Future use of the 470–694MHz band

One-page summary of Aetha's report

The World Radiocommunication Conference in 2015 (WRC-15) will consider the award of co-primary status to mobile in the 470–694MHz band in Region 1. A consortium of Abertis, Arqiva, BBC, BNE, EBU and TDF has therefore requested Aetha to consider the economic benefits that would arise across the EU's 28 member states from mobile gaining access to the 470–694MHz band, compared to continued use for DTT and other existing uses.

We have considered a scenario in which DTT transmissions cease and consumers are required to migrate to alternative platforms (a mixture of satellite, cable and IPTV). All 224MHz of spectrum in the band then becomes available for mobile. We have calculated the costs and benefits of this scenario over a 15-year period (2015 to 2029) and compared them to the costs and benefits of continued use of the spectrum for DTT and other existing uses (PMSE, radio astronomy and 'white spaces').

The benefits from making spectrum available for mobile are highly sensitive to forecast traffic levels. Therefore, we have considered a range of traffic forecasts, the highest of which is based on forecasts from the ITU and UMTS Forum.

The result of our economic assessment is provided in Figure 1 below.

Figure 1: Results of our economic assessment across the EU [Source: Aetha]

	EUR billion
Cost of consumer equipment	19.7
Cost to set up new free-to-view platform	10.8
Cost of reduction in TV platform competition	14.2
Net avoided cost of operating DTT network	(6.2)
Total cost of DTT migration	**38.5**
Value of spectrum to mobile	**0–10.3 (depending on traffic forecast)**

Our results show that even in the most aggressive mobile traffic forecast, the **costs of clearing DTT from the spectrum (EUR38.5bn) significantly outweigh the potential value of using the spectrum for mobile (EUR10.3bn) by a factor of almost four.** When a less aggressive traffic forecast is used, the costs of clearing DTT are unchanged but the value of using the spectrum for mobile would be near to zero.

It is clear that the economic benefits for the EU are maximised if the 470–694MHz band continues to be used for DTT for at least the next 15 years – **there is clearly no economic case for switching-off existing DTT networks across Europe** on the grounds of spectral efficiency.

Further, the introduction of a co-primary allocation to mobile at WRC-15 **would have considerable negative impacts on DTT.** Given the history of DTT spectrum being awarded co-primary status for mobile and that then leading to the spectrum being cleared for mobile, granting a co-primary allocation to mobile in the 470–694MHz band would **undermine investor confidence in the future of the platform**. This would lead to the DTT platform falling behind other television platforms and even unnecessarily risk its viability, with little benefit to be derived.

A full version of the report is available on Aetha's website – www.aethaconsulting.com

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