Toward Safe and Secure Electronic Documents of E-Governments: Generating Authentic Documents using Image Processing Techniques

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Abstract

E-governmental applications have to find a solution for efficient and effective mechanism for authenticating and signing official documents. We propose and implement a mechanism for issuing secure electronic authentic governmental documents using watermark technology. The proposed mechanism constructs a watermark from domain name and MAC address of the governmental institution of interest. The watermark is augmented into the governmental document that is available in the form of image. This new mechanism promises allows the usage of watermarking to guarantee the authenticity and integrity of official documents. It can discover the change in these documents and the place where this change occurred. Proven by our experimental results, the proposed mechanism is secure and robust as the watermark will be embedded in multiple places inside the document where sensitive data is located, this way we can significantly reduce the probability of successful fraud of electronic documents.

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**Index Terms**

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**Keywords**

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