

Research on combined coding methods applied in satellite communications

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Abstract: This topic focuses on researching and implementing new encoding methods to improve the efficiency of data transmission from satellites. The context is the strong development of satellite information technology in the fields of environmental monitoring and natural resource management, where the accuracy and transmission speed of data play a decisive role. The objective is to build an encoding system that combines theory and experimentation to optimize communication performance. The research method is based on a combination of machine learning methods and advanced encoding algorithms. Through testing, the topic expects to achieve significant improvements in data accuracy and processing speed, thereby providing practical application solutions for the satellite industry.

Keywords: combined coding, satellite information, environmental monitoring, natural resource management, machine learning algorithms