QoS AND MOBILE TECHNOLOGIES

EDITORS:

AISHA-HASSAN ABDALLA HASHIM

OMER MAHMOUD

RASHEED SAEED

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

IIUM Press

Published by:
IIUM Press
International Islamic University Malaysia

First Edition, 2011

Perpustakaan Negara Malaysia Cataloguing-in-Publication Data

ISBN: 978-967-418-142-0

Member of Majlis Penerbitan Ilmiah Malaysia - MAPIM
(Malaysian Scholarly Publishing Council)

Printed by :
IIUM PRINTING SDN.BHD.
No. 1, Jalan Industri Batu Caves 1/3
Taman Perindustrian Batu Caves
Batu Caves Centre Point
68100 Batu Caves
Selangor Darul Ehsan
Tel: +603-6188 1542 / 44 / 45 Fax: +603-6188 1543
EMAIL: iiumprinting@yahoo.com

TABLE OF CONTENTS

CHAPTER 18

OVERVIEW OF WIMAX MESH

R.A. SAEED , M. HASAN, AISHA HASSAN ABDALLA HASHIM, OTHMAN O. KHALIFA, OMER MAHMUD, SHAYLA ISLAM

ECE Dept, Fac. of Eng., International Islamic Univ. Malaysia (IIUM), Jalan Gombak, 53100 Kuala Lumpur. Malaysia.

hasankamrul@msn.com

18.1 INTRODUCTION

The definition according to WiMAX technology forum, an organization dedicated to promoting WiMAX technology and specifications, According to WiMAX forum "WiMAX is a standards-based technology enabling the delivery of last mile wireless broadband access as an alternative to cable and DSL. WiMAX Technology will provide fixed, nomadic, portable, and, eventually, mobile wireless broadband connectivity without the need for directs line-of-sight to a base station. In a typical cell radius deployment of 3 to 10 kilometers, WiMAX Forum Certified systems can be expected to deliver capacity of up to 40 Mbps per channel, for fixed and portable access applications." (WiMAX Forum, 2007). Practically, a wireless backhaul WiMAX – facilitates flexible placement of a mesh gateway node anywhere in the network. The moveable WiMAX Base Station (BTS) also allows fast installation and easy relocation. Furthermore, for a typical metro area network (MAN) WiMAX performance is outstanding which is specially designed for MAN. It is noticeable that WiMAX also can operate either on licensed or unlicensed band with the third party operators.

The rest of the chapter is organized as follows. Section 2 presents mesh network architecture with WiMAX, section 3 describes Wi-Fi technology and Section 4 analysis of related works, in section 5 summarizes the chapter.