FINAL YEAR PROJECT REPORT

ADVANCED DIPLOMA IN ELECTRICAL ENGINEERING (ELECTRONICS)

SCHOOL OF ENGINEERING

MARA INSTITUTE OF TECHNOLOGY

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ART 900 Radio Base Station Monitoring System

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PREFACE

This final year project is a partial requirement for engineering student to get the Advanced Diploma In Electrical Engineering (Electronics).

This project was done during the four months of practical training/industrial project at Cellular Communication Network (M) Sdn Bhd.

The purpose of this project is to expose the student with the actual environment of an engineer's work. It also provide ample opportunities for practice and promotes the development of analyzing, understanding and testing.

ACKNOWLEDGEMENT

In the name of Allah, the Most Beneficent and the Most Merciful. It is with the deepest sense of gratitude to the Almighty Allah that we write this, for if not His help and guidance the report would not have been completed as it is today.

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1.0 ART 900 Monitoring System

1.1 Abstract

The objective of this project report is to give an overview for the ART 900 Radio Base Station (RBS) monitoring system which is similiar to SCADA (Supervisiory Control And Data Acquisition) system.

1.2 Introduction

The purpose of this project is to design a system that can monitor certain status or events at the RBS, which will be send to the monitoring terminal at the Mobile Switching Center (MSC) via one of the existing channels.

In the existing monitoring system, there are only 3 types of sensors to monitor current status at RBS, these status are :

i. Power failure

ii. Over voltage

iii. Under voltage

1.3 Proposal

The project was proposed by Cellular Communication Network (M'sia) Sdn Bhd or CELCOM research and development departmant, after discussion with ITM. This project is expected to be completed within a period of 4 months.

This project is to upgrade the existing monitoring system at the RBS. In this system, the RBS status will be send within some time interval to the MSC via one of the existing channel.