

ABSTRACT

As the rapid development of today's technology, and high level of activity it requires the development of distributed control technology capable of sending data through the medium grid (Power Line Network) in order to control household appliances with a microcontroller-based control center. The selection of the grid in this application because the electricity is something that almost certainly exist in every home. Thus, every house that has electricity can apply without having to use a longer cable.

This tool has two parts: a control center (controller) and Object (Plant). At the control center serves as the input data through a push button. As the control signals of this signal will be transmitted by applying FSK modulation. This tool serves to turn on or turn off electronic devices connected to the object.

This control system begins to enter data input from the push button and then processed by a microcontroller and digital data transmitted to the FSK modem and the resulting analog signal is forwarded to the PLC modem for FM modulated and transmitted to the grid with the use of the carrier frequency of 200 KHz. Data received from the grid by the modem and then proceed to the modem receiver for FSK demodulated and processed in the microcontroller. 220 Volt electrical network shown can be used to transmit other information signals, for example data and even voice. This tool can be implemented in a room that is connected in a single phase power lines and even different phase.

Keywords: *PLC Modem, FSK (Frequency Shift Keying), the grid*