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Improving the Security of Internet of Things Using Encryption Algorithms

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Abstract : Internet of things (IOT) is a kind of advanced information technology which has drawn societies’ attention. Sensors and stimulators are usually recognized as smart devices of our environment. Simultaneously, IOT security brings up new issues. Internet connection and possibility of interaction with smart devices cause those devices to involve more in human life. Therefore, safety is a fundamental requirement in designing IOT. IOT has three remarkable features: overall perception, reliable transmission, and intelligent processing. Because of IOT span, security of conveying data is an essential factor for system security. Hybrid encryption technique is a new model that can be used in IOT. This type of encryption generates strong security and low computation. In this paper, we have proposed a hybrid encryption algorithm which has been conducted in order to reduce safety risks and enhancing encryption's speed and less computational complexity. The purpose of this hybrid algorithm is information integrity, confidentiality, non-repudiation in data exchange for IOT. Eventually, the suggested encryption algorithm has been simulated by MATLAB software, and its speed and safety efficiency were evaluated in comparison with conventional encryption algorithm.

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