

**European Commission  
Information Society and Media Directorate-General  
Radio Spectrum Committee (RSC)  
Brussels**

**RADIO SPECTRUM POLICY GROUP  
public consultation on  
Wireless Access Platforms for  
Electronic Communications Services  
(WAPECS)**

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**Siemens Communications response to  
RADIO SPECTRUM POLICY GROUP  
public consultation on  
Wireless Access Platforms for Electronic Communications Services  
(WAPECS)**

Dear Madams and Sirs,

Siemens congratulates RSPG for the consultation on Wireless Access Platforms for Electronic Communications Services (WAPECS).

Siemens as one of the major manufacturers of mobile communication systems in Europe and in the world follows the current discussions on new regulatory approaches with strong interest.

In our opinion, in case of modification of the current regulatory approach, the new regulatory framework should offer guidance on how to form the future landscape of telecommunication infrastructure in Europe. We expect that also in the future the telecommunication systems will be

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implemented in harmonized spectrum using internationally standardized and interoperable techniques. The huge achievement of harmonized spectrum used for world-wide standardized techniques should be preserved because it is beneficial for competition between companies, for the consumers, and for technological innovation.

We welcome the opportunity to inform the Commission about views of Siemens Communications on questions listed in the WAPECS consultation document. Nevertheless, some definitions, scenarios and descriptions presented for consultation may be interpreted in many ways which may lead to misunderstandings. Our interest as a leading telecommunication supplier is to support the Commission as *the* institution to construct the regulatory framework for the telecommunication infrastructure that is acceptable for the European society and in accordance with their consensus oriented culture.

Please find our comments and responses in the attachment.

We hope that you will find our contributions useful and wish you furthermore a successful course of the consultation and insightful results.

Yours sincerely

Christoph Legutko

[Attachment](#)

### Attachment

The purpose of the consultation is to seek the views from all interested parties on the spectrum implications of WAPECS. Views are sought on the following questions:

- Q.1 Do you agree with this operating definition of WAPECS? Do you consider that the WAPECS concept should include spectrum intended for private, as well as public, applications?

Siemens view:

The proposed definition of WAPECS is as follows:

“Wireless access platforms for electronic communications services (WAPECS) are the platforms used for radio access to electronic communications services, regardless of the bands in which they operate<sup>1</sup>, or the technology they use.”

Our opinion is that the WAPECS concept and particularly its definition should be improved.

We agree that the “Matching market demand to service delineation has always been a challenge to spectrum managers” because the available technologies, propagation conditions and later also the spectrum availability allowed only one service in a spectrum band. For example we have radio broadcasting with AM or FM radio interface, TV with PAL or SECAM as well as mobile telephony with GSM or W-CDMA - every service has its own technical “platform” optimised for given service and frequency spectrum.

But now in the time of convergence given by digitalisation, the contents of service as defined in ITU-R Radio Regulations (RRs), e.g. radio- and TV-broadcasts, voice telephony, pictures, movies, games, data, etc. can be transported by different radio interfaces connected to the adequate backbones described like radio communication systems. The radio telecommunication systems have to follow the rules of physics (like radio propagation conditions, interference rules or Shannon’s law). Therefore the WAPECS definition should allow the evolution of existing, international standardised radio interface techniques and their operation in the world-wide harmonised spectrum.

We hope that the Commission will use their competence and influence to meet the expectations of European citizens on a homogenous European telecommunication landscape in the future. Regarding this WAPECS consultation paper we got an impression of a collection of facts and partially contradictory discussion topics rather than a concept or vision of telecommunication in Europe. In this respect we see the need for future mutual co-operation with the European Commission to develop a homogenous concept for WAPECS.

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<sup>1</sup>

Recognising the obligations on Administrations under the ITU Radio Regulations

- Q.2 Do you consider that the term “platform” should be more closely defined? If so, what definition do you propose?

Siemens view:

In our opinion, the term “platform” should be more closely defined because the platform concept is applicable for services but not for technologies.

The application of internationally standardised telecommunication techniques has simplified the inter-operability of European networks as well as improved services and roaming. It has ensured massive economies of manufacturing scale, and with that the rapidly declining prices for telecommunication infrastructure and terminals. Therefore the European subscriber numbers grew faster and the penetration rates are higher than in North America.

For example, the GSM and UMTS systems with their evolution used by many operators world-wide are accepted as the optimal technical basis for converging services. The European industry offers already a clear technical vision how demanded content and converging services can be distributed with available and planned telecommunication systems.

In our opinion, the fact of converging services nevertheless requires the technically oriented spectrum allocation in order to achieve roaming and consumer convenience.

With the identification of new IMT-2000 bands by WRC-2000 there is now a clear regulatory evolution path from GSM via UMTS to 3G+ and beyond. Also the industry offers the technical evolution along this path. Therefore, in our opinion the definition of the WAPECS platform “regardless the technology they use” is not acceptable for Europe.

- Q.3 What, if any, constraints should there be on the provision of services using spectrum primarily in the broadcast domain?

Siemens view:

Broadcasting is a traditional method to fulfil the obligation of a state to ensure the basic distribution of information to its citizens. Nowadays more private institutions are also active in the broadcasting domain. In our opinion the regulatory rules for the sensitive broadcasting domain are necessary not only for the content and services to protect the freedom of expression and to ensure that the media reflect a variety of views and opinions that characterise a democratic society. The regulatory rules for the broadcasting domain are also necessary for frequency spectrum and allocated techniques to ensure Europe-wide accessibility to support the obligation of ensuring the basic information distribution for European citizens.

Currently, Europe-wide accessibility to broadcast content is significantly facilitated by harmonised spectrum bands and common transmission techniques. It would be an unacceptable situation if in various European countries for services (e.g. broadcasting) and for future applications (e.g. digital audio and video, videotext, VoD, RDS etc.) different spectrum bands are used and a multitude of different data formats and transmission protocols are allowed. This diversity of frequency bands, protocols and formats should be then supported by all receivers. If not, than it would be counterproductive to European harmonization and to the acceptance of new broadcast techniques by the consumers.

Consumers expect as a minimum that they can move and use their receiving devices (TV, audio ...) without any technical restrictions all over in Europe.

Shortly saying, a pan-European approach is necessary, i.e. the broadcasting spectrum and systems should remain harmonised ,standardised and accompanied with acceptable IPR policy.

- Q.4      What specific rules should be introduced or maintained to safeguard the delivery of Services of General Economic Interest (SGEI) in the future? Is it most appropriate to deal with these issues through the regulation of spectrum, or through other instruments such as competition law or state aid policy?

Siemens view:

In the “White Paper on services of general interest” (COM(2004)374final, dated 12.5.2004) the Commission claims the competence to define the European laws fulfilling the requirement “...of principles and conditions, in particular economic and financial, which enable them to fulfil their missions”. Thus the Commission should consequently proceed in accordance with European tradition of legislation, without being aware of particular interests.

It is our opinion that in electronic communications there is room for a pan-European type of SGEI relying mostly or completely on the Union, where the interoperability and general boosting effect on economy are also complemented by a European dimension, a need to use very wide effects of scale to limit the costs, a need to protect investments by EU-wide legal certainty, plus possibly some high level objectives such as state or public security which can benefit from a Europe-wide common interoperable solution.

When dealing with these issues, some regulation is necessary to balance the market between the states of monopoly and of total fragmentation. There are prognoses stating that spectrum trading will result in market fragmentation. In economic theory, phases of market fragmentation are followed by phases of market consolidation which are likely to ultimately end up in monopolies. Therefore, the spectrum area is one of the only areas where we still see the need for ex ante regulation. With regard to spectrum, ex ante regulation provides a stable, reliable regulatory environment from the very beginning which ultimately benefits society as a whole. Ex post regulation e.g. by competition authorities should only be seen as a complement which can retrospectively assess the activities of companies and create uncertainties. Careful assessment is needed here

One of the methods to ensure how to meet the above objectives is to conduct studies like for example on advantages and disadvantages of a market oriented approach compared with a regulatory oriented one. Conscious and detailed studies on the economical impacts are needed before such far reaching decisions are taken. Responsibility for spectrum regulation implies that EU public authorities are meant to intervene so as to ensure that the above objectives are met.

- Q.5 How do you think changes in spectrum policy will impact on the requirement for standardisation? What policy will best ensure the timely availability of standards?

Siemens view:

The current spectrum policy ensures the level of long term confidence that is necessary for international standardisation processes. The telecommunication systems belong to the basic infrastructure with life cycles of tens of years and therefore they must be standardised. We understand that the presented WAPECS concept has a potential to support the proprietary solutions and therefore it will harm the development of international standards. The reason for it will be the WAPEX oriented, too flexible spectrum policy and encouragement of unlimited market forces. Market forces may lead to “de facto” standardised solutions but not necessarily.

Therefore no specific changes for spectrum policy are required.

- Q.6 Are there any other challenges that the RSPG should consider?

Siemens view:

*Challenge 1:*

The spectrum for cellular telecommunication mobile networks must be protected. A weak point of current spectrum licensing regimes is that an effective mechanism how to get the spectrum (license) back when the license taker does not fulfil the obligations defined by license is not implemented or not consequently used. One of the currently discussed solutions for it is so called “spectrum trading”. It looks like an approach to shift the responsibility for spectrum from the regulatory authorities to the market. The utilisation of unused telecommunication spectrum can be better improved by modification of current licensing rules and their consequent execution rather by changes of well proven spectrum policy. The challenge is to modify the spectrum regulatory rules in that way that they do not violate the already achieved spectrum harmonisation as well as the spectrum harmonisation in the future.

*Challenge 2:*

The licensing rules/conditions for technologies protected by Intellectual Property Rights (IPR) have a tremendous impact on the development of international standards and their operation in harmonised frequency bands. Therefore the European Commission should study the interrelation between impact of IPRs, IPR-rules and licensing conditions on one hand and spectrum usage, harmonization and international standardisation on the other hand in much deeper detail, before decisions on future, more flexible methods of spectrum usage are taken. This recommendation results from the observations

- that the interest in regulatory flexibility is very often linked to the development of proprietary systems that are strongly protected by IPRs;

- that allowing proprietary systems in “harmonised spectrum” contradicts the European goal of harmonisation;
- that harmonisation is not a natural goal of the industry and does not happen automatically, as harmonisation is not a mandatory key to maximise short term revenues of an individual company using their essential IPRs for collection of extraordinary high licensing revenues or keeping competitors completely out of market;
- that successful standards need the introduction of the most innovative technologies from different companies on a broad basis. The introduction of those innovative technologies and active participation in standardization bodies however is only guaranteed if such IPR holding companies can get an appropriate return for their investment in technology development by licensing their protected IPR under reasonable, fair and non-discriminatory terms, which has to be allowed by the IPR policy of the respective standardization organization;
- that harmonisation should be encouraged by an appropriately tailored framework fostering cooperation of competing companies and innovation of technologies at the same time. Cornerstones of such a frame work could be e.g.:
  - a) make mandatory international standardisation activities and suitable IPR-rules of the standardisation organisations,
  - b) prefer evolutionary, backwards compatible innovations of existing technologies,
  - c) request challenging technical parameters for new emerging technologies.

Summarising, the impact of IPRs on both, innovation and harmonisation, should be carefully investigated and consideration of IPR-aspects should be included into the further elaboration of the WAPECS concept.

### *Challenge 3:*

A further important challenge is the spectrum information system.

Currently the spectrum information is available usually in the national language, very often in paper form only and some information is not available at all because it is secret due to national security reasons or competition rules.

In the era of deregulation and globalisation, fast and precise spectrum utilization information is essential for globally active operators and suppliers. For example the EFIS data base is a very good and very useful nucleus for such information system. Our suggestion is to complement it with information about operator and country specific licensing conditions like validity period and area, power limits, interference conditions, etc. We welcome that service of regulatory authorities and expect that it will remain free of charge.

Siemens acknowledges the Commission’s work already done and would like to encourage them to extend EFIS further in cooperation with other Regions.

- Q.7 What is your view on the long term policy goals mentioned above and more specifically on how to achieve the right balance between “minimising and harmonising constraints” presented under point 9?

Siemens view:

In early times of telecommunications the service was always closely linked with content due to the available radio interface techniques which is also reflected in the Radio Regulations up to now. In case of radio telecommunication, the radio broadcast was and still is AM or FM (nowadays converging into Digital Radio Mondial or DAB), the TV broadcast was PAL or SECAM (nowadays converging into DVB-T or DVB-H).

In the time of convergence between fixed and mobile telecommunication, between audio and video broadcasting, between voice, picture and data, there is a separation between the technology and content – the content becomes independent of the distribution method or way.

Thus, “service neutrality” seems to be the right answer to the universal capabilities of modern digital communication systems. Examples of these universal capabilities are e.g. GSM or UMTS that are able to provide a multitude of services (voice, facsimile, video, file transfer, paging, voice- and/or data-broadcast, PMR-like group calls and many others) which in the older days were subject to separated technologies with separated spectrum allocations. In this sense licensing conditions for spectrum should be as much as possible service neutral i.e. they should not contain artificial restriction for the transport of certain service types (via specific radio technology i.e. technological platform). But service neutrality and technology neutrality are different and mutually independent categories. Service neutrality does definitely not require technology neutrality.

It is Siemens’ opinion that, when “It is envisaged that the long-term policy goal should be towards converged and coherent spectrum regulation...” (see consultation paper chapter 3, §5), then it should be taken into account that technological neutrality is in contradiction to the coherent authorization and harmonization mechanisms which are beneficial from the point of view of economics of scale, inter-operability and roaming capabilities.

One way out from that dilemma could be defining of clear criteria for the technologies that can be used, for example:

- the technology shall not be proprietary - the technology shall jointly be standardized by a broad international community of independent companies (i.e. an international standardisation organisation);
- the standardisation organisation shall have defined reasonable IPR-rules that allow to license the technology under reasonable, fair and non-discriminatory conditions;

These criteria aim to prefer technologies from international standardisation against proprietary solutions, to encourage both, innovation of existing technologies and development of new technologies and to facilitate competition between many companies before and after a technology has been adopted by the market. Thus, they are suitable to achieve the goal of “harmonisation whilst minimising constraints”.

The Commission should decide which kind of long term strategy they would like to follow: either strategy of technological neutrality which results in fragmentation or strategy of harmonisation and standardisation which results in an excellent infrastructure. For achieving the goals of Lisbon Agenda the strategy of harmonisation and standardisation is the only choice.



Q.8 Are there any other long term policy goals that the RSPG should consider?

Siemens view:

The Commission should lead the European resources and capabilities towards the right field of competition. Studies like “GSM White Paper - brilliant past, bright future” issued by Deutsche Bank on 18th February 2004 offer an analysis of regulatory impact on macro-economical results. They inform that on the field of telecommunication it is disadvantageous to initiate competition between different radio systems (called by Commission “technologies”) instead of agreeing on a common telecommunication system in advance and to start the competition on the field of improvements of this system.

The example of second generation mobile telephony presented in the study is impressive: in North America the competition of mobile telephony systems was enforced after a common AMPS standard and was not successful – the market value of relevant North American companies decreased dramatically; Europe agreed on GSM in advance, competed on its improvements and the relevant European companies (operators and supplier) become leader of the mobile telecommunication markets.

The study allows the conclusion that the competition should generally be encouraged between companies. Competition between technologies should rather be avoided as this might lead to loss of harmonization, to market fragmentation, to monopolisation etc.

Motivated by those observations we would like to express our opinion, that the Commission should develop long term policy which supports standardisation, harmonisation and balanced regulation without preferring brakeless market forces.

Q.9 Do you think that these steps form an adequate basis for achievement of the European objectives in this area? Are there any other steps that are required?

Siemens view:

Too much emphasis on technology neutrality foreseen by the WAPECS concept will harm competition in infrastructure, services and terminals. The competition is stimulated by consumers being able to choose hardware i.e. terminals and service provision independently. Proliferation of incompatible technologies will frustrate this, as services will again become linked to specific/proprietary standards as it was in the early time of radio. Additionally, it will limit not only a variety of available services but also their geographical spreading.

Therefore we expect that the Commission takes an evolutionary approach to improve the existing regulatory framework and does not initiate revolutionary changes.

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