MIDDLE EAST TECHNICAL UNIVERSITY

COMPUTER ENGINEERING DEPARTMENT

CENG 491

TERM PROJECT PROPOSAL

HSBS SMART

COMPANY NAME

HSBS Smart

PROJECT TOPIC

CENGAP AIRTIES (Wireless Sensor Network Simulation)

MEMBERS

1250471	Serdar KOÇBEY	skocbey@gmail.com
1347244	Burak CANSIZOĞLU	burak_cansizoglu@yahoo.com
1347285	Serkan ÇAĞLAR	serkancaglar@gmail.com
1298140	Hanifi ÖZTÜRK	cengozturk@gmail.com
Group Mail:		**hsbs_smart@yahoo.com**

DESCRIPTION

Simulating a wireless sensor network with AirTies AP-400 and laptop computers.

PROBLEM DEFINITION

Building a wireless sensor network for

- safety of users,
- reducing the cost of maintaining the environment,
- automating tasks that are typically performed in the environment.

Common Features

1. Developing software for simulating sensor environment on laptops
2. Developing protocol for communication between AP-400 and sensors (laptops in our case).
3. Developing protocol for communication between AP-400 and Server.
4. Developing server side software to compute, analyze and producing alerts.

Extra Features

5. Developing an AI module for interpreting the alert issues.
6. Developing an extension module for server side software to prepare weekly and monthly regular reports.

Advanced Features

7. Extending the AI module to create a smart environment which can adjust its members according to acquired knowledge.

ROLES AND GRADE EXPECTATIONS

Roles

Serdar KOÇBEY	Project Leader, Initiator, Summarizer
Burak CANSIZOĞLU	Initiator, Recorder, Gate Keeper
Serkan ÇAĞLAR	Initiator, Optimist, Time keeper
Hanifi ÖZTÜRK	Initiator, Devil's Advocate, Time keeper

Grade Expectations

Serdar KOÇBEY	CB-BA
Burak CANSIZOĞLU	CB-BA
Serkan ÇAĞLAR	CB-BA
Hanifi ÖZTÜRK	CB-BA

RISK PLAN

Risk Categories : Product size(PS),Business Impact(BU),Customer Related(CR),Process(P),Technology(T),Development Environment(DE),Staff Size(SS),Experience(EX)

Impact: 1-catastrophic, 2-critical, 3-marginal, 4-negligible

Risks	**Category**	**Probability**	**Impact**
Estimates may be very low	PS	%67	3
Hardware Failures	P\T	%34	2
Bankrupting of Customer Company	CR	%1	4
Loosing a group member	SS	%25	1

SOFTWARE MODEL

Rather than one model, several models can be combined into some sort of hybrid methodology. Disabling some test steps or switching test steps from V-shaped life cycle model can also be useful for this project. General design of the project is obvious so each phase of the project should be implemented as a unique small project. Integration of these components also contains the testing part of these compact results. Each individual component has to be integrated for the future design where developers want to achieve. On the other hand, requirements do not tend to change easily in the long run.