Extensive Performance Evaluation of Efficient Method for Vertical Handoff in Heterogeneous Networks

Volume 131
Number 13
Year of Publication: 2015

Authors:
Surwase S.V., Sambare S.S.

Abstract

Handover during mobile communications is becoming the general task in heterogeneous wireless networks. To make handover efficient and faster without leaking data with less delay is prime objective. Since from last two decades, many on-going research studies presented to achieve these goals. Still many research works going on to claim more robust performance. In this paper presenting new method for vertical handover in heterogeneous wireless networks. Taking vertical handoff decision plays significance role. In this paper the extensive simulation studies and performance evaluation for proposed work and comparing it against existing work.

Here introduced the fuzzy rule based HMM (FR-HMM) technique for VHD. In addition to this, we further extended FR-HMM method in order to reduce latency and handover delay using concept of automatic authentication auditor (AAA). AAA helps FR-HMM to take speed decision about network selection to perform handover based on logs and history maintained at AAA. Core task of AAA is to minimize the time required for authentication in order to switch to another network using the scores computed for each network. The performance evaluation in done by considering different types of networks to form heterogeneous network such as WiFi, WIMAX,
Extensive Performance Evaluation of Efficient Method for Vertical Handoff in Heterogeneous Networks

WLAN, UMTS etc. Two different network scenarios are considered one by varying mobility speed and another by varying packet size.

References


Index Terms

Computer Science Networks
Keywords

WIFI, WIMAX, Vertical Handover Decision, Heterogeneous Networks, AAA, HMM, Fuzzy Rules