ERICSSON

Reference:
Date: 2013-06-28
Attending to this matter: Kursten Leins

Your Reference:
Your Date:

Committee Secretary Parliamentary Joint Committee on Law Enforcement
PO Box 6100
Parliament House
Canberra ACT 2600 Australia

Parliamentary Joint Committee on Law Enforcement into Spectrum for Public Safety Mobile Broadband network - Ericsson supplementary submission

Dear Committee Secretary

I would like to provide additional clarification on two points made in the Ericsson submission provided on the 12th June 2013, specifically items 2.2 b) and 2.3 c).

Please find enclosed a supplementary submission which provides clarification relating to ITU recommendations on use of frequency bands for PPDR, as well as 3GPP standardisation status of Band 27 within ITU Region 3. These points are highlighted in yellow within the enclosed supplementary submission.

Kind regards

Kursten Leins

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2.2 (b) which of the 700 or 800 MHz bands is the most appropriate for law enforcement agencies given the current licensees occupying spectrum;

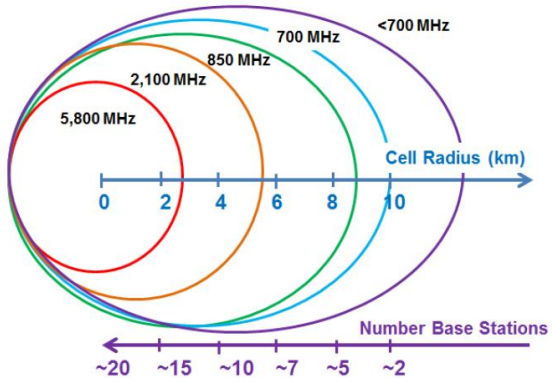
Within 3GPP, many spectrum bands have been standardised to facilitate global and regional harmonisation, thereby enabling vast economies of scale for network infrastructure suppliers and device manufacturers.

ITU-R recommendation M.2015[1] encourages administrations to examine a number of frequency bands when considering national planning of advanced PPDR solutions, including the range 806-824/851-869 MHz.

3GPP has developed band 27 (807-824 / 852 – 869 MHz), which is a potential candidate for commercial cellular as well as broadband PPDR solutions in Region 3, using LTE (basic and Advanced) as an enabling technology. In part, this was due to the existence of a number of narrowband Public Safety networks in operation within this band throughout Asia Pacific, thereby creating a future evolution path to mobile broadband using LTE for Public Safety with regional scale.

Spectrum below 1GHz is generally regarded as 'premium' spectrum, primarily due to its excellent propagation over long distances, as well as its superior in-building performance. This is illustrated in the following figure. As can be seen, there is negligible difference in coverage characteristics between 700 & 800MHz spectrum bands.

Figure 2 - Cell site coverage radius at different frequency bands[2]



By comparison, 700MHz spectrum in APAC is known as APT700 (Band 28), and has been adopted and/or endorsed widely throughout the region, and increasingly across large parts of Latin America, for commercial operators to deploy future mobile broadband capacity and coverage.

Countries that have adopted and/or endorsed adoption of this band plan have a total population in excess of **2 billion people**, with additional countries expected to endorse this plan in the near term future.

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[1] ITU-R, Frequency arrangements for public protection and disaster relief radiocommunication systems in UHF bands in accordance with Resolution 646 (Rev.WRC-12)
[2] 4G Americas, The Benefits of using LTE in Digital Dividend Spectrum, Nov 2011

2.3 (c) how the necessary spectrum for public safety should be secured in a timely manner;

As per response to (b) above, band 27 has been specified by 3GPP for LTE, and could be suitable as a candidate band for mobile broadband PPDR and Public Safety solutions for those countries in ITU Region 3 (and potentially also Region 2) that wish to implement such service in a flexible way combining it with a commercial service.

The Australian Communications and Media Authority has recently undertaken a review of the 800 and 900MHz bands, including proposed options for allocation for Public Safety mobile broadband spectrum.