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Security and Privacy of E-health Data

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Abstract

Information and Communication Technology (ICT) advancements have eased the life of mankind in many ways. Modern-day gadgets and tools have helped immensely in our daily life and have increased the life standards. Many tools and techniques are being used to communicate and disseminate information in the form of text, audio, video and what not. Effects of ICT can be visualized in home and domestic activities, education healthcare, commerce, banking and employment. Medical fraternity across the globe has heavily invested in ICT to provide better quality health-related services

throughout the world in general and within their respective countries in particular. Medical experts use e-healthcare systems, a combination of multimedia and digital technologies to facilitate health improvement and healthcare services which include diagnosis, application, training and implementation. The medical information stored in electronic form known as electronic health record have replaced traditional paper-based systems. Electronic health record systems, a critical part of e-health system, are prone to the threats which make security and privacy of patient's health data vulnerable. Unauthorized access of electronic gadgets, data manipulation, denial-of-service attacks and phishing are common threats to the e-healthcare systems. Different types of users are accessing this vital information from the electronic healthcare systems which make it imperative to implement role-based access control mechanism. In this chapter, privacy-related issues of e-health data and security models used at different phases have been discussed.

Keywords

Electronic Health Records (EHR) ICT TPBS

Access Control Cloud Multimedia

Electronic Healthcare Systems

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