UM RADIO INTERFACE IN GSM

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ABSTRACT

The Global System for Mobile communication (GSM) is a digital cellular communications system initially developed in an European context which has rapidly gained acceptance and market share worldwide. A GSM network consists of a number of-well defined open interface. The interface between mobile (MS) and Base Transceiver Station (BTS) is called air interface or Um interface. Here Mobile Radio Analyzer (MA10) is used to see the activities involved between MS and BTS. Simulation programming using Visual Basic is used to simulate data from MA10. This project presents and approach on how to locate Mobile Station using triangulation solution.

TABLE OF CONTENTS

CHAPTER

CHAPTER 1

INTRODUCTION

1.1 Introduction

To communicate in a mobile telephony system, mobile stations and base stations are needed. By using frequencies, information is sent to/from the mobile station. In telephony a channel uses separate frequencies, one for downlink transmission and one for uplink transmission.

Between Mobile Station (MS) and Base Transceiver Station (BTS), there are a lot of activities involved. From these activities, this project present and approach on locating the MS. From this MS location, we can locate a user of a cellular phone. There are several reasons why Mobile Station Location (MSL) is very importance to us such as for emergency call, providing position information and to pinpoint the position of a stolen cellular phone. The main parameters involved are timing advance, signal strength, timestamp and latitude and longitude of BTSs.

1.2 Objective

This project is implemented to study the activities involve in radio interface and to observe the radio network performance. Measurement data from MA10 is used to locate position of MS from BTS using Visual Basic programming and to estimate major subscriber location for a particular cell.