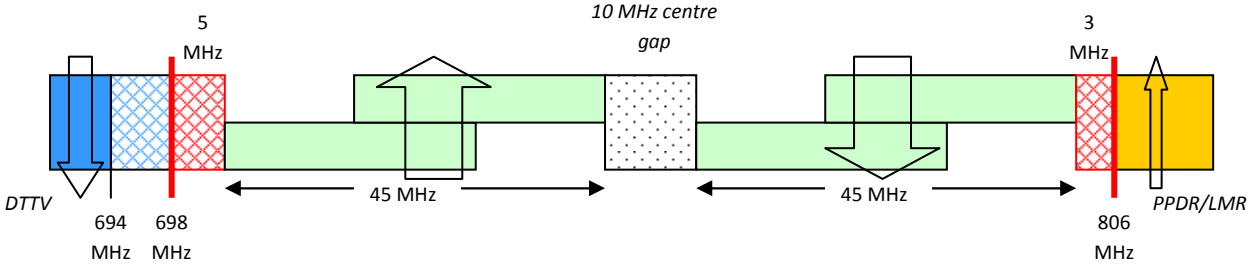
Position paper for Asia Pacific on Digital Dividend/UHF band plans

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Abstract

The GSMA believes that the band plan agreed by the Asia-Pacific Telecommunity Wireless Forum, known as the "2x45 MHz" option, offers the best chance for delivering the benefits of regional harmonisation. It also provides the largest bandwidth of usable spectrum. As such it also offers the best chance for delivering the benefits of mobile broadband to rural populations in the region.

The GSMA therefore supports this option in the Asia Pacific region, as specified in "APT COMMON VIEWS ON HARMONISED FREQUENCY ARRANGEMENTS FOR IMT IN THE BAND 698-806 MHZ"[1].



Source : APT/AWF

Introduction

The GSMA supports the work of the Asia-Pacific Telecommunity, in the development of recommended harmonised approaches, for the release of spectrum and applicable frequency sub-bands. The work currently underway in the APT, with regards to defining such a harmonised approach for the release of UHF spectrum, for mobile broadband, is very

[1] This document was considered and accepted by consensus at the ninth meeting of the Asia Pacific Telecommunity Wireless Forum held in Seoul, Republic of Korea from 13 to 16 September 2010. See document AWF 9 / Out-13,which also formed part of the ITU 5D submission: Document 5D/865-E – 7th October 2010.

important for the future deployment of mobile broadband within Asia Pacific. This is because mobile broadband is likely to be the main broadband delivery mechanism for the region. The work in the AWF has highlighted the importance of such a harmonised approach in that:"

- *Mobile operators and manufactures will be able most efficiently to address a large market, through the achievement of economies of scale for equipment manufacturer (mobile terminals). Absence of harmonization (within the region or with other regions), will lead to prohibitive handsets costs which could result in a significant reduction of the take-up of any mobile service due to the fragmented market*
- *The propagation characteristics of the spectrum below 1 GHz made this 700 MHz UHF digital dividend band very suitable for wide coverage provision. This UHF spectrum is also very suitable for in-building coverage provision, e.g. in urban areas.* "

The GSMA is also in favour of the harmonisation of frequency bands used for mobile broadband services in the UHF band, because this helps to reduce the cost of terminals for consumers. GSMA studies have shown that spectrum fragmentation can significantly increase the costs of ownership to consumers, and that developing markets are particularly sensitive to such costs.

The GSMA believes that Asia Pacific has a historic opportunity to develop a band plan that is best suited for Asia Pacific consumers and for Asia Pacific manufacturing. The scale of the Asia Pacific market, with around two thirds of the world's population, means that if Asia Pacific were to settle on one "primary" band plan, that this could become a defacto UHF band for mobile broadband/LTE in other parts of the world, as 900 MHz has become for GSM. However, this opportunity could be threatened if the region fragments with a number of mutually incompatible bands.

Principles for deciding on a common band

The GSMA believes that the interests of Asia Pacific consumers and economic and social development in the region, is best served by considering the following principles when deciding on a harmonised approach on frequency bands for UHF mobile broadband, namely:

- *The need to deploy wide frequency channels to facilitate current and future broadband data needs;*
- *The need to deliver cost effective wide area network mobile broadband coverage to rural communities;*
- *The need for regional harmonisation to drive mobile device economies of scale and to minimise the 'cost of ownership';*
- *That the main benefit of the UHF band is enhanced rural and indoor coverage. Any band plan should ensure there is minimum impact on the link budget advantage this band offers; and*
- *Due to the relatively small size of the band, and the need to support mobile broadband, there is a requirement to maximise the amount of available spectrum, and hence minimise spectrum wasted in any required guard bands.*

We believe that these principles point to the adoption of one "**primary**" international band being identified for the region, as opposed to bands that are only likely to be used in one country (ie *national bands*). While the GSMA would favour all countries harmonising their frequency arrangements, we recognise that this has not been possible in the past, and will continue to be a challenge for UHF.

Conclusion

The GSMA believes that following the consensus agreement reached at APT/AWF/G-9 in Seoul, in September 2010, on the **"2 x 45 MHz"** band plan, should be implemented as widely as possible in the region.