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| U.S. Radiocommunications Sector  Fact Sheet | |
| **Working Party:** ITU-R WP 5C | **Document No:** uswp5c23\_02\_FS – WBHF QUESTION |
| **Ref:** Res.429 ( WRC-19), Res.656 (Rev WRC-19) | **Date:** 7/8/2021 |
| **Document Title:** Preliminary Draft New Question – Accommodating Wide Band High Frequency (WBHF) services within the 3 to 30 MHz Frequency Band | |
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| **Purpose/Objective:** This is a Fact Sheet for the development of a Draft New Question regarding the accommodation of Wide Band High Frequency (WBHF) services operating in the 3-30 MHz Frequency Band. Such services would include; digital voice (both point-to-point and multi-point, database replications (financial transactions, logistics, medical records), remote sensor reporting (tsunami or meteorological buoys, ice shelf diagnostics, emergency services and disaster relief operations and management, email, FTP file transfer, chat rooms and video calls over an IP WBHF MESH network. The spectrum channels may be contiguous (48 kHz) or non-contiguous with aggregations of 3kHz, 6kHz, or 8kHz channels across a 200 kHz frequency span.  Although an existing HF Question (246) addresses some aspects of HF operations it does not address WBHF topics. The work that is proposed in this Preliminary Draft New Question is focused on WBHF operations throughout the 3 to 30 MHz Frequency Band. As such the topics that are covered by this question are unique to WBHF Systems and are not addressed through the existing HF Question.  Resolution 1 indicates that a Working Party can produce Recommendations on anything under its purview. It also indicates that the Working Party can do so with or without a question. An additional objective of developing this question is to make other interested Administrations aware of this work and give them the opportunity to contribute to the development of Reports and Recommendations prior to the introduction of WBHF related documents at the ITU Working Party level and to enlist the aid of interested parties in moving the WBHF work forward by contributing to the development of related studies. | |
| **Abstract:** In recent years advancements in HF technologies and increasing demand to pass large amounts of data over HF have resulted in a need to support wideband channel requirements. (WBHF). Approaches have been proposed for increasing the capability of HF radio communications through WBHF technologies and WBHF MESH networks. These WBHF systems will be using contiguous and non-contiguous signalling bandwidths. Bandwidths of 48 kHz or higher would be required to implement these WBHF systems. This would be accomplished in two ways. A contiguous 48 kHz channel or an aggregation of 3 kHz, 6 kHz or 8 kHz frequency channels that are spread across a 200 kHz span within the 3 to 30 MHz frequency range.  This question would establish the basis for the identification and qualification of WBHF system technical and operational characteristics for use in channelization, interference, sharing and compatibility studies between WBHF systems and incumbent services within the 3-30 MHz frequency band. The document seeks answers to the following questions.   1. What are the technical and operational characteristics for WBHF systems operating within the 3 to 30 MHz frequency range? (e.g., transmitter power, antenna characteristics, emission characteristics, frequency tolerance, channel bandwidths, network topologies, Automatic Link Establishment (ALE) capabilities, spectrum utilization, sense and detect capabilities and other yet to be defined parameters.) 2. Can the 3-30 MHz frequency band accommodate WBHF systems operating across multiple services and what impact would such operations have on incumbent service channel plans and allocations within the band? 3. Can current protection criteria protect incumbent services from WBHF systems operating within the 3 to 30 MHz frequency band. | |