

## **An enhanced secured mobile IPv6 with multicast function and hierarchical design**

### **ABSTRACT**

The proposed handover scheme according to the present invention is an enhancement of the existing Mobile IPv6 protocol; it integrates hierarchical concept and multicast function. Hierarchical design was used to shield the micro mobility from macro mobility in order to reduce location update signal and signaling traffic within micro level network while multicasting is used to send packets to mobile node through base station that are near to mobile node. This will reduced handover delay that causes packet lost when mobile node is roaming. The proposed security scheme is extended enhancement of the existing Mobile IPv6 security protocol. It can detect Man-Int-The-Middle attacks or attacks against data and then prevent them. Each mobile node can trust itself to check whether the connection is secured or not. It is done by requesting the receiver or server to return some selected packet to compare with the original generated. In this method, it is proposed to use encryption if any attack is detected so is not increase the delay.

**Keyword:** Internet Protocol version 6; Mobile IPv6 protocol; Mobile IPv6