



5G and WRC-19 CANTO Conference

Trinidad and Tobago, February 2018
Veena Rawat Senior Spectrum Advisor,
GSMA



GSMA's positions on 5G spectrum

1. Significant new widely harmonised mobile spectrum is needed to ensure 5G services meet future expectations and deliver on the full range of potential capabilities
2. 5G needs spectrum within three key frequency ranges to deliver widespread coverage and support all use cases. The three ranges are: Sub-1 GHz, 1-6 GHz and above 6 GHz
3. WRC-19 will be vital to realise the ultra-high-speed vision for 5G and low cost devices
4. Licensed spectrum should be the core 5G spectrum management model. Unlicensed spectrum can play a complementary role



Agenda Item 1.13

“to consider identification of frequency bands for the future development of International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution 238”



Seven spectrum ranges

24.25-27.5 GHz

31.8-33.4 GHz

37-43.5 GHz

45.5-50.2 GHz

50.4-52.6 GHz

66-71 GHz

71-76 GHz

81-86 GHz



The GSMA's key positions on AI 1.13

1. A successful identification of spectrum for IMT under Agenda Item 1.13 is vital to realise the full potential of mobile 5G networks
2. At this point in the WRC-19 cycle, the GSMA supports focusing studies on the 26 GHz, 32 GHz and 40 GHz bands. The 26 GHz band has the highest priority
3. Bands above 24 GHz offer a good opportunity for the coexistence of 5G and other wireless services
4. Bands above 45 GHz also need further consideration



5G and WRC-19



- Widely harmonised spectrum
- Three key frequency ranges:
 - Sub-1 GHz
 - 1-6 GHz
 - Above 6 GHz
- Coexistence with other services in higher frequency bands
- Technology neutral spectrum licenses

- 26 GHz (24.25-27.5GHz) – high priority band
 - 40(37-43.5GHz)) GHz offers potential tuning range:
 - 42 GHz - Europe's as priority band
 - 38 GHz - supported in other regions
 - 32 GHz (31.8-33.4GHz) - potential due to low current usage
- Bands above 45 GHz under consideration



Improve harmonization of some bands from WRC-15 for IMT

- Review FN's for the band 470 (614)- 698 MHz; 3300-3400 MHz; 3600-3700 MHz and 4800-4900 MHz with the view to improve harmonization (Refer to Annex)
- Process: Interested Administrations submit requests to WRC-19 subject to no objection from affected neighbour countries





The 600 MHz (614-698 MHz) band plan and WRC-15 Decisions



- WRC-15 decision (RR5.308A): IMT in the band 614-698 MHz for Bahamas; Belize; Barbados; Canada; Colombia; Mexico; US
- R2 Countries with existing allocation to mobile (RR5.293): Chile; Cuba; Guyana; Jamaica; Panama, **no IMT identification**
- RR5.308 : new allocation to mobile service for Belize and Colombia at WRC-15
- Citel approved Band plan in Dec, 2017





Citel Band plan for C band

MHz	3300	3400		3600	3700
		5.429D	5.431B (Region 2)		5.434
1	TDD				
2		TDD			
3					TDD



Region 2 Countries with IMT identification in 3.3-3.4 GHz and 3.6-3.7 GHz band

- **5.429D:** Argentina, Colombia, Costa Rica, Ecuador, Mexico and Uruguay, the use of the frequency band 3 300-3 400 MHz
- **5.534:** In Canada, Colombia, Costa Rica and the United States, the frequency band 3 600-3 700 MHz



Summary

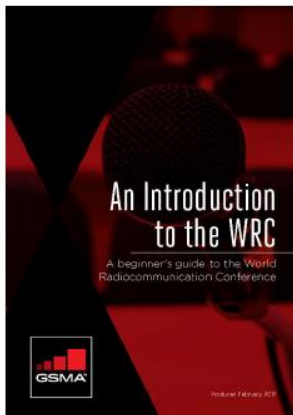
1. Harmonised high-frequency mobile spectrum is needed to ensure 5G services meet future expectations
2. WRC-19 decisions for AI 1.13 will be vital to realise the ultra-high-speed vision for 5G and low-cost devices
3. Support from the Caribbean states for the identification of priority bands for 5G through Citel process will be key to achieve 5G vision.



GSMA Reference documents

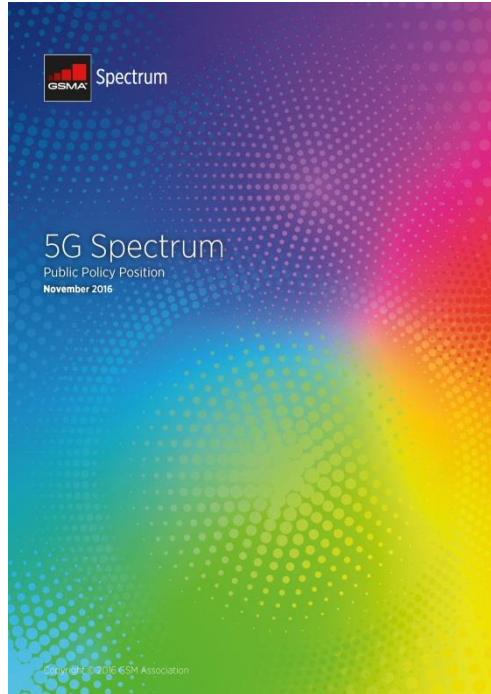


THE GSMA WRC SERIES





5G spectrum – read more about it



[http://www.gsma.com/spectrum/
5g-spectrum-policy-position/](http://www.gsma.com/spectrum/5g-spectrum-policy-position/)