

**GSM TELETRAFFIC QUALITY ENGINEERING**  
**SOFTWARE DEVELOPMENT**

**This is presented in partial fulfillment for the award of the  
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## **ABSTRACT**

The objective of this work is to know the performance of Global System , Traffic Measurement and the Quality of the Traffic Engineering for Mobile Communication telephone network . The performance involve in the service performance , system capacity & the quality of the teletraffic engineering . This projects will describe the how to measure the telephone traffic , analyze & quality of the traffic engineering . Telecommunications networks , like a roads , are said to carry ' traffic ' , consisting not of vehicles but of telephone calls or data messages . The more traffic there is , the more circuits & exchanges must be provided . If traffic exceeds the design capacity then will be pockets of congestion . Short of providing an infinite number of lines , it is impossibles to know in advance precisely how much equipment to build into a telecommunications network so as to meet demands witout congestion . The quality of the teletraffic engineering is important to make sure the service to the custurmer for more efficiency to the future development . To achieve the quality more efficiency , I have developed one programming using language QBASIC for quality of the service for Teletraffic Department Celcom ( M ) Sdn Bhd .

## 1.0 INTRODUCTION

Telecommunication networks are aid to carry 'traffic' consisting of telephone calls or data messages [1]. A network which was engineered correctly will provide a respectable quality of service, able to cope with network problem (resilient) and even network failures and easily expandable [2]. It provides a method to correctly and economically plan a new network or to expand an existing network. Traffic Engineering is the engineering of telephone call. A solid understanding of the network involved is a must to undertake successful teletraffic engineering. The prime objective of teletraffic engineering is to perform dimensioning of a telecommunication system such that the network is economical and the service quality is as desired. The output of Teletraffic engineering is number of lines are required and where the lines are to be connected to. Teletraffic dimensioning method was first published in 1917 by a Danish scientist, A.K. Erlang [1]. Erlang defined a number of parameter and developed a set of formula, with together give a frame-work of rules for planners to design and monitor the performance of telephone, telex and circuit-switched data network [3]. The prime objective of teletraffic engineering is to perform dimensioning and forecasting of a telecommunications system such that the network is economical (no wastage) the service quality as desired. Many of today's modern digital cellular networks are based on the GSM standard which was originally developed in Europe as an Pan-European Mobile System. This paper explain a technique to how to make the software development using Qbasic for Teletraffic Department Cellular Communication Network (M) Sdn Bhd . The output can determine the events of the data that have been generated . Each data block are given in ISO coded .