Abstract

The expected growth in radio access technologies (RATs) such as wireless technologies (802.11a, 802.11b, 802.15, 802.16, etc.) and cellular networks (GPRS, UMTS, HSDPA, LTE, etc.) requires efficient vertical handoff algorithm. Variety of vertical handoff algorithms (VHA) have been proposed to help the user to select dynamically the best access network (BAN) in terms of quality of service. The objective of this paper is to provide an optimized network selection decision that allow mobile users to choose the BAN with seamless manner and to exploit a minimum of criteria for all traffic classes namely: background conversational, interactive and streaming. Our optimized algorithm combines two multi attribute decision making (MADM) methods such as analytic network process (ANP) method to weigh the criteria, and the novel method based on mahalanobis distance (NMMD) to rank the alternatives.
New Optimized Network Selection Decision in Heterogeneous Wireless Networks


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Index Terms

Computer Science
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Keywords

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Criticality Analysis