Abstract

The scope of this paper is to provide a detailed description of the selected architecture and the functionalities considered for the AROMA project. This project focuses on a heterogeneous radio access network which includes several Radio Access Technologies (RAT), namely; UMTS Terrestrial Radio Access Network (UTRAN), GSM/EDGE Radio Access Network (GERAN), and Wireless Local Area Network (WLAN). The corresponding Common Core Network (CN) is considered to provide and satisfy different kinds of services, thus, different identified services have different QoSs, then, so the goal is to study and analyze some algorithms that best fit in the network in order to enable quality of service (QoS) based on the service demand in the network. Radio Resource Management (RRM) refers to a group of algorithms that are collectively responsible for efficiently utilizing the radio resources within a RAT to provide services with an acceptable level of QoS. Mainly, at present, Radio Resource Management (RRM) algorithms are implemented independently in each RAT. In the meanwhile, The Common RRM (CRRM) strategy, has been proposed in the literature to coordinate radio resources utilization among a number of RATs in an optimized way. This paper analyze CRRM
solutions with particular attention on implementations. Starting from an analysis of the state of the art, the most interesting solutions have been critically analyzed and then some in depth investigations on some of the identified solutions have been performed.

References


Index Terms

Computer Science Wireless
Keywords

Common Radio Resource Management (CRRM), Heterogeneous Wireless Networks, Radio Access Technology (RAT)