

ABSTRACT

All kinds of industrial activities require remote monitoring and controlling facility in doing its business. One of the applications of this technology is the application in monitoring and controlling Generator Set. Now, Generator Set is being a secondary electric power source if the *PLN* is not able to fulfill the electric power requirements. In its operation, Generator Set has some parameters which must be known by the operator every time to prevent the Generator Set dysfunction which cause the dissolution of an electric power current to the load. In some industries, Generator Set is located far from workstation. For example, in telecommunication industry has a BTS (Base Transceiver Station) which spreads throughout Indonesia, but in the fact BTS (Base Transceiver Station) still requires Generator Set. The aim of this final assignment is to create a system of monitoring and controlling Generator Set and alarm that can be accessed through the web with data acquisition using Delphi programming language.

This monitoring and controlling system in its development uses ADC 0804 as a reader of battery voltage; IC 74157 as a multiplexer alarm; language programming of Borland Delphi 7.0 is used in making of data acquisition software; and MySQL as a database of voltage and alarm. Besides, PHP is used as web language programming. In this final assignment, the steps of system development used are library study, the making of hardware and application program which have been designed, and the experiment system which has been created.

From the experiment result and the explanation, the writer concludes that data acquisition of voltage and alarm can be done automatically through the parallel port. The result of data acquisition and ADC has average difference of 0.19 volt if it is compared with the measurement by using digital voltmeter. In here, the experiment result of the system states that the monitoring and controlling can be done remotely. The searching of the voltage data and alarm status can be done through the web which has been made. The result of this searching can be displayed in the table or graph.

Keywords: *Telemonitoring system, ADC, data acquisition, parallel port, web, PHP, and Delphi.*