

Discussion of Suitable Frequency Ranges For Candidate Bands Under WRC Agenda Item 1.1

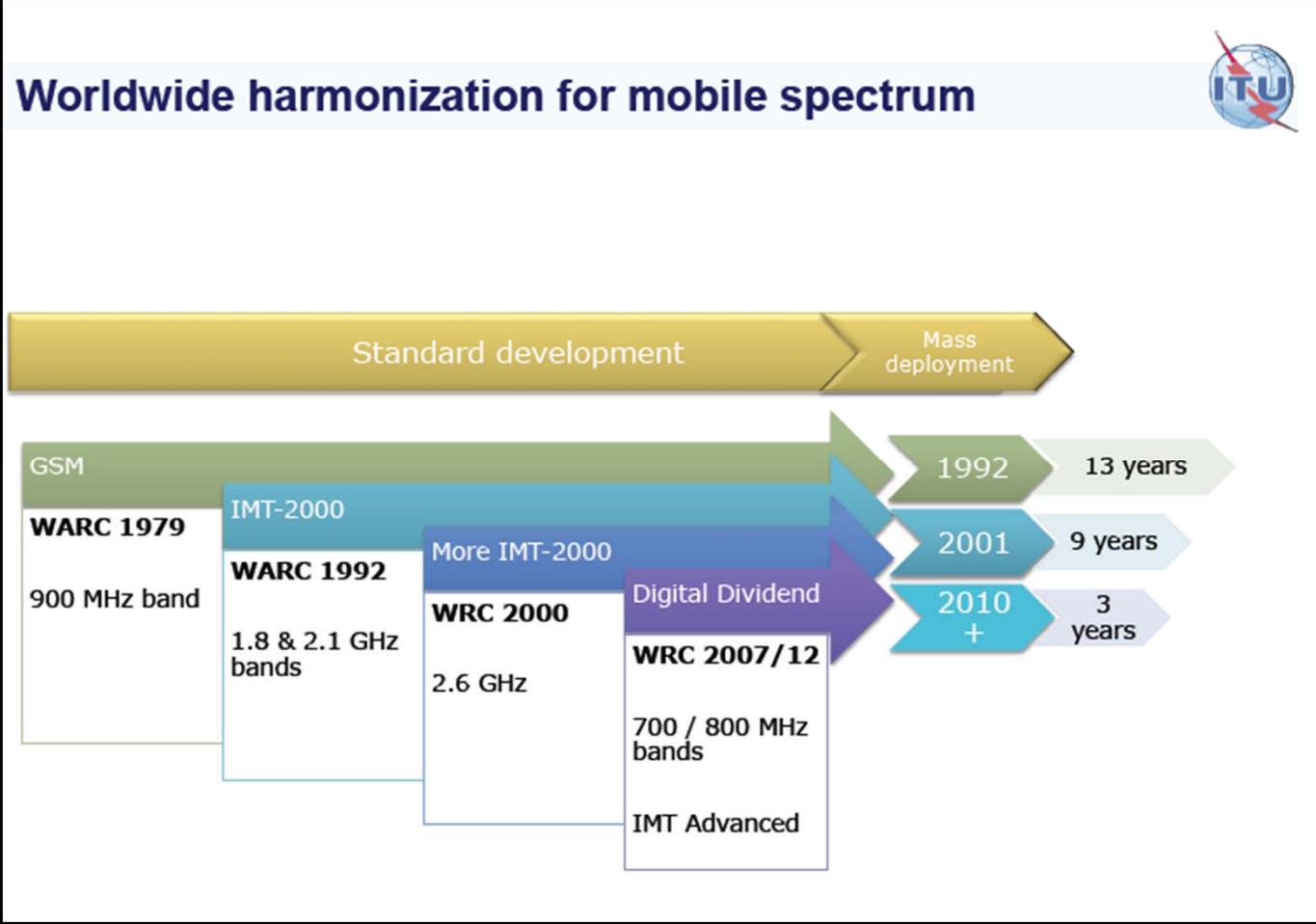
*And why the World Radiocommunication Conference (WRC) 15 is needed to deliver enough harmonised spectrum – a prerequisite to allow mobile broadband to be a “**Platform for Progress**” as envisaged UN/UNESCO www.broadbandcommission.org*

Sandeep Karanwal
Head of India, GSMA
15 March 2013 , New Delhi

Why is the international process important?

Because scale matters, and drives down costs creating more scale. In markets like India, IMT is the best chance to deliver affordable broadband to most people, as it has done for voice.

From identification to availability takes time



Background

Spectrum and Broadband

- Demand for mobile data is growing fast – doubling every year in many markets;
- Many governments have made the connection between spectrum and much needed economic growth, as well as social benefits;
- How much spectrum, and how fast will be a key element;
- Clear that we need spectrum harmonisation – and this means ideally globally;
- It is becoming more and more difficult to accommodate multiple bands and technologies in devices – impacts on costs and RF performance
- The ITU/WRC offer the best mechanisms for this harmonisation (common band plans);
- That means administrations need to think about candidate bands being submitted to the ITU/WRC15 process for IMT. As well as sharing studies and spectrum estimates.

The situation in India

- In India, telecommunications has witnessed unprecedented growth in the last decade;
- India has emerged as one of the fastest growing telecom markets in the world, particularly in mobile telephony;
- As on date, total mobile subscriptions is 864.7 million;
- Number of broadband connections are only 42.79 million , i.e. penetration of broadband is just 3.39% as against tele-density of 70.82%.
- Nearly 85% of total broadband connections are through DSL.
- Broadband policy objective of 2 Mbps to 10 Mbps open access optical fibre network connecting all habitation with population of 500 and above
(National BB plan 2010)

Source : Wireless Intelligence

Why does spectrum matter?

Because the growing demand for mobile broadband needs sufficient and suitable spectrum. Without that spectrum, IMT can't be the "Platform for Progress" to encourage economic and social benefits.

Decisions made about spectrum harmonisation can make some bands unusable or more expensive to use, or offer a worse user experience than need be.

WRC15 issues

Decisions need to be made in the run-up to WRC15. GSMA respectfully suggests that Administrations should consider what is in the best interests of their national policy objectives. Timely intervention internationally may give the best opportunity to maximise those policy objectives.

WRC15 - Candidate Bands for IMT

There are a number of issues that should be considered with regards to suitability of bands for IMT under WRC-15 Agenda item 1.1. The GSMA would like to propose the list below:

- The needs of developing nations should be taken into account, such as the need for economic/cost effective services for a wide range of user densities and coverage areas (such as rural).
- The ability to deliver international harmonisation to reduce device costs.
- The ability of bands to provide coverage and capacity (accepting that these terms need further discussion) as well as very high bit rates.
- The technical suitability – factors such as the availability and feasibility of required RF components within the required time frame. Also that bands should be (ideally) contiguous and of sufficient bandwidth to allow IMT-Advanced systems to operate optimally.

What has GSMA suggested in WP5D

The GSMA suggests that candidate bands be selected from the frequency ranges suggested here namely:

- UHF (470-694 MHz);
- L Band (1 300-1 527 MHz);
- 2.7-2.9 GHz; and
- C Band (3.4-4.2 GHz).

Document 4-5-6-7/88-E (source GSMA)

Conclusion

- The success of mobile broadband depends on the success of IMT
- For IMT to succeed in being as widely available as mobile voice requires the same ITU actions that helped mobile develop initially – internationally harmonised IMT bands of suitable size and in suitable frequency ranges;
- Consideration of candidate bands in the WRC process will be important to help prevent fragmentation, as well as sharing studies and spectrum estimations. Given the very short timescales to do the work for the CPM text industry believes strong leadership from key countries is required;
- Whilst the year 2020 may seem a long way off, mobile requires long lead times and major investments to move forward. WRC decisions send a strong signal to industry of government buy-in.

A final thought – it seems almost every mainstream estimate for mobile has always been an underestimate, and in some cases a gross one.

Say **yes** to

future spectrum for mobile