A SIMPLE SOLUTION TO SPECTRUM CRUNCH COULD GENERATE UP TO €54 BILLION FOR EUROPEAN ECONOMY

A new study published in the wake of the European Parliament Resolution shows significant benefits could flow from use of 1.4 GHz band for a supplemental mobile downlink for enhanced multi-media and broadband services

There could be up to eight times as much data being downloaded than is being uploaded in mobile networks. And this imbalance will only grow, as rich mobile content is increasingly made available and as consumer demand continues to soar. A regulatory innovation, the use of the 1.4 GHz band as a supplemental downlink band for mobile applications, is shown to drastically ease capacity, to enable considerably higher user data rates, to substantially enhance the user experience and to provide significant economic benefits.

A study by **Plum Consulting**, unveiled today at the *6th Annual European Spectrum Management Conference* in Brussels, shows that using the 1.4 GHz band (i.e. 1452-1492 MHz also called 1.5 GHz by the European Parliament or the L-band by the CEPT) for terrestrial supplemental mobile downlink would:

- generate a **net present value for Europe of as much as €54 billion over a 10 year period**
- substantially **enhance user experience** through faster download speeds, **fostering content and access competition and innovation**;
- **aid mobile broadband roll-out** by enabling a far greater number of users;
- **give Europe an early opportunity** given the possibility for 1.4 GHz supplemental downlink deployment in the Middle East, Africa, Canada, as well as Central and South America.

A full copy of the report and executive summary is available at www.plumconsulting.co.uk

Phillipa Marks, Director at Plum Consulting noted that "*the **economic benefits may well be in excess of €50 billion** for the European economy when using the 1.4 GHz band for a supplemental downlink for the delivery of enhanced mobile multimedia services*".

Ms Marks added that "*it is increasingly important that we find a solution to ease the spectrum crunch, as **around three-quarters of mobile broadband traffic last year was estimated to be multimedia** - and this will only grow. The 1.4GHz band is the ideal solution, not just to help address the spectrum crunch but as an important step forward in achieving the EU's Digital Agenda target of providing 30Mbps access to 100% of European citizens by 2020.*"

The independent study was conducted jointly for Ericsson and Qualcomm Incorporated and the results vindicate both the European Parliament's recent Resolution in favour of harmonising 1.4 GHz for wireless broadband services and the CEPT's recent decision to review and harmonise the future use of the band in Europe. Lasse Wieweg, Director, Government and Industry relations at **Ericsson** said that "*the 1.4 GHz band can be the perfect complement to a mobile operator's existing frequency assets. A supplemental downlink band, combining extended bandwidth and favourable coverage properties, will be a precious*

resource in the near future, given the significant rise of data traffic on mobile broadband networks."

Wassim Chourbaji, Senior Director for Government Affairs at **Qualcomm** added that "*while it might seem obvious to use the 1.4 GHz band as supplemental downlink, this has only become technologically possible with the development of HSPA+ and LTE-Advanced standards. The technology exists, the spectrum exists and the political will exists. However, the substantial social and economic benefits derived from this use of 1.4 GHz can only materialize if the band is harmonised in Europe and offers the economies of scale identified in the Plum Consulting study."*

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NOTE FOR EDITORS:

There is currently a significant asymmetry of mobile communications traffic, with up to eight times as much data being downloaded than is being uploaded (see Plum Consulting report). This due to the very rich content being made available, ranging from videos, to apps and to books. However, current spectrum allocations for 3G and 4G in Europe almost all come in paired bands (i.e. one band for uploads and one band for downloads). Finding an additional band that can be expressly used for downloading data as supplement to the existing paired spectrum bands will drastically easy capacity and increase wireless usage.

The term 1.4 GHz band is used to mean the 40 MHz block at specifically 1452-1492 MHz (it is also commonly called 1.5 GHz and L-band in Europe). The use of 1.4 GHz for supplement downlink has only recently become possible, through developments in technology now included in the 3GPP HSPA+ standard and the soon to be finalized LTE-Advanced standard, that are part of the main 3G and 4G mobile broadband roadmap.

The band is currently allocated for use by digital audio broadcasting (DAB) services in most European countries– part of the band is allocated to terrestrial networks and part is allocated to satellite networks. None of these services have developed in the band. Rather in all countries in Europe the satellite part of the band is unused and this is also the case in the terrestrial component in most countries.

On 11 May 2011, the European Parliament adopted a resolution by Rapporteur Gunnar Hökmark (EPP, SE) and voted at first reading on the EU's Radio Spectrum Policy Programme (RSPP) for the harmonisation of this band for wireless broadband services. The European Parliament amendment reads "*The Commission is invited to take action, in cooperation with*

Member States, at the appropriate levels to achieve further harmonisation and a more efficient use of the 1.5 GHz band (1452-1492 MHz) […] for wireless broadband services".

On May 20th, the European Conference of Postal and Telecommunications Administrations (CEPT, formed of 48 European countries cooperating to regulate posts, radio spectrum and communications networks, www.cept.org) set up a Project Team, FM PT 50, to determine which future use(s) of the 1.4 GHz band would be the most beneficial for Europe and harmonise the spectrum accordingly.