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ITU REGULATORY PROCEDURES AND THE ITU-R HANDBOOK FOR SMALL SATELLITES

Abstract

In the past decade, with the rapid rise in the number of CubeSat and other small satellite projects and launches, the International Telecommunication Union (ITU) has seen a dramatic increase in the number of registrations from small satellite projects. The utilization of small satellite technology is evolving into an increasingly powerful tool with multiple missions, functions and capabilities, which is fundamental in supporting the needs of those requiring seamless services on a worldwide basis. This trend in the adoption of small satellite technology, while "democratizing" space for all nations irrespective of their economic status and geographical constraints, emphasizing a more equal and inclusive distribution of opportunities in space exploration, also plays a role in helping these nations achieve the United Nations sustainable development goals. The ITU has undertaken various efforts to address and meet these needs.

Decisions were taken at the World Radiocommunication Conference that streamlined the processing satellite networks with short duration mission. One noteworthy improvement involves the reduction of processing time required for the registration of satellite networks. All submitted satellite networks as well as comments received from other administrations are now promptly accessible online enhancing transparency, and at the same time, this streamlined approach improved the efficiency of coordination between administrations and operators. For satellites with short mission duration, a specific regulatory procedure exists where some frequency bands are allocated for space operation service without having to go through the extensive coordination process typically required for larger, commercial satellites. Separately, following a resolution from the 2019 ITU Radiocommunication Assembly, work began on a Handbook on small satellites to promote the development of small satellites effectively and better serve the needs of the membership and the entire satellite industry. This Handbook was completed and made freely available for download in September 2023. This first edition of the Handbook on Small Satellites is the success story of international cooperation amongst qualified and skilled experts in the field of small satellites and its regulations. The nine chapters and two Annexes describe in detail the technology, regulatory elements, practices of small satellites, and even provide information on missions related to the Moon, inter-planetary and deep space exploration, as well as short-duration missions.

This paper will delve into the advancements in ITU regulatory procedures, and the valuable contributions made through the ITU-R Handbook for Small Satellites, emphasizing their impact on the growing landscape of small satellite technology and its global applications.