

ANALYSIS OF HANDOVER DATA BETWEEN URBAN AND SUB-URBAN AREA IN SELANGOR

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Abstract

This paper is on the handover data analysis between urban and sub-urban area in Selangor. The continuation of an active call is one of the important features of a wireless cellular system to provide such a facility by transferring an active call from one cell to another. The objective of this project is to present the study of successful handover and failure between two areas which is at Semenyih, Selangor and Jalan Kuala Selangor, Shah Alam, Selangor. Both these areas are representing the sub-urban and urban area respectively. The paper focused on data collection of 3G mobile communication by using NEMO drive test provided by Digi Communication Berhad. The collected data consist of strength of signal which is Received Signal Code Power (RSCP) and quality of signal which is E_c/n_o . Data will be analysis using Microsoft excel and will be export to the Matlab. This data will be presented by using Graphical Using Interface (GUI) create using Matlab software.

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CHAPTER 1

INTRODUCTION

1.1 Universal Mobile Telecommunication System

UMTS is the European vision of 3G mobile communication systems. It represents an evolution in terms of services and data speeds from today's 2G mobile networks. UMTS represents the move into 3G of mobile networks. It addresses the growing demand of mobile and Internet applications for new capacity in today's overcrowded mobile communications. UMTS increases transmission speed up to 2 Mbps per mobile user and establishes a global roaming standard. It allows many more applications to be introduced to a worldwide base of users and provides a vital link between current multiple GSM systems and the ultimate single worldwide standard systems for all mobile telecommunications [1].

In Malaysia, we are know that there are several company that provide mobile services such as Celcom Axiata Berhad, Maxis Communication Berhad, Digi Telecommunication Sdn Bhd and U Mobile. This entire mobile network has their ongoing investments in network coverage, capacity and performance, and intends to maintain their technology leadership and position as the country's best mobile service provider. Although all of the companies use the same system, but there are differences in the quality signal. Thus, we bring out this research in order to study and analyze the different in signal strength and quality signal between Celcom and Digi networks service provider. This parameter will effect to the handover process.