

# Digital signatures



Signature is an important aspect of any document or agreement between two parties. Only handwritten signatures are valid for legal documents. The modern world is currently doing lot of proposals and agreements through computers and internet. In order to use in the online documents, technologists has developed a new signature method called digital signature. This paper examines the technology, validity and reliability of digital signatures

### Introduction

Digital signature is an electronic signature which is used to identify the validity of a document.

With the help of digital signature one can verify that the message he received is original and unchanged. Nobody can reject the fatherhood of a message if it is signed digitally. Digital signature is a process which involves some kind of encryption and decryption of data. The person who sends the message will encrypt the message which can be decrypt only by the addressee. “ A digital signature is a " stamp" places on the data which is unique to somebody, and is very difficult to forge.

In addition, the signature assures that any changes made to the data that has been signed cannot go undetected. ” (David Youd)

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#### Digital signature – Technology

“ After creating a document, using special software one can obtain a message hash (mathematical summary) of the message. Then using a private key obtained from a public-private key authority, the message is been hashed. This encrypted hash is the digital signature of the message.

The receiver of the message makes a hash of the received message to ensure the validity of the message. He will then make use of the public key provided by the sender to decrypt the message hash. If the hashes matched,

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then the received message is valid. ” (Digital signature) Legality of Digital signature Many countries like, US, European Union, and Australia have approved digital signatures legally just like other handwritten signature documents. Most of the e-commerce activities are making use of digital signatures to authenticate the documentants.

“ Stimulated by the development of the American Bar Association Digital Signature Guidelines, electronic signature legislation began with the Utah Digital Signature Act, which was enacted in 1995 and focused solely on issues raised by cryptography-based digital signatures. Soon thereafter, legislation was introduced in several other states” (Thomas J. Smedinghoff and Ruth Hill Bro) Digital signatures 4 Issues and concerns of digital signatures Like most of the other secure documents have suffered by the intrusion of hackers, digital signature technology is also under the constant threats from the e-frauds.

“ How do you verify the actual consent and authority of a person relating to these new electronically-signed transactions, or know that the electronic signature wasn't stolen from a PC by some inside or outside entity? ” (Lauren Weinstein) Conclusion Digital signatures are extensively used in e-commerce activities. It is legally approved in many countries just like the hand written signatures. Like most of the other secure documents in internet, the digital signatures are also under threat from intruders or hackers.