IMT-2000

International Mobile Telecom-munications-2000 (IMT-2000), also known as the Third Generation Mobile Systems, is the International Telecommunication Union's (ITU) vision of global access in the 21st Century. These systems will fulfill the dream of communications anytime and anywhere, providing both terrestrial and satellite access. IMT-2000 will offer a wide variety of broadband and multimedia communications capabilities, providing a new level of worldwide access to information for business, education, community services, safety and entertainment. Service is scheduled to begin this year in some countries, either in frequency bands previously identified by the World Administrative Radio Conference 1992 (WARC-92), or through an evolutionary process by operators wishing to implement third generation mobile systems in bands currently used for existing Cellular and Personal Communications Systems (PCS).

Beginning in the late 1980's, the ITU convened a special Task Group 8/1 to study the technologies and various spectrum related issues that would make the ITU's vision a reality. This proved to be a great challenge with various proposals and frequency ranges being considered. The group successfully completed its work by November 1999, developing the standards for the radio transmission technologies. Its report on the need for additional spectrum for IMT-2000 was submitted to the Conference Preparatory Meeting 1999 (CPM). Considering the increasingly mobile international society and the need to satisfy the many communications needs of the world, ITU-R Study Group 8 decided that it was necessary to continue work on IMT-2000 systems and beyond, and it established a new Working Party 8F to continue where TG 8/1 left off.

The WRC will be challenged to identify more spectrum in order to fully realize the IMT-2000 vision, and to meet the growing demand for mobile services. One approach that the WRC will likely take is to identify a limited number of contiguous bands available globally to reduce the cost, size and complexity of IMT-2000 terminal and network equipment and deployment, and to provide the economies of scale for the mass market.

The IMT-2000 spectrum needs have been a major topic of regional and sub-regional WRC proposals and views, and it appears that it will not be possible by WRC-2000 for many Administrations to identify the large amount of contiguous spectrum for near-term IMT-2000 use in a globally harmonized manner. The difficulties result when considering the huge investment in equipment currently operating in the desirable bands, band sharing problems, the impact on consumers and other users of existing services, and the lack flexibility to authorize other systems based on national needs.

Following extensive analyses and international talks, the United States has had difficulty identifying a single band that could likely be used on a global basis by IMT-2000 and other advanced communications technologies. Some administrations have proposed the 1710-1885 MHZ and 2500-2690 MHZ bands as candidates for regional or global use by IMT-2000 and other technologies. These bands present significant challenges for the United States because of important existing uses. However, recognizing the interest expressed in these bands by some Administrations and some members of industry, the United States will closely examine the possibility of some available spectrum in these bands. As a result, the United States has initiated a multi-step process to determine whether these bands, or any part thereof, are feasible for use domestically by IMT-2000 and other advanced communications technologies. The United States must consider the investment of existing licensees, the impact on consumers and other users of existing services, the flexibility to authorize other systems based on national needs, current and emerging uses, the availability of comparable replacement spectrum to which current and emerging uses might migrate, and the costs of relocation against the benefits of global harmonization of spectrum for IMT-2000 and other advanced communications technologies. The United States will not have completed this process in time for the WRC, but plans to resolve issues related to use of these bands in time for the next WRC.

determine the possibility of sharing between existing systems and new advanced communications technologies, to assess the requirements and benefits of existing services, and to consider various means to facilitate global roaming. The results of these studies will be useful for administrations wishing to implement advanced communications technologies including IMT-2000. To preserve each Administration's flexibility to use these bands for other fixed and mobile systems as they may deem necessary to their national interest, particularly in light of the ongoing studies, this proposal clarifies the flexibility to use these bands within the broadly-defined service allocations in those bands.

The United States proposes the identification of spectrum in several bands for consideration by Administrations for the implementation of IMT-2000 and other advanced communications technologies. Specifically, the proposed modified S5.388 and Resolution IMT to identify the 698-960 MHz, 1525-1559 MHz, 1610-1660.5 MHz, 1710-2025 MHz, 2110-2200 MHz, 2483.5-2690 MHz bands for potential IMT-2000 use. The U.S. proposal acknowledges that many Administrations, including the United States, are studying some of the proposed spectrum to determine its feasibility within the national boundaries of that particular Administration. For that reason, the United States calls for the adoption of a second new Resolution addressing national studies as well as ITU-R studies related to the 698-960 MHz, 1710-1885 MHz and 2500-2690 MHz bands. The national studies will clarify if Administrations can make those bands available. ITU studies will look at aspects to facilitate the implementation of these new technologies.

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