Abstract

Today's networks prime for mobility. A Mobile which is connected to a specific Access Point may be transferred from one Access Point to another, even during a call. This transfer is called a Handover. UMTS and GSM use this concept every day, when a user is performing a call and moves from one location to another, switching the Access Point to which the Mobile Device is connected. However, this handover is made within the access technology.

True mobility does not restrain itself to a specific access technology, which is why there is an effort to create a handover that works between them. The IEEE 802.21 uses network devices like the ones used in UMTS and Wifi to perform a handover. The Media Independent Handover Function (MIHF) is used by IEEE 802.21, to provide events, controls and even information for an application to use. The Media Independent Information Service (MIIS) can be thought of as complement to the MIHF, using the services and commands provided to implement the handover. It also uses a SPARQL to query a RDF Server for information related to the Access Points in the vicinity, thought the MIHF. The DHCP is used by the MIIS, due to the MIIS's implementation as a mobility agent.

In this work an implementation of an IEEE 802.21 framework was made, demonstrating its advantages in the handover process. A handover scenario using the framework presented demonstrates the seamless handover with the MIHF, in opposition with the handover without the MIHF. The main difference between this two handover times is the information provided by the MIIS, which in the handover scenario, determines the need for a Wifi channel scan.