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Confidentiality Enhancement of Highly Sensitive Nuclear Data Using Steganography with Chaotic Encryption over OFDM Channel

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Due to the widespread usage of the internet and other wired and wireless communication methods, the security of the transmitted data has become a major requirement. Nuclear knowledge is mainly built upon the exchange of nuclear information which is considered highly sensitive information, so its security has to be enhanced by using high level security mechanisms. Data confidentiality is concerned with the achievement of higher protection for confidential information from unauthorized disclosure or access. Cryptography and steganography are famous and widely used techniques that process information in order to achieve its confidentiality, but sometimes, when used individually, they don't satisfy a required level of security for highly sensitive data. In this paper, cryptography is accompanied with steganography for constituting a multilayer security techniques that can strengthen the level of security of highly confidential nuclear data that are archived or transmitted through different channel types and noise conditions.

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