

September 4<sup>th</sup> 2009

## **AmCham EU response to the European Commission consultation on the digital dividend**

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### **Introduction**

The American Chamber of Commerce to the European Union (AmCham EU) welcomes this opportunity to contribute to the Commission Consultation on 'Transforming the digital dividend opportunity into social benefits and economic growth in Europe'.

AmCham EU supports the proposals for European co-ordination of the digital dividend, including the proposed Roadmap and Decision harmonising the technical conditions of the 800 MHz band.

As the intense debate surrounding it implies, the digital dividend is of great importance for spectrum users across Europe due to its excellent propagation characteristics. The fixed/mobile broadband community has a particular interest and making part of the dividend available to them will be of great benefit to Europe. Widespread access to digital applications and services enabled by broadband capacities of the 800 MHz band is an essential component of our economic and social future. The 800 MHz spectrum is well suited to ensure digital, mobile services and applications for sparsely populated areas. In tandem, in order to ensure real broadband experience for the customers, further development of networks is necessary, such as deployment of broadband systems operating in the other mobile broadband frequency bands i.e. 900 MHz, 1800 MHz, 2.1 GHz and 2.6 GHz bands.

In terms of boosting the economic recovery, a recent study indicated that an adoption rate of broadband at the speed of the most advanced countries in Europe would be worth an extra 2.1 million jobs from 2006 – 2015, whereas adopting it at the rate of the slowest countries, while still beneficial, would create just 345,000 jobs.<sup>1</sup> Companies adopting broadband-based processes improve their employees' labour productivity on average by 5% in the manufacturing sector and by 10% in the services sector.

In social terms, making the digital dividend available for broadband, alongside spectrum in other bands, can help close the digital divide. Such access is increasingly important as broadband becomes entwined with our daily need and desires. The social benefits include e-commerce, e-government, e-health, education and entertainment. As the move toward more connected wireless devices, especially in the home and enterprise environment, new applications will help improve people's lives. For

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<sup>1</sup> 'The Impact of Broadband on Growth and Productivity'; MICUS; 2008

example, home sensors wirelessly connected to communications networks will be used for everything from helping our ageing population to maintain independence to reducing our energy consumption.

Without freeing spectrum resources to enable the development of broadband networks, we are in danger of being under prepared for tomorrow's applications and services. Traffic continues to grow at a tremendous pace. Overall, the Internet will be nearly four times larger in 2013 than in 2009, while mobile data and Internet traffic will more than double every year in Europe – making it 61 times greater in 2013 compared with 2008 in West Europe and 89 times larger in Central Eastern Europe.<sup>2</sup>

Having outlined the need for the digital dividend to be made available to wireless broadband, please find below our comments in relation to the consultation.

### **A European Roadmap for the Digital Dividend**

#### **1. Increase minimum standards for digital compression capacity on terrestrial TV platform**

AmCham EU supports the Commission's proposal for all DTT (Digital Terrestrial Television) receivers sold after 1 January 2012 to include compression standard at least as efficient as H264/ MPEG-4. We also support for channel encoding at least as efficient as DVB-T2, as the UK is introducing this year. The use of such compression standards increases spectral efficiency and is likely to ease the transition of the 800MHz band to wireless broadband use. Furthermore, such a requirement is likely to increase legal certainty for manufacturers and may lead to benefits of economies of scale.

As twelve Member States already use MPEG-4, there is substantial momentum in this direction. That being said, we appreciate the indication of technology neutrality in that the Commission indicates the compression standard in question should be at least as efficient as H264/ MPEG-4. In other words, it does not rule out the future development of other standards that may also be spectrally efficient. In that regard, whilst there is no suggestion of this in the document, we would caution against any future move towards mandating any specific standards. Requiring a certain level of efficiency in the use of terrestrial spectrum is highly desirable. Picking particular techniques is fraught with danger. With that in mind, we would also caution against any move to require minimum standards for non-terrestrial TV receivers (e.g. IPTV, satellite or cable). Generally these issues are better left to market solutions.

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<sup>2</sup> 'Cisco Visual Networking Index'; Cisco; 2009

**2. Make the 800MHz band available for electronic communications networks under harmonised technical conditions, respecting the principles of tech/service neutrality**

a) Commission Decision on the 800MHz band

AmCham EU welcomes the intention of the Commission to publish a Decision harmonising the technical conditions for the 800MHz band. The digital dividend from the switch from analogue to digital broadcasting is beginning to be realised across Europe. The Netherlands, Finland, Luxembourg, Germany and Sweden have already made the switch; Denmark will do so in September; while parts of the UK and Belgium have also done so. The majority of Member States intend to do so by 2012. It is beneficial for both industry and consumers for the dividend to be allocated as soon as feasible. While some individual Member States are advanced in their preparations for allocation of the dividend, others are in danger of falling behind. Given that the US has already conducted its equivalent 700MHz auction we would hope that Europe can see the need for urgency. Given the pressing need to act on the digital dividend and to co-ordinate its use at the European level, we appreciate the efforts to bring this forward as an urgent action, in line with the call in the RSPG Opinion on the Digital Dividend.<sup>3</sup>

b) Mandatory deadlines

We agree with the proposal that any Member States developing plans beyond the current broadcasting use should do so in accordance with the technical parameters Decision. This would not be to say that the 800 MHz band is designated for fixed/mobile broadband as such but that Member States should make the band available for fixed/mobile broadband, with the market then determining the actual use. While it may be that enough momentum builds for fixed/mobile broadband in the 800 MHz band to be applied across Europe, we would also suggest that introducing a deadline for applying the Decision would be appropriate.

Such a mandatory deadline has several advantages. Firstly, it provides clarity to pan-European operators so that they can plan their networks. Secondly, it encourages Member States that might otherwise miss out on the benefits of an aligned approach. These include attracting operators to provide advanced services to their citizens, given the economies of scale they can achieve from a significant geographical area and avoidance of roaming problems that would be to the detriment of the consumer. Thirdly, it could potentially hasten the decision making of Member States that are lagging in the decision-making process. Thirteen Member States have yet to start serious discussions about how the digital dividend will be used. The final advantage is in terms of negotiations with third countries which border Europe, as it allows Europe to present a united front.

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<sup>3</sup> Radio Spectrum Policy Group Opinion on the Digital Dividend; RSPG; 2009; p12

Given the need to give clear direction to the market, we would prefer such a deadline to be apparent as soon as possible. Ideally, it would be in the Decision itself, but given the current sensitivities and desire for political debate, we welcome the intention to include a proposal for such a deadline to be included in the multi-annual spectrum policy programme.

c) ITU Radio Regulations footnote

We also support the proposal for Member States to be associated with the ITU Radio Regulations footnote on co-primary allocation of the 800 MHz band for broadband in WRC-11. Under the current WRC, the timeline for co-primary allocation of broadcasting and mobile services in the 800MHz sub-band is from 2015. Via footnotes in the ITU Radio Regulations or via bilateral negotiations, some countries can open up the use of this sub-band before that date; subject to technical co-ordination with other countries (e.g. under Geneva Agreement 06). However, there remain a number of countries outside of the footnote and it is advantageous for the 800 MHz band to be opened up as soon as possible, rather than waiting till 2015 or beyond.

d) Interference issues and use of spectrum by high and medium power broadcasters

Notwithstanding the wider societal benefits of freeing the digital dividend spectrum resources for new broadband networks, in opening up the 800MHz band to fixed/mobile broadband and modifying the current service's coexistence, it is possible that there will be issues with regards to interference with other users. More specifically, the concern is that proposed use of the upper spectrum of the UHF band for mobile communication applications may interfere with the transmission of signals via the infrastructure of cable operators to their customers.

The cable industry in Europe has flagged an Electro-Magnetic Compatibility issue in relation to its receivers. Any evidence which is brought forward by the cable industry or other users needs to be taken seriously and carefully reviewed by regulators, who should resolve the issue on its merits, taking into account the EU's goals for electronic communications overall.

The Commission could consider requesting the development of new harmonised TV receiver standards by European SDOs in order to:

- Remove any EMC threat to cable TV receivers (Cable TV standard),
- Facilitate the deployment of mobile broadband networks in 790-862MHz by ensuring that Terrestrial TV receivers are not open in the 790-862MHz range. Filtering out the 790-862MHz frequency range would significantly contribute to the success of fixed/mobile broadband roll-out in the 800MHz band.

### **3. Supporting research into "frequency agile" mobile communications systems**

We agree that such systems, depending on the outcomes of research and technology evolution, could simplify spectrum planning, and allow for simpler transitional arrangements in the future. Increased research, leveraging the past and ongoing research on this topic, will help to validate concepts and test solutions. Collaborative research is required due to the complexity and interdisciplinary of such new systems, in addition to the resources needed. In the short term, focusing effort on building simulation environments close to 'real life' would help to increase knowledge on interference challenges.

### **4. Common position on white spaces**

AmCham EU supports a pan European approach on white spaces.

### **5. Negotiations with non-EU countries**

We support the idea of the Commission negotiating with non-EU countries in order to facilitate the deployment of the 800 MHz band.

The largest problem of this nature in Europe is that several countries are bound by footnote 5.312 in the ITU Radio Regulations which allows the Russia Federation and Belarus to allocate 645-862MHz band to aeronautical radio-navigation services (ARNS) on a primary basis, and neighbouring countries wishing to use this band for mobile must first reach agreement with the two countries. The Ukraine also uses this sub-band for ARNS services. This problem affects Estonia, Finland, Latvia, Lithuania and Poland. Malta has an unrelated issue with using the 800MHz sub-band for applications other than broadcasting thanks to GE06 agreement on using DTT in channel 66. Spain has also indicated that it has to undertake negotiations with third countries in order to clear the 800MHz band.

While individual Member States have played a positive role in finding agreement with third countries, the process so far has been somewhat deadlocked. This negotiation process should be revitalised and intensively driven within CEPT as a forum where all countries in the region are represented and working methods are well established. The EU could potentially have more weight with accession and partner countries.

### **6. Mechanism for addressing future external developments**

AmCham EU supports the idea of a mechanism for addressing future external developments affecting the Roadmap on a regular basis. Such an approach could assess the take up of particular services for which spectrum has been allocated, bottlenecks, new uses for spectrum and advances in compression standards.

This would be particularly useful in determining whether a second sub-band should be cleared within the 470-862MHz band. Initial findings from Analysis Mason indicate

that in scenarios even where demand for DTT is high, there could be a further €17bn in private value from clearing a second sub-band if demand for wireless broadband is also high, and €30bn in private value if new uses emerge for such spectrum.<sup>4</sup> Should such a sub-band be cleared, channel plan proposals should be reviewed to maximise and harmonise this opportunity.

It should be noted that in both Region 2 (the Americas) and Region 3 (Asia-Pacific) the Digital Dividend comprises the entire 690 – 806 MHz, band; a full 36 MHz more spectrum than currently foreseen in Europe. From the outset this seems to put Europe in a disadvantaged situation.

### **Analogue Switch-Off**

AmCham EU believes it is imperative for Member States to reconfirm their commitment to analogue switch off by 1 January 2012 and agrees with the Commission that this should be stated in national law.

This should be matched by a commitment to hold spectrum awards for the 800MHz band prior to switch off in order to facilitate the earliest possible reassignment of that band. There is a growing recognition among Member States that the dividend spectrum should be made available to fixed/mobile broadband. Austria, Czech Republic, Finland, France, Germany, Spain, the UK, Ireland, Denmark, Sweden and the Netherlands have all acknowledged this need. It is important that all Member States take steps to accelerate the switch-off of analogue broadcasting in order to enable the market to determine use of this band.

The early findings by Analysys Mason quote studies to the effect that a one year delay in the use of the 800MHz band would lead to a 10% decrease in its value.<sup>5</sup> This amounts to €10.7bn, should the demand for wireless broadband be high. In the US, the equivalent 700MHz auction was completed in April 2008 and the band is already in use. One of the interesting developments is that Verizon Wireless is opening up its networks with more open and faster market introduction of new applications and devices on their network. This will have a knock-on impact in introducing new market segments and fostering the Internet of things, with 90% of the devices in their process certification being for machine-to-machine communication. These include items such as sensors, tracking devices and temperature monitors that are having an important impact on transportation, retail and the supply chain.

Europe is being somewhat left behind by other regions and it is essential that we do what ever in our power to catch up.

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<sup>4</sup> Analysys Mason, *op.cit.*

<sup>5</sup> *Ibid.*

### **Multi-Annual Radio Spectrum Policy Programme**

AmCham EU supports the initiative to instigate a multi-annual radio spectrum policy programme in order to garner political endorsement for the strategic elements of the roadmap. First raised by the Parliament in the context of the Telecom Review, it will help ensure recognition of the importance of spectrum and facilitate buy in from policy makers in Europe and national capitals. It is important, however, that the programme is so designed that the implementation of spectrum policy is not delayed, to the detriment of European consumers and industry.

In particular, AmCham EU welcomes the recognition of the importance of the evolving communication needs of the emergency services and recommend that Security and Public Safety services is central to the future EU's Roadmap on Spectrum.

We fully support the inclusion of the spectrum needs of the emergency services within the multi-annual EU spectrum roadmap. Whilst we support the creation of further spectrum resource for the emergency services in bands below 1GHz, we also note that the possibility of the increased use of higher bands for particular applications may also be needed. We would also like to see incentives for public services to use existing spectrum allocations with greater efficiency and to look for opportunities to share spectrum with commercial services wherever possible. This is particularly important in rural areas, where commercially funded network infrastructure may not otherwise be viable.

Existing dedicated radio communication systems used by the European emergency services cannot support mission critical data or video communications needed by the emergency services. To do so the emergency services require additional spectrum to enable them to use the latest technologies to aid their work.

The value from the emergency service communications networks that has been generated today has its origins back in 1995 when the 380MHz band was harmonised. This resulted in creating a world leadership position for the European Public Safety (PS) community served by more than 10 suppliers. AmCham EU member companies wish to underline the importance of a pan-EU approach in the role of a catalyst to encourage the successful evolution of the equipment towards the fulfilment of new operational requirements. Sufficient spectrum and European harmonisation measures to align spectrum and standards would have a critical impact on ensuring interoperable and efficient systems.

AmCham EU would like to point out the need for a swift decision with regards to the allocation of spectrum for Public Safety and invite the European Commission to take the importance of timing into consideration when planning the roadmap. The early identification of spectrum provides the necessary certainty to industry to invest and develop equipment meeting the needs of Public Safety organisations. This triggers a chain reaction of planning certainty for Public Safety Service providers, widespread adoption of interoperable communications systems, increasing in functionality and

price performance. The 1996 decisions have shown this for voice and narrowband data services, and the next two years is appropriate timing to repeat this success for broadband communications.

### **Geographic clusters**

Ideally, switch off and assignment procedures would have occurred at the same time across Europe, to allow the development of true pan-European networks. AmCham EU strongly supports the availability of the 800 MHz band at pan-European level by 2012.

### **Size of Spectrum Blocks**

One issue not directly addressed by the consultation is the size of spectrum blocks made available to spectrum winners in order to roll-out their networks. Regulators should recognise the need for substantial blocks of spectrum to deliver advanced speeds and services. Cutting edge mobile broadband technologies will require a minimum of 5 MHz channelisation, and service providers may choose equipment that can operate on 10 MHz channelisation or more. In order to achieve the necessary size, operators should be able to bid for the basic blocks on a contiguous basis, i.e. aggregate several blocks of 5MHz. These broadband channel arrangements are essential for accommodating the mix of video, data and voice applications that will be required. Enabling such an approach will provide an incentive for the market to adopt an open applications and devices approach, which is more difficult with smaller blocks.

In preparing for large blocks of spectrum to be made available to operators, we would also like to highlight the need for the spectrum to be allocated in multiples of 5MHz (as suggested by CEPT). The profiles which have been created for the technologies likely to be used in the available spectrum have been developed based on 5MHz, 10MHz, 15MHz or 20MHz sub-blocks.

AmCham EU would like to thank the Commission for this opportunity to provide input to its work on the digital dividend. We furthermore welcome any further discussion and dialogue with the Commission on this important issue.

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*AmCham EU speaks for American business committed to Europe on trade, investment and competitiveness issues. It aims to ensure a growth-orientated business and investment climate in Europe. AmCham EU facilitates the resolution of transatlantic issues that impact business and plays a role in creating better understanding of EU & US positions on business matters. Total US investment in Europe amounts to \$700 billion, and currently supports over 4 million jobs.*

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