COMPUTER COMMUNICATION USING SERIAL INTERFACE C/W SAMPLED DATA TRANSFER

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MOHD FUAD BIN JUNAIDI

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Department of Electrical Engineering
School of Engineering
MARA Institute of Technology
40450 Shah Alam
Selangor Darul Ehsan
MALAYSIA

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ABSTRACT.

Generally, a computer should be able to communicate with another nearby computer, either directly or through a modem that transmits over long distances through telephone lines. Such data transfer is normally done with the bits of the bytes transmitted serially over a transmission line.

In this project, serial transmission scheme was used for the communications between the computers. Two types of serial transmission which are known as synchronous and asynchronous methods can be used to the system, thus some studies was done to select the best method. Considering some factors, asynchronous transmission method with a low bit rate was applied to the system.

The software which is the important part of the system was developed to enable the computers to communicate with each other. The progarm was based on UART which is a built-in device in the computer.

1.0 INTRODUCTION.

This project is to construct a remote monitoring image capture and flood early warning system. The full diagram of the system is shown as in Appendix 1. It is important to have such system that can monitor the situations of the rivers especially during rainy season. With this system, the authority can be more prepared and alert of the situation. The monitoring also becomes more efficient and easier since all data from the rivers are centralized at one place.

The most relevant part of the system in this project is the part that is used to serially transmit data from Local Processor to the Central Processor . It is a middle part of the system where the Local Processor receive the data from the cameras and sensors that being allocated at the rivers. Then the Local Processor sends the data to the Central Processor where it will alert the authority for any critical and danger situation.

Serial transmission was used to the send data from Local Processor to Central Processor. Two methods of transmitting serial information are names for the timing method that paces the information transmitted and received over the serial link.