



MICHIGAN STATE UNIVERSITY

09/14:
Team Status Report Presentations

The Capstone Experience

Dr. Wayne Dyksen
Department of Computer Science and Engineering
Michigan State University
Fall 2011



From Students...
...to Professionals

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Team Auto-Owners

Status Report (1 of 4)

24-Hour Road Service Mobile Apps

- Project Description
 - Android and iPhone apps for use in car breakdowns
 - Will email GPS and insurance data to Quest
 - Allows current insurance information to be viewed
 - Can locate nearby service centers, restaurants, and hotels
- Project Plan Document
 - In contact with auto owners for GUI design (50%)
 - Working on system architecture layout (50%)
 - Function specification have been discussed and determined (60%)
 - Work in progress

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Team Auto-Owners

Status Report (2 of 4)

24-Hour Road Service Mobile Apps

- Server Systems / Software
 - SQL server
 - TFS
 - RESTful web service
- Development Systems / Software
 - Android and iPhone hello world apps
 - Basic website implemented

The Capstone Experience Team Status Reports 6

Team Auto-Owners

Status Report (3 of 4)

24-Hour Road Service Mobile Apps

- Client Contact
 - In person meeting to determine requirements
 - Weekly conference calls + email contact
- Team Meetings
 - Weekly Friday meetings
 - Discuss progress and next steps
- Team Organization
 - Justin: Lead Web Programmer
 - Wong: Lead I-Phone Programmer
 - Paul : Lead Android Programmer

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Team Auto-Owners

Status Report (4 of 4)

24-Hour Road Service Mobile Apps

Risks

- Database Communication
 - How to communicate between phone Apps and remote Databases
 - Building a SQL Database, researching methods
- GPS to Road
 - How do we translate a GPS coordinate to a road and milemarker, or an address
 - Researching existing Apps (reverse-GeoCoding)
- Administrative Tools
 - Provide some sort of graphing for stored usage data
 - Researching graph methods within Visual Studio
- Daily Database Sync
 - Want to update insurance data on phone in case accident happens outside of internet service
 - Researching existing apps
- Finding nearby points of interest
 - Find restaurants, hotels, service centers
 - Researching existing apps

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Team Boeing

Status Report (1 of 4)

BAPS 2: Battle Aircraft Position Share 2

- Project Description
 - Universal Platform Support
 - Exploit Vulnerabilities of Multiple Devices
 - Interweave Exploitations with Gameplay
 - Communicate Securely Between PC and Mobile Device
- Project Plan Document
 - IDE/Source Control
 - Vulnerability Research for iPhone and Windows 7
 - Web App UI
 - Networking/Encryption

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Team Boeing

Status Report (2 of 4)

BAPS 2: Battle Aircraft Position Share 2

- Server Systems / Software
 - N/A (yet)
- Development Systems / Software
 - Upgrading PC to Windows 7
 - SVN
 - Google docs

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Team Boeing

Status Report (3 of 4)

BAPS 2: Battle Aircraft Position Share 2

- Client Contact
 - Introduction
 - Initial Breakdown/Weekly Goals
- Team Meetings
 - Identify Existing Software
 - Assigning Tasks
- Team Organization
 - Client Contact
 - Set Meeting Days

The Capstone Experience Team Status Reports 11

Team Boeing

Status Report (4 of 4)

BAPS 2: Battle Aircraft Position Share 2

Risks

- Risk 1
 - Networking on a mobile device may be difficult through a web app
 - Researching the possibility of using raw TCP/IP connections from the mobile device
- Risk 2
 - Cryptography in Javascript/HTML5
 - Researching cryptography in web apps, attempting to find a solution that is compatible with the cryptography in BAPS I
- Risk 3
 - Security vulnerabilities in platforms may take to long to analyze
 - Researching common and documented vulnerabilities. These can be used as examples of the necessary process.

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Team Ford Status Report (1 of 4)

Ford Qwikboard

- Collaboration Tool
 - Sticky Notes with text and embedded media files to share
 - Web based application with mobile access
 - Use Context: SCRUM or Brainstorming environment
 - Allows multiple users to collaborate in real time
 - Ability to share Qwikboard's by exporting to Office products
- Project Plan Document
 - Functional Specification Document Done
 - Design Specification Document Done
 - 15% Complete

The Capstone Experience Team Status Reports 13

Team Ford Status Report (2 of 4)

Ford Qwikboard

- Server Systems / Software
 - Microsoft SQL Server 2008
 - Ford Directory Services using LDAP
- Development Systems / Software
 - HTML 5
 - AJAX
 - Javascript
 - Java
 - Eclipse + OEPE Plugin + Tomcat Server

The Capstone Experience Team Status Reports 14

Team Ford Status Report (3 of 4)

Ford Qwikboard

- Client Contact
 - Weekly Conference Call: Tuesdays 2pm - 3pm
 - Met twice along with multiple emails with contact
 - Contacts: Mike Volk & Gopal Kamat
- Team Meetings
 - Tuesday & Thursdays: 12pm - 3pm
 - Future meetings as needed
- Team Organization
 - Company Contact - Danh Tran
 - Collaborators : Luke Davis, Jin Hou, Will White

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Team Ford Status Report (4 of 4)

Ford Qwikboard

Risks

- LDAP Database & SQL Database
 - Connecting to the database to validate users
 - First major milestone + Tutorials
- Java / AJAX
 - Client wants real time collaboration
 - Tutorials, Books, Online resources
- HTML 5 / Javascript
 - Major Updates to Web development
 - Tutorials, Books, Online resources
- Mobile Support
 - Multi-platform support
 - Modify existing UI + Rigorous Testing

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Team GE Aviation

Status Report (1 of 4)

NextGen Aircraft Taxi Assistance

- Project Description
 - Aircraft Taxi Assistance
 - 3D visualization of surface with overlaying route data
 - X-Plane plugin: converting X-Plane weather to NOAA RUC
- Project Plan Document
 - Created in Google Docs
 - Preliminary notes

The Capstone Experience Team Status Reports 17

Team GE Aviation

Status Report (2 of 4)

NextGen Aircraft Taxi Assistance

- Server Systems / Software
 - Already configured from previous semester
 - Can checkout full repository
- Development Systems / Software
 - Visual Studio: pre-installed
 - X-Plane: pre-installed
 - Previous projects compile and run

The Capstone Experience Team Status Reports 18

Team GE Aviation

Status Report (3 of 4)

NextGen Aircraft Taxi Assistance

- Client Contact
 - Had conference call last week
 - Meeting this Friday, Sept. 16th
- Team Meetings
 - Every Monday after class
- Team Organization
 - Jacob is client contact
 - Each team member is focusing on separate piece of project
 - ❖ Jacob: 4D Path Planning Algorithms
 - ❖ Jason: Weather converter
 - ❖ John: Graphics Symbolology
 - ❖ Mitch: X-Plane Plugins

The Capstone Experience Team Status Reports 19

Team GE Aviation

Status Report (4 of 4)

NextGen Aircraft Taxi Assistance

Risks

- 4D Path Prediction
 - Can be very complicated
 - Will need attention from entire team
- Time
 - Will have a tendency to over-reach
 - Set primary, secondary, and tertiary goals
- X-Plane responsiveness
 - X-Plane freezes every couple minutes
 - Rebuilding machine
- Accessing specific X-Plane data
 - Runway info, generated weather, etc.
 - Will need to reference documentation

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Team Meijer

Status Report (1 of 4)

Tablet-Based Point-of-Sale System

- Project Description
 - Self-check out on a tablet
 - New HTML 5 UI
 - .Net web service communicating with VPOS via SOAP
 - .Net interface for barcode scanners
- Project Plan Document
 - Outline complete
 - System architecture
 - Screen mockups - In progress
 - Schedule - In progress

The Capstone Experience Team Status Reports 21

Team Meijer

Status Report (2 of 4)

Tablet-Based Point-of-Sale System

- Server Systems / Software
 - Windows Server 2008 R2 installed and configured
 - IIS installed
 - TFS installed and configured for source control
- Development Systems / Software
 - Visual Studio 2010 with Team Explorer installed

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Team Meijer

Status Report (3 of 4)

Tablet-Based Point-of-Sale System

- Client Contact
 - PjM: Scott - Held conference call, sent a few e-mails
 - Lead Dev: Murali - Got back from vacation yesterday, waiting for e-mail responses
- Team Meetings
 - Client Conference Call on Mondays
 - Triage on Wednesdays
- Team Organization
 - Point of Contact - Andrew
 - Development distributed among the team

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Team Meijer

Status Report (4 of 4)

Tablet-Based Point-of-Sale System

Risks

- Completely New UI
 - Many components are likely to be re-used, but we'll need to talk to admin users to determine priority use cases so the UI makes the most sense.
 - Mitigation: Take a trip out to Meijer labs as soon as possible, ask for access to talk to employees to determined admin uses.
- Browser v. Native App
 - Native app would require more development, but browser would likely create a worse user experience
 - Mitigation: Talk to client to figure out if they have a preference. If not, prototype native app.
- Interfacing with existing VPOS
 - Waiting on documentation until dev contact returns from vacation, will take some ramp up to learn it and make sure we're following Meijer coding standards for it
 - Mitigation: Ramp up .Net technologies in the mean time, ask plenty of questions when we get documentation.
- Security
 - Likely will be handling payment data and will need to ensure that only the intended clients can connect to our service.
 - Mitigation: Make sure security is a priority throughout our development process.

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Team Motorola Mobility

Status Report (1 of 4)

Synchronized Program Content Delivery

- **Project Description**
 - Synchronize what the user is viewing on the television with the secondary device
 - Provide the user with the ability to customize the secondary content received
 - Developed starter web app to understand the technologies and frameworks
 - Began implementation of sync service
- **Project Plan Document**
 - Completed executive summary, outline, client screenshots, and use case diagrams.
 - First draft of the document due September 21st.

The Capstone Experience Team Status Reports 25

Team Motorola Mobility

Status Report (2 of 4)

Synchronized Program Content Delivery

- **Server Systems / Software**
 - Windows 7
 - 2 iMacs - Windows XP and Mac OS X
 - Kreate! Set Top Box
- **Development Systems / Software**
 - Restlet, MyBatis, PostgreSQL
 - Eclipse Java EE with Maven
 - jQuery, jQuery mobile

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Team Motorola Mobility

Status Report (3 of 4)

Synchronized Program Content Delivery

- **Client Contact**
 - Conference calls scheduled every Monday, Wednesday, and Friday.
 - Daily contact via Google Talk and email
- **Team Meetings**
 - Meetings daily to accomplish tasks assigned from the client
 - Triage Meetings every Monday 2:20-2:40
- **Team Organization**
 - Tasks are assigned to team members immediately after conference calls

The Capstone Experience Team Status Reports 27

Team Motorola Mobility

Status Report (4 of 4)

Synchronized Program Content Delivery

Risks

- **Integration**
 - Building upon and integrating previous semesters' work
 - Mitigation : Regression testing
- **Performance**
 - Must sync accurately to provide appropriate secondary content
 - Mitigation : Extensive testing, fail-safes in the system
- **Interfacing with Set Top Box**
 - Developing a UI and web services for a set top box.
 - Mitigation : Read documentation available immediately
- **New Technologies**
 - REST, jQuery, jQuery mobile, MyBatis, Echoprint
 - Mitigation: Start working on learning them immediately

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Team Sparrow

Status Report (1 of 4)

iSupport Device Management System

- Project Description
 - IT Help Desk Application
 - Able to set/change location of various hospital devices
 - Visual interface for faster response time and reliability
 - Allow IT to assist hospital staff in locating alternative devices when primary devices fail
- Project Plan Document
 - First screen mockup done
 - System Architecture Diagram
 - Approx 30% completed

The Capstone Experience Team Status Reports 29

Team Sparrow

Status Report (2 of 4)

iSupport Device Management System

- Server Systems / Software
 - Team Foundation server for source control
 - SQL server
 - SharePoint Server
- Development Systems / Software
 - Visual Studio 2010
 - SharePoint Designer

The Capstone Experience Team Status Reports 30

Team Sparrow

Status Report (3 of 4)

iSupport Device Management System

- Client Contact
 - Scott Carney Director of Project Management
 - Larry Leasher (technical contact)
- Team Meetings
 - Met at Sparrow Hospital on 9/7
 - Weekly Conference call Thursdays 2pm
- Team Organization
 - John Happ- Project Manager
 - Angela Mireau- Client Contact
 - Travis Newport – System Admin.

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Team Sparrow

Status Report (4 of 4)

iSupport Device Management System

Risks

- Editing Visio documents with SharePoint
 - Overlay images on maps that can be edited
 - Determining different ways to save and load maps
- Connecting with Altiris database
 - Sending/receiving data from SharePoint site
 - Consult Altiris documentation
- Lack of SharePoint knowledge
 - No prior SharePoint experience
 - Read documentation, plan extra time for learning
- Migration to production
 - Will not be able to test with their actual database
 - Ensure that our schemas match, knowledge of their setup

The Capstone Experience Team Status Reports 32



Team Spectrum Health

Status Report (1 of 4)

Log Monitoring Compliance

- Project Description
 - Creating new web-based audit log control dashboard with personalized views for each reviewer
 - Automated notification of outstanding reviews by email
 - Show each reviewer complete to-do list across several sub-categories on dashboard
 - Allow drill-down functionality as support for management decisions
- Project Plan Document
 - Outline completed
 - Document 20% completed
 - Architecture sketched out
 - Page Mock-ups constructed

The Capstone Experience Team Status Reports 33

Team Spectrum Health

Status Report (2 of 4)

Log Monitoring Compliance

- Server Systems / Software
 - Server built as Windows Server 2008
 - Need to add Active Directory and SQL Server 2008
- Development Systems / Software
 - Installed MVC 3.0 Razor, Visual Studio 2010 SP1, .NET 4.0
 - Need to add IIS 7.0
 - Learning C#, SQL Server, Windows Server, Active Directory, HTML, MVC
 - Still to do: Build a parser for audit logs

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Team Spectrum Health

Status Report (3 of 4)

Log Monitoring Compliance

- Client Contacts
 - Have had one conference call with contact
 - Visited on-site in Grand Rapids last Friday
 - In process of coordinating weekly status meetings.
- Team Meetings
 - Have met three times internally for two hours each meeting.
 - Internal team meetings scheduled: Tuesdays & Thursdays, 5-7pm
- Team Organization
 - Designated Client Contact and Internal Coordinator roles
 - Assigned duties for learning front- and back-end technologies.

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Team Spectrum Health

Status Report (4 of 4)

Log Monitoring Compliance

Risks

- Risk 1
 - Learning server management (SQL, etc.)
 - Assigned server platforms in which to research and build example projects
- Risk 2
 - Waiting to obtain cleansed data from client
 - Have informed client of this need; client has promised to deliver cleansed data soon.
- Risk 3
 - Finding or developing a parser as soon as possible.
 - Have found possible parsers online and are researching them for viability.
- Risk 4
 - Mimicking client's Active Directory set-up
 - Are learning Active Directory and waiting on client for set-up.

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Team TechSmith

Status Report (1 of 4)

Mobile Web Reporter

- Project Description
 - Records web, camera, and audio into 1 video
 - Upload created video to YouTube, Facebook, and Screencast.com
 - General User Interface to fit all users
 - Compatible with Android, iPhone, and iPad
- Project Plan Document
 - Have an outline/skeleton
 - 50% complete

The Capstone Experience Team Status Reports 37

Team TechSmith

Status Report (2 of 4)

Mobile Web Reporter

- Server Systems / Software
 - Windows 7 installed
 - iOS with iPhone and iPad. Have All hardware
 - Android
- Development Systems / Software
 - Eclipse installed with android plugin
 - Xcode installed
 - iPhone SDK/iPad SDK,Android SDK All installed and linked
 - All on device development is ready

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Team TechSmith

Status Report (3 of 4)

Mobile Web Reporter

- Client Contact
 - Weekly emails on Tuesday after Triage meeting
 - Occasional face to face meetings
- Team Meetings
 - Tuesday 4:50-5:10pm Triage Meeting
 - Daily meetings Monday-Thursday + weekends if necessary
- Team Organization
 - Project Manager/Client Contact – Jacob Anderson
 - System Developers – Josh Berger, Mehmet Barutcuoglu

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Team TechSmith

Status Report (4 of 4)

Mobile Web Reporter

Risks

- New Programming Experience/Environment
 - No prior experience with android or iOS
 - Mitigation: Research and experience through use, already have hello worlds
- Limited Performance of Mobile Platforms
 - Mobiles are not as powerful making programming for speed important
 - Mitigation: Eliminate unnecessary actions causing less stress on hardware
- Multimedia File Combinations
 - Little experience creating a Video file in any format
 - Mitigation: Learn how to use AV Foundation for iOS, and android equivalent
- Screen Capture
 - Capturing a video of the screen
 - Find way to get pixels and/or screenshot, can make video frame by frame if necessary

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Team Urban Science

Status Report (1 of 4)

Visual Hierarchy Selection

- Project Description
 - Replace existing selection component
 - Integrate with existing reporting system
 - Allows objects to have images and other data
 - Allows for quick navigation via a search function
- Project Plan Document
 - Outline created
 - Requirements understood
 - Will review with client in next meeting
 - Panicking

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Team Urban Science

Status Report (2 of 4)

Visual Hierarchy Selection

- Server Systems / Software
 - Installed Windows Server 2008
 - Installed SQL Server 2008 R2
 - Installed Visual SVN Server
- Development Systems / Software
 - Installed Windows 7
 - Installed Visual Studio 2008/2010
 - Installed TortoiseSVN

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Team Urban Science

Status Report (3 of 4)

Visual Hierarchy Selection

- Client Contact
 - Met with client and scheduled weekly meetings
 - Received sample data and schema for development
- Team Meetings
 - Set weekly for Tuesdays at 2:15
 - Met to determine existing skill sets
- Team Organization
 - Project Manager: Neil Owen
 - Client Contact: Brian Smith
 - Developer and Tester: Christian Hessler

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Team Urban Science

Status Report (4 of 4)

Visual Hierarchy Selection

Risks

- Browser Compatibility
 - Making the component work with multiple browsers, including mobile browsers
 - Extensive testing and research
- Database Retrieval
 - Retrieving information from the database
 - Already obtained database schema
- HTML5
 - No real experience with HTML5
 - Early research, such as Google's extensive examples.
- ASP.NET
 - Very little ASP.NET experience, web development is unfamiliar
 - Early prototyping and test applications

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