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Function of Blockchain in Solving Existing Challenges in International Space Law
(Original Research)

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Extended Abstract

Introduction

Subsequent to the achievement by mankind to leave the planet for the space, space law slowly emerged as the latest branch of international law. It includes laws that are set to prevent a country from dominating space, preventing military use of space, maintaining security in space, and determining laws related to the peaceful use of space. As one of the incomparable human assets, the space environment is one of the main and vital issues in the field of international space law. Due to the increase in space activities and the development of space travel, maintaining the space environment has become a major challenge in this field. Since any pollution or damage to the space environment has wide-ranging effects on the feasibility of space missions as well as on the Earth, it is necessary to provide appropriate solutions to preserve and protect this valuable environment. With the development of Blockchain and its unique capabilities, this technology has become known as an efficient tool for managing information, creating security and ensuring transparency. Considering the fact that maintaining the space environment is a basic need in the field of international space, the use of Blockchain in this field can be considered as an effective solution to solve space environment issues.

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Research Gap and Objective

The purpose of this research is to investigate and analyze the role and functions of Blockchain in international space law with an emphasis on preserving the space environment and obtaining efficient solutions for applying this technology in order to preserve the space environment. By examining the tools and technologies used in preserving the space environment, as well as a detailed examination of blockchain technology and its functions in the field of international space law, the present research puts forward the conclusion that Blockchain can play an important role in preserving the space environment. That its applications can provide effective mechanisms for its protection. Providing a healthy and stable environment in outer space not only enables successful space missions but also has significant effects on the Earth and its resources.. This research can help to develop and improve the conditions of the space environment and promote the use of Blockchain as an effective tool to preserve the space environment.

Methodology

This research is theoretical in nature. The research method is descriptive-analytical and data were collected through library sources, specifically by referring to books and articles.

Key Findings

Blockchain, as a new and powerful technology, can be widely used in international space law. Blockchain is a distributed database system that stores information in the form of blocks, each block containing information about previous transactions. This technology enables the recording and maintenance of information without the need for intermediaries. It is for this reason that it can also be used in the field of international space law. The blockchain in international space law can be implemented in a variety of fields, including registration and verification of space property rights, verification of space contracts, and verification of identification and authentication of astronauts, data security and space risk management.

Contribution to the Field

Blockchain can register the space property rights and make them accessible to other countries. Space contracts can be registered electronically and intelligently using Blockchain and prevent unauthorized changes in them. Through this technology, it is possible to electronically register the identity of astronauts and prevent fraud in this field. Therefore, the use of Blockchain in international space law can be useful in improving the security and efficiency of international space law.

Conclusion

The increase in human activities in space has led to the need of preservation in the space environment more prominent. Legally outer space is considered an international environment that requires international laws and regulations, as it serves as a domain for human activities. Considering that most human activities in space are conducted internationally, the need for an applicable international legal framework to govern the space environment is recognized. Blockchain has been proposed as a new and efficient solution in preserving the space environment. Blockchain acts as a transparent and reliable information storage system and can be used as a solution to record and manage international laws and regulations related to maintaining the space environment. The use of blockchain in preserving the space environment can be useful in various fields, including verifying information about space pollution, managing space waste, and promoting the use of sustainable space resources. For example, the use of blockchain can be useful in verifying information about space pollution, which has been recognized as a serious problem. By using blockchain, information about space pollution can electronically be recorded and made accessible to other states. The use of blockchain is also useful in managing space waste and promoting the sustainable use of space resources.

Keywords

Blockchain, Encrypted Information, International Space Law, Space, Space Environment

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