The WRC series

L-band: 1500 MHz IMT Range

May 2017

IMT frequencies sitting between long-standing 850/900 MHz and 1800/1900 MHz bands will form a vital part of mobile broadband networks. The 1427-1518 band MHz was identified for use by IMT systems at WRC-15 on a global basis. It provides an ideal mix of coverage and capacity. In total, 91 MHz of mobile broadband spectrum is available in this band to help mobile operators deploy faster broadband services over wide areas. This will boost the social and economic development of all countries that decide to take advantage of it.

Band plan discussions are ongoing regarding supplemental downlink (SDL), FDD and TDD. These should be considered on a regional basis seeking harmonization that will enable roaming and maximize the benefits of economies of scale. Frequency interference work regarding this band has been productive, committed and conclusive. It exists to ensure effective use of the band.

Compatibility with MSS

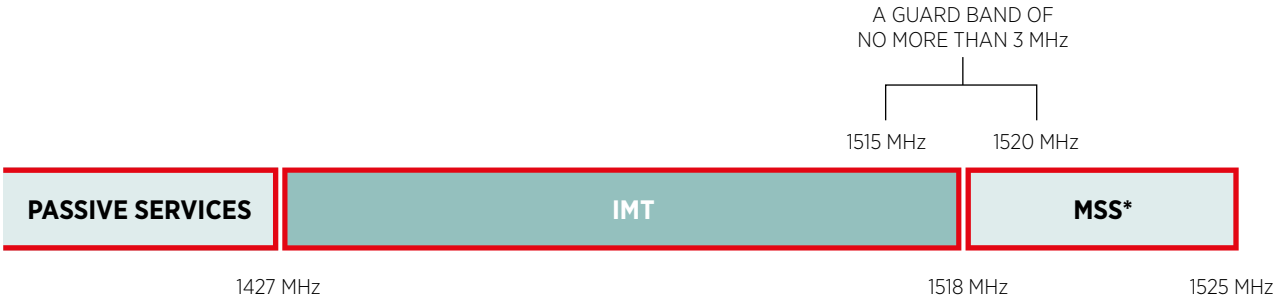
Discussion of interference between IMT and the mobile satellite service (MSS) in the adjacent band has formed a crucial part of the development of the band 1427-1518 MHz band for IMT services. Current studies conclude they can coexist with a guard band of 3 MHz. It is important to assess the realistic use of 1518-1525 MHz to decide where to place the guard band.

Compatibility with passive services

The 1400-1427 MHz band, adjacent to the band identified for IMT, is allocated to the following passive services: Earth exploration satellite service, space research service and radio astronomy. Mobile's ability to exist alongside such services is crucial to the development of broadband. Still, it is important existing passive services are protected. IMT needs to comply with the out of band emission limits specified in ITU-R Resolution 750 (Rev.WRC-15). That gives countries assurance that existing services will be protected.

FIGURE 1

The L-band: a good mix of coverage and capacity



*1518-1525 MHz is allocated to satellite, but isn't heavily used in many parts of the world

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