

# **QoS AND MOBILE TECHNOLOGIES**

**EDITORS:**

**AISHA-HASSAN ABDALLA HASHIM**

**OMER MAHMOUD**

**RASHEED SAEED**

**DEPARTMENT OF ELECTRICAL AND COMPUTER  
ENGINEERING  
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA**



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Tel: +603-6188 1542 / 44 / 45 Fax: +603-6188 1543  
EMAIL: iiumprinting@yahoo.com

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## CHAPTER 10

### EVALUATION OF NEMO EXTENSIONS

SHAYMA SENAN, AKRAM M. ZEKI, AISHA HASSAN ABDALLA HASHIM

*ECE DEPT, FAC. OF ENG., INTERNATIONAL ISLAMIC UNIV. MALAYSIA (IIUM), JALAN  
GOMBAK, 53100 KUALA LUMPUR, MALAYSIA.*

*shay\_sinan@yahoo.co.uk*

#### 10.1 INTRODUCTION

Currently IPv6 communication is widely using wireless devices and mobile technologies. However Mobile IP and Mobile IPv6 aim at maintaining Internet connectivity while a host is roaming, as users expect to be connected to the Internet from “anywhere” at “anytime”. The most important feature of Mobile IPv6 is that even though the MN changes locations and addresses, the existing connections through which the MN is communicating are maintained. To do this, connections to MNs are made with a specific address that is always assigned to the MN, and through which the MN is accessible at all times [1].

Network Mobility (NEMO) [2], developed by IETF, is introduced to support network mobility management, and to ensure communication continuity for nodes in the mobile network. A mobile network includes one or more mobile routers (MRs) that provides access to the Internet. The MR transmits the packet to mobile network nodes (MNs). Moreover, the MR performs the binding update (BU) to the home agent (HA) without additional registration such that NEMO can reduce the signaling overhead.

#### 10.2 NEMO EXTENSIONS

Although NEMO Basic Support achieves continuous, optimal and secure communication to and from all nodes, it still suffers from some limitations. However, many researches and protocols are proposed to overcome the drawbacks of NEMO.

##### 10.2.1 IETF contributions

Beside the standard document of NEMO Basic Support protocol [2], the Network Working Group of IETF has contributed several “Request for Comments” (RFCs) (which are Informational documents) to highlight and analyze features and problems of NEMO Basic Support, in addition to many related Internet drafts issued by others. Next, a brief description about these RFCs and some Internet drafts will be presented: