

# 2008 Ohio Student Research Forum

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## RESEARCH ABSTRACT FORM

**TITLE:** Sensor Web and It's Application in Smart Nursing Home Design

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Sensor networks can be used for monitoring and enhancing human awareness about the environment by collecting and sending the data to users through a network. Sensors used in this project are called motes. Equipped with different sensors, motes can detect motion, light, temperature, sound, moisture level, and other important environmental conditions. Nursing. In this research project, we provide a simulation study on using latest sensor and information technologies to provide enhanced homes can tremendously benefit from the capabilities sensor networks can provide for monitoring the environment for elderly residents and patientare in nursing homes.

The sensor web is composed of the motes which have sensors that collect data and send it to a database. An alert server is needed to retrieve the data from the database so alerts can be sent when necessary. Data from the alert server is read and interpreted by an analysis server which will display the data in a high level to be read by users. A web server displays the high level data on a webpage that can be viewed from an internet browser. A registration server is used so that users can subscribe to receive alerts by email. An email server reads data from files created by the registration and analysis server and sends alerts via email to those who have subscribed to emails. These various components form an alert system that can be implimented in nursing homes and provide room for future functionality to be added.