

0 Executive summary

The objective of this report is to provide information relating to the implementation of UMTS/IMT-2000 in Central and South American countries, including information on current usage of the frequency bands for public mobile networks below 3 GHz . It also highlights the factors that are needed for global harmonization and benefits of it.

In order to fully benefit from global spectrum identification, the Forum encourages and supports global harmonisation of frequency arrangements for UMTS/IMT-2000. The harmonisation of frequency arrangements is a key element in reducing cost and complexity of IMT-2000 implementation and to facilitate global roaming. The third key enabler for harmonized spectrum usage is the globally common standard for UMTS/IMT-2000. These elements are needed for the players to be able to benefit of the advantage of economies of scale on terminals and infrastructure equipment. They also facilitate global roaming.

Each possible solution for UMTS/IMT-2000 frequency arrangements was evaluated and the conclusion was that an early, harmonized UMTS/IMT-2000 implementation is only possible in the WARC-92 bands. The choice of an alternative band arrangement would either delay the implementation of UMTS/IMT-2000, due the lack of suitable equipment, and/or would not offer the expected third generation services, especially, global roaming.

The collected information shows that most of Central and South American countries have made or could make the WARC-92 bands available for UMTS/IMT-2000. Other such countries are using parts of the WARC-92 band for 2nd generation networks and these frequency plans are assumed to continue for 3rd generation networks.

Based on the findings, the following recommendations¹ were made:

Recommendation 1:

Central and South American countries should start the implementation of UMTS/IMT-2000 in the WARC-92 frequency bands (1920 – 1980 /2110 – 2170 MHz for paired operation) as most of them could make all or parts of these bands available. This would enable them to fully benefit of early availability of equipment, economies of scale and roaming possibilities. This is the best solution for global harmonization in both the short-term and longer-term.

Recommendation 2:

The GSM1800 bands (or parts of it) could be used for implementation of UMTS/IMT-2000 in those Central and South American countries where the WARC-92 frequency bands are not available. This solution could support global harmonisation in the longer-term.

Recommendation 3:

Operators in Central and South American countries should choose UMTS technology (W-CDMA), which has the best potential to enable the benefits of economies of scale and global roaming.

¹ Regarding the preferred minimum spectrum requirement per public UMTS operator, UMTS Forum recommendations are given in Report 5.

Recommendation 4:

The issued licenses should be national². It will improve spectrum efficiency and minimise the need for guard bands.

Recommendation 5:

Future plans to fulfill the spectrum demand beyond the WARC-92 frequency bands should be prepared early enough and should take into account spectrum harmonization aspects (especially the band 2500-2690 MHz) to enable further growth and evolution of UMTS/IMT-2000 services and networks

² UMTS Forum Report 4 "Considerations of Licensing Conditions for UMTS Network Operations" gives more information on licensing.