

## **Response to the public consultation on Wireless Access Platforms for Electronic Communications Services (WAPECS)**

### **Summary:**

Within the present European radio spectrum regulatory framework the development of high quality radio communication services in terms of service availability, network interoperability, free equipment circulation and economies of scale has successfully been achieved. This is beneficial to the whole European society, the customers as well as industries involved.

Current trends in technology evolutions and increased convergence of services require changes in radio spectrum management as regards to faster spectrum access and greater flexibility in spectrum usage. This important issue is addressed by the WAPECS concept. However, taking into account the huge investments in radio network infrastructure necessary to provide full coverage seamless high quality services, a reliable regulatory regime is the key prerequisite for a continuing success of wireless communication industry competitiveness within the EU in comparison with non-EU regions. If the existing investment supportive climate in the EU is not continued, there will be a significant risk of an increasing “digital divide” in Europe to the disadvantage of the European society.

Hence, the implementation and operation of high quality network infrastructures must be based on a reliable and balanced combination of rights (access to spectrum, security of planning) and obligations (e.g. coverage, QoS). The primary focus of WAPECS must be to guarantee stable, fair and non-discriminatory conditions between all spectrum users. By taking investments and existing license conditions as well as diverging regulatory conditions of services (licensed, license exempt, unlicensed, fixed, mobile, broadcast) into account, it should include a stepwise approach and an appropriate transition period for gaining sufficient experience.

Thus Deutsche Telekom favours a smooth transition from the current radio spectrum regime to a more flexible one, taking into account market development as well as socio economic needs of the European society. Any change needs to be carefully evaluated not to discourage necessary investments.

## **1. Introduction**

Deutsche Telekom operates radio services in the range between 77 kHz and 38 GHz in many European countries and even beyond. Therefore, Deutsche Telekom has a strong interest in radio spectrum management and follows with great interest the discussions concerning improvements of the international spectrum regulatory framework currently taking place in ITU-R, CEPT, and also within the European Commission. In the following we like to provide general remarks as well as responses to the questions in the consultation document RSPG05-87-rev.

## **2. General Remarks**

As radio spectrum is a finite resource, Deutsche Telekom is of the opinion that its usage cannot be left entirely to market forces. From our view, a forward-looking, non-discriminatory, pro-active spectrum management is necessary to secure the efficient and interference-free use of frequencies and a fair and effective competition environment, but also facilitating the introduction of innovative technologies. The interests of manufacturers, network operators, frequency users and end customers have to be taken into account.

Before radio spectrum is made available, in particular for new services, the effects on existing frequency usages have to be carefully analysed. Thus, spectrum management has considerable strategic weight regarding the development of new radio telecommunications markets.

Based on the designation of harmonised frequency bands for specific services dedicated to the use of specified systems or technologies, the present regulatory framework for radio spectrum management enabled the introduction of a range of high quality wireless applications. The result was a dynamic and most successful development in terrestrial and satellite radio communications services (fixed, mobile and broadcasting).

Seamless availability of radio communications services in the single European market requires large investments in infrastructure by network operators. These investments must be based on the confidence that return of investment is enabled by a fair and stable competition and regulatory framework.

Trends in technology evolutions and the growing importance of radio communications require improvements in radio spectrum management as regards to faster spectrum access, higher efficiency and greater flexibility in spectrum usage. However, before any significant modification of the current regulatory framework is taken, careful consideration with regard to possible drawbacks should take place.

Deutsche Telekom is of the opinion that radio spectrum regulation purely based on market forces without coverage obligations will finally result in “cherry-picking” and an increase of the “digital divide” to the disadvantage of end customers. Therefore, we consider that clear market and service definitions for radio communications operations will be required also in the future.

### **The WAPECS concept**

The WAPECS concept proposed is primarily based on the future development of convergent radio applications. These kinds of applications can already be introduced within the current regulatory framework in frequency bands designated and assigned to the relevant services, provided that national regulation does not impose barriers. For instance, applications enabling fixed and mobile access to customers can be deployed in bands allocated to both fixed and mobile service, using an appropriate technology.

The WAPECS concept aims at removing regulatory service categorisation of frequency ranges used for different radio communications services. However, this approach does not automatically result in additional spectrum resources. Even innovative technologies have to respect the physical conditions and limits in radio transmissions. Greater technology neutrality might result in higher guard bands and less efficient spectrum usage might be the consequence.

### **Conclusion**

Europe’s main competition advantage compared to other regions is its reliable and high quality infrastructure. To sustain and further develop this infrastructure, huge investments are necessary also in the future. Therefore, investors, manufacturers, network operators and service providers need security concerning planning parameters and regulatory conditions to develop reliable business cases, to design equipment and to provide services not only for the sake of end customers, but also in the public interest of the economy as a whole.

Deutsche Telekom has doubts that the WAPECS concept presented in document RSPG05-87-rev will build the appropriate framework for investment, innovation and economic growth within the European Union.

The current radio spectrum regulatory framework enables an interference-free use of spectrum. Harmonisation of frequency bands is the basis for pan-European development of radio communication services in terms of service availability, network interoperability, free equipment circulation and economies of scale for all parties involved. Improvements regarding flexibility and greater spectrum efficiency are desirable in order to enable faster spectrum access and the timely introduction of innovative technologies.

Deutsche Telekom is of the opinion that the current regulatory framework can be further developed and enhanced towards more flexibility and greater spectrum efficiency. However, any change has to be evaluated carefully not to discourage necessary investments that weaken European competitiveness in the global market.

**3. DEUTSCHE TELEKOM response to the questions in document RSPG05-87-rev**

**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?**

Currently there are certain differences between public and private applications concerning operational conditions (QoS, coverage, service availability, etc.). In addition, the provision of public applications usually requires licences, and spectrum fees have to be paid.

However, public and private applications will become more and more similar with regard market and services point of view and, therefore, both might be appropriate to be covered.

**Q.2**

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

It remains unclear to what extent the WAPECS concept would mean a change of the current regulatory framework. A more clear definition might help to get more clarity.

**Q.3**

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

By applying the so-called mask principle other services can use frequencies allocated to broadcasting services. However, services using spectrum primarily allocated to broadcasting should guarantee an interference free operation of broadcasting networks. That is an important precondition for the further development of broadcasting in an economic way. Furthermore, innovative broadcasting systems will enable new forms of transmission and applications, including interactivity and mobility.

This question is also related to the transition from analogue to digital broadcasting by which a part of the spectrum presently used for broadcasting might become available for other uses, and in particular, for mobile communications. Deutsche Telekom believes that it would be highly desirable that to harmonise the so-called “digital dividend” throughout Europe as far as possible.

**Q.4**

**What specific rules should be introduced or maintained to safeguard the delivery of Services of General Economic Interest 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?**

Deutsche Telekom considers an adequate frequency management, facilitating efficient radio spectrum usage by avoiding harmful interference, as the basis for a reliable delivery of radio services. The delivery of Services of general Economic Interest, however, is appropriately dealt with by state aid policy or competition law.

**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?**

Experience has shown that the availability of harmonised spectrum is a prerequisite for open radio standards to avoid proprietary solutions. This is facilitated by the close cooperation between ECC and ETSI and should be continued in the future. Moreover, Deutsche Telekom considers a harmonised approach as the sound basis for an efficient development of radio communications equipment and the investments in radio network infrastructure.

Changes in spectrum policy towards a single category of service (as proposed by the WAPECS concept) would result in significant turning away from this harmonisation and promote proprietary standards and hence complicate the provision of seamless radio services and interoperability.

**Q.6**

**Are there any other challenges that the RSPG should consider?**

The progress of convergence in services and technologies requires regulatory clarity regards competition, authorisation and licensing. Currently, great differences exist e.g. for the broadcasting and telecommunication sector. Investments made and exclusive rights should be taken into account as these are based on the confidence in a stable regulatory framework. Furthermore, alignment of the diverging national procedures would be desirable. The RSPG could initiate a more uniform approach within the EU with the aim to achieve sufficient flexibility while maintaining the necessary degree of harmonisation in order not to fragment the European radiocommunications market.

### **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?**

Deutsche Telekom considers that harmonisation should remain the main objective also in the future as it results in broader markets with cheaper radio equipment, cheaper network rollout and consequently lower subscriber costs. Although the introduction of more flexibility in the use of frequency bands is desirable from operators' point of view, it should not jeopardise the general harmonisation aim.

As regards technology neutrality, in practice European-wide solutions (e.g. UMTS from the IMT-2000 family) are favoured by network operators for a number of well-known reasons (cross-border coordination, interoperability, etc.). Also manufacturers aim for harmonised spectrum for their radio equipment as this facilitates lower production cost and hence broader market penetration.

An entirely service neutrality bears the risk of non-availability of SGEI and an increase of the “digital divide”. Therefore, the proposed approach to adopt service and technology neutrality needs to be carefully analysed before possibly implemented.

### **Q.8**

**Are there any other long term policy goals that the RSPG should consider?**

The basic objective of the European telecommunications policy is the strengthening of the European competitiveness by promoting market development and competition. Flexibility is considered as a means to reach the before mentioned goals, but not as an aim of European policy. Therefore, it has to be scrutinised whether, and if to what extent, flexibility is the right way for radio spectrum regulation.

Flexibility can be beneficial in spectrum management to that degree as it promotes the development of innovative services. However, an implementation of flexibility in a dimension that endangers past investments in the telecommunication market or leads to an incalculable risk for new investments due to longer depreciation durations would be contra-productive.

The increasing customer demand for broadband wireless access will require additional radio spectrum for these applications. The radio spectrum needs cannot be fulfilled by solely redefining the ITU-R radio service definitions. As governmental and military services will also change from analogue to digital and require less radio spectrum it is proposed that RSPG considers possible steps to open radio spectrum currently used by governmental and military services for commercial applications.

**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?**

Deutsche Telekom also considers that a "Big Bang approach" in changing European radio spectrum policy has to be avoided. Instead, a pragmatic approach dealing with specific cases is favoured.

The involvement of CEPT on technical issues is supported. In addition, regularly consultation with industry is recommended.

Concerning a possible Mandate to CEPT on WAPECS, it is noticed that ECC already deals with these matters. In particular, discussions on FLEX-bands have recently been initiated.