

**ALARM ISOLATION FOR TELEKOM MALAYSIA  
CGPA SYSTEM**

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## **ABSTRACT**

Today, SCADA (Supervisory Control and Data Acquisition) system has been widely used in various organizations for the purpose of monitoring and controlling various systems. Telekom Malaysia is one of the organizations that use such system to monitor the condition of pressure level in telephone cables which is referred to as CGPA (Computer-Based Gas Pressurization Alarm) monitoring system.

The system is capable of monitoring and reporting various types of alarm such as pressure and system errors. All of the alarm will be automatically transmitted to the nearest exchange and the headquarter for analysis and rectification. The system is also capable of reporting the pressure level at any point of the cable depending on where the transducers were installed and identify the fault location.

The objective of this project is to enhance the existing system software. The software enhancement must be able to eliminate some of the alarms sent to the printer. The alarm to be isolated is the low pressure alarm. Only this critical alarm will be printed out and other alarms will be stored into the hard disk. The software will also be able to page the Telekom personnel via public switched telephone network. This software only need to be active at certain period of the day.

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## **1.0 INTRODUCTION**

The Local Network is the most expensive component in a telecommunication infrastructure. Typically this component takes up more than 40 percent, in many cases a substantially higher proportion of the total capital investment is required for the development of the telephone cable network. For that reason it is obvious that the network must be well maintained.

Most of the telecommunication cable in Malaysia utilizes paper as the insulator. This type of cable is known as the Paper Core Unit Twin (PCUT) and need to be pressurized. The purpose of pressurization is to protect the insulator from becoming wet in case that the cable sheath crack. When this happens communication disruption will occur.

It is therefore important to protect the cable from moisture (i.e by pressurizing it) and to monitor the pressure status and trends for early detection of faults due to pressure leaks in the cable.

A leakage in the cable shield seldom occur abruptly. It takes a rather long period of time and therefore it is quite easy to maintain the network in full operation if leakages can be detected earlier.

A computer-based GPA monitoring system makes this possible by analyzing the information from a number of transducers installed in a joint along the cable. The system is capable of storing the data of each transducer for further analysis. The pooling of data can be done automatically or manually. The system can also send an alarm signal in case the reading exceed the threshold value or when there is an error in the system. The system will then print the alarm type complete with its location on the printer as a hard copy.

However the present system has some drawbacks especially on the software section. The objective of this project is to add some new features to the system without interfering the existing software.