

**Deutsche Telekom Comments on the  
DRAFT RSPG OPINION ON THE RADIO SPECTRUM POLICY PROGRAMME**

Deutsche Telekom (DT) would like to thank the RSPG to comment on the RSPG draft opinion on the Radio Spectrum Policy Programme. Please find our comments below the corresponding “spectrum policy objectives” of section IV.

An additional issue has been introduced at the end of this document: DT is of the opinion that the “protection of spectrum” also needs to be addressed within the RSPP framework.

#### **IV. Spectrum policy objectives**

- *Identify EU level policies that have a spectrum dimension and assess how to facilitate the achievement of such policies.*

DT-Comment:

We support this objective.

- *Ensure that sufficient spectrum for coverage and capacity purposes is allocated within the EU so that all citizens could have access to ubiquitous high-speed broadband.*

DT-Comment:

Consumers want to use broadband services not only via fixed wired networks but also via mobile networks in a seamless manner. Therefore it is important that mobile networks are able to provide those services in a similar quality in order to ensure a comparable user experience. This requires data rates which are not much different from that in wired networks. The market success of mobile broadband segments, portable usage (dongle, embedded laptop) and truly mobile usage (smartphones e.g. iPhone) with the corresponding significant mobile data traffic growth is a convincing indication that there will be a strong demand for higher data rates in future. This will inevitably require an adequate amount of spectrum which is definitely higher than the currently available spectrum for mobile services.

DT is of the opinion that there is definitely a need for an overall spectrum need of at least 1000 MHz (incl. already available spectrum resources for the mobile service) by 2020 to accommodate the increasing demand for mobile broadband. Additional spectrum should be identified below 5 GHz.

Currently the most urgent need is to enhance broadband coverage in rural and remote areas. Therefore special emphasis should be given to the release of spectrum below 1 GHz in order to enable ubiquitous mobile broadband coverage in Europe. Only spectrum below 1 GHz is technically suited to provide adequate coverage in an economical manner. In the long run the band 790-862 MHz (i. e. 2x30 MHz) will not be sufficient to provide real broadband access in such areas. Therefore, the band 698 – 790 MHz (which is already allocated to the mobile service in the Americas and in the biggest countries of Asia) should also be allocated to the mobile service.

- *Achieve coordinated availability of the 800 MHz band for ECS other than broadcasting in all the EU Member States by 2015.*

DT-Comment:

DT welcomes the proposal, to have a co-ordinated availability of the 800 MHz band for ECS other than broadcasting in all the EU Member States, very much.

Seamless services across borders require an internationally harmonised approach. DT would like to recommend international harmonisation as far as possible, not only harmonisation of band plans, but

also harmonisation of timing and roadmaps. This would help to avoid the challenges of fragmentation and less efficient spectrum use.

However, regarding the proposed date 2015, DT is of the opinion that a more challenging date would be more appropriate in light of the huge economical benefits for the European society.

Therefore DT proposes to set an EU wide mandatory deadline of 2013 for the release of digital dividend (790-862 MHz) spectrum.

- *Identify developing and potential future significant uses of spectrum taking into account market and technology trends.*

DT-Comment:

We support this objective.

- *Take all actions to designate more 'new' spectrum and liberalise, where possible, currently used spectrum under service and technology neutral regimes (i.e. WAPECS).*

DT-Comment:

DT fully agrees with the objective to take all actions to designate more new spectrum to the mobile broadband service. As outlined already above (see second bullet point) future mobile communication will need to transmit much more data traffic than today. This will not be possible with the spectrum resource currently available.

Moreover DT is of the opinion that spectrum regulation needs first of all to be reliable and predictable. Investors that acquire spectrum need a level of safeguard over a significant period of time in order to ensure adequate return of investment.

We observe with concern that some European administrations pursue national solutions at the expense of harmonised European solutions (e. g. the 2.6 GHz band plan). This increases the uncertainty for multinational operators planning to apply for a license and undermines confidence in the regulatory system.

For the consumer of wireless services it is important that interference free use of spectrum or operation (even while travelling) of their equipment is possible. Interference will immediately reduce the confidence of the consumer in wireless services and his willingness to pay for it. Lack of European harmonisation can be a significant source of interference.

Moreover, spectrum should be awarded in a non-discriminative, fair and transparent manner. Radio spectrum should be assigned to such entities which will provide the most socio-economic benefit.

- *Make more spectrum available under a collective use model in order to facilitate rapid access to spectrum, promote innovation and competition.*

DT-Comment:

DT is of the opinion that for commercial cellular mass market mobile services offered to the public there is no alternative to individual authorisations and the granting of exclusive spectrum user rights. Services/applications operated under a collective use model (CUS) do not deliver the required quality of service. Moreover, spectrum use by individual licenses enables the application of market based approaches (e. g. trading) for more efficient spectrum use.

Even sharing between CUS and individual licensed applications and services would considerably complicate and impede any later modification of the individual licensed service/application, be it

- the application of market based approaches for the services/applications sharing with CUS or
- refarming of such spectrum, which would be difficult if not impossible.

Therefore, extensive allocation of spectrum for CUS in lower bands is to be avoided as it would significantly restrict the further development of primary individual licensed services and applications.

- *Create appropriate regulatory mechanisms to foster more efficient use of spectrum, both for the commercial and public sector.*

DT-Comment:

As already outline above (5<sup>th</sup> bullet point) DT is of the opinion that spectrum regulation needs first of all to be reliable and predictable. The regulatory mechanism should be adapted to the corresponding radio service. For commercial cellular mass market mobile services harmonisation is the most important factor for market success.

Moreover, in order to achieve a more efficient spectrum use the EC should support the principle that the use of spectrum as a valuable, limited resource should in general not be for free. All spectrum users (incl. broadcasting and public users) should be obliged to pay for the use of spectrum.

- *Develop a spectrum policy approach for intelligent spectrum sharing which should, inter alia, promote the use of cognitive technologies, and enable the use of spectrum that is currently unused.*

DT-Comment:

In principle DT agrees with the introduction of intelligent spectrum sharing technologies, as this could free up spectrum to satisfy market demand for mobile broadband services, but DT has concerns with relying too early on cognitive technologies to detect other users and avoid interference.

Cognitive devices are at a very early stage of development and rely on knowledge of the characteristics of the primary users of the radio spectrum in order to avoid causing them harmful interference. Cognitive technologies should therefore be introduced very carefully in bands where the risk of mass interference is low.

- *Ensure that competent national authorities, the European Commission, CEPT and ETSI work towards the same objectives, enhancing collaboration and cooperation to reach those objectives, and clearly defining their respective roles and responsibilities.*

DT-Comment:

DT supports this objective but would like to note that it is important to also involve network operators at an early stage.

- Ensure that European spectrum interests and policy objectives are promoted in all relevant EU and international fora and discussed with non-EU countries and other regions.

DT-Comment:

We support this objective.

- Ensure that all Member States are given the necessary assistance when negotiating with neighbouring countries on frequency coordination issues.

DT-Comment:

We support this objective.

### **Additional Issue: Protection of Spectrum**

DT is of the opinion that the “protection of spectrum” is an important general issue which also needs to be addressed by the RSPP.

It is not sufficient to facilitate the access to spectrum or to make spectrum use more flexible, it is also important to safeguard interference free use of spectrum. The basis for this is the development of “EMC Standards” and “Harmonised Standards”.

Unfortunately, the development of EMC standards today is more or less driven by the manufacturers of electric and electronic equipment (mainly non-radio industry) who are mainly interested to reduce costs which results in the tendency to relaxed EMC-limits. We believe that a more balanced approach is needed to the benefit of the protection of spectrum. Therefore the development of these standards and EMC-limits needs to be given more attention by the Commission and by regulators.

Example: The current discussion concerning the future use of the band 790-862 MHz shows that the immunity of cable TV systems and the selectivity of TV receivers are vital parameters regarding the coexistence of systems and need to be improved. Thus receiver components have to be regarded as part of an overall system and not as stand alone objects. At least some minimum requirements for receivers and networks need to be defined and respected to enable coexistence of all parties involved.

A more holistic approach is needed in order to ensure future efficient use of the scarce spectrum resource. The development of EMC standards and harmonised standards needs to be given more attention by the EC and NRAs. In particular receiver characteristics of radio receivers and the immunity of non radio equipment needs to fulfil minimum requirements. It is not possible to protect equipment if such minimum receiver and immunity characteristics are not available.

Sincerely

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