# The Digital Dividend in Europe

Mobile communications are central to European consumers' lives. Mobile is the most ubiquitous, connected, personalised communications platform in Europe, surpassing 124% penetration in 2009[1].

Mobile services are now being used across all age groups and socio-economic segments of the population with 83% of EU households having access to at least one mobile phone and 24% being 'mobile-only', with no access to a fixed line[2].

With a sufficient proportion of the digital dividend allocated on fair economic terms, mobile could help to bridge the digital divide, bringing broadband to rural areas.

## Status

In Europe, the switchover from analogue to digital terrestrial TV by the end of 2012[i] will free up an unprecedented amount of spectrum, including the new 800 MHz band (790 – 862 MHz) that will be used for mobile broadband networks. The spectrum that is freed up is known as the "digital dividend", and is known for its very good propagation characteristics that make it highly suitable for extending coverage into rural areas.

Countries such as Norway, Denmark, Finland, Germany, Luxembourg, the Netherlands, Sweden and Spain have already completed analogue switch-off, and are now taking steps towards allocating some of the digital dividend to mobile broadband services. Today, Germany is the first EU country to have awarded spectrum in the 800 MHz band in an auction that completed in May 2010. In the region of Hessen in Germany, results of a survey of participants in a pilot testing the mobile internet using digital dividend frequencies found that more than 90% of participants were satisfied with their internet connection, compared with only 32% before the pilot. France, Sweden and other European countries also have plans to award the spectrum in the digital dividend band in late 2010 or in 2011.

At EU level, the necessity for harmonization of the 800 MHz band for mobile services within Europe has been acknowledged and strongly advocated in various reports, Communications and Recommendations published by relevant bodies such as the CEPT, the European Commission (EC), Radio Spectrum Policy Group (RSPG), the Body of European Regulators for Electronic Communications (BEREC), the European Parliament, and the Council. In May 2010, the EC adopted a Decision[ii] which laid down technical harmonisation measures for those Member States opening up the 800 MHz band for networks other than terrestrial broadcasting.

Building on this momentum, the European Commission issued a legislative proposal for a five-year spectrum policy programme[iii] in September 2010, which sets 1st January 2013 as the deadline for the allocation of digital dividend spectrum to mobile broadband across Europe. The proposal must now be approved by the European Parliament and Council. Early and clear guidelines as to the future availability of the digital dividend for mobile broadband services will help the whole mobile ecosystem to plan for network roll-outs, and to invest in the development of infrastructure and devices. Failure to secure a pan-European harmonisation, however, would have several negative effects for Europe and for the mobile industry, such as fragmenting the single market, causing further cross-border interferences and severely impacting Europe's economy, innovation and leadership in the telecommunication industry.

As well as its tangible enhancement of consumers' lives, mobile is a significant driver of economic productivity, delivering greater added value per megahertz of spectrum than any other industry[3].

As data traffic volumes in mobile networks are doubling every eight months[4], new spectrum is needed to facilitate the development of innovative mobile services and enable mobile networks, constrained today by the limited availability of radio spectrum and network resources, to respond to consumer demand. Inadequate spectrum allocation would stifle these new services.

1 Note: dual SIM card ownership in many markets explains why the number is >100%

2 GSMA Mobile Manifesto 2009, www.gsmworld.com/mobilemanifesto

3 See for example, "The economic impact of the use of radio spectrum in the UK", Europe Economics (2006)

4 Cisco Visual Networking Index, 2009. Link: http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-481360.pdf

i COM (2005) 204 — Communication on Accelerating the transition from analogue to digital broadcasting

ii C (2010) 2923 — Commission Decision on harmonised technical conditions of use in the 790-862 MHz frequency band for terrestrial systems capable of providing electronic communications services in the European Union

iii COD (2010) 0252 — Proposal for a decision of the European Parliament and of the Council establishing the first radio spectrum policy programme

From a policy and regulatory perspective, 2010 will be critically important as the European Union decides on the scope, focus and direction of its European Digital Agenda. With the digital economy and broadband for all firmly on the political agenda of the Commission, the current and future EU Presidencies and of the new European Parliament's contribution to the post i2010 strategy, it is essential for Member States to actively cooperate to foster a more harmonised approach to the potential use of the digital dividend. This will help Europe to emerge from the current crisis, enabling cost-effective deployment of mobile services through economies of scale which will drive down handset and network equipment costs and encourage innovation.

*"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."*

*Viviane Reding, EU Commissioner for Telecoms and Media, Brussels, 9 July 2009.*

## GSMA position and advice

The GSMA believes that Europe stands to benefit greatly from the allocation of the 790-862MHz sub-band to mobile broadband services. Harmonisation of frequencies within the region will create economies of scale lowering both the cost of deploying mobile networks and the cost of mobile devices for consumers, allowing the delivery of mobile broadband services to rural Europe as cheaply as possible, and bridging the digital divide.

The GSMA encourages governments in Europe to allocate this band in sufficient time for mobile operators to continue to meet the fast rising demand for mobile broadband services. For consumers to reap the full benefits of the digital dividend, governments need to provide clear, early indications of their intentions so that mobile operators can plan their network investments. National regulatory authorities should consider establishing mechanisms to incentivise efficient usage.

EU stakeholders should:

- Create harmonised technical conditions for use of the 790-862MHz band – specifically through co-ordination of activities within Europe (technical implementation) and, on the borders of Europe, with surrounding countries (promotion of harmonised usage)
- Ensure full implementation in Europe within appropriate timescales
- Focus on making the spectrum available on a technically harmonised basis and at the lowest possible cost to make it commercially attractive for mobile operators to provide mobile broadband to rural areas.

The EC should review spectrum usage and future requirements of mobile and non-mobile applications, working with the ITU where appropriate, covering availability, technology choices and timelines. The development of a roadmap, in collaboration with the mobile industry and other parties, would specifically involve:

- Assessing overall allocations within Europe
- Assessing the value of European harmonisation, and the incremental value (e.g. economies of scale) of harmonisation beyond Region 1[5]
- Reviewing additional future spectrum needs for mobile
- Calculating the economic impact for the EU of different spectrum usage scenarios to ensure an appropriate balance is struck.

**Where to go for more information**

**www.gsmworld.com/digitaldividend**

5 Region 1 (Europe, Africa, the Middle East west of the Persian Gulf including Iraq, the former Soviet Union and Mongolia)

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