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Abstract

In this paper a heterogeneous network model based on the IMS-SIP (session Initiation protocol) with the help of Authentication, Authorization, and Accounting (AAA) protocol that integrates the Worldwide Interoperability for Microwave Access (WiMAX), Universal Mobile Telecommunications System (UMTS) and Wireless Local Area Network (WLAN) technologies is proposed to improve QoS. The proposed Loose coupled WiMAX-UMTS-WLAN convergence architecture using IMS is compared with interworking of WiMAX-UMTS-WLAN without IMS and WiMAX-UMTS interworking with IMS. The QoS performance metrics such as different traffic delays such as Voice over IP (delay sensitive), Video streaming, Web browsing and background traffic (email, FTP), throughput are analyzed and simulated using OPNET 14. 5.

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Index Terms

Networks

Keywords

WiMAX UMTS WLAN Interworking QoS IMS SIP Loose Convergence
Heterogeneous