Abstract

Next-generation wireless network is striving to integrate different wireless access networks leading to a new concept called vertical handoff. Vertical handoff occurs when mobile node moves between different technology networks. Designing intelligent vertical handoff algorithm is a most critical challenge for next generation network. Towards this as a first step, IEEE 802.21 working group proposed a standard called Media Independent Handover (MIH). The IEEE 802.21 MIH is focused on handover facilitation between different wireless networks in heterogeneous environment regardless of the type of medium. In order to simulate MIH standard, National Institute of Standards and Technology (NIST) developed a add-on module compatible with ns2 version 2.29. In this paper we have presented a simulation result of vertical handoff between WiFi and WiMAX networks using IEEE 802.21 MIH standard. The simulation is carried out using ns2 simulator with NIST’s add-on module for IEEE 802.21 MIH standard. Performance of IEEE 802.21 MIH standard is analyzed in terms of throughput, handoff latency, packet drop and end to end delay.

References
Simulation and Performance analysis of Vertical Handoff between WiFi and WiMAX using Media Independent Handover Services


- 3rd Generation Partnership Project (3GPP), http://www.3gpp.org/
- 3rd Generation Partnership Project 2 (3GPP2), http://www.3gpp2.org/
- L. Eastwood, S. Migaldi, X. Qiaobing, V. Gupta, Mobility using IEEE 802. 21 in a heterogeneous IEEE 802. 16/802. 11-based, IMT-advanced (4G) network, IEEE Wireless
Simulation and Performance analysis of Vertical Handoff between WiFi and WiMAX using Media Independent Handover Services

- The network simulator NS-2 NIST add-on; IEEE 802.21 model, NIST, January 2007.

Index Terms

Computer Science Wireless

Keywords

4G - Network Vertical handoff Media Independent Handover ns2 simulator etc.