

## UNITED STATES

### PRELIMINARY VIEWS ON WRC-07

**WRC-07 Agenda Item 1.5:** to consider spectrum requirements and possible additional spectrum allocations for aeronautical telecommand and high bit-rate aeronautical telemetry;

**ISSUE:** Obtaining sufficient spectrum to satisfy wideband aeronautical mobile telemetry requirements and associated telecommand above 3 GHz, possible sharing with existing services, and continued protection of incumbent services.

**BACKGROUND:** This agenda item has its origins in efforts undertaken by the Space Industry prior to WRC-97. The issue was pursued by the U.S. and other Administrations at WRC-03 and placed on the agenda for WRC-07. In addition, a CITELE IAP in support of this agenda item was accomplished and supported by the U.S. and other CITELE Administrations. This agenda item seeks to address a large and growing shortfall in spectrum available to conduct aeronautical telemetry. The shortfall is due to rapidly increasing telemetry data rates associated with the testing of new technologies. It has been exacerbated by the loss of MS spectrum for non- aeronautical telemetry applications. Without additional MS spectrum, aeronautical platform development will be subject to major delays, escalating costs, and the impairment of global competitiveness of the aerospace industry (including equipment manufacturers, civilian space programs and test ranges, airlines, and passengers).

Aeronautical mobile telemetry ("AMT") is an application within the Mobile Service. While Mobile Service allocations are available for AMT except where expressly excluded, it is important that, to the extent possible, additional spectrum be expressly identified/designated as available for the purpose so as to foster international harmonization of test equipment. This will enable U.S. manufacturers to offer prospective customers aircraft with common test equipment packages, and, thus, help them achieve additional economies in the aircraft life-cycle -- a very significant factor as global competition in the aircraft industry intensifies. Moreover, by making additional spectrum specifically available for AMT, the world community will not only be adhering to consistent ITU practice over the past 40 years, but the U.S. flight test community will have a measure of additional certainty for the enormous investment in range infrastructure that will be incurred in equipping new bands for flight test operations.

Within the ITU, the responsible group for this agenda item is WP 8B, with WP 8A as the contributing group and WP 3M (point-to-point/earth-space propagation), 4A (orbit/spectrum utilization), 6S (satellite delivery), SG-7 (science services), and 9D (fixed service sharing) as interested groups. It is anticipated that WP 8B will deal with all of the aeronautical telemetry studies, and that its work will be completed in time for Administrations to prepare proposals.

**U.S. VIEW:** The United States supports further studies in order to determine how best to satisfy this Agenda Item while recognizing protection of incumbent services. Upon completion of these studies, the U.S. will be in a position to make a specific proposal to meet aeronautical mobile telemetry spectrum requirements. While the U.S. will continue to evaluate possible regulatory solutions under this agenda item (including possible new allocations to the Mobile Service), one approach the U.S.

currently contemplates for some of the bands under study in ITU-R WP 8B would be footnote identification/designation of existing Mobile Service bands for use by aeronautical telemetry. U.S. requirements are for telemetry only in the air-to-ground direction inasmuch as telecommand functions, which are narrowband, can be accommodated in other spectrum.- Any such identification/designation would not preclude the use of these bands by other services to which the bands are allocated on a co-primary basis and, in particular, would not establish any sort of priority for aeronautical mobile telemetry as against other co-primary services. Administrations would be urged to take this into account when considering regulatory provisions in relation to these bands.

The new spectrum will not be used for the protection of life and property, and the footnotes will be consistent with this principle. Such uses will continue to be accommodated by legacy telemetry applications in MS spectrum in the L and S bands provided for in current footnote designations (Nos. 5.342, 5.343, and 5.394) in the Radio Regulations. Hence, aeronautical mobile telemetry applications in other spectrum will not require the level of protection associated with operations in the L and S bands.

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