Abstract
Global System for Mobile (GSM) is a second generation cellular standard developed to cater voice services and data delivery using digital modulation. Short Message Service (SMS) is the text communication service component of mobile communication systems, using standardized communications protocols that allow the exchange of short text messages between mobile phone devices. SMS framework allows two peers to exchange encrypted and digitally signed SMS messages. The communication between peers is secured by using public key cryptography. The identity validation of the contacts involved in the communication is
implemented through ECDSA signature scheme. In the next part, there is the description of
ECDSA approach and a modified approach based on ECDSA for mobile phones, which signs
SMS. At the end, there is described attack on ECDSA for secured SMS and future extension of
the application.

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A Secure Digital Signature Approach for SMS Security


Index Terms

Computer Science  Communications

Key words

GSM  SMS security  ECDSA  ECDLP

public key cryptography