AN INVESTIGATION TO UPGRADE THE GLOBAL SYSTEM FOR MOBILE (GSM) INDUSTRY

This thesis presented in partial for the award of the
Bachelor of Electrical Engineering (Hons.)
UNIVERSITI TEKNOLOGI MARA

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ACKNOWLEDGEMENT

In the name of ALLAH S.W.T, the Most Gracious and Most Merciful who have given me the strength and ability to complete this final project. Prayers are upon His final Prophet Muhammad S.A.W.

My deepest and warmest appreciation and gratitude to my Supervisor En Ahmad Asari bin Sulaiman for his support, guidance, ideas, suggestions, encouragement, constant support and invaluable advice has helped me tremendously in completing this thesis.

I also would like to express special thanks to my Panels Pn Aziyati Husna and En Huzaimy Mohd Jusoh for their comments and suggestions.

Finally, my deepest appreciation goes to my beloved wife for her moral supports, guidance and ideas. Also to my daughters, Umairah and Safiyya for their understanding, support and expectations. Last but not lease, I also want to say thanks to those that have directly or indirectly contributed towards the progress of this thesis.

Abstract

In order to improve the performance of a system, investigations must be done to identify any weaknesses of that system. For traffic engineering purposes, the traffic load for a geographic region is often referred during busy hours. The location of the busy hour during the day depends on whether the region is used as a business or residential area. Although users move from one place to another, the peak-hour traffic load implicitly considers such mobility. This thesis reports an investigation of the performance of three different cells located at Subang Airport Terminal 3 for three months (August, September and October 2006). The cells are AIRTM11, AIRTM12 and AIRTM13. This study is based on the traffic in those areas because it provides information critical to communication networks planning and designing the system to meet the users need at a reasonable cost. Elements that have been analyzed are call attempts, number of success calls and handoffs. Daily traffic such as busy hour and blocking for the three cells are also reported in this paper. The utilization is determined based on the obtained data. By analyzing the traffic load of a certain area, the service provider can decide whether to improve the whole system, provide additional traffic channel or upgrade the number of cells. From this investigation, it was found that the system is operating perfectly well based on the percentage of utilization.

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