

UNITED STATES OF AMERICA
DRAFT PRELIMINARY VIEWS FOR WRC-15

Agenda Item 1.1: to consider additional spectrum allocations to the mobile service on a primary basis and identification of additional frequency bands for International Mobile Telecommunications (IMT) and related regulatory provisions, to facilitate the development of terrestrial mobile broadband applications, in accordance with Resolution **233 (WRC-12)**

BACKGROUND: Third- and fourth-generation advanced wireless systems provide terrestrial and satellite-based broadband and multi-media capabilities, and represent a path for expanding broadband capabilities and coverage areas. It is important for administrations to identify spectrum that could be made available for terrestrial mobile broadband as administrations plan their spectrum use and as industry plans to meet the marketplace requirements of the future. The early identification of spectrum is critical to the timely introduction of new broadband services due to the time required to complete the reallocation process, which could include developing service rules or sharing methods, conducting auctions, relocating incumbent users to comparable spectrum as necessary, and the redesign of incumbent systems to accommodate new operations.

The United States considered the entire band 1 675-1 710 MHz as a candidate for terrestrial mobile broadband. The band 1 675-1 710 MHz includes co-primary allocations to the meteorological aids service, the meteorological-satellite service (space-to-Earth), and an additional co-primary allocation to the mobile service in the frequency range 1 675-1 690 MHz. The United States and other countries operate meteorological aids in the frequency range 1 675-1 683 MHz. Meteorological aids provide data critical to the accuracy of global weather prediction models and calibration of meteorological satellite sensor data. There is no suitable alternative for the in-situ measurements provided by meteorological aids and loss of data would have a significant negative impact on global weather prediction. Application of exclusion zones or other sharing mechanisms is impractical due to the large number of fixed and transportable meteorological aids stations releasing transmitters that drift up to 250 km while in flight.

Emergency managers and the public currently rely on information that National Oceanographic and Atmospheric Administration (NOAA) satellites broadcast in the 1 690-1 695 MHz range. This information includes severe weather warnings and forecasts via the Emergency Manager's Weather Information Network and re-broadcast data from ground-based sensors, such as flood gauges. NOAA's satellite command and control communications reside in the frequency range of 1 690-1 695 MHz. It is difficult to provide alternative communications to users who do not have reliable Internet access or who are in areas where a weather event has degraded or destroyed power or communications infrastructure. Without the data provided by meteorological satellite transmissions, emergency managers and other users would have to receive broadcasts through another transmission means, such as commercial satellite broadcasts with an equivalent amount of reliability and availability present in current direct broadcast transmissions. The

studies concluded that mobile broadband systems are incompatible with existing meteorological systems in the range of 1 675-1 695 MHz.

The United States determined that the range 1 695-1 710 MHz offers opportunity for mobile broadband while minimizing disruption of meteorological operations upon which the domestic and international public safety and weather prediction communities depend. Initial studies in the United States concluded that the use of some geographical limitations on terrestrial mobile broadband could protect the limited number of critical meteorological earth stations within 1 695-1 710 MHz. More recent studies resulted a framework for sharing the band that protects incumbent meteorological operations while maximizing the opportunity for commercial use. The framework recognizes the need to protect the operations of both the co-channel polar orbiting satellites as well as geostationary operations in the adjacent 1675-1695 MHz band. The framework provides for deployment of commercial operations outside of the Protection Zones without any coordination. It also permits commercial operations within the Protection zone following a successful coordination process concluding that such commercial operations can meet specified conditions and will not cause harmful interference to ensure no loss of meteorological capability within the protection zones. If coordination is unsuccessful, commercial operations will not be permitted within the Protection Zone.

U.S. VIEW: The United States supports studies to develop technical requirements that would allow a primary mobile, except aeronautical mobile, allocation in the 1695-1700 MHz band, and identification for broadband wireless systems including IMT, in the band 1 695-1 710 MHz. These studies should identify sharing arrangements to ensure protection of existing services, namely meteorological-satellite earth stations.