BIOMETRIC AUTHENTICATION DIGITAL SIGNATURE SYSTEM FOR DEED TRANSFERS

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ABSTRACT

Land is a valuable asset of Sri Lankan people as the land ownership is considered a property right for a very long period of time, enacted through the land registration procedures. Every year there has been an increase in the change of land ownerships along with disputes and frauds that prevail in the land registry domain. One of the most common and frequent problem faced by developing countries like Sri Lanka is the management and administration of land properties due to poor land ownership verification mechanisms exercised by government in the sector of land registry department. This leads to cases like land fraud, land encroachment and land misuse. Implement a biometric based digital signature scheme for land registry verification, which guarantees the authenticity of land ownership, integrity of land information, and non-repudiation of land transactions.

Land registration involves collection of details like ownership and size of the property. Currently the entire process of land registry maintenance is too tedious since it involves safekeeping of large volumes of registers in written form. The main issue with the above-mentioned method of land registry maintenance is that any future reference that needs to be taken from these hard copies will involve too much labour. This process is time consuming. Current system is not secure since majority of the process is not transparent, system is slow, and selling a property more than once needs to be recorded accurately. Several approaches have been made to automate the land registry data maintenance by eliminating the process of keeping bookish records. However, such method is not efficient in terms of data security as the data contents are breached easily as data tampering can happen in case of poorly maintained databases. Land registry does not have a way to verify the signature signed by the real owner except matching signatures in the original deed and new transfer deed due to the absence of a biometric identity mechanism with the signature.

This research project is proposing a framework based on “Biometric authentication digital signature for deed transfers” will provide a reliable way of authenticating and verifying the