CENG-AP Projects

HSBS WSN

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What is CENG-AP Project?

• It consists development of applications using AirTies AP-400
  - AirTies AP-400:
    - 54 Mbps
    - Wireless Access Point
    - Repeater
    - Bridge
    - 4-Port Switch

• It has two subprojects:
  1. Network Monitoring Tool
  2. Wireless Sensor Network
What is HSBS WSN Project?

• General View of HSBS WSN:

• Main Components of HSBS WSN:
  - HSBS Sentinel
  - Server
  - The Network
HSBS Sentinel

- is the name of our wireless sensor node
- supports IEEE 802.11 protocol
- measures humidity and temperature
- is formed by assembling SP-07 over an AP-400

- SP-07: Sensor Integrated PIC Board
- Main Components of SP-07:
  - SHT15: Temperature and Humidity Sensor
  - PIC 16F877: Microcontroller
The Server

- Collects data from nodes
- Records the data
- Provides a user interface to visualize and manipulate the data
- Handles alert issues
The Network

- IEEE 802.11 protocol
- Mesh Technology
- WPA / WPA2 Encryption
- General View
System Overview

- PIC Module
- AP Module
- Server Module
- GUI Module
GUI Module – Node Monitor
GUI Module – Data Analyzer
GUI Module – Report Generator

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Included Nodes:
Node #1
Node #2
Node #3
Node #4

Node Locations:
Node #1: Ceng Building A, Entrance 2
Node #2: ES Car Parking, West Corner
What we have done so far:

- Schematic of SP07 is completed
- SP07 PCB is in progress
- PIC Module is completed
- AP Module is in progress
- Server Module, GUI Module are 2nd terms work.
Thanks for Listening

Questions?