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for Process Re-Engineering and Preventing
Forgery of Indian Documents

ABSTRACT

The problem of fake documents has been haunting India for many years. Not only it has proved to be a threat to national security, but it has also created great hardship to individual citizens of India at various forums. It has also put a question mark on authenticity of documents supposed to be issued by the Government.

Documents and Forgery are integral part of our life. First document is issued at the of birth followed by various type of documents in our life and finally death certificate is issued after death. Similarly, forgery is also integral part of every all societies and countries. Holders of fake documents suffer due to forge documents and holders of genuine documents suffer by way of suspicion due to circulation of forged document in the market/ society/ nations. The thesis entitled “**Information Technology as Management Tool for Process Re-Engineering and Preventing Forgery of Indian Documents**” is an attempt to address the aforementioned problem and find viable and scalable solutions by using Information Technology as an enabler.

For the purpose of study documents have been categorized into four categories viz; personal, educational, commercial and high security travel documents. For the purpose of issuance documents have been studied as primary documents (issued by Governments after field verification), secondary documents (issued by public/ private agencies on the basis of primary documents) and high security documents which have national importance (issued by Government by following stringent issuance processes). For the purpose of study, forgeries have been broadly categorized as (i) tampering of document; (ii) genuine stationary with forged personalization; (iii) fake document and (iv) identity theft.

Objective of research is to suggest scalable solution to prevent the forgeries in Indian documents by way of strengthening documents, strengthening the issuance processes and establishing procedures for secured & authenticated consolidation and verification of the target documents.

During the research, process of attestation of educational documents has been re-engineered and system has been developed and proposed for establishment of National Educational Repository (NER). Establishment of NER shall help Government in preventing forgeries by way of identification; help corporate India in authentication of documents of their employees and re-engineered process shall facilitate attestation in two steps as against five steps, saving time & energy of Indian youth while ensuring security.

De-duplication algorithm has been developed to suit Indian names/ customs, to reduce the possibility of multiple document issuance and strengthening issuance processes against negative list. De-duplication processes have been further smoothed by injection of personal parameters. Experiments have been carried out and relevance judgment taken from domain experts before making recommendations.

For ensuring the security of the base document various biometric features have been studied along with physical (also known forensic) and digital security features. Comparisons of various biometric features have been made before suggesting physical, digital and biometric security features for incorporation in the documents requiring high security at production as well as personalization stages.

For the purpose of security of data and images within the issuance systems and during transit, various encryption techniques have been studied. Experiments have been made before suggesting successive use of two image encryption techniques for achieving increased security at the cost of processing time.