

CRYPTOGRAPHIC PROTECTION OF DIGITAL SIGNALS USING MATHEMATICAL DEVICE “EIGEN VALUES OF THE GIVEN SECRET KEY MATRIX”

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Abstract

Cryptography is the art and science of keeping message secure, has a long and fascinating history. Over the centuries, an elaborate set of protocols and mechanisms has been created to deal with information security issues when the information is conveyed by physical documents. Often the objectives of information security cannot solely be achieved through mathematical algorithms and protocols alone, but require procedural techniques and abidance of laws to achieve the desired result. Automata theory is the study of abstract computing devices or machines. It is a behavior model composed of a finite number of states, transitions between those states, and actions in which one can inspect the way logic runs when certain conditions are met. Recently finite state machines are used in cryptography, not only to encrypt the message, but also to maintain the secrecy of the message. In the present paper, new cryptographic scheme is proposed using finite state machine and the Eigen vectors.

Keywords: Moore Machine, secret key, cryptography.