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Author: Prof. Tahsin Yomralioglu
Istanbul Technical University, Türkiye

SPACE CADASTRE: A NEW PARADIGM FOR THE FUTURE OF SPACE

Abstract

Space is viewed as a limitless domain that offers endless opportunities for exploration and discovery for humanity. However, rapidly increasing activities and resource use in space bring new challenges to space management and especially ownership rights and use for the nations. Nowadays, the complex and dense nature of space makes it difficult to track, record and manage objects in space. Therefore, the development and implementation of a “Space Cadastre” concept for space will be an important step towards sustainable and effective management of space. Space Cadastre provides a systematic legal and technical framework for tracking and recording property rights, assets, activities and resources in space. By extending the traditional concept of cadastre to space, it aims to regularly determine the location, movement and ownership of objects in space, especially with map support. This approach facilitates the recording, inventory, monitoring and management of activities in space, just like traditional cadastre on the Earth, and creates a permanent and sustainable legally based recording system such as today nations’ are used. The establishment of the Space Cadastre offers an important opportunity to promote international cooperation and standards. Under an international framework, common legal principles and technical standards can be developed to ensure the peaceful and sustainable use of space. Thus, the property rights and responsibilities of all actors in space can be determined and the future of space can be secured for all humanity. Ultimately, the concept of “Space Cadastre”, as a new paradigm for the future of space, can be an important tool for the effective management of space. With the support and cooperation of the international scientific and administrative communities, this new paradigm will contribute to the peaceful, sustainable and efficient use of space, allowing permanent steps to be taken for better management and better understanding of the future of space. In this study, a detailed discussion is made on the necessity, scope, legal and technical infrastructure with basic components of the concept of “Space Cadastre” as an innovative view, and explanations are presented on the main principles of the new approach.