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Radio Spectrum Policy Group
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Date Dec 4, 2006
Subject T-Mobile response to the draft RSPG Opinion on "EU spectrum policy implications of the Digital Dividend"

Dear Madams and Sirs,

T-Mobile welcomes the opportunity to comment on the draft RSPG opinion on „The EU spectrum policy implications of the Digital Dividend“. T-Mobile agrees with the intention of the RSPG's initiative to approach the issue of the digital dividend on a Community level, to address the prospects of the digital dividend and to identify needs for coordination at EU level. Such initiative is consistent to support a timely availability of freed spectrum as well as to develop harmonized principles to facilitate the introduction of new services and increased efficiency of spectrum use.

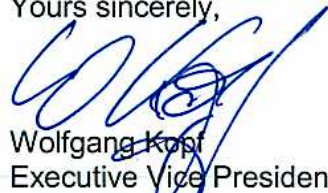
A harmonized implementation of the principles of EU spectrum policy for the use of these bands will increase the flexibility and efficiency of spectrum use in these bands and improve the internal market for manufacturers, network operators, service providers and consumers by allowing spectrum access for new and innovative services.

In this regard T-Mobile recommends:

- 1) To foresee part of the UHF bands IV and V (470 to 862 MHz) to be used by mobile TV and mobile multimedia services.
- 2) To allocate part of the UHF band to fixed and mobile applications additional to the current broadcast allocation.

Enclosed please find our detailed comments. Feel free to contact us in the case of any questions.

Yours sincerely,



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T-Mobile Comment on the draft RSPG Opinion on "EU spectrum policy implications of the Digital Dividend"

The draft RSPG opinion foresees two options for the use of the digital dividend: 1. Broadcasting (increased number of programs, higher quality of service (e.g. HDTV), mobile TV, etc.) and 2. Electronic communications (fixed and mobile broadband, private mobile radio, etc.). Before any decision on the use of the digital dividend is taken by EU Member States, a fair analysis and evaluation of all economic and social benefits of the various alternatives is proposed by RSPG.

T-Mobile welcomes an open analysis of alternatives as technologies and services develop over time. Upcoming opportunities for the delivery of services as well as scarcity situations have to be taken into account. Regarding the use of the digital dividend for classical broadcasting applications (option 1), it should generally be taken into account that the demand for terrestrial TV has decreased in many European countries to a low of 5 to 10 % of population. This is the outcome of having meanwhile at least two alternative TV infrastructures with cable and satellite TV platforms in most regions of the EU. Also the appearance of digital TV via ADSL is currently increasing the number of alternatives to classical broadcast services. Finally, EU Member States should consider that the future introduction of more advanced television coding systems (MPEG-4) will again allow considerable increase in the capacities for broadcasting using just part of the currently used spectrum.

Therefore, due to the shown limited demand and a variety of alternatives, the need of using a huge part of the digital dividend for classic broadcasting seems to be very questionable. On the other side, social and economic benefits of liberalizing spectrum use and opening it for innovative mobile multimedia and TV solutions as well as for bringing internet access via wireless technologies into rural areas are obvious and discussed in connection with the Lisbon Agenda goals, the Review 2006 process and a variety of spectrum conferences. Due to this situation, T-Mobile is of the opinion that a maximum in efficiency, growth perspective and innovation will only be achieved, if a substantial part of the spectrum that becomes available by the analogue switch-off, is taken for mobile TV applications as soon as possible. Furthermore, the UHF band should be opened to electronic communication services and a reasonable part of the digital dividend spectrum should be allocated after the analogue switch-off for cellular mobile services based on latest technologies (IMT and beyond), which are best suited to reduce the digital divide.

Regarding the different broadcasting bands discussed in the draft opinion, Band III (VHF) and the L-Band are partially already used by digital TV and DMB based mobile TV solutions. T-Mobile agrees that no action appears to be necessary at EU level at this stage on these bands. But it has been emphasised that all opportunities given by the outcome of the Regional Radio Conference (RRC'06) should be used effectively and in a timely manner. Shifting of DVB-T layers into other bands and replanning should not be supported until a sufficient part of the digital dividend has been reserved for mobile TV and electronic communications services.

T-Mobile's preferred technology for mobile multimedia services is the DVB-H standard, and the UHF bands IV and V are the preferred bands from a propagation / coverage point of view and from a network cost perspective. As suggested previously, T-Mobile urges the RSPG to encourage EU Member States to make available as soon as possible dedicated spectrum to

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allow the launch of mobile TV services.¹ The full availability of the digital dividend is expected at the EU level for 2012, but many countries will finalize the switchover even earlier. The German exercise might show that even under very complex conditions reaching a spectrum platform for a broad mobile TV solution seems already possible by using channel planning and the time factor to overcome restrictions. Therefore, any delays in the switchover in certain countries should not block the increase of efficiency and the introduction of innovative services in other parts of Europe. In this regard, the determination of the transition period should be made mandatory for the EU member States as it is decided for the EC.

Furthermore, T-Mobile is of the opinion that Europe will achieve the biggest net benefit of the digital switchover, if a suitable part of the freed spectrum is to be used for innovative electronic communication services via cellular mobile broadband networks. As mobile applications have the highest efficiency of spectrum use and allow cost-effective coverage in scarcely populated regions, it is expected to maximize the economic, social and public benefits by pushing economic growth, job creation, innovation and global competitiveness. This holds even if the definition of a sub-band in the relevant spectrum between 470 and 862 MHz might be complex, time consuming and costly due to re-planning activities needed.

Even if in some EU countries the situation might be more complex than in others and freeing spectrum a difficult task, in the longer term a sizeable amount of unused spectrum should become available everywhere in Europe if more advanced television coding systems (MPEG-4) are implemented. This opens the European perspective and makes a subsequent allocation of the frequency band 470 – 862 MHz for mobile service and as a candidate band for IMT at the World Radio Conference 2007 necessary (Agenda Item 1.4). Furthermore, RSPG should support a WRC'07 resolution asking for studies on the nature of the digital dividend and compatibility requirements as well as the identification of a sub-band for IMT at the WRC'10 (Agenda Item 7.2).

T-Mobile welcomes the opportunity for further discussion with the RSPG on the issues raised in our response. Please feel free to contact us in the case of any questions.

¹ T-Mobile refers to its response to the RSPG opinion on the "Introduction of Multimedia Services in particular in the frequency bands allocated to the broadcasting service", delivered at July 12th, 2006.