## Implementing Fault Tolerance with Proxy Signature on the Improvement of RSA System

Authors: H. El-Kamchouchi, Heba Gaber, Fatma Ahmed, Dalia H. El-Kamchouchi

**Abstract :** Fault tolerance and data security are two important issues in modern communication systems. During the transmission of data between the sender and receiver, errors may occur frequently. Therefore, the sender must re-transmit the data to the receiver in order to correct these errors, which makes the system very feeble. To improve the scalability of the scheme, we present a proxy signature scheme with fault tolerance over an efficient and secure authenticated key agreement protocol based on the improved RSA system. Authenticated key agreement protocols have an important role in building a secure communications network between the two parties.

Keywords: fault tolerance, improved RSA, key agreement, proxy signature

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