Smart Rooms…

SMARTCITY RESEARCH CENTER

OBJECTIVE

- To identify the crowd in the room and adjust the air conditioning, lighting and ventilation for smart room implementation
- Develop infrastructure and controls for a room that will sense and control to conserve power

FEATURES

- To achieve automated lighting and ventilation, energy data, weather data, CO_2 levels and movement is measured and controlled accordingly
- Enthalpy based control is used for energy saving
- Data logging at frequent intervals
- Detailed building energy dataset.

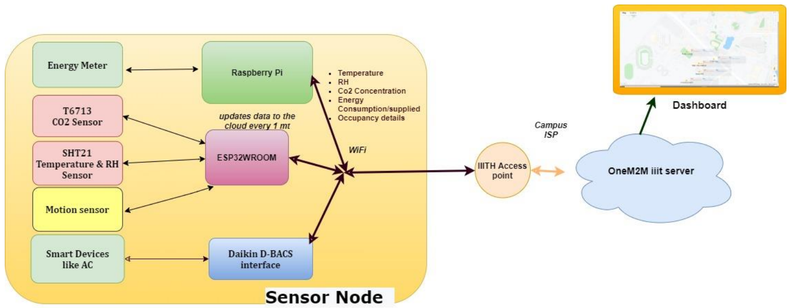

Fig1: Block Diagram

METHOD

- ESP 32 is interfaced to Telaire T6713 sensor and SHT 21 sensor via I2C to get CO2, Temperature and Humidity values, respectively.
- The power and energy consumption of the AC units and other electrical appliances is being monitored by Elmeasure and Schneider energy meters via Modbus. AC parameters are obtained from the Daikin DBACS interface via BACnet
- IoT nodes are deployed to collect the data and post it to OneM2M, and data is used to control the Ventilation, Air conditioning and power consumption of the rooms.

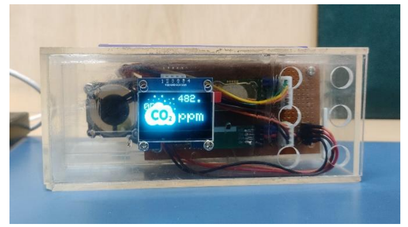

Fig2:Smart Room Air Quality node

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