

## **154. AN AGGREGATED COMPRESSION AND CHAOS BASED ENCRYPTION SCHEME FOR IMAGE**

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Joint Photographic Experts Group with high compression ratio does not provide security. A chaos based cryptosystem is proposed along with conventional Joint Photographic Experts Group to provide security. Chaos, coding and cryptography all the three methods are combined into a whole and are used for cryptography. In the proposed algorithm encryption and compression of Joint Photographic Experts Group is done simultaneously using a special form of Aggregated Three C - Chaos, Coding, and Cryptography which is used to attain synchronous compression and encryption. An image is first initialized using Discrete Cosine Transform, quantization and run-length coding, just like Joint Photographic Experts Group. Then, it is encoded and encrypted simultaneously by utilizing Aggregated Three C and binary key stream resulting from the chaotic generator.

Key words: Chaos, coding, cryptography, Discrete Cosine Transform, Quantization, Run Length coding

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