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GSMA Europe response

RADIO SPECTRUM POLICY GROUP OPINION ON THE DIGITAL DIVIDEND

RSPG09-272

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Summary

GSMA Europe welcomes the opportunity to respond to the public consultation on the draft RSPG Digital Dividend Opinion. GSMA Europe is supportive of the overall objective and intent of the RSPG opinion and agrees that there is a proactive role for the RSPG to play in facilitating coordination across the EU.

GSMA Europe is of the opinion that:

- 1) **Benefits of Coordination** – GSMA Europe believes there is significant value in an early coordinated approach to the release of Digital Dividend spectrum in Europe.
- 2) **Benefits of Harmonisation** - We believe there will be significant benefits of harmonisation across Europe at a National and European level. As stated by Commissioner Reding "As a result of the switchover from analogue to digital TV, tremendous spectrum resources will become available for other uses, especially for wireless broadband. The incremental value of using the digital dividend spectrum for wireless broadband across the EU is estimated to be between €150 – €200 billion. The digital dividend could allow Europe to extend its leadership in electronic communications services, creating growth and jobs, increasing productivity and giving greater access to broadband services for all Europeans." Harmonisation in Europe is critical to realise these benefits.
- 3) **Importance of EU Leadership** – Ultimately decisions on spectrum are made at a national level however there are such significant benefits to all European markets of introducing harmonised services, mainly through economies of scale but also from R&D investment and roaming.

A lack of leadership from the EU also presents a risk of fragmentation within ITU Region 1. The Region 2 band option of 698 – 806 MHz offers developing markets the potential to realise more spectrum for broadband than currently available in Europe without disruption to existing services. If this results in much of Africa and Asia following a 700MHz plan there will potentially be further impact on European consumers through increased handset costs.

- 4) **Cost of Delay** - It is important for the EU and National Governments to make a strong commitment and indication of commitment as early as possible to allow for R&D investment and infrastructure planning. The GSMA is very concerned that there is some suggestion of possible delay to Digital Switch Off and as a consequence the release of the Digital Dividend. We believe this is exactly the wrong time to be sending out messages to the market that investment may be delayed – if anything the economic stimulus suggests that it should be accelerated.



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Introduction – Optimising the Digital Dividend for Europe

GSMA believes the early release of the Digital Dividend for Electronic Communication Networks (ECN) and Electronic Communication Services (ECS) is of critical importance to Europe. As stated by Commissioner Reding "The incremental value of using the digital dividend spectrum for wireless broadband across the EU is estimated to be between €150 – €200 billion. The digital dividend could allow Europe to extend its leadership in electronic communications services, creating growth and jobs, increasing productivity and giving greater access to broadband services for all Europeans." For this opportunity to be fully realised all EU countries need to allocate, as a minimum, the 790–862 MHz spectrum identified at WRC07 for mobile services.

The GSMA also believes there is significant social value from releasing the 800MHz spectrum for mobile services. The 800 MHz spectrum has excellent propagation characteristics and will therefore allow broadband services to be delivered to geographic areas currently unsupported by fixed infrastructure. The provision of broadband internet access delivers significant value through access and inclusion, community, education, informed democracy and cultural understanding. Research commissioned by Ofcom in the UK has shown that the incremental social value of television, beyond the provision of the basic analogue services delivered today, is marginal. Early allocation of 800MHz for mobile services is therefore a win-win in Europe, delivering significant economic value and significant incremental social value by enabling access to the digitally excluded.

The GSMA is strongly supportive of the views of the Council of the European Union, the European Parliament, the EC and the RSPG in recognising that there are significant societal and economic benefits to be gained from the unique opportunity of making available a digital dividend in the UHF band. We also recognise there is significant momentum at a National level towards the identification and allocation of this band for mobile services with Sweden, Finland, France and Germany having already decided to allocate, Spain stating they will allocate the spectrum for broadband services and the UK, Netherlands and Ireland currently consulting on the question but seeming supportive.

There are significant benefits to harmonisation and costs of fragmentation. GSMA analysis of economies of scale at the handset level showed that fragmentation could double the handset cost when the market size is reduced from a region the size of the EU to a country the size of the Italy. Fragmentation could reduce the Radio Frequency efficiency by up to 50%, therefore eroding the main value of value of UHF spectrum for mobile services, the ability to cover larger areas with fewer sites. Technically, the gain of using the UHF band (800 MHz) over the 2100 MHz band is around 8 dB. However, designing handsets to support multiple national band plans reduces the efficiency and the performance of the handset. Even with limited fragmentation in Europe it is possible there could be a loss of 3dB due to impacts on radio handset performance. If this were to be the case then a significant part of the benefit of UHF could be lost. Fragmentation will clearly have a significant cost to European consumers.



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To date, decisions on spectrum in Europe have been adopted almost without question across ITU Region 1 and much of Region 3. This harmonisation has benefited European consumers through leveraging economy of scale benefits and through ease of roaming. There are significant questions as to whether all of Region 3 will follow Europe with a 790-862 MHz band plan. In North Africa there are Military assignments in the 800 MHz band and in many African markets CDMA networks are operating at around 850 MHz. The lack of clear leadership from Europe and the doubts that still exist over the degree of harmonised adoption of 790-862 MHz in Europe are resulting in increasing interest in the 700 MHz band. We have seen how lack of clear regulatory signals has weakened the development of UMTS900 equipment, compared with UMTS850. A significant equipment ecosystem has built up around the US 850 frequency band for UMTS, because of the early availability of terminals, developed for the US market.

Unencumbered by incumbent television services and leveraging the potential economies of China and India following the US in allocating 108 MHz of spectrum in this band, there is a real risk of Europe becoming isolated. This could lead to European consumers having less choice in devices offering broadband, and having to pay more for these devices. Strong leadership from Europe and a clear commitment to a harmonised band by Member States will significantly mitigate the risk of European isolation.

The GSMA also recognises there are complications and sees a proactive role for the RSPG and the EU in addressing these issues in order to accelerate the release of the Digital Dividend spectrum. For the Baltic States the primary issue and challenge is cross-border interference issues with ARNS systems: constructive discussions with Russia at a European level could potentially help facilitate a solution to the cross-border issues impacting a number of member states. In North Africa there may also be a need to facilitate a solution that allows for the use of mobile services in the band. Again, the Commission could play a valuable role in facilitating these discussions on behalf of a number of Member States.

GSMA Europe Opinion on RSPG Recommendations

1. The RSPG recommends that the EC should assess the advantages and disadvantages of options for a coordinated non-mandatory EU approach to the availability of the 800 MHz band for ECN and ECS, other than broadcast transmission networks and services, as this is essential in order to determine the appropriate level of coordination between Member States;

GSMA Europe supports an analysis of the options for a coordinated non-mandatory approach to the availability of the 800 MHz band for mobile services. Coordination will be required between Member States to facilitate the rapid release of spectrum and to stimulate investment and innovation.



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There are clearly significant benefits to be realised from a coordinated approach to releasing 800 MHz spectrum for mobile services. Harmonisation- realises the benefits of economies of scale, driving down handset costs and facilitating roaming and interoperability across European markets. These are significant benefits for citizens in individual Member States and for consumers in Europe generally.

GSMA Europe agrees that a co-ordinated non mandatory approach to availability of the 790-862MHz band for mobile services is the most appropriate approach to allow for the rapid implementation of this band for mobile services. It is however important that this non mandatory approach sets out clear timescales for the implementation of the band across Europe and that this non mandatory approach sets a clear direction in terms of a harmonised approach for Europe. The Commission and the RSPG may wish to look at available legal instruments to help achieve some certainty however this should only be considered if the result is an acceleration in the release of the digital dividend and / or a greater degree of harmonisation across Europe.

We look forward to the imminent Commission report from Analysys Mason which we believe should inform this consideration.

2. The RSPG recommends that the EC act on the recommendations contained in this Opinion as quickly as possible and no later than 31 October 2009 in order to minimise EU level uncertainty in the ability of Member States to make available the 800 MHz band in order to promote growth, competition and innovation in the provision of ECN and ECS;

The GSMA strongly supports a timely conclusion to the process to minimise uncertainty. Continued uncertainty is a constraint to investment, R&D and innovation, not only in the mobile sector but in all sectors that depend on mobile technology to enable new business practices and to the new media industry that will exploit the new capabilities to deliver new consumer propositions.

Not only should the recommendations be acted on in a timely manner but all efforts should be made to announce the intent to allocate 790-862 MHz for mobile services now across all Member States. LTE deployment using digital dividend spectrum will start in the US in late 2009. Europe runs a significant risk of losing its global leadership in mobile technology through political indecision; this will be to the detriment of the citizens of all Member States and bad for European industry.

3. The RSPG recommends that the EC encourages Member States who are making available the 800 MHz band for new and/or enhanced ECN and ECS to apply WAPECS principles, particularly of service and technology neutrality, recognising that Member States may maintain broadcasting use in all or a portion of the band;

The GSMA believe the 800 MHz band should be made available on a technology neutral basis as far as is possible, however, to facilitate the benefits for all European consumers the GSMA does believe the 800 MHz band should be explicitly allocated for mobile services. Clearly for harmonisation benefits to be realised and to ensure



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the value of the 800 MHz spectrum (rural coverage) is realised, it is essential interference is managed by, for example, facilitating Members States to adopt the CEPT band plan. To ensure this, the licensing of the 800MHz band should be made in a manner that ensures the efficient use of radio spectrum, and allows the band to be used to maximise rural coverage. For example, the coexistence of TDD and FDD is a problem, and requires large frequency guard bands for wide area systems. Given the small size of the band it will be difficult to support both FDD and TDD in this band. The industry momentum is around an FDD band plan for the 800MHz band.

If a Member State chooses to continue to broadcast in the band, the obligation should be placed on them to mitigate any cross-border interference issues with neighbour states, replanning their broadcast networks as required ensuring any cross-border interference is in the 700 MHz band and not the 800 MHz band.

4. The RSPG recommends that any EU harmonisation of technical elements such as channelling arrangements and common and minimal (least restrictive) technical conditions be based on the outcome of the CEPT work in response to relevant EC mandates;

The GSMA agrees the most appropriate way to determine technical conditions should be through the CEPT work. CEPT, with active participation of industry and administrations, has for several years proved its capability to develop frameworks which ensure an efficient use of spectrum. In particular, the “preferred band plan” based on FDD arrangement as agreed in CEPT should be one of the main technical conditions that needs to be harmonised by the EC.

5. The RSPG recommends that the EC encourages Member States to facilitate cross-border coordination agreements with the aim of enabling those administrations wishing to make available the 800 MHz band for ECN and ECS, other than broadcast transmission networks and services to do so, taking into account technical feasibility and the need for equitable access;

The GSMA strongly supports NRA and EC engagement in facilitating bilateral and multilateral negotiations on cross-border coordination. This coordination should be facilitated by the EC in a way to support NRAs in discussing and adopting joint plans, either on sub-regional basis or bilaterally and with clear timelines for implementation.

6. The RSPG recommends that the EC supports Member States in renegotiating aspects of the GE06 Plan if necessary with countries outside the EU to allow them to realise and make available the 800 MHz band part of their digital dividend;

The EU has a significant role to play in the negotiation with Non EU countries which face common challenges. Aeronautical systems (ARNS) along the Eastern border of the Union, for example, represent a significant challenge to the deployment of mobile service for a large number of Member States. It is also likely renegotiation will be



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required with North African states to allow for the full benefits of a 790-862 MHz allocation for mobile service to be realised.

The EU can play a significant role in facilitating discussion, potentially supporting technical work and addressing political concerns on behalf of Member States with bordering territories. By supporting Member States to renegotiate allocations within the Geneva '06 (GE-06) framework, the EU can help the early realisation of the benefits of a mobile allocation in 800MHz. The focus should be on enabling EU Member States to gain full advantage of the digital dividend in their markets; however, there is also a role (which will also benefit European consumers) to encourage Non Member States to release 800 MHz spectrum for mobile services as soon as possible)

It should be noted that GE-06 has not been developed in order to enable an equitable access to spectrum between broadcasting and mobile at the border but to protect broadcasting services. The revision of trigger mechanisms to more balanced levels is necessary to prevent difficulties in future mobile deployment. A review of these triggers mechanisms to ensure balance between services should be considered by the EU.

7. The RSPG recommends that the EC gives further consideration through a review process to the merits of facilitating EU-wide long term availability of the 800 MHz band for mobile and fixed broadband applications;

It is unclear to the GSMA what the purpose and intent of this recommendation is. Critical for investment is a clear and early indication from the EU and member states that the preferred use of the 800 MHz band for Europe is mobile services. As stated above, Sweden, Finland, France and Germany have already given this clear direction, Spain and Denmark have stated they will allocate the spectrum for broadband services and the UK, Netherlands and Ireland are currently consulting on the question but on the assumption that 790-862 MHz will be allocated. The Baltic States recently stated their collective support for this band to be used for mobile services. It is unclear how a review process to an unspecified timescale will encourage investment. To the contrary, the proposal appears to increase uncertainty and will therefore reduce investment and have a negative impact on European consumers.

If the intention is to introduce a process to review the entire digital dividend spectrum to ensure this is being used for the appropriate purposes then this may have merit if the specific terms of this review are clear. As stated in the RSPG opinion, the definition of the digital dividend is all spectrum made available following the migration of existing analogue TV services to digital platforms. Clearly under this definition the biggest beneficiary of the digital dividend is terrestrial digital TV. It is possible that at a future date Member States may wish to review whether existing allocations of spectrum remain appropriate.



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8. The RSPG recommends that Member States, acting on a bi/multilateral basis should identify whether there are geographic clusters arising from commonalities between transitional activities and possible access to the 800 MHz band for electronic communications networks and services, noting the need to consider the requirements of countries adjacent to the cluster which may be affected. Such commonalities could facilitate a coordinated approach to timing in releasing their digital dividends and provide more economic and social benefits as a whole.

In principle, working in a coordinated way to address common issues and to accelerate transitional activities is welcomed. However it is critical that this does not become a “lowest common denominator” approach where Member States who are in a position to introduce mobile services are constrained from doing so by another in the cluster. We also believe this activity should be strictly related to the technical aspects of the release of spectrum and not to any commercial aspects.

It is also critical that all clusters are following a harmonised approach across Europe.

Where the Member States can act together, as in the case of the Baltic States, to address common issues and to find common solutions the clustering approach is welcomed.

About the GSMA in Europe

The GSMA in Europe represents around 147 operators in 50 countries/areas in Europe and counts around 588 million subscribers. Globally, the GSM Association represents over 700 operators in over 200 countries and counts around 3.8 billion subscribers.