Web-Based Data Acquisition and Control of a Remote Temperature Sensor

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Abstract
The primary objective of this thesis is to design and implement a low cost web-based data acquisition and control of a remote temperature sensor.

With the value added features, the new objective is to implement a successful Telehome care product with increased security performed by speech recognition; increased energy efficiency performed by motion sensor and increased performance by the incorporation of a humidity sensor.

Introduction
This Telehome care system incorporate the following systems:
- Data Acquisition and Control System
- Control System
- Supervisory Control System
- Surveillance System
- Speech Synthesizer System
- Speech Verification System

Speech Synthesizer System allows the users to control a speak capable machine remotely via the Internet.

Supervisory Control examines the reception of data from the Control System to be graphically displayed. It also allows the user to send control signal to the hardware remotely.

Speech Verification System confirms the speaker’s identity by comparing visual patterns of fundamental pitch periods for enhanced security.

Data Acquisition and Control System involve with data acquisition from the sensors. The M16C/62 is an interface between the sensors and the Control System.

Control System concern with the transmission and reception of data from the Data Acquisition and Control System and the Supervisory Control System.

Surveillance System provides the current status of the room in which the image will be uploaded from the FTP client to the FTP server via the Internet.

Conclusion
The KJC System as a Telehome care product has been successfully implemented. The primary objective of the System to acquire temperature data and transmitting it via the Internet to enable remote control to the external hardware has been achieved.

To improve on the reliability and performance of the entire KJC System, value adding is performed.

All functionality within the system has been designed with the best practice to ensure its success as a Telehome care product.