IAFI Workshop WRC-27

Agenda items: 1.11, 1.12, 1.13, 1.14

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Agenda Items

Non 3GPP NTN

1.11 (Res 249)

Space-Space Links among NGSO & GSO MSS, L & S bands

1.13 (Res 253)

Use of IMT terrestrial bands by satellite IMT below 1 GHz up to 2.7 GHz

1.12 (Res 252)

New allocations for NGSO low data rate MSS, L & S band

1.14 (Res 254)

New allocations Regions 1 & 3

MSS, S band

3GPP NTN uses existing, primary MSS spectrum, L & S bands, does not overlap with IMT terrestrial use. For expanding MNO's coverage over unconnected areas via partnership, integrating into national infra.

Implications

D2D on existing (primary) MSS Spectrum

- D2D is feasible within the existing regulatory framework that enables today's MSS services and is already fully defined and incorporated in the ITU Radio Regulations
- Existing MSS networks that operate in bands already globally allocated by the ITU to MSS on a primary basis can connect and provide D2D communication seamlessly
- Notably, MSS spectrum in the L- and S-bands has been widely authorised globally for MSS by regulators and, their allocation and co-existence mechanisms have been established
- Therefore, MSS D2D services can be offered today in these bands without requiring additional national or international regulatory action

D2D on IMT (MS) Spectrum

- D2D relies on satellite operators transmitting in spectrum allocated to terrestrial services (MS) and licensed to mobile operators and will require significant changes to existing regulatory frameworks to allow for different uses of spectrum than existing allocations support, and careful management to avoid interference into existing uses
- Use of MS spectrum to support D2D operations presents significant regulatory, technical, and operational complexities and challenges
- Among other things, D2D services using terrestrial MS spectrum outside of any primary MSS allocation must be provided on a non-interference/non-protected basis under ITU Radio Regulation (RR) No. 4.4. But this can be difficult to enforce in practice
- As a result, operations under RR No. 4.4 place other systems and services at a high risk of interference

Rational and **Equitable** spectrum-orbit resource use is key

…radio **frequencies** and any associated **orbits**, including the geostationary-satellite orbit, are limited natural resources and that they must be used rationally, efficiently and economically, in conformity with the provisions of the Radio Regulations, so that countries or groups of countries may have **equitable access** to those orbits and frequencies…

Article 44, ITU Constitution

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Thank you