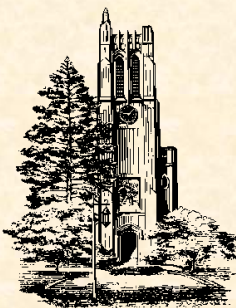


MICHIGAN STATE
UNIVERSITY

Technical Specification / Schedule Ford Test Drive



Team 4: Ford
CSE 498, Collaborative Design

Jeffrey Ignatius
Stephen Rice
Ronald Rodriguez
Ryan Wagoner

Department of Computer Science and Engineering
Michigan State University

Fall 2008


S Project Overview

- Using sensors to collect data during test drives
- Sensors create a wireless mesh network to share data and locate cars on lot
- Data is stored and analyzed for use by dealers
- Can provide information on popular test vehicles, how vehicles are being driven, & security systems.

Team 4: Ford

2

S Functional Specifications



Team 4: Ford

- When a user begins a test drive, the sensors will automatically begin collecting data
- Upon the return of a test drive, the data that has been collected will be transmitted to a database
- The car salesman will be able to sit with the customer and review their data from the test drive. This will be displayed on a website
- The wireless network formed by the sensors should still function even with the arrival and departure of cars.

3

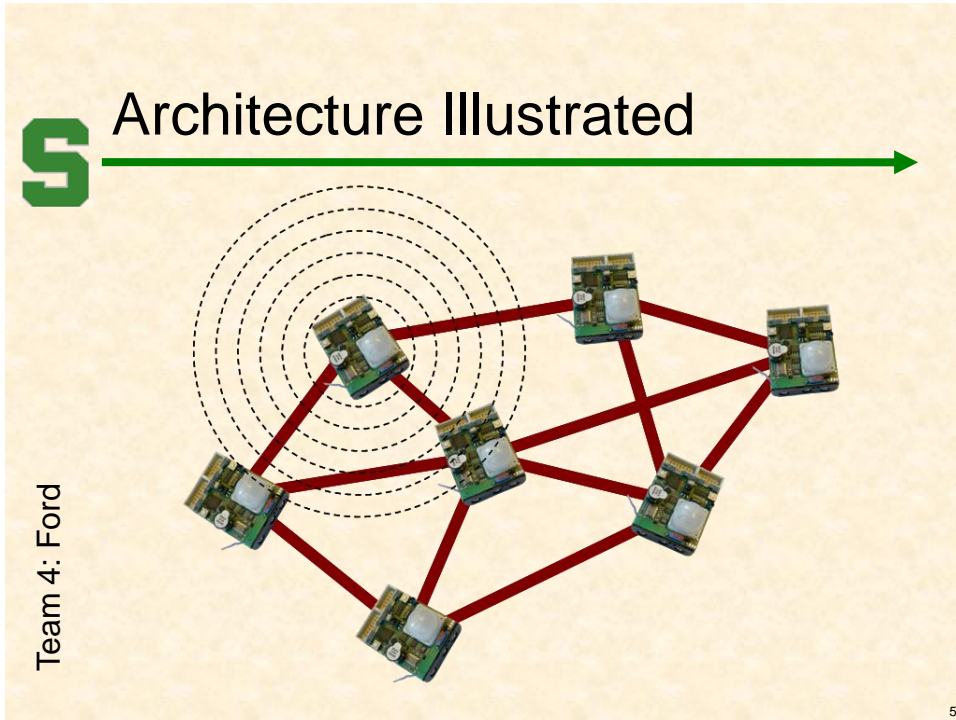
S System Components



Team 4: Ford

- Server Systems / Software
 - Windows Server 2003, Windows XP
 - Apache, MySQL
 - .NET Framework, .NET Micro Framework
 - C#, PHP, AJAX, Silverlight
- Development Systems / Software
 - Visual Studio 2005 SP1
 - Subversion Client Installed for Version Control

4




\$ Risks

- **Risk 1: Obtaining data from the Sensors**
 - Priority: High
 - Difficulty: Medium
 - Mitigation: Information is provided by sensor distributors.
- **Risk 2 : Being able to accurately locate sensors.**
 - Priority: Low/Medium
 - Difficulty: High
 - Mitigation: Research into previous attempts at locating mobile sensors
- **Risk 3 : Providing useful analysis of received data**
 - Priority: High
 - Difficulty: Medium
 - Mitigation: Contact with client to determine useful analytics.

Team 4: Ford

6

\$ Project Schedule




Team 4: Ford

- Week 1: August 25 – August 31
 - Receive project overview, begin conceptualization.
 - First contact with Ford.
 - Begin setup of work environment, including development environment, server hosting for website and version repository.
- Week 2: September 1 – September 7
 - Begin specification documentation
 - Continue work environment setup
 - Begin sensor research and experimentation.

7

\$ Project Schedule




Team 4: Ford

- Week 3: September 8 – September 14
 - Design wireless network protocols for node communication
 - Revise and finalize specification document
 - Add information on wireless network protocols
 - Add information on sensor capabilities and APIs to access them.
 - Add information on database schemas.
 - Edit team website, providing updates on progress.

8

Project Schedule




- Week 4: September 15 – September 21 
 - Begin work on alpha version
 - Create Driver Profile data collection web site
 - Create minimal mesh network with limited feature set.
 - Code collection and storage of data from the sensors
 - Create database, create Driver Profile table and attach to data collection site.
 - Edit team website, providing updates on progress.
- Week 5: September 21 – September 28
 - Continuous development of alpha version
- Week 6: September 29 – October 5
 - Alpha version should be usable
 - Prepare for in-class demonstration.

Team 4: Ford

9

Project Schedule



- Week 7: October 6 – October 12 
 - Alpha Demonstrations Due
- Week 8: October 13 – October 19
 - Begin development of beta version
 - Possible alpha version demo with Ford contacts
- Week 9: October 20 – October 26
 - Continue development of beta version
- Week 10: October 27 – November 2
 - Rigorous testing of beta version
- Week 11: November 3 – November 9
 - Beta Version Due

Team 4: Ford

10



Project Schedule

- Week 12: November 10 – November 16
 - Begin intensive testing and debugging
- Week 13: November 17 – November 23
 - Finish adding features and finalize product
- Week 14: November 24 – November 20
 - Code Complete
- Week 15: December 1 – December 5
 - Project Videos Due

Team 4: Ford

11