

**MULTIPLE DISPLAY DATA ACQUISITION  
AND  
CONTROL SYSTEM  
(MDDACS)**

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**In the Name of Allah  
Most Gracious Most Merciful**

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## **ABSTRACT**

This thesis describes the development and application of Multiple Display Data Acquisition and Control System (MDDACS). MDDACS is a software based remote monitoring and control system that uses the Local Area Network (LAN) to establish the communication for remote access between the client PC and server PC. The data from the controlled hardware is passed to the server PC and later can be accessed (in real time) by any clients in the network by using callback procedure. The input and output of the system has been tested successfully using a simple temperature control circuit.

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## **1.0 Introduction**

Client/server has massively changed the world of computing. The explosion of personal computers and Local Area Network (LANs) has moved most computing power away from mainframe computers to individual desktop computers. Servers allow the information stored on these numerous desktop computers (clients) to be centralized and coordinated. This allows the power in individual personal computers to be leveraged. Client/server computing, and the concepts this field embodies, bring tremendous capability to information systems within an organization.

With the expansion of the client/server computing, one of the major changes in Engineering field is Remote Monitoring system. Even though there are several methods of remote monitoring system, the TCP/IP method is considered as one of the best method by utilizing the advantages of global networking or internet.

In computer context, multiple display is a feature that can be viewed in more than one display window or unit. The data can be presented in graphical or numerical form. With current sophisticated technology, the client/server configuration can be used to create a system with multiple display units.

### **1.1 Project Overview**

This project is concerned with the development of a remote monitoring system using standard Local Area Network protocols or TCP/IP. In this project, the control processes can be monitored from any remote locations since the systems are connected to the network either LANs, WANs or global networks (internet) as shown in Figure 1-1.