

# A Secure Communication Mechanism Using NFC Technology

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## Abstract

In recent years, many researchers pay attention to the area of information security. There were two important issues in information security: Identity Verification and Information Protection. Smart card is one of the popular tools to verify user identity. In the paper, a safe and effective model is proposed to resolve the impersonation attack problem of smart card. First, we modified Jiang' s model to improve the efficiency and reliability. Moreover, we adopt the NFC technology into the proposed model to provide a novel, reliable and convenient environment. Also, we used NFCphone to simulate the handshake processes between the NFC-phone and ATM extension module to verify the proposed model.

Keyword : NFC, Impersonation Attack, Mutual Authentication, Replay Attack, Smart Card