

Universiti Teknologi MARA

A Study on the Billing and Tariffing Issue in
GPRS

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ABSTRACT

GPRS is The General Packet Radio System (GPRS) is a new service that provides actual packet radio access for mobile Global System for Mobile Communications (GSM) and time-division multiple access (TDMA) users. The main benefits of GPRS are that it reserves radio resources only when there is data to send and it reduces reliance on traditional circuit-switched network elements. The increased functionality of GPRS will decrease the incremental cost to provide data services, an occurrence that will, in turn, increase the penetration of data services among consumer and business users.

In addition, GPRS will allow improved quality of data services as measured in terms of reliability, response time, and features supported. The unique applications that will be developed with GPRS will appeal to a broad base of mobile subscribers and allow operators to differentiate their services. These new services will increase capacity requirements on the radio and base-station subsystem resources. One method GPRS uses to alleviate the capacity impacts is sharing the same radio resource among all mobile stations in a cell, providing effective use of the scarce resources. In addition, new core network elements will be deployed to support the high burstiness of data services more efficiently.

However, many are wondering of the billing and tariffing issue involved. There are still no proven billing architecture that best suits the needs of the users which provides the best solution for the billing requirements. This paper will address the billing and tariffing issues, proposing the best billing architecture Malaysia can adopt.