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The Review 2006 of the EU’s regulatory framework for electronic communications: Frequently Asked Questions

What is the EU regulatory framework for electronic communications, and why does it need to be reviewed now?

The current EU framework for electronic communications is a single set of rules (consisting of five Directives) for all communication services that are transmitted electronically, whether wireless or fixed, data or voice, Internet-based or circuit switched, broadcast or personal. These EU rules are designed to stimulate competition and create opportunities for innovative companies. They lead to lower prices and a wider range of products and services for the consumer. The framework entered into force in 2002 and had to be implemented in the Member States by July 2003 (1 May 2004 by the new Member States).

There are presently five Directives of the European Parliament and the Council. These can be found at:

In parallel, the Commission proposes to revise the Recommendation on Relevant Markets, adopted in 2003 and which identifies those markets considered suitable for regulation, if they are uncompetitive. The 2003 Recommendation can be found at:

In keeping with "better regulation" principles, the framework provides for a regular review to ensure that it keeps pace with technological and market developments. This year’s first review of the legal instruments that make up the framework includes a thorough examination of its principles and implementation, in particular to remove any bottlenecks that are delaying the provision of faster, more innovative and competitive services.

In the 2006 Review of the EU regulatory framework, the Commission follows a “triple-play” approach aiming to promote innovation, investment and integration:

The most important aims to be achieved in the 2006 Review are to:

- strengthen incentives for investment through competition to provide infrastructure,
- promote innovation through openness of the rules for new technologies, and
- complete the single market, by making the application of EU rules more consistent across the 25 Member States and by encouraging cross-border communication services.
What documents are published by the Commission today?
The four documents being published today in support of the Public Consultation are the following:
- a Commission Communication COM(2006) 334 giving a retrospective presentation of the effectiveness of the current rules governing eCommunications in Europe:
- an "Impact Assessment" SEC(2006) 816 of various policy options for the future, analysing the advantages and disadvantages of each of these:
- a "Working Document on proposed changes" SEC(2006) 817 presenting the proposed changes to the directives, as currently formulated by the Commission as a starting point for the public consultation:
- a draft "revision of the Recommendation on Relevant Markets" together with an explanatory memorandum SEC(2006) 837:

What is the timescale for the adoption of the changes initiated today?
Current plans are for formal Commission legislative proposals to the European Parliament and the Council to be submitted at the end of 2006. Before these come into effect, they will need to complete the legislative adoption procedure and be transposed into the national laws of Member States. Current expectations are for this to be completed by 2009 or 2010.

In contrast to this, the revised Commission Recommendation on Relevant Markets will come into effect as soon as this is adopted and published by the Commission (early 2007). National regulators must then begin to apply the new recommendation.

Why can ex-ante regulation boost investment?
The reason for regulating the electronic communication markets is that they were originally dominated by state-owned monopolies and are still subject to structural problems of competition. Under EU rules, electronic communication markets were progressively opened up to competition at the end of the 1990s. The objective of regulation on these markets is thus to continue to open markets to greater competition by new market entrants until a situation of sustainably effective competition – at best, infrastructure–based competition – has been reached. As soon as this happens, ex-ante regulation of the electronic communications markets can and must be phased out and be left to the ex-post control by competition law and authorities.

Good ex-ante regulation provides just enough stability to stimulate competition and investment. Statistics show that EU countries that have applied the EU rules in a timely and efficient manner, following the principle of competition, have clearly achieved the best results in terms of investment in new networks and take-up of new innovative services. The OECD regulatory reform index shows that those countries with a poor record of regulatory reform have less investment. Also incumbent telecoms operators invest in new services and networks where they feel they can compete effectively.
While investment in the electronic communications sector is rather high in the UK (0.42% of GDP), Denmark (0.72% of GDP) and the Netherlands (0.79% of GDP) – in all these countries we observe, in principle, a very effective application of EU rules –, investment made in the German market reaches only 0.27%. The correlation between investment and competition in infrastructure in the EU is particularly visible in the broadband markets. Countries with strong competition between incumbents and cable operators tend to have the highest broadband penetration. Thus, broadband penetration levels in Denmark, Finland, Sweden and the Netherlands are all above 20%, well ahead of the broadband penetration level achieved in the US.

The EU sector for electronic communications is a very fast-moving sector with a lot of technological change. Are the EU rules taking account of such change?

The EU rules of 2002 are designed to be future-proof. They apply to the markets, rather than the technologies. This enables them to take account of the convergence of digital technologies that allow everything from phone calls to entertainment to be delivered over all sorts of networks to all sorts of devices – PCs, televisions, mobile phones and more. The aim is to move towards truly competitive markets with enhanced cross-border competition. One of the main principles of the framework is that, when markets become sustainably competitive, sector-specific regulation that controls the market power of dominant companies must be removed.

What's wrong with giving operators "regulatory holidays" to enable them to earn a fair return on high-risk investments?

The EU telecoms rules of 2002 already explicitly provide for a "light touch" regulatory approach to emerging markets in order to encourage investment. This approach is applied to specific cases by the national regulator, in close co-operation with the Commission. However the EU regulatory framework does not allow a specific operator or a specific technology to be exempt from regulation as long as there is a structural competition problem. This is why the Commission is opposed to the idea of "regulatory holidays".

One of the main objectives of today's EU rules is to promote investment that is a response to enhanced competition. So ex-ante regulation always needs to take this into account. Regulated access for competitors to the infrastructure of an incumbent therefore also needs to ensure, under the present rules, that a "reasonable return" on investment is guaranteed for the incumbent.

What are the markets that the Commission considers ripe for removal from ex-ante regulation and why?

The Commission Recommendation on Relevant Markets of 2003 identified 18 markets (7 retail and 11 wholesale markets) on which ex-ante regulation was required in case of significant dominance by one or several operators.

The Commission considers now that for a number of retail markets, existing wholesale arrangements are already ensuring sufficient competition to give retail customers a good deal. This has been borne out in the market analyses of a number of national regulators. Retail competition should grow further as and when the wholesale remedies so far adopted by national regulators are fully applied and produce their effects.
The retail markets that the Commission considers ripe for removal from ex-ante regulation are the following:

- Publicly available local and/or national telephone services provided at a fixed location for residential customers
- Publicly available international telephone services provided at a fixed location for residential customers
- Publicly available local and/or national telephone services provided at a fixed location for non-residential customers
- Publicly available international telephone services provided at a fixed location for non-residential customers
- The minimum set of leased lines

It is also envisaged to merge the retail market for access to the public telephone network at a fixed location for residential users with the retail market for access to the public telephone network at a fixed location for non-residential users. Altogether, the number of markets where ex-ante regulation is justified could thus be reduced from 18 to 12.

In the public consultation, the Commission is seeking advice on whether further markets (such as the wholesale market for access and call origination on public mobile telephone networks or the wholesale market for broadcasting transmission services to deliver broadcast content to the end users) should be removed from the Recommendation. The wholesale national market for international roaming would also be removed from the Regulation as soon as an EU regulation on roaming (which takes into account in particular the specific cross-border nature of this market) comes into effect.

**What happens when ex-ante regulation is removed from a market? Does it become completely unregulated?**

No – general competition rules apply. In addition, national telecom regulators will be entitled to resort to ex-ante regulation under the supervision of the Commission if the state of competition deteriorates significantly on a particular market.

**Would the 2006 Review proposals subject telephone texting to EU rules for the first time?**

For any specific customer, there is only one operator that can actually terminate calls to that person (voice and text). That is why the call termination market (market amongst operators setting the price for the termination of calls) already requires careful examination by the regulators at the wholesale level.

Telephone texting (SMS) is implicitly covered by the 2003 Recommendation on Relevant markets, as part of "Mobile call termination". However, at that time the wholesale SMS termination market was considered to be an emerging market, and hence too immature to regulate. Under the draft for a revised Commission Recommendation published today, wholesale SMS termination (having become a substitutable product for wholesale call termination) would be explicitly included in the wholesale market for mobile call termination. This would in effect subject the wholesale market for SMS termination to periodic checks by national regulators for any dominance by an operator. This could lead to a lowering of wholesale rates and ultimately the retail cost of sending SMS messages.
Each mobile network operator has a monopoly in terms of how it charges other operators for reaching its customers. This is as true for SMS termination as it is for the termination of voice calls. Since the termination charge is set by the called network, which is chosen by the called subscriber, the calling party in general is not able to affect or influence termination charges. As the market power is the same for both voice and SMS termination and as both services are sold as part of the same mobile cluster, both at retail and wholesale level, it seems appropriate to deal with them as part of a single termination market per operator.

Even under the present rules, it has always been possible for national regulators to extend the wholesale market for voice call termination on a mobile network to include SMS. The Commission is currently considering such a case notified by the French regulator ARCEP in June.

**How does the Review 2006 help citizens? What benefits will it bring for citizens?**

The Review 2006 will improve the **availability of price information for users**, by

- giving regulators specific powers to require operators to inform users about prices, and
- making it easier for third parties, e.g. consumer bodies, to publish price comparison guides.

The Review 2006 will also make **"112" emergency services** more effective and easier to use, by:

- ensuring that network operators give emergency authorities real time information about the caller's location, so that the emergency services can go straight to the correct location, and
- ensuring that disabled users, e.g., people with hearing disorders, who use text telephones, can access the "112" emergency services.

Finally, the review will increase user confidence in the internet, by

- giving regulators more powers to stop spammers, and
- requiring operators and service providers to inform their customers about any loss or theft of personal data.

**How does cooperation between the European Commission and national regulators currently function in the application of the EU regulatory framework for electronic communications?**

The current EU Framework Directive on electronic communications allows the Commission to oversee national regulatory measures in this market. The so-called “Article 7” procedure obliges national regulators to notify to the Commission their market assessments and proposed remedies. This procedure helps to ensure consistency in regulatory measures applied in all Member States, and so to improve the single market.
This procedure requires national regulators to undertake market reviews and to notify their results to the Commission and other national regulators, together with their proposed remedies for correcting the identified market failures. Such market failures may range from excessive pricing to refusal to provide access to the network. The Commission may refuse to accept a notification, for example, if it considers that either the market definition or the finding of significant market power (SMP) is incompatible with Community law or could create a barrier to the single market. The Commission may also make comments on the proposed corrective measures (remedies). Regulators are expected to take the utmost account of these comments.

Thus far, out of a total of more than 410 notifications, the Commission "veto" has been used in only a handful of cases. One reason for this is that the Commission and national regulators have worked closely together since 2002 and both understand the realities of the market place in each Member State. Even so, harmonisation of regulatory remedies remains a challenge under the current framework. Measures designed by different countries to tackle similar market failures have diverged throughout the EU.

After three years of market reviews, it is clear that the Commission's role has helped to consolidate the single market. However, it is also clear that the present rules do not provide the Commission with adequate legal tools to ensure the EU-wide consistency that is necessary to safeguard the single market.

**What are remedies under the EU regulatory framework for electronic communications?**

Remedies are the means proposed by the national regulators to correct any failure in the market or presence of significant market power that they have identified.

**Why are there problems at the moment in the application of remedies?**

Telecoms operators understandably expect regulators to treat them, and their competitors, in a similar fashion in any EU country. Yet in some cases, there is a huge discrepancy between the measures/tariffs proposed and the average measures/tariffs observed at EU level. This is particularly true for the (monopolistic) call termination markets where the national proposed measures range from immediate imposition of strictly cost-oriented pricing of the most efficient operator (i.e. mobile termination in Estonia, Cyprus) to a weak/different price regulation (i.e. mobile termination in Greece, Luxembourg, Slovenia).

In fixed access markets, the Commission has seen different approaches being adopted by different Member States in similar circumstances, in particular regarding transparency, non-discrimination, accounting separation and methodologies of cost accounting.

**What are the policy options for making the application for remedies more efficient and consistent on electronic communications markets?**

The most effective way to achieve a real level playing field for telecom operators across the EU would of course be to create an independent European telecom regulator that would work together with national regulators in a system, similar to the European System of Central Banks. In such a system, national regulators would continue to act as direct contact points with operators and could directly analyse the market. At the same time, a "light" European agency, independent from the Commission and from national governments, could ensure by means of guidelines and, if necessary, instructions that EU rules are applied consistently in all Member States. The idea of creating such a European telecom regulator is included as a policy option in the impact assessment published today.
Another option would be to ensure in the regulatory framework that the Commission is able to speed up the adoption of remedies and to check whether the proposed national remedy is efficient to remedy the competition problem. At present, the Commission may contest a regulator’s assessments of the national market boundaries or of the “significant market power” of an operator, but it may only make comments on the proposed corrective measures. Regulators are expected to take the utmost account of these comments, but are not obliged to do so. Giving the Commission the ability to review the timeliness and effectiveness of remedies would help to improve the mutual consistency of regulatory measures applied in similar circumstances in different Member States, and hence also improve the functioning of the single market.

What is radio spectrum?

Radio technologies use electromagnetic waves to send information in free space. Many different radio applications can be used at the same time by employing waves of different “frequency” (the number of times an electromagnetic wave vibrates in a second, in “Hertz” units, Hz). This is akin to having many different “paths” to reach the same destination. As long as the “paths” are not exactly the “same”, signals do not affect each other (thereby avoiding “interference”). The radio spectrum is defined as frequencies between 3 kHz and 300 GHz.

Signals transmitted at various frequencies behave in different ways. Broadly speaking, the lower the frequency, the greater the range (but the smaller the flow of information that can be carried). Furthermore, different frequencies are absorbed differently by air, water, buildings, etc., so radio applications are always seeking to use frequencies that are optimal for their purpose. For instance, mobile phone users expect to be able to communicate without hindrance inside buildings, and this requirement needs to be reflected in the selection of frequencies.

The radio spectrum is divided into “bands”, i.e. ranges of frequencies. Different applications use different bands. Terrestrial TV is roughly in the area between 400 and 800 MHz, mobile phones around 900, 1,800 and 2,000 MHz, cordless phones just below 1900 MHz, WiFi “hot-spots” at 2.4 or 5 GHz and satellite communications often in even higher frequencies.

The radio spectrum is accommodating a growing number of applications (those mentioned above, but also GPS, radars, earth observation and weather satellites, telemetry, radio astronomy, medical implants, hearing aids, sensors, “smart” tags...). Given the transmission characteristics of radio spectrum, there is currently a particular high demand for frequencies below 3 GHz.

Why is spectrum important?

The total value of electronic communications services that rely on radio spectrum in the EU is estimated to exceed €200 billion, equal to between 2% and 2.5% of Europe’s annual GDP\(^1\). This could grow considerably if there were a genuine single market in which pan-European services could be rolled out. New services and technologies would become available earlier and consumers would have a broader choice resulting from the increased competition. Granting spectrum usage rights is traditionally a national prerogative, but today’s market players using spectrum or developing new technologies have ever decreasing chances of recouping their investment within the confines of a national market.

\(^1\) See the study by Analysys et al. ‘Conditions and options in introducing secondary trading of radio spectrum in the European Community’ (2004), p.12.
Radio spectrum knows no borders, but is at present managed at the national level, normally in an administrative way that creates scarcity, by prescribing in detail what every part of the spectrum may be used for in that Member State. The overall direction of policies affecting spectrum users (e.g. in the research, environment, transport, and information and communication technology fields) is, however, increasingly developed and agreed for the EU as a whole. This suggests that the EU needs to create a common, pan-European market for wireless devices and services that will release the technological and economic potential of this resource. National spectrum regulators have already managed to develop some Europe-wide solutions to specific spectrum management challenges, but much more needs to be done.

Today, suppliers of any new wireless technology have great difficulty in accessing adequate radio spectrum in the EU, despite the fact that many radio frequency bands are actually under-used or even "empty". The Commission expects spectrum management reform to generate new opportunities for industry and consumers, more growth, jobs and innovation, as well as to support social policies, safety-of-life operations and public use. An independent study conducted for the Commission has shown that a saving of 8-9 billion Euro could be achieved through the better management of Spectrum.

How is spectrum managed at the moment?

The traditional approach, or "administrative" model, is for public authorities to regulate in detail all the characteristics of radio emitters and license spectrum users. The key aim is to avoid interference, particularly for services of public interest. The approach is to issue individual rights to use frequencies by segmenting the available spectrum into specific bands reserved exclusively for certain technologies or applications.

Other approaches for managing the rights to use radio spectrum have been developed and are now considered as alternatives to the administrative model:

- **trading and flexibility model**: spectrum users are given a tradable right. The objective is to ensure that the most efficient use of spectrum prevails. This model appears suitable where commercial suppliers of wireless applications and services compete for exclusive rights to use spectrum resources. This model empowers a right holder to decide on the use of a band of spectrum, or to buy or sell the right to use that band to other operators,

- **unlicensed model**: several local users are jointly using the spectrum band without a licence, but there is no guarantee of interference-free operation. Interference effects have to be tolerated, but can to a certain extent be mitigated by technical means, so that they do not critically affect transmission. This management model, already used for e.g. cordless phones and WiFi "hot spots", has considerably lowered the radio resource access hurdles for innovative applications.

New technologies also open up the prospect of complementary spectrum management approaches such as "self-governing" systems via "intelligent" radios, or "underlay" use of spectrum (i.e. very low power applications operating in the same bands but not disturbing high-power transmissions).

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Why does spectrum management need reform?

The traditional system of managing spectrum is under strain. The digital revolution has broken the boundaries between TV, telephony and the internet and the traditionally segmented and rigid approach to organising the use of frequencies has become inefficient, as new technologies are capable of delivering a mix of services and as technologies become substitutable.

As spectrum use has evolved, so traditional regulation has thrown up often unintended barriers to suppliers of innovative applications and services. With the rapid growth in society’s demand for wireless applications, traditional spectrum management approaches are increasingly yielding inefficient spectrum utilisation and artificially restricting innovation and competition. New and presumably better technologies are forced higher and higher up in the spectrum, leading to smaller coverage and therefore more expensive networks. Action is needed to improve the efficiency of spectrum use, promote innovation and provide greater flexibility for users and more choice for consumers.

Since, today, most spectrum throughout the EU is awarded through a licence, a new service can normally make use of spectrum only at the expense of existing uses or users. The gap between market demand and supply under current spectrum distribution practices significantly impairs efficient use of spectrum and inefficient use creates costs as well as slowing down the take-up of innovative services, to the detriment of consumers and the economy as a whole.

What is the new approach that the Commission proposes on spectrum management?

In the 2006 Review of EU regulatory framework for electronic communications, the Commission proposes to eliminate much of the inherent rigidity of traditional national radio spectrum management, by giving electronic communication service suppliers more freedom to use radio spectrum resources as they choose, picking what they judge to be the best technology to use and combining the services that they want to offer. This in itself should greatly reduce inefficiency and hence spectrum scarcity for those services. Wherever possible, the number of users in a specific spectrum band should not be limited by regulation. This approach has been already used successfully to introduce applications such as cordless phones and WiFi.

The Commission believes that a new system for spectrum management is needed that permits different models of spectrum licensing (the traditional administrative model, unlicensed and new market-based approaches) to coexist so as to promote economic and technical efficiency in the use of this valuable resource. Where it is not possible to let in all interested users (due to the risk of unacceptably harmful interference), individual licences could be granted. In addition, holders of spectrum usage rights should be free to supply any type of electronic communications service (the principle of “service neutrality”), subject to certain safeguards, and to use any technology, abiding by common conditions (the principle of technology neutrality).

Greater flexibility in the use of new wireless technologies will lead to increased innovation and investment in services, and competition among services and technologies, in turn boosting competitiveness, jobs and the range of services available to consumers, while all the while growing the European economy. The administrative model of spectrum management will remain important especially where, on balance, legal certainty and interference management issues are priorities and where public interest objectives are at stake.

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3 The alternative is for new services to be given “virgin” spectrum at increasingly higher frequencies, which can however substantially increase the cost of new systems.
The Commission also proposes in the Review 2006 that rights within selected frequency bands should be made available for private buying and selling (so-called "secondary trading") according to common rules across the EU. This would make it possible for promising new applications to access spectrum and allow the market, rather than regulators, to pick the "winners" amongst the new services available to consumers. Independent estimates suggest that significant net gains (around €8-9 billion/year) for the European economy could be made by the combination of flexibility and market mechanisms that put spectrum to its most promising uses EU-wide.

The new spectrum approach can only deliver the foreseen benefits if common rules apply in all Member States and national spectrum markets are opened up in a uniform manner. This will entail defining basic principles and anchoring them in the regulatory framework. A robust system of collective and coordinated decision-making is also needed – a European spectrum agency would be one possible policy option –, to ensure that national measures are taken faster than at present and to guarantee a level playing field for all players.

Finally, the Commission also proposes to establish regulatory mechanisms allowing industry and users to benefit from the creation of EU-wide unlicensed spectrum bands, as well as common licensing conditions for pan-European services, such as those provided by satellites.

What are the advantages for consumers to be gained from a more market based approach to spectrum management?

Seen from a consumer's perspective, a market-based approach to spectrum allocation may allow service providers to become more innovative, and to respond faster to emerging consumer demands in the market place.

For example, consumers will expect any portable radio devices they have bought in one Member State, to work in all other Member States without difficulty. Shortage of spectrum should never become a reason for slowing down deployment and commercial take-up of a service, when operators are more easily able to purchase the additional spectrum that they need to cope with rising demand. The savings and increased revenues achieved by operators that are buying and selling their usage rights to spectrum - should ultimately be passed on to consumers as new types of service becoming economically viable for the first time, together with reduced prices and improved quality levels for existing services.

Why does the Commission feel that an EU agency could be needed to manage radio spectrum?

In the USA, spectrum is managed by a single agency, whereas in the EU, the equivalent market is managed by 25 separate agencies. The possibility of a single European regulator/spectrum agency is mentioned in the impact assessment for the 2006 review. To many, this seems likely to be the most efficient way to complete the EU single market – at least in regulatory terms. We are interested to hear what stakeholders will say on this during the consultation. Such a regulator would in any event be based on a model that includes national regulatory authorities.

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4 Exceptions to service neutrality would need to be proportionate, time-limited, non-exclusive, justified and necessary to achieve a limited number of legitimate general-interest objectives.
**What does the Commission mean by "structural separation"?**

Structural separation means that telecom regulators could require a dominant operator to provide non-discriminatory access to all operators by separating infrastructure provision from service provision to a greater or lesser extent. Today, the EU regulatory framework for electronic communications does not foresee structural separation as such as a regulatory remedy on the telecom markets. The current rules include however a range of measures imposed at wholesale and retail levels for ensuring non-discrimination and fair competition amongst the operators in an uncompetitive market.

By introducing the idea of structural separation into the public debate for the Review 2006, the Commission intends to open a broad debate during the Review 2006 to see whether it would help to complete and accelerate the process of market liberalisation in the telecom sector by imposing such a remedy on operators with significant market power.

Further information on the Review 2006 of the EU rules on electronic communications can be found at: