A Efficient and Secure Delegation Scheme for Wireless Digital Archives Systems

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ABSTRACT

Because of the development of information technology, wireless networks are becoming the life cores of most compatriots gradually. On the other hand, the promotion of the digital archives project in Taiwan has accumulated a considerable collection of resources for years. Through the web services technology, the digital archives database and web site architecture provide the overall services, such as the establishment of the single sign-on and the authorization between digital contents. In addition, in the web services access control policies, combining the role-based access control (RBAC) and context-aware mechanisms may reduce the responsibilities of digital archives system administrator, be convenient to view users ’ limits of authority, and improve system stability. However, with emerging network security issues, the aforementioned access control mechanism is inadequate. Therefore, this study will reinforce the security of both the RBAC and context-aware mechanisms. It combines the context-aware mechanism with the delegation scheme for enhancing efficiency and security of the digital archive system in the wireless local area networks (WLAN) environment. Moreover, this study also develops the system prototype for verifying the feasibility of the proposed access control scheme in the WLAN environment. We affirm the proposed mechanism can be effectively applied in the WLAN digital archives environment, because it can not only reduce the burden of system managers and provide the convenience of using in WLAN, but also enhance the security of the access control scheme of the digital archive systems.

Keywords : Digital Archives、Wireless local area network、Web Services、Role-based Access Control、Context-aware 、Delegation

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