

2nd Global 5G Event on 9-10 November, Rome (Italy)

Considerations for 5G Spectrum Harmonization

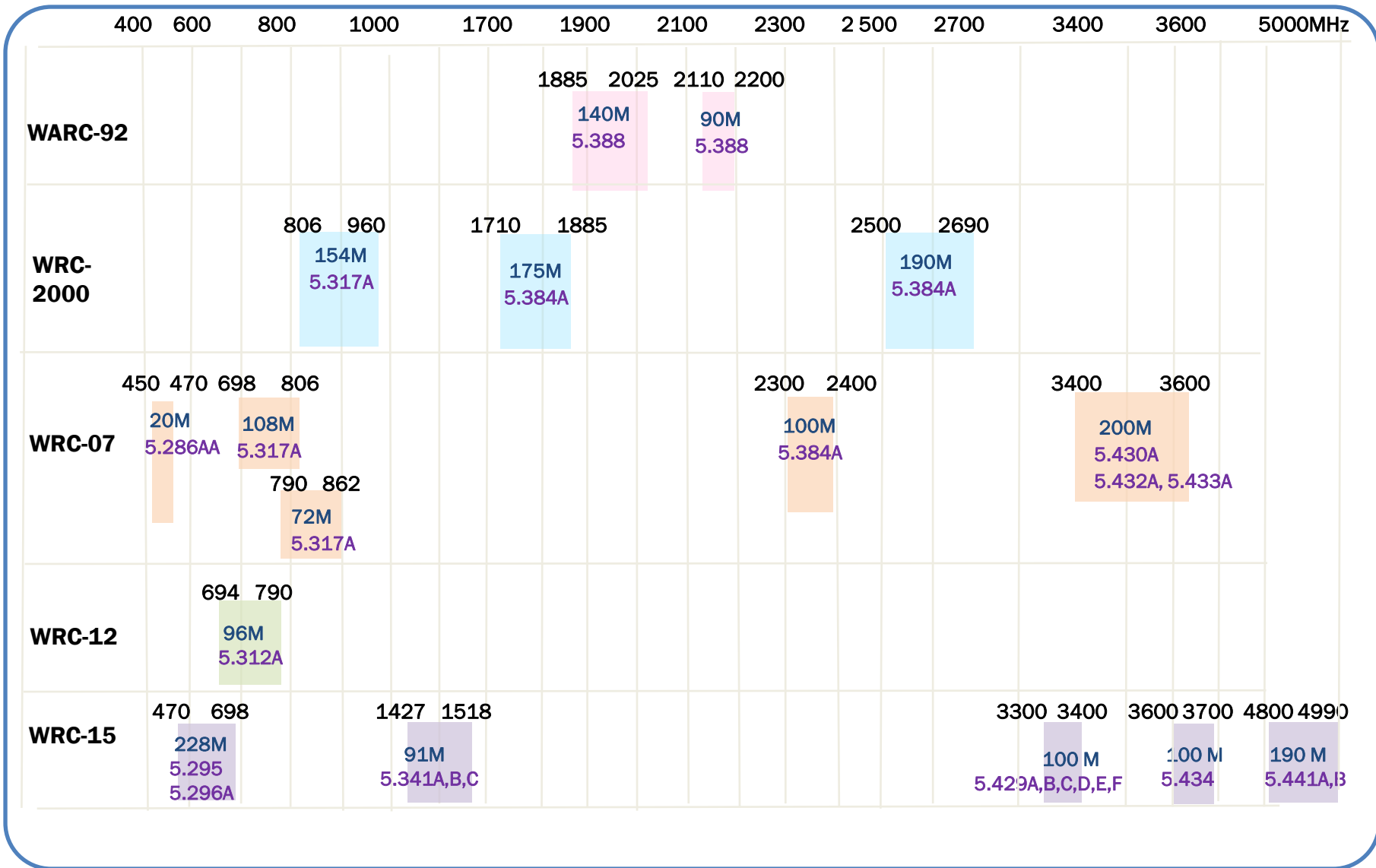
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Why global harmonization?

- **Spectrum harmonization is important for:**
 - easiness of **global roaming** for mobile communication
 - **low cost device** by global economy of scale
 - **avoidance of interference** issue with neighboring countries
 - **value creation** of spectrum for licensee
- **In reality, difficulty for IMT spectrum below 6 GHz:**
 - **a few available bands** due to heavy use of incumbent services and different usages in country by country
 - **not enough** to get contiguous **wide bandwidth**
 - **not easy to coexist** with existing services/applications taking into account IMT coverage

IMT identifications within ITU



Why 5G in higher frequency band?

- **Opportunities** in bands above 6 GHz, esp. above 24 GHz
 - **contiguous wide bandwidth** for performance
 - **tolerable path loss** within small cells
 - **easy coexistence** due to small coverage and advancing technologies
 - **maximized efficient data delivery** by multi-beamforming
 - **WRC-19 AI 1.13 for IMT in 24.25-86 GHz (Res. 238)**
 - 24.25-27.5 GHz*, 31.8-33.4 GHz**, 37-40.5 GHz, 40.5-42.5 GHz**, 42.5-43.5 GHz, 45.5-47 GHz, 47-47.2 GHz**, 47.2-50.2 GHz, 50.4-52.6 GHz, 66-76 GHz and 81-86 GHz
- * to take into account EESS (s-E) and SRS (s-E) in the band 25.5-27 GHz
- **may require additional mobile allocation on a primary basis

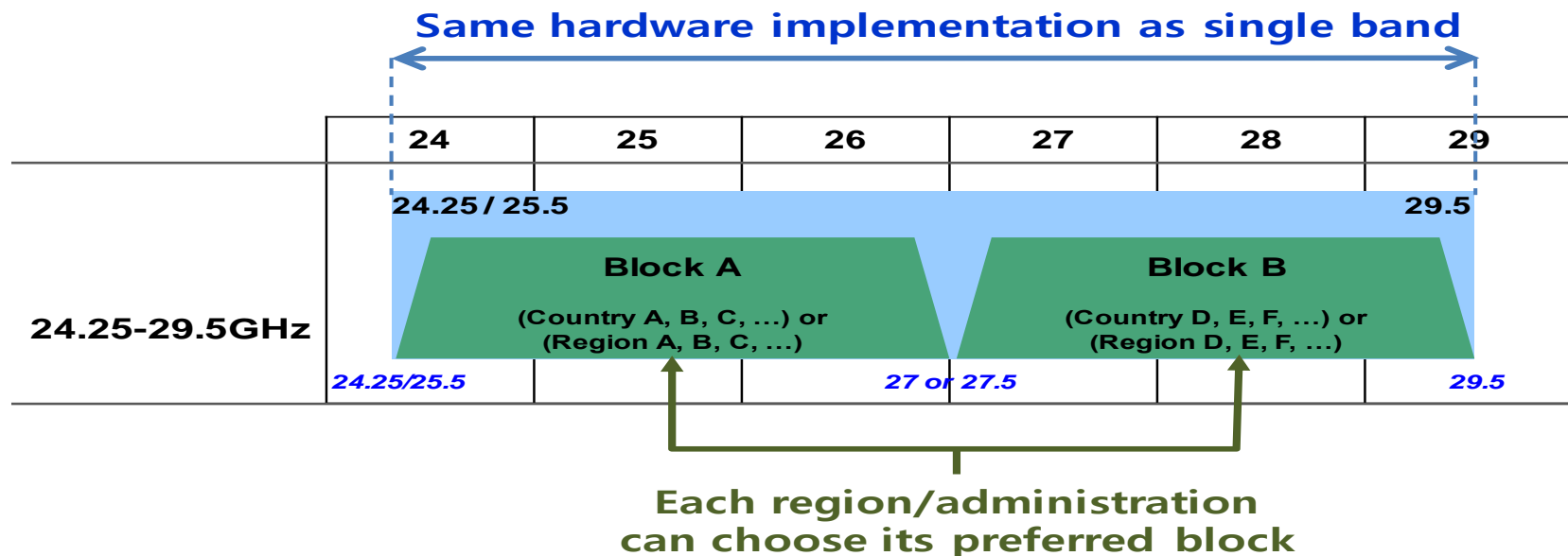
Korean views towards 5G

- **28 GHz band will be a practical solution for 5G initiation**
 - introduce **5G trial at PyeongChang Winter Olympic Games** in Feb. 2018 within the band 26.5-29.5 GHz (focusing on the band 27.5-28.5 GHz)
 - **more than 30 stations using 28 GHz band** are testing in Seoul, PyeongChang and other cities

** The band 3.4-3.7 GHz is positively considered for 5G as well as LTE.*
- **Strategy for 5G Eco environments in higher band**
 - prepare **early 5G market in 28 GHz band** and facilitate 5G commercialization
 - at **WRC-19**, achieve **global/regional harmonization** in 24.25-86 GHz taking into account **technical solution**

Technical solution for harmonization

- Harmonization by implementation aspects (Doc. WRC-15/102A24R1)
 - multi-band plan on a single device
 - similar to 3GPP band plan implementation
 - To give flexibility for administration to select band plan



Thank you!

Questions? Answers!
