Protecting wireless data transmission in mobile application systems using digital watermarking technique

ABSTRACT

There have been many cases of fake documents be used for important legal transactions. This includes the use of fake degrees or certificates during professional job applications either in private sectors or government related firms. Since many people are using smart phones currently, it is possible to have a mobile application system apps that can validate the correctness of legal documents or certificates in real time basis. The apps must be able to validate the certificate by confirming it with the data obtained from a registered database owned by relevant academic institutions. However, since these data require wireless transmissions which are vulnerable to data manipulations by hackers, this paper introduces a protection measure using encrypted elements of user authentication to watermark the transmitting data.

Keyword: Data transmission; Digital watermark; Mobile application systems; QR code; Wireless communication