problems that would meet the three criteria test. We have examined the areas of IP transit and Peering and sms termination in this respect in particular.

2. Introduction

Deutsche Telekom believes that the Recommendation on relevant markets has overall proven to be a valuable tool for progressively reducing regulation in response to intensifying competition on electronic communications markets.

Since 2007 when the current list was adopted the electronic communications market has undergone a profound transformation. The year 2007 knew no smartphone 'apps', no widespread social networks and only a fraction of the competitive high-speed broadband deployments we see today.

The emergence of strong competitors on other levels of the internet value chain and the success of platforms such as cable and increasingly mobile in providing broadband services in many national markets are putting constant pressure on traditional telecommunication network operators to innovate. These developments also offer the opportunity to make a bold step towards completing the deregulation of the sector with the present revision.

Against this background, Deutsche Telekom welcomes the opportunity to comment on the review of the Recommendation. The following high-level principles should guide this review:

Methodology to be applied

The revision of the Recommendation should be based on a thorough, forward-looking analysis of market developments in the Member States and follow a consistent methodology.

As outlined in the explanatory memorandum to the 2007 Recommendation and in line with competition law methodology, an analysis of relevant markets that may still warrant ex-ante regulation under the revised Recommendation has to start with a forward-looking analysis of retail market developments.¹

On the basis of the situation on retail markets for electronic communications, wholesale markets may then be defined on which regulation may still be warranted under the three criteria test.² This is the case where a retail market would not tend to effective competition over time in the absence of wholesale regulation (an approach sometimes referred to as the 'modified greenfield approach').³

Need to assess sub-national geographic markets

Starting from an analysis of geographic differences of competition at the retail level, the Recommendation should also foresee a strict assessment of the need for continued wholesale regulation in different geographic areas. As both under the legal provisions of the framework (Art. 15 Framework Directive) and in practice NRAs will be determining the geographic scope of the market, the Recommendation should instruct NRAs to assess the geographic scope of the market in each individual case, and, where conditions of competition are not homogenous

¹ Cf. SEC(2007)1483 final. Explanatory Note - Accompanying document to the Commission Recommendation on Relevant Product and Service Markets within the electronic communications sector, p. 7: "*The starting point for the definition and identification of markets is a characterisation of retail markets over a given time horizon*"

² In Deutsche Telekom's view no retail market passes the 3 criteria test for the relevant time period, s. Q 9 below

³ Cf. M. Cave, U. Stumpf, T. Valetti, "A Review of certain markets included in the Commission's recommendation on Relevant Markets subject to ex ante Regulation", 2006, p. 4

across a national market, delineate sub-national markets, taking into account for example the reach of alternative platforms next to the regulated platform.

Need to take into account symmetric regulation

An analysis of wholesale markets has to take into account any regulation imposed at other levels of the network. In particular, where symmetric regulation has been imposed that ensures effective competition at the retail level no wholesale market should be defined for the purpose of ex-ante regulation. Symmetric regulation as foreseen in Article 12 of the Framework Directive can in some cases provide an appropriate solution to market failures, for example for access to in-house cabling and access to ducts in the access network (s. Q 3). The revised Recommendation should assess in how far symmetric regulation can alleviate the need for SMP regulation and explicitly instruct NRAs to fully take into account the effects of symmetric regulation on the passing of the three criteria test and SMP-designation for each market.

Need to take into account new sources of market power in the internet value chain

A major challenge of a review of the list of relevant markets will be to achieve a more level playing field between players on different layers of the internet value chain. The presence of competitive pressure from established internet players has already changed perceptions on the sources of market power in the internet economy. A review that acknowledges the new realities can free up the potential of the European communications sector and help to achieve a new balance in the global digital economy. We believe that no new markets should be defined in the IP and internet connectivity sphere. An extension of SMP-regulation under the framework beyond connectivity into the competitive IP services layer should be avoided.

3. Responses to the consultation questionnaire

Question 1:

What are the technological developments in the electronic communications sector at the EU level as of 2007 that have an influence on how the markets should be defined in the revised Recommendation from an ex ante perspective?

Since the entry into force of the present Recommendation in 2007, technological developments have had a significant impact on the competitiveness of the electronic communication sector. As the revised Recommendation will enter into force in 2014 and determine the regulatory environment for the period until ca. 2020, the technological developments for this timeframe should be taken as a basis for the assessment next to market developments observed since 2007 until today.

1. Trend towards strong inter-platform competition

The most relevant developments in the telecommunication sector until 2020 have recently been assessed with respect to the Digital Agenda targets.⁴ One result of this analysis is that the electronic telecommunication sector will be characterised by a competition of platforms even more than today rather than by any single dominant

⁴ Expert report by Analysys Mason for Telefónica and Telecom Italia, 2012 “Policy orientations to reach the European Digital Agenda Targets” <http://www.rcysostenibilidad.telefonica.com/blogs/wp-content/uploads/2012/06/Policy-orientations-to-reach-the-European-Digital-Agenda.pdf>

infrastructure. This confirms a trend that can be observed already in the emerging NGA environment characterised by different technologies and different ‘first movers’ in NGA. In a number of markets these are no longer former incumbents but municipal initiatives, cable operators or in some cases alternative fibre-based operators.

The most relevant networks in future electronic communications markets will be fibre (FTTP/FTTC), cable and LTE Advanced. Fixed NGA networks (FTTP/FTTC and cable on basis of DOCSIS 3.0) provide already today bandwidths of 100 Mbit/s and more. Until 2020 it is expected that fixed NGA will cover 72 % of households in Europe.⁵ In regions where fixed NGA networks are not available LTE Advanced can be an essential driver of high-speed broadband if sufficient spectrum is provided. Estimates show that by 2020 LTE advanced will have the same coverage than 3G networks today.

Additionally, satellite and Wi-Fi broadband connections will deliver increasingly higher bandwidths. Both technologies will therefore remain an important alternative for broadband access especially in less dense populated areas.

While the significance of individual infrastructures might vary between Member States, increasing competition in the electronic communication sector is created by this multitude of platforms.

2. Entry barriers services markets fall with IP-based service provision

Next to increased platform competition, the electronic communication sector will be shaped by internet-based service provision on an all-IP infrastructure. This reinforces competition as the underlying platforms become less relevant for the services offered especially on consumer markets. OTT players provide products such as VoIP, instant messaging and media content on any platform making content and services available at anytime, anywhere and on any device. Internet-based services have a major impact on the degree of competition in electronic communication services markets, for example alleviating the need for continued regulation targeted at telecoms services such as voice calls at wholesale level.

Growth in IP-services will at the same time continue to necessitate major network investments. Forecasts show that the monthly IP traffic in Western Europe will be 24,4 petabytes and 5,987 petabytes in Central and Eastern Europe already in 2016.⁶ The importance of a revised Recommendation in providing incentives for investments in infrastructures cannot be underestimated looking at the requirements by new devices and services. Developments such as cloud and ubiquitous computing and increasing media consumption via telecommunication networks require networks providing higher bandwidths also in the access network. Alongside other legislative and non-legislative measures, the revised Recommendation should provide a framework that is giving enough flexibility for network investors and provides incentives for investments and sustainable competition.

Question 2:

What are the changes in structure and functioning of the relevant markets (e.g. supply and demand side developments, bundles, convergence, geographic scope), which should be reflected in the revised Recommendation from an ex ante perspective?

The technological developments outlined in question 1 have a significant impact on the structure and functioning of the relevant markets of the electronic communication sector that should be fully reflected in the revised

⁵ Expert report by Analysys Mason, 2012, p. 30

⁶ Cisco White Paper “The Zettabyte Era”, 2012, p. 16

Recommendation. As infrastructure competition increases and OTT players increasingly shape the service markets, the telecommunication sector has become significantly more competitive in comparison to 2007.

As a basis for our response to questions 7 – 16 below, which cover changes to the current list of relevant markets, the following comments set out the most important developments on electronic communications markets observed today and expected within the relevant time period.

As outlined in the introduction, **a thorough analysis of retail market trends in Member States** needs to be the basis of any revision of the market list. We understand that the European Commission has commissioned a study on market developments in the 27 Member States. We encourage the Commission to publish the results of the study early in the discussion process to provide a common facts-basis for the debate.

1. Fixed retail access markets⁷

The following areas appear particularly relevant for defining relevant markets in the field of fixed access for the forthcoming Recommendation: (1) the structure of fixed retail access markets and whether they form separate markets according to product characteristics (2) increasing geographic differences in competition conditions and (3) the degree of substitution between fixed and mobile access.

Access markets have developed in a dynamic manner and at different speeds across the internal market.

- More and more customers adopt broadband access⁸, a trend that will be accelerated by the ambitious goals of the Digital Agenda for Europe which – if targets are fully met - would result in a 30MB connection being available to all households by 2020.
- Different access bundles have established themselves over the past years. In some Member States 'triple-play' bundles including TV services have become a predominant important driver for fixed line competition.
- Less marked is the phenomenon of quadruple play offers also including mobile connections. It is not present where mobile is purchased rather as a substitute than a complementary service and is mitigated by specific features of the mobile market such as corporate mobile phone usage.

Single play telephone access lines are still a significant, but declining proportion of the fixed access market. If and where access connections are transformed to all-IP access lines (lines that are no longer PSTN-based), also voice-only accesses will technically be provided over data broadband connections. Also, demand side substitution between voice telephony access and broadband / multiplay access is especially high where price difference are low and a small hypothetical price increase would lead customers to switch to the higher-value broadband access line. This effect will be amplified by the penetration of fibre-based access lines: a business case based on Single Play on fibre access lines (with high investments) will not be feasible.

1.1 Triple play / the role of cable networks

In some Member States, triple play bundles including TV, voice and broadband services have become the standard form of provision of these services, driving the retail broadband market. Often, such markets are characterized by a

⁷ On fixed-mobile substitution, s. 1.3. below

⁸ European Commission, "Digital Agenda Scoreboard 2012", pp. 50-52

high share of cable networks providers.⁹ The need to take such developments - where relevant - into account at both retail and wholesale level is also recognised by BEREC in its report on the impact of bundled offers.¹⁰ As TV services are increasingly consumed over the internet, there is no certainty, however, that the trend to triple-play bundles is irreversible.

More generally as regards cable networks, it is important to acknowledge the major impact of cable in shaping competition in broadband markets and in particular the high-speed segment of the broadband market. Following the upgrade of DOCSIS 3.0 cable networks and in view of lower and more incremental upgrade costs in comparison to other infrastructures such as fibre, cable is the most-widely available technology for delivering up to 100 Mbit/s in Europe, covering over 40% of European households.¹¹ The role of cable networks regarding relevant markets should be fully reflected in the revised Recommendation, at both retail and wholesale level (s. *chapter on self-supply below*).

1.2 Geographic differences in competition

The development of broadband markets described above highlights the growing importance of geographic differences in competition. Broadband markets in a number of Member States, such as for example the German market, are characterized by competition of several fixed platforms such as copper, fibre and cable networks and no longer by a single dominant infrastructure. There are several operators covering densely populated regions and, in some cases, rural areas, along with a couple of nationwide operators. In some regions the market share of the former incumbent operator in the retail broadband market is below 25%. The competitive conditions significantly vary in different regional areas across many European countries (such as UK, Portugal, Germany, Slovakia etc.).

Starting point for a geographic market definition should be the retail level. It is very likely that at least certain dense populated regions will be classified as highly competitive meaning that end customers benefit from competitive prices and can choose from a variety of product offerings from different providers, the latter often being operators with proprietary infrastructure. Only if a persistent market failure is identified in specific geographic areas it may be appropriate to identify and analyze the relevant wholesale market. This implies that the delineations of wholesale and retail markets coincide to a significant degree. The fact that supply side conditions may be considerably different, e.g. due to infrastructure-based competition, needs to be acknowledged when assessing the three-criteria test on properly defined geographic markets.

Some NRAs have successfully established regional differentiation for years. In 2007 Ofcom identified three sub-national wholesale broadband WBA access markets where the competitive conditions differ significantly. As a result, an area covering around two third of the population has been deregulated. The Commission in its reaction supported the need for regional differentiation:

“Although a sub-national market approach requires NRAs to analyse the competitive conditions in a large number of geographic areas and may prove to be cumbersome, it appears to reflect the presence of alternative supply channels and the corresponding regional differences in market conditions in a

⁹ OPTA, “Market Monitor 2011”, 2011, p. 5; in the Netherlands, 54% of broadband and 71% of fixed telephony is offered as part of triple play today while growth in triple play is declining, s. <http://www.telecompaper.com/research/dutch-triple-play-market-growth-slows-to-37-percent-in-q3-2012--914495>;

¹⁰ BEREC report on impact of bundled offers in retail and wholesale market definition, Dec 2010, BoR (10) 64

¹¹ Expert report by Analysys Mason, 2012, p. 27

number of telecommunications markets. Provided it is based on sufficient evidence [...] the evolution towards the definition of sub-national markets may allow better targeted regulation”.

The Portuguese NRA ANACOM introduced geographical segmentation of the broadband market in 2009. ANACOM identified two types of wholesale broadband access markets according to the degree of competition. Within the competitive regions ANACOM did not find SMP; the area covers around 60% of the broadband market. The Commission endorsed the proposal stating that *“the proposal is a reasonable move towards better targeted regulation, concentrating on regions where structural competition problems persist.”*

We believe these decisions point in the right direction, given the competitive development and structural changes not only on the supply side of the broadband markets. The Explanatory Memorandum of 2007 by the Commission recognises that:

“[...] investment in alternative infrastructure is often uneven across the territory of a Member State, and in many countries there are now competing infrastructures in parts of the country, typically in urban areas. Where this is the case, an NRA could in principle find sub-national markets. The NRA would need to identify the competitors of the potential SMP operator(s) and assess the area of supply of these competitors”.

We observe that often NRAs are hesitant when it comes to the need of defining sub-national markets even though these are indicated by significant differences in competition. It is therefore of highly importance both from an economic and legal viewpoint that the revised Recommendation provides greater certainty than the present version that regulation becomes more targeted with respect to geographic differences in competition. It should therefore explicitly foresee the obligation for NRAs to request data in a way that allows differentiation between regions and to in each case assess the definition of sub-national wholesale broadband access markets, taking into account competition based on ULL business cases. Where the competitive constraints from alternative platforms differ between regions, national regulators should explicitly justify if they want to maintain a national market, in order to ensure a consistent approach to targeted access regulation.¹²

As a result of the roll-out of different NGA networks which serve a different region within a country, it cannot be ruled out that in certain cases new regional fibre infrastructure monopolies emerge. In that case, only when regulation is geographically differentiated it is possible to

- sustain end customers' choice of service providers,
- gain access to regional networks and thus avoid regional monopolies
- shape regulatory intervention reflecting the actual competitive landscape and avoid negative implications of over-regulation in competitive areas.

¹² Some NRAs have argued against geographic market definitions on the grounds that business customers with sites spread across the country need a ubiquitous offer which can only be served by the incumbent's national network. This argument considers an exceptional and quantitatively small aspect of the market which has to be weighted against the prevailing situation of single-site customer demand. In view of the overwhelmingly residential nature of the broadband access market, moreover considering that business customers are often served by dedicated Leased Lines, the aspect loses its significance for market definition of market 5. Otherwise, the need of multinational companies would even call into question the delineation of national markets.

1.3 Fixed-mobile substitution

The effect of fixed to mobile substitution will continue to differ between Member States, but overall become even more significant than at present as mobile broadband connections reach higher bandwidth.

Technological developments as outlined above, in particular the roll out of 3G and now of LTE, reduce the gap between fixed and mobile networks broadband in terms of speed and quality. In addition, mobile retail prices have further decreased for access and service bundles, increasingly including mobile broadband services.

Fixed and mobile access can still be distinguished on the basis of their characteristics. Notably, customers of mobile services value mobility of their service not offered by fixed access. Network capacity, available speeds and quality of service in many instances still differ between fixed and mobile access.

The degree of fixed mobile substitution differs significantly between Member States, in function of fixed-line penetration, usage habits – for example a high degree of triple play products in the market would signal limited readiness to switch to mobile (broadband) only - and other factors.

As a very rough categorization, in many large Western European Member States with high fixed-line penetration, the large majority of customers still views mobile and fixed line services as complements rather than as substitutes. Apart from the Austrian regulator on the residential segment, no other NRA has so far concluded that fixed and mobile services belong to the same retail market.

In some, typically Central and Eastern European Member States with a lower fixed line penetration and a well-developed wireless sector, fixed-mobile substitution is a determining factor in the market and should guide the market definition by NRAs at retail level.

In conclusion, whether or not one single retail market on voice and/or broadband could be defined will differ based on national circumstances. This has also been highlighted by BEREC in its report of last May 2012 on fixed mobile substitution.¹³ Where no fixed-mobile market is defined, the competitive pressure from wireless broadband on fixed infrastructure should be reflected by each NRA in the SMP assessment.

Linked to the issue of fixed-mobile substitution, the character of mobile products designed for stationary use, for example in (fixed network) white spots for broadband access, may be in question when analyzing retail access markets. Some operators offer mobile based telephone services, which resemble a fixed access to give retail customers an alternative to the non-available broadband access bundles. Whether such stationary products are part of the fixed access market should not be determined at the European level. NRAs have to investigate the concrete products and market situation to decide whether this kind of access is to be included. It is, e.g., very relevant whether a mobile use is also possible with such products, in which case stationary mobile access would not belong to a fixed retail access market unless the overall market is defined as comprising both fixed and mobile access.

2. Impact of OTT competition on electronic communications services markets

A further aspect regarding structure and functioning of the relevant markets is the level of service competition created by OTT providers. Since the last Recommendation of 2007 the telecommunication sector has been witnessing a growing number of entrants that compete with classic telecommunication operators.¹⁴ On the one hand the growing penetration of smart phones has given application such as “WhatsApp” an entrance to the

¹³ BEREC report on the Impact of Fixed Mobile Substitution in Market definition, May 2012, BoR BEREC report on impact of bundled offers in retail and wholesale market definition, Dec 2010, BoR (10) 64

¹⁴ Arthur D. Little, “Disruptive Threat or Innovative Opportunity? Scenarios for Mobile Voice OTT”, 2011, p.

mobile market where it competes with traditional services offered by MNOs, such as sms.¹⁵ On the other hand applications such as “Skype” or “Google Talk” make use of the growing bandwidth of fixed platforms to offer telecommunication services. Where OTT services provide ‘free’ alternatives to existing communication services that are perceived as (partial) substitutes by the end-user, this will erode price setting freedoms in traditional telecoms services that regulation has addressed in the past, for example in the field of voice call termination. The structure of fixed and mobile retail markets has become much more competitive due to the entrance of OTT players.¹⁶

Increased competition by other platforms and market entry of OTT players on electronic communications markets also affect the provision of business services. These trends enlarge the choice of available services for business customers and allow product offers designed for business customers over other platforms as bandwidths requirements by business customers can be fulfilled by alternative fixed and wireless technologies. Providers of alternative telecoms platforms can use this new flexibility to offer products on wholesale and retail business markets.

Services offered by OTT players to consumer markets are equally available for businesses over the internet or can be provided by the same players with enhanced quality of service (e.g. video conferencing) via a separate channel for business communication. Competitive pressure on business markets is expected to further increase as a result.¹⁷

Looking at both the increase in competition between platforms as well as the entrance of OTT players it becomes obvious that the structure of relevant markets has changed significantly. Since the last Recommendation the level of competition on telecommunication markets has strongly increased which should be reflected in a Recommendation for the period from 2014 onwards. As the trends of platform competition and pressure by OTT players will further accelerate in the timeframe of the revised Recommendation, a forward looking approach with regard to the structures and functioning of the relevant markets should be applied.

3. Transition to NGA may result in long-term variations in market conditions

While a number of common trends can be identified, it should be borne in mind that due to current differences in market structure, technological developments will not have the same effects in all Member States. For example different forms of fibre roll-out may lead to competition focusing on different network layers. Such differences will have a fundamental impact on market definition. As a result, the revised Recommendation on relevant markets may in some respects need to be more flexible than the 2007 Recommendation.

We will comment in more detail on the consequences of changes in technology and market structure when addressing individual markets of the Recommendation below.

¹⁵ Ernst & Young, “Inside Telecommunications – July to September 2011”, 2011, p. 6

¹⁶ Roland Berger, “Telco 2020 – How Telcos transform for the “Smartphone Society””, 2012, p. 5

¹⁷ PWC, “Global entertainment and media outlook 2011–2015”, 2011, p. 45

Question 3:

Can you identify any market bottlenecks which in your view cannot be addressed by ex ante regulation via a revision of the Recommendation alone? How in your view can such market bottlenecks be addressed?

Present and future market developments in NGA roll-out as outlined above may lead to a situation where bottlenecks in the ICT value chain may best be addressed by symmetric regulation rather than SMP regulation.

1. Addressing bottlenecks in electronic communications through symmetric regulation

We encourage the Commission to consider the use of other instruments than SMP-regulation to address specific perceived market failures within the scope of application of Article 12 Framework Directive, in particular in the area of access to in-house wiring and access to ducts. Where applicable, such measures should replace SMP-regulation, not merely complement it, which would create an additional layer of regulation. Where symmetric regulation leads to effective competition downstream, SMP regulation should be lifted.

One area where symmetric instead of SMP-based regulation should be considered is access to in-house cabling and ducts of both electronic communications providers and, as regards ducts, players outside the electronic communications sector. In a recent consultation, the European Commission has proposed measures to lower the cost of NGA-roll-out which would apply irrespective of the existence of significant market power.¹⁸ As outlined in more detail in Deutsche Telekom's comments on these proposals, access to ducts in the access network can be better addressed by an obligation that covers all infrastructures capable of carrying electronic communications networks than by SMP regulation. Where more than one player rolls out NGA networks (based on DOCSIS 3.0, GPON or P2P fibre etc.), in-house cables and the passive infrastructure on the last stretch to the building constitute a bottleneck irrespective of who has been identified (if any) as SMP on the wider national or regional market.

Symmetric regulation should, wherever it leads to effective competition or a tendency to effective competition downstream, result in the lifting of SMP-regulation as downstream wholesale markets no longer fulfil the three criteria test.

On a higher network layer, the new NGA roll-out paradigm leads to the need for a more granular market definition under the SMP-regime that differentiates between regions characterised by differing conditions of competition (s. introductory comments).

Another area where symmetric regulation may act as a safeguard when SMP-regulation is rolled back to the benefit of the application of general competition law under the revised Recommendation on relevant markets is termination (current markets 3 and 7, s. Q. 9 below). In an environment of symmetric rates and comparable, if not fully symmetric traffic flows, the dispute resolution mechanism under Art. 5 Access Directive is suited to address potential interconnection disputes.

2. Potential bottlenecks in other areas of the ICT value chain

¹⁸ EU Commission "Public Consultation on an EU Initiative to Reduce the Cost of Rolling Out High Speed Communication Infrastructure in Europe" at http://ec.europa.eu/information_society/policy/ecomms/doc/library/public_consult/cost_reduction_hsi/cost_reduction.pdf

The ICT value chain has become both much more varied and more complex since the introduction of telecoms regulation. A number of important inputs for competing on retail markets lie outside the field of electronic communications, such as premium content.

Moreover, traditional electronic communications services such as voice and SMS are being replaced by voice and messaging over IP such as Skype or WhatsApp. Such 'Apps' are marketed by device manufacturers and operators through their own App stores distributing Apps directly to the clients. The increased use of Apps available via proprietary shops can lead to considerable market power on the side of internet application providers and device manufacturers over the review period. However, as Apps in themselves constitute software downloads, the impact on electronic communications services is indirect, via competition at the retail level. Further consolidation in the field of operating systems could also lead to a small number of players dominating that sector and acquiring strong market power.

We believe that these developments need to be fully taken into account when assessing the market power of electronic communications providers at retail and wholesale level (cf. discussion on IP transit and peering under Q 11).

We do not at this stage advocate an extension of SMP-regulation under the framework and the relevant markets under this Recommendation to these areas, but rather an approach to ex-ante regulation that does not impose asymmetric burdens on telecoms operators, leading to an uneven playing field between different actors in the value chain. Any anti-competitive leveraging of market power from adjacent businesses into electronic communications markets should moreover be firmly addressed by competition authorities.

Question 4:

In your opinion, is the three criteria test, as defined in the Recommendation, an appropriate instrument in defining the relevant markets susceptible to ex ante regulation or would alternative means to identify relevant markets be more suitable?

Question 5:

Should, in your view, criteria be added or removed from the list or should the criteria be formulated in a different manner? Should additional guidance be given to the existing criteria?

The three criteria test should continue to serve as a tool for limiting regulators intervention in the internal market in a revised Recommendation and be applied also at national level on the markets included in the Recommendation.

It cannot, however, replace a thorough competition analysis based on state of the art market definition and competition assessment techniques by NRAs at national level (s. below). This should include an analysis of the three criteria. The NRAs should assess the three criteria for specific national or sub-national markets to fully take into account specific national circumstances.

Deutsche Telekom takes the view that all three criteria serve a purpose in singling out exceptional circumstances that require ex-ante regulation.

The first criterion "high and non-transitory barriers to entry" needs to be analysed in great detail and not only in a theoretical manner. Therefore, it is absolutely necessary to take the technical developments (alternative and less costly broadband technologies), process and product innovation and market entry strategies into account. In

addition, it is absolutely necessary to analyse whether local market entry is the dominant and less cost intensive strategy for infrastructure competitors.

The second criterion should be the most important criterion for the revision of the Recommendation, since this focuses on the future perspective. Ensuring a thorough, forward-looking assessment both by the Commission and also by NRAs at national level has to be guaranteed, since regulation is a permanent and very strict intervention, which has a significant influence on market structure, the behaviour of the parties and the market outcome.

The third criterion should be assessed in a more stringent manner than is the case at present. Market structure and levels of competition in many national electronic communications markets resemble more and more those in other industries characterized by scale effects which are not subject to ex-ante regulation. To point, as does the staff working document to the present Recommendation, to a need for frequent intervention, e.g. for the purpose of cost modelling or monitoring of tariffs and behaviour of a dominant firm, is not sufficient to justify the insufficiency of ex-post competition law as this need arises from the ex-ante intervention itself. The importance of the third criterion is reflected in Recital 27 of the Framework Directive that states that ex ante regulatory obligations should only be imposed “...where national and Community competition law remedies are not sufficient to address the problem”.

It is important to recall at this stage that an isolated three criteria test is not sufficient for justifying ex ante regulation. The three criteria test identifies a permanent monopolistic bottleneck on a given market. The basic requirements for identifying a monopolist bottleneck are a proper market definition (both product market and geographic market definition) and the identification of SMP on the relevant market in a first step. In line with the EU regulatory framework, which gives NRAs the task to analyse markets and designate SMP-operators, if any, on national or sub-national markets, Deutsche Telekom notes that DG Connect only carries out a more theoretical, high level market definition and summary competition analysis (as part of the three criteria test).

This cannot replace a deep dive competition analysis on the basis of the Commission Recommendation by the NRA in the second step. Firstly, the regulator needs to define the relevant product market based on state of the art demand side concepts, such as the hypothetical monopolist test (ideally based on a Discrete Choice analysis). When the product market is defined, the regulator needs to identify the relevant geographic market. For the geographic market definition it is also important to use standard market definition tools, such as the hypothetical monopolist test and in addition supply side characteristics, such as variations in the degree of competition and regional differences with regard to average quality adjusted prices. Then, the NRA needs to carry out a proper SMP analysis. In an economic logic, only if SMP was found, the three criteria test shall apply as a second step to ensure that ex ante regulation is inevitable (e.g. in order to foster competition in downstream markets). Deutsche Telekom is aware of the fact that many national regulators are carrying out the above described proper market analysis steps as set out in the current Commission Recommendation on relevant product and service markets, with some NRAs starting with the analysis of the three criteria. Some of the national regulators, however, spare this effort and simply refer to the Commission's analysis of the three criteria. This is highly problematic, also in view of the fact that many subsequent competition law decisions are based on the findings of regulatory assessments, which may lead to a 'vicious circle'.

Question 6:

How, in your view, can legal certainty be best ensured in identifying the markets susceptible to ex ante regulation?

We agree that legal certainty is an important ingredient of a stable and investment-friendly regulatory framework.

The Recommendation on relevant markets in itself plays an important role in signalling the boundaries of future ex-ante regulatory intervention. It should be clearly stated in the Recommendation that any regulation outside the scope of the relevant markets identified in the revised Recommendation should be subject to a three criteria test by the NRA which in turn would be subject to Commission and BEREC scrutiny and may entail a Commission veto. This clarification is required to end the legal uncertainty under the present Recommendation over whether the Commission can veto a national decision on the basis of an incorrect application of the three criteria test.

Within the limits set by the Recommendation as regards the scope of ex-ante intervention, market developments, and in particular the different pace and forms of NGA roll-out, in tendency call for a higher degree of flexibility to adjust market definition to national circumstances in the revised Recommendation than under the present Recommendation. As observed in the Explanatory memorandum to the present Recommendation, the definition of relevant markets can and does change over time as the characteristics of products and services evolve and the possibilities for demand and supply substitution change. This is particularly important where the characteristics of products and services are continually evolving, where new products and services appear and where the way in which such products and services are produced and delivered evolves as a result of technological evolution. Within the limits to ex-ante regulation set by the Recommendation, the definition of markets in the revised Recommendation should leave flexibility to NRAs to adapt market definitions to differences between Member States and over time.

For example, the degree of fixed-mobile substitution differs between markets and will lead to different outcomes of the market analysis process in different Member States.

Similarly, the boundaries - and indeed separate nature - of current markets 4 and 5 may vary between Member States and over time, calling for a more flexible approach in the list of relevant markets as regards this key market area.

Question 7:

In your opinion, should the scope of any relevant market(s) identified in the Recommendation be changed? If yes, please explain why, referring to the relevant market(s) concerned.

Question 8:

If the answer to the previous question is yes, please specify the qualitative and quantitative impact of such changed scope on consumers (users), competition, and development of the internal market. Please provide separate reasoning for each market subject to a new scope.

Current markets 4, 5 and 6

In the light of retail market developments outlined under Q1 and 2 above, the revised list of relevant markets should no longer comprise markets outside the scope of current markets 4, 5 and 6 (s. Q 9 below). In this area of wholesale access to the fixed network and certain Leased Lines inclusion in the list of relevant markets may still be warranted if and where persistent market failure at retail level absent regulation prevails in the majority of Member States.

Particularly within the scope of current markets 5 and 6, geographic differences in retail competition should be assessed in each case in order to target regulation to non-competitive areas.

1. Wholesale market definition and the 'ladder of investment'

Identifying relevant markets susceptible to ex-ante regulation in the Commission Recommendation constitutes the first in a series of steps that have to be followed before specific ex-ante obligations can be imposed. While market definition in this context follows competition law methodology that is in principle neutral to the remedies imposed, in regulatory practice the desired outcome of the regulatory process in terms of access obligations influences market definition especially on wholesale markets. This is not surprising as for example current markets 4 and 5 have been created absent of a merchant market for wholesale products with the aim of introducing making specific access products available to alternative operators.

The revision of the Recommendation should be carried out against the background of a clear understanding of how to address in an efficient and proportionate way any remaining competition problems in retail markets for electronic communications at the remedies stage. In particular, the Commission should clarify that in order to achieve effective competition downstream, generally not more than one relevant access product in the market is required. Market circumstances in the initial liberalization phase may have favoured a set of parallel wholesale inputs to incentivise entry. In the presence of strong inter- and intra-platform competitors, such exceptional circumstances in any case no longer apply.

In the regulatory debate, the concept of the ladder of investment is increasingly abandoned as it would lead to a disproportionate imposition of several access remedies to provide the same retail offers and fibre investment patterns do not reflect a 'ladder-of-investment'-approach of investors.¹⁹ A multiplication of access remedies unduly constrains the behaviour of the network investor (for example in pricing) and does not lead to efficient investment by maintaining access options for competitors that could be 'built' as opposed to bought or, reversely, imposing costly obligations that do not meet significant demand from access seekers.

To avoid the imposition of access products at multiple layers, NRAs should, inter alia, follow an appropriate geographic segmentation of markets and/or remedies for telecommunications services of the markets 5 and 6.

In the following, where reference is made to wholesale markets that can comprise several access products, DT's understanding is that in any given national or sub-national market only one relevant access product within this market should be imposed to address the identified market failure downstream.

2. Delineation of current markets 4 and 5

We believe that the revised Recommendation should provide more flexibility and ensure more appropriate results as regards the delineation of current markets 4 and 5 at national level, especially as regards product market definition and geographic market definition for market 5.

In summary:

- The revised Recommendation should allow NRAs to define a common wholesale broadband access market comprising current markets 4 and 5 where appropriate in view of national technology and market developments. Alternatively, NRAs should be permitted to define current markets 4 and 5 in view of national market circumstances.

¹⁹ S. for example Marc Bourreau, *A Critical Review of the 'Ladder of Investment' Approach*, 2009 with further references at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1493706

- The revised Recommendation should explicitly include alternative platforms competing at retail level in the wholesale market definition if significant direct or indirect constraints exist that limit the price-setting power of the operator in question. This reflects the approach in many Member States to assess the competitive constraints by alternative broadband networks at the retail level, esp. cable, on wholesale markets, also if there are no wholesale products offered on that infrastructure. The explicit inclusion of alternative platforms therefore improves the competitive analysis in regard to the effects between linked retail and wholesale markets.
- The revised Recommendation should advise NRAs to analyse in every market analysis on market 5 or a joint wholesale broadband access market whether geographically differentiated markets based exist. The analysis should be based, *inter alia*, on the reach of alternative local access platforms which often operate on a regional basis.

If an analysis of retail markets comes to the conclusion that relevant retail markets would not tend to effective competition absent wholesale regulation in certain geographies or in the entire territory of a Member State, a relevant wholesale market should be defined that allows the imposition of (a) wholesale product(s) that enables effective competition downstream.

The relevant wholesale product within the scope of current market 4 and 5 in view of competition on a fixed single-play retail access market is wholesale (physical) network infrastructure access at a fixed location (ULL).

The relevant wholesale products within the scope of current market 4 and 5 in view of competition on a fixed broadband or multi-play retail access market could be (physical) network infrastructure access at a fixed location ('ULL') and wholesale broadband access ('Bitstream access').

Market and technology developments in the transition to NGA have raised the question whether the current delineation of markets 4 and 5 is still valid. In particular, certain fibre technologies, as well as cable networks, do not permit physical unbundling, or do not allow it at the network layer where ULL is currently offered.

- Sub-loop unbundling is no longer possible in case VDSL Vectoring is deployed.
- GPON fibre to the home cannot be physically unbundled before the splitter (which in case of FTTB is normally located in the basement of the building).
- 'Virtual' unbundling (VULA) is an active product and can be offered at different levels of the network, potentially providing for a link in a chain of substitution between different wholesale products currently placed in markets 4 and 5.

In particular when and where these types of fibre infrastructures become determining for broadband competition, maintaining a separate, technology neutral unbundling market may lead to the imposition of regulation on the 'wrong' layer of the network, leading to inefficient investments, over-regulation and a loss of consumer benefits. A market analysis based on the retail market in that case is likely to conclude that an active wholesale product would be most efficient, as well as sufficient to ensure effective downstream competition.

To the contrary, in ADSL-driven broadband markets where significant unbundling-based competition is in place and is expected to continue, different demand-side structures (where LLU is used by competitors to provide own Bitstream services on the merchant market) and differences in prices of products and value remaining with the regulated operator indicate that markets 4 and 5 will remain separate for the relevant time period.

The same applies in markets where point-to-point fibre unbundling is to become the relevant wholesale offer on a future fibre access market or where (potentially symmetric) access to the splitter in a GPON environment ensures effective competition downstream.

Where access to passive infrastructure and/or the terminating segment has been mandated and significant demand for such access exists, such access may either fall into current market 4 where the NRA still identifies separate markets 4 and 5, or may be designed as a separate, symmetric regulatory obligation that should be based on Article 12 of the Framework Directive. Given the different needs for investment by access seekers for connecting to an active access product at a higher level of the network and for providing broadband services based on duct access or access to the terminating segment next to the customer's premises and the different price for such products, NRAs are likely to conclude that demand side substitution between, e.g., a VULA product and unbundled access to in-house-cabling in a GPON roll-out does not exist.

Since the appropriate market definition between markets 4 and 5 will not only differ between Member States but may also change over time as NGA roll-out and take-up advances in different national markets, the Recommendation should neither impose separate markets for unbundling and Bitstream access nor a joint market covering all wholesale broadband access products. The list of relevant markets itself should include the option to define a common wholesale broadband access markets comprising both current markets 4 and 5, while keeping current markets 4 and 5 as sub-markets in the list.

This would give an important signal to NRAs to move to a joint wholesale access market where appropriate in the light of national circumstances without having to justify this as a national exception, and without triggering potential Commission or BEREC intervention.

3. Role of symmetric regulation in assessing the need for regulation on markets 4, 5

As outlined above the Recommendation should oblige NRAs to take into account symmetric regulation in place under national law, national regulatory practice or, in the future, any potential EU legislation on the topic. Where national or sub-national retail markets tend towards effective competition based on the symmetric regulation in place for access to, e.g., civil engineering infrastructure, wholesale markets downstream to that access would not fulfil the three criteria test and should not be regulated.

4. Inclusion of self-supply in wholesale market definition

With regard to future markets 4 and 5 or a joint wholesale broadband access market, self supply by alternative platforms that compete at the retail level should be taken into account at the market definition stage.

The commonly used approach to market definition is based on applying the SSNIP test. Under this test, a market is defined by: "*postulating a hypothetical small, lasting change in relative prices and evaluating the likely reactions of customers to that increase. [...] The question to be answered is whether the parties' customers would switch to readily available substitutes or to suppliers located elsewhere in response to a hypothetical small (in the range 5 % to 10 %) but permanent relative price increase in the products and areas being considered. If substitution were enough to make the price increase unprofitable because of the resulting loss of sales, additional substitutes and areas are included in the relevant market*".²⁰ The SSNIP test identifies all the sources of competitive constraints that are faced by the firm under investigation. There are two types of constraints: direct constraints, reflecting the ability of the purchasers of the wholesale product to switch to an alternative supplier of the wholesale product; indirect

²⁰ European Commission Market Definition Notice (97/C 372/03), paras 15 and 17

constraints, reflecting the ability of the final consumers of the product in the retail market to switch to an alternative provider of the product.²¹

In practice, direct constraints in wholesale broadband markets are often limited, as the operators of alternative access networks are not required by regulation to provide access, and thus do not provide this access. Regarding current market 4, direct constraints are also limited by the fact that ULL is an access product which the Commission specifically designed at the time by reference to the copper network and, as a result, it is not technically feasible for certain alternative networks to offer ULL access. Therefore, the definition of wholesale markets in the telecommunications industry has to be based primarily on indirect constraints.

Competition law practice varies with regard to the issue in question: the need to take indirect constraints into account at the market definition stage was stated by the General Court in its judgment relating to the Schneider/Legrand merger.²²

There is established precedent of the application of indirect constraints at the market definition stage in broadband markets, which has been accepted by the Commission.²³ In the UK, Ofcom systematically includes cable and ULL self-supply in the relevant market for wholesale broadband access in the market reviews.²⁴ The Portuguese NRA (ANACOM) also considered cable and ULL-based wholesale broadband services on the basis of indirect constraints at retail level.²⁵

If the SSNIP test ignores the impact of a price increase on downstream (retail) demand, it can lead to narrowly defined wholesale markets and critically influence the calculation of market shares. If the market is defined too narrowly, the market share of the regulated undertaking and will be higher. If indirect constraints are then considered at the SMP assessment stage, this will bias the assessment of SMP.

Against this background, the revised Recommendation should explicitly opt for taking into account indirect constraints in the context of wholesale broadband access markets at the market definition stage.

²¹ Cf. G. Edwards and V. Sorana (2006): “Indirect Constraints and Captive Sales: Overview of regulatory practice and competition case law with regard to indirect constraints and captive sales in market definition and market power assessment”, CRA International, available at http://www.crai.com/ecp/assets/Indirect_constraints_and_captive_sales.pdf.

²² Case T-310/01, *Schneider v Commission* [2002] ECR II-4071. In that case, the Commission had defined several upstream markets for a variety of low-voltage equipment used for electrical installations in buildings. Some producers of this equipment were vertically integrated. In its decision the Commission refused to take into account the indirect constraints exercised by the vertically integrated producers, such as Siemens and ABB, on the wholesale suppliers of equipment. Schneider appealed to the General Court, alleging inter alia that the Commission erred in not considering the indirect constraints posed by vertically integrated producers. The General Court upheld Schneider’s plea, holding that: “It cannot be denied that, in the context of such competitive procedures, ABB and Siemens, as integrated producers, compete with their non-integrated counterparts such as Schneider, either directly where the non-integrated manufacturers agree with switchboard assemblers or installation engineers to submit their bids or indirectly where those manufacturers sell panel-board components to a switchboard assembler whose bid has been accepted. In both cases, the prices of the non-integrated manufacturers are subject directly to competitive pressure from the parallel bids made by ABB and Siemens in response to the same invitation to tender”.

²³ See Ofcom, “Review of the wholesale broadband access markets 2006/07”, 21 November 2006, paras 4.126 et seq., available at <http://stakeholders.ofcom.org.uk/binaries/consultations/wbamr/summary/wbamr.pdf>.

²⁴ See Ofcom, “Review of the wholesale broadband access markets”, Statement, 3 December 2010.

²⁵ See Commission decision of 5 January 2009, Case PT/2008/0850: Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location; and case PT/2008/0851: Wholesale broadband access.

5. Delineation of current market 6 and 5

NRAs in Europe have generally defined a separate market for terminating segments of Leased Lines. No general trend of substitution between Bitstream Access and Leased Lines can be observed.²⁶

- Leased Lines themselves develop to very high bandwidth up to 10 or more GBit/s, far beyond today's possibilities of Bitstream access. Therefore, only lower bandwidth Leased Lines could only be in question for a substitution.
- However, Leased Lines are dedicated lines with special quality features. This is still a feature explicitly requested by wholesale and retail customers in contrast to best effort, IP-Network based data transmission via Bitstream. The quality of data transmission regarding a guaranteed bandwidth, security options and dedicated line features clearly distinguish Leased Lines and Bitstream access.
- The product features of Leased Lines, the more complex infrastructure and the stated unique features of Leased Lines and the point-to-point character of this dedicated data transmission lead to a higher price level for Leased Lines compared to Bitstream and therefore to a significant difference in product pricing between Leased Lines and Bitstream. Therefore even at lower bandwidths, Leased Lines and Bitstream access are not perceived as substitutes.

As a recent market analysis in the Netherlands shows, there might be countries, where Bitstream and leased line product features differ from that situation. Whether substitution occurs with market 5 could be analysed in detail by each NRA. But the general picture within the EU will still lead to distinct markets 5 and 6.

Question 9:

On the basis of the three criteria test carried out at EU level, should any of the markets listed in the Recommendation be removed from the list in the revised Recommendation? If yes, please provide comprehensive reasoning thereof.

1. Access to the public telephone network at a fixed location for residential and non-residential customers.
(Market 1)

Market 1, the only retail market remaining in the current list of relevant markets should be removed. A forward-looking analysis of the market clearly shows that - in the presence of adequate wholesale regulation where appropriate - no major entry barriers exist on this market.

The 2007 Recommendation states that

“Regulatory controls on retail services should only be imposed where national regulatory authorities consider that relevant wholesale measures or measures regarding carrier selection or pre-selection would fail to achieve the objective of ensuring effective competition and the fulfilment of public interest objectives.”²⁷

Both in mature competitive fixed access markets with competition based on ULL, Bitstream and/or broadband cable and in markets characterized by fixed-mobile substitution, there is sufficient evidence for the tendency to effective competition of market 1. In well-developed fixed markets, regulated wholesale services provide a stable

²⁶ In the Netherlands, a substitution between high quality Bitstream Access and Leased Lines with lower bandwidths has been identified by OPTA, s decisions OPTA/AM/2012/203110 and OPTA/AM/2012/203111.

²⁷ 2007/879/EC, Recital (15)

entry to the retail access market. ULL-based competitors mainly use their own infrastructure up to the local exchange. For the 'last mile', they obtain wholesale services from the incumbent operators. Cable which has seen strong increases in market share in a number of EU markets including Germany is solely based on independent infrastructure. With cable gaining ground and access-based competition being stable, retail access markets are characterised by inter and intra-modal competition and display a clear tendency to effective competition. In markets where fixed-mobile substitution is a driving force of retail competition, multiple access platforms moreover allow sustainable multi-platform competition behind any existing entry barriers.

Following the deregulation of retail services markets in the 2007 Recommendation, competition law has proven sufficient to deal with any potential competition problems on retail markets in the electronic communication sector. Continued regulation of market 1 was due to exceptional circumstances and partly based on a set of particular features of the regulatory framework in force in 2007 that are no longer present in today's (2009) set of Directives.

Most NRAs have not deregulated market 1 in their respective country. However, until the present round of market analysis, regulation on this market was based on the previous (2002) regulatory framework that based Carrier (Pre-) Selection (CPS) obligations under former Article 19 (1) Universal Services Directive on an SMP-finding in market 1. Equally, wholesale line rental obligations were – and partly still are - based on a retail market SMP finding. NRAs that did not want to deregulate the retail access market and the above-mentioned wholesale products at the same time had a strong incentive for keeping regulation on market 1 in place. SMP-findings were based on high remaining market shares of the incumbent without an analysis of the three criteria.

Current and future market developments support deregulation of the market in this revision. Firstly, since 2007 regulated operators across Europe have significantly lost market shares in this market. In Germany, the market share of Deutsche Telekom declined from 71,22% in 2008 to 58,81% in 2011 (findings of current draft for the review of market 1 by BNetzA). Elsewhere in the EU footprint of Deutsche Telekom, established operators lost significant market share or their share remained stable on an already moderate level, as is the case for Romtelecom / Romania (December 2010: 60%, December 2010 55%, June 2012: 52%) and Magyar Telekom / Hungary (October 2011: 62.7%, October 2012: 59.3%).²⁸

Furthermore, the access market itself changes fundamentally as access lines are transformed into all IP, broadband-capable accesses. On the access markets inter-modal competition from cable, alternative fibre and, increasingly, mobile as outlined under question 1 undermines the market positions of the established operators.

For broadband lines as well as voice-only lines based on broadband, a set of wholesale products is available ensuring low entry barriers into the market. As broadband lines compete with traditional voice-only PSTN access lines and will gradually replace them (s. above Q2), functioning wholesale regulation in place (at ULL and/or Bitstream level) can be seen as an additional safeguard for removing market 1 from the Recommendation. At the same time, in an all-IP service environment, continued C(P)S regulation is no longer justified (s. below).

Present and expected developments clearly demonstrate that market 1 is contestable and the wholesale regulation in place is working. It should be removed from the list of relevant markets. The deregulation of market 1 in the next Market Recommendation would give further proof that the EU framework, by using the instrument of the Recommendation on relevant markets as a tool, can deliver necessary deregulation in view of changing market conditions.

²⁸ Fixed retail broadband market shares are considerably lower: for Magyar Telekom (based on broadband internet penetration) it was 34.7 % in October 2012.; Romtelecom's market share on fixed broadband market is ca. 30%.

2. Call origination on the public telephone network provided at a fixed location. (Market 2)

The present Recommendation identified a separate call origination market. The explanatory memorandum explains that “*An undertaking may make a decision to enter the combined market for access and calls or simply enter part or all of the calls market*”.²⁹

With the new regulatory framework, the obligation for Carrier Preselection (CPS) is imposed under market 2. Most alternative call offers, however, do no longer rely on C(P)S. In the large majority of Member States, retail markets for telephone calls are driven by access operator bundles on broadband on the one hand and over-the-top service provision on the other hand. Access-based provision of telephone calls no longer provides a future-proof business model. This development will continue within the period relevant for this revision of the Recommendation. With a move to all-IP access lines, call origination will eventually cease to be a meaningful service.

CPS is already becoming insignificant: for example, within the overall volume of calling minutes in Germany, Carrier Preselection has remarkably lost relevance in the calls markets, which are no longer regulated. Within four years, both call-by-call and pre-selection call minutes on Deutsche Telekom’s network have decreased by more than factor three.³⁰ Regarding the overall market, the share of CPS-Minutes has diminished to a minor factor (2005: 62 billion minutes 2011: 10 billion minutes).³¹

In those markets characterized by fixed-mobile substitution, call by call and pre-selection calls carried out on the fixed network are even less of a role. In both mobile and fixed broadband bundles, voice services will become one part of the access bundle. The market for phone calls is competitive absent call origination regulation, which thus no longer fulfils the three criteria test.

In the absence of a market failure on retail calls markets, call origination markets containing origination of CPS-Calls, should no longer be susceptible to ex-ante regulation.

In Member States where market 2 would still account for a substantial part of the services market, for example for value-added services, NRAs may continue to find that the three criteria are met on this (sub-)market in the first round of market analysis. The diminishing importance of this market cannot justify an inclusion in the Recommendation anymore.

3. Markets for termination on individual fixed and mobile networks (3, 7)

The termination markets 3 and 7 should be removed from the list of relevant markets. The three criteria are not fulfilled on these markets.

Intense ex-ante regulation of the last years has created a situation where competition law and symmetric regulation under Article 5 Access Directive where applicable are sufficient to counter any potential market failure on these markets.

In the satiated voice markets there are stable interconnection relationships and hardly any new relations to be established. There exist approved reference interconnection offers which have not been changed materially for years. The Commission Recommendation on termination rates has brought severe reductions of termination rates

²⁹ Explanatory memorandum, p. 17

³⁰ Development of Carrier Selection and Carrier Preselection minutes on Deutsche Telekom’s network from 2007 to 2011; detailed figures are business confidential information

³¹ Bundesnetzagentur, “Jahresbericht 2011”, p.83

to marginal costs and imposed symmetric rates. Market analysis and choice of remedies have become a routine. After the implementation of the Commission Recommendation in 2014, similarly low rates under a harmonised methodology would also be the outcome of future ex-ante rate settings and cost modelling.

In view of price levels driven down to marginal costs, further ex-ante scrutiny would be disproportionate, creating high administrative costs with no additional consumer benefits.

Furthermore, a deregulation of termination markets will re-establish bargaining power between the operators which due to relatively balanced traffic between the access operators will guarantee a market driven development. In case operators still felt disadvantaged in future negotiations on termination rates, they will not rely on the competition authorities alone but can still get support from their NRA via the instrument of dispute resolution under Article 5 Access Directive that is linked to the control of access to end-users, which is the case for termination.

Developments at retail level moreover curtail any remaining price setting power in termination. Against the background that OTT services which provide 'free' alternatives to existing communication services such as VoIP or even video conferencing and instant messaging are spreading and providing a substitutes for end-user's needs for traditional voice calls, any abusive termination pricing foster this revenue-eroding trend. This is impressively demonstrated on the messaging market by the enormous growth rates of WhatsApp. Future technology and product innovation might even bring further cuts in termination rates beyond the levels reached by the Recommendation.

A removal of markets 3 and 7 would confirm the transitory character of sectors-specific regulation which may not only stop after no undertaking with SMP can be found but also when – according to the third criteria – the instruments of competition law are sufficient to control the market. It furthermore would be a helpful act to dispose of inefficient bureaucracy which from 2014 on would otherwise be produced by an insignificant and disproportionately laborious battle of material in the proceedings of market analysis, remedy determination, cost modelling and corresponding court proceedings.

Question 10:

If the answer to the previous question is yes, please specify the qualitative and quantitative impact of such removal of markets on consumers (users), competition, and development of the internal market. Please provide separate reasoning for each market you propose to delete from the list.

Concerning markets 3 and 7 it has been demonstrated in the answer to question 9 that keeping these markets on the list would mean inefficient bureaucracy as a situation will have been reached for which a surveillance of competition authorities is sufficient and where regulatory authorities lack superior knowledge to create a better result than market forces and uncertain future technological and product innovation would do. There are numerous papers published³² which blame the regulatory forced pure LRIC standard for determining termination rates already as an assault and before the background that this will nevertheless be practically irreversible and that NRAs keep competences to intervene via article 5 of the access directive it is straightforward that SMP-based sector-specific intervention has to come to an end for these markets with the next market Recommendation.

³² Frontier Economics "Assessing the impact of lowering mobile termination rates,," July 2008; Deloitte "Analysis of „pure LRIC” methodology with potential consequences of its application for calculation of MTRs in Polish mobile market", August 2012; Frontier Economics, „The impact of recent cuts in mobile termination rates across Europe” report prepared for Vodafone Group, May 2012

Question 11:

On the basis of the three criteria test carried out at EU level, should any of the markets regulated by NRAs on the basis of national circumstances (such as SMS termination or broadcasting transmission services) be added to the list in the revised Recommendation from an ex ante perspective? Please provide comprehensive reasoning.

No additional market fulfils the three criteria. We comment on the case of sms termination in particular.

- **SMS termination**

As voice termination does not qualify to be on the list of relevant markets, it would be even more inappropriate to reconsider SMS termination as a candidate, as messaging is easier to substitute and free OTT services like WhatsApp have already severely influenced retail SMS pricing and revenues. Currently WhatsApp delivers more than ten billion messages which is more than ten times the volume from ten months before. According to "App Monitor Deutschland" of the German magazine focus in September 2012 about 43% of interviewed Android Smartphone users use the WhatsApp messenger. This leaves no price setting power to operators as higher termination rates would foster this development (and pushing customers into free services would also affect own revenues as outgoing sms would also be substituted). This also means that the NRAs in France, Denmark and Poland should be encouraged to withdraw their current ex-ante interventions.

Question 12:

If the answer to the previous question is yes, please specify the qualitative and quantitative impact of adding those market(s) on consumers (users), competition, and development of the internal market. Please provide separate reasoning on the impacts for each market you propose to add to the list.

Question 13:

On the basis of the three criteria test carried out at EU level, can any other markets be indentified that should be added to the list in the revised Recommendation, from an ex ante perspective? If yes, please provide comprehensive reasoning thereof.

None.

We examine the case of IP Peering and Interconnection in particular, as two NRAs (UKE and ARCEP) have investigated the market in the recent past:

- **A (wholesale) market for IP Connectivity?**

In the recent past both regulatory and competition authorities have shown an increased interest in the market for IP connectivity, or more specifically IP peering and transit. In one case – ARCEP – a systematic reporting procedure has been set up to submit this inter carrier business to a constant monitoring. However, this has been done in absence of a proper market definition.

Before even considering the inclusion of a market for IP connectivity on the list of recommended market, the first step would be to properly define the market.

Abstracting from a concrete definition it seems worthwhile to quickly conduct a plausibility check for the 3 criteria with regard to IP connectivity:

1. The presence of high and non-transitory barriers to entry;

There is a large number of companies that offer global IP transit services at various locations across Europe. In recent years we have seen both market entries (and market exits). Hence, it is safe to assume that barriers to entry are not insurmountably high.

2. A market structure which does not tend towards effective competition within the relevant time horizon;
The average price level for IP connectivity has decreased between 20% and 30% every year for the past ten years. In the same time the transported traffic has roughly doubled, every year. In combination with the number of actors this is a strong indication that both actual and potential competition is effectively high.

3. The insufficiency of competition law alone to adequately address the market failure(s) concerned.
There is no reason to assume that competition law would not be able to address a market failure. But since there is no market failure the criteria test would not even have to be conducted up to stage 3.

Furthermore the French competition authority has ruled recently in a case that revolved around alleged anti-competitive behaviour by Orange-France Télécom.

"In this case, the US telecommunications operator Cogent claimed, among other things, that France Télécom was compromising the peering system (enabling exchange of traffic flows between networks, free of charge) used by transit operators, by requesting payment for opening up additional technical capacity for access to Orange subscribers. Regarding this claim, the Autorité considered that in view of the highly asymmetric nature of the traffic exchanged between France Télécom and Cogent, such a payment request does not in itself constitute an anti-competitive practice inasmuch as this type of remuneration is not uncommon in the Internet industry in cases where a significant imbalance exists between the incoming and outgoing flows exchanged between two networks, and is consistent with the overall peering policy adopted by France Télécom, with which Cogent is familiar"³³:

This demonstrates that competition law and competition authorities are capable of addressing potentially anti-competitive behaviour in this domain. Hence, there is no reason to consider extending the list of markets requiring ex-ante regulation by including IP connectivity.

Question 14:

If the answer to the previous question is yes, please specify the qualitative and quantitative impact of the relevant market(s) you propose to add on consumers (users), competition, and development of the internal market. Please provide separate reasoning on the impacts for each market you propose to add to the list.

Question 15:

On the basis of the three criteria test carried out at EU level, can any transnational market(s) be identified in the revised Recommendation, from an ex ante perspective? If yes, please provide comprehensive reasoning thereof.

None

Question 16:

If the answer to the previous question is yes, please specify the qualitative and quantitative impact of the relevant market(s) you propose to introduce on consumers (users), competition, and development of the internal market. Please, provide separate reasoning on the impacts for each market you propose to introduce.

³³ http://www.autoritedelaconurrence.fr/user/standard.php?id_rub=418&id_article=1971