

01/23: Team Status Reports

The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University

Spring 2013



*From Students...
...to Professionals*

Team Auto-Owners

Status Report

(1 of 4)

Event Planning Web Application

- Project Description
 - Web and Mobile
 - Administrative Features
 - Attendee Features
 - Email Correspondence
- Project Plan Document
 - Screen Mockups
 - Functional Specifications
 - Design Specifications
 - Basic Outline



Team Auto-Owners

Status Report

(2 of 4)

Event Planning Web Application

- Server Systems / Software
 - Windows Server 2008 (Staging)
 - Tomcat v.6 server
 - Tomcat v.6 on Windows 7 VM (Development)
 - IBM DB2
- Development Systems / Software
 - Eclipse Juno for Java development
 - JQuery Mobile
 - JDBC (Java Database Connectivity) API
 - Git Repository



Team Auto-Owners

Status Report

(3 of 4)

Event Planning Web Application

- Client Contact
 - In-person meeting on site (1/12/13)
 - Setup weekly conference calls
 - Thursdays at 2:30pm
- Team Meetings
 - Mondays at 4:00pm
 - Impromptu meetings throughout the week
- Team Organization
 - Project Manager/Web Master – Trevor Murphy
 - Customer Liaison/Project Facilitator – Ryan Burr
 - Systems Administrator/Web Master – Minh Do



Team Auto-Owners

Status Report

(4 of 4)

Event Planning Web Application

Risks

- Java and DB2
 - Connecting Java apps with DB2
 - Extensive examples/sample code
- Security
 - Unwanted persons accessing event information
 - Encrypted data and authentication
- Mobile Testing
 - User readability on different mobile devices using jQuery mobile
 - Set up outward facing server
- Setting up remote Tomcat Server
 - Installing and configuring a production server
 - Google



Team Boeing

Status Report

(1 of 4)

Airplane Building Game Simulator

- Project Description
 - Paper Airplane Factory Simulator
 - Player is the Factory Owner
 - Arrange different robots to assemble paper airplanes
 - Player graded on safety, quality, and efficiency
 - All results and data logged for tracking
- Project Plan Document
 - Divided project up into 3 main programming tasks
 - Given each member a non-technical role
 - Created rough task schedule for rest of semester
 - Narrowing project down into manageable scope



Team Boeing

Status Report

(2 of 4)

Airplane Building Game Simulator

- Server Systems / Software
 - Ubuntu Server with individual login accounts
 - SVN installed, tested, and running
- Development Systems / Software
 - Running Ubuntu 12.04 Virtual Machines
 - Open Source Software
 - Gazebo with ROS, Bullet, and Ogre to simulate our environment
 - Programming with C++ and Code::Blocks



Team Boeing

Status Report

(3 of 4)

Airplane Building Game Simulator

- Client Contact
 - Weekly conference calls with client
 - Shared Google Calendar and Drive folder for collaboration
- Team Meetings
 - 2-4 meetings a week
 - One meeting a week dedicated to development
 - Constant Skype communication outside of meetings
- Team Organization
 - Project Manager – Grace Lweendo
 - Customer Liaison/System Admin – Chris Flynn
 - Documentation Lead – Greg Klein



Team Boeing

Status Report

(4 of 4)

Airplane Building Game Simulator

Risks

- Scope
 - Scope expands with every client meeting
 - Working on core features and wish list
- Gazebo
 - Very large open source project
 - Spending 1-2 weeks getting every member proficient in use
- Simulation Speed
 - Final simulation might run too slow
 - Future stress tests on different hardware
- Project Complexity
 - Three complicated parts need to be integrated
 - Merge early and often



Team Dow

Status Report

(1 of 4)

Personalized Intranet Portal

- Project Description
 - Recreating Dow's Intranet Portal, must authenticate users
 - Website must be built with SharePoint 2013
 - Must include user profiles that allows a customizable dashboard
 - Intranet must display internal information based on user's settings
- Project Plan Document
 - Started drawing up System Architecture Diagram
 - Filled out the system component slide
 - Filled out the risks slide
 - Meeting with Client on Thursday to discuss Project Plan



Team Dow

Status Report

(2 of 4)

Personalized Intranet Portal

- Server Systems / Software
 - OS: Windows Server 2008
 - SQL Server 2012
 - SharePoint 2013 Enterprise
 - Team Foundation Server for our version control
- Development Systems / Software
 - Our VM of Windows 7 includes the following:
 - Firefox (most editing within SharePoint is done through a web browser)
 - SharePoint 2013 Designer (used for editing SharePoint pages)
 - Visual Studio 2012



Team Dow

Status Report

(3 of 4)

Personalized Intranet Portal

- Client Contact
 - Emailed Dow clients on 1/10, asked questions about the project
 - Had 3 conference call meetings with Martin Brennan, IT architect from Dow (1/14, 1/16, 1/22), about SharePoint training and project description information
- Team Meetings
 - First two meetings (1/09, 1/10) set up the server and installed required programs
 - Three meetings to talk with Martin on conference call and discuss project planning afterwards (1/14, 1/16, 1/18, and 1/22)
- Team Organization
 - Eric Miller: Client Contact, Developer
 - Matt Savela: Developer
 - Gordon Leung: Developer



Team Dow

Status Report

(4 of 4)

Personalized Intranet Portal

Risks

- Risk 1
 - SharePoint has a high learning curve
 - Continue going through training with Martin and also researching intensely on available online tutorials.
- Risk 2
 - Lack of documentation due to the new nature of SharePoint 2013
 - Working closely with Martin, who is experienced in SharePoint, and also making the best of the information online.
- Risk 3
 - Must develop custom web components, this requires writing html code and converting into a format that SharePoint can read.
 - Work on this early, and research available online information
- Risk 4
 - Security, only authenticated users can be allowed to view/create certain content
 - Must learn to deal with SharePoint's built in authentication process



Team EA

Status Report

(1 of 4)

Android Emulator for EA Games

- Project Description
 - An Emulator That Runs EA Game APKs on PC
 - Control the Emulator with Android Device
 - Stream Video Game From Emulator to HTML5 Webpage
 - HTML5 Interface for Android Device
- Project Plan Document
 - Delegated tasks to each team member
 - Skeleton document outlined and partially completed
 - Functional specifications partially completed with preliminary diagrams
 - Rough schedule for the semester has been outlined



Team EA

Status Report

(2 of 4)

Android Emulator for EA Games

- Server Systems / Software
 - Windows Server 2012 Standard – Installed
 - Apache – Installed
 - GitStack – Installed – Repository created
- Development Systems / Software
 - Android SDK / Eclipse IDE
 - Dalvik VM / Downloaded on Linux
 - HTML5 / Researching

Team EA

Status Report

(3 of 4)

Android Emulator for EA Games

- Client Contact
 - Already Had 2 Conference Calls
 - Plan to Have a Weekly Call Every Wednesday - From 4 p.m to 5 p.m
- Team Meetings
 - Already Had 9 Meetings
 - At least 1 During Mon to Fri and 1 During Weekend
- Team Organization
 - Jim Challenger – Client Contact
 - Justin Vrooman – Systems Administrator

Team EA

Status Report

(4 of 4)

Android Emulator for EA Games

Risks

- Risk 1
 - Redirecting video output from the Android emulator
 - Investigate Android emulator source code and WebRTC
- Risk 2
 - Lack of Knowledge of Android System and HTML5
 - Research Relative Areas
- Risk 3
 - How to interface the Android tablet with the emulator
 - Create mobile HTML page with the ability to interpret gestures
- Risk 4
 - Tons of Work & Time Limitation
 - Schedule with short deadlines for each task



Team GM

Status Report

(1 of 4)

My Conference Room

- Project Description
 - Be able to check on your phone if a nearby conference room is available
 - Should show a calendar on your browser with its availability
 - Be able to reserve that room for appropriate times through the web interface
- Project Plan Document
 - Daniel Bachelis works on the PowerPoint
 - Do Screen Mock-Ups
 - Develop a working calendar app with Exchange API



Team GM

Status Report

(2 of 4)

My Conference Room

- Server Systems / Software
 - Microsoft Exchange Server 2013 – Setup
 - Microsoft Server 2012 – Setup
 - Active Directory - Configured
- Development Systems / Software
 - Visual Studio 2012 – Installed
 - Team Foundation Server – Version Control
 - Mac OS w/Windows Virtual Machines

Team GM

Status Report

(3 of 4)

My Conference Room

- Client Contact
 - Initial conference call on 1/10/13
 - Weekly status updates sent via email
- Team Meetings
 - Wednesdays 2-3, 4-5
- Team Organization
 - Daniel Bachelis – Documentation & Assurance
 - Matt Tarnowsky – HTML5 Expert
 - Jeff Girbach – Exchange API Expert
 - Thomas Smale – Client Contact & Project Manager



Team GM

Status Report

(4 of 4)

My Conference Room

Risks

- Learning the Microsoft Exchange Web API
 - How to program and interact with an Exchange Server
 - Getting familiar with the Outlook Web Interface through online tutorials
- Tailoring the Outlook Web App to a Mobile Phone
 - Specifically designing the app to be run in a mobile environment
 - Documentation found on deploying Web Apps from Windows Server 2012
- Mobile Web (HTML5)
 - Learning HTML
 - W3Schools “Try It Yourself”



Team Meijer

Status Report

(1 of 4)

IT Metrics Repository – Project Description

- Provide a Metrics Repository for Meijer IT
 - Ability to create and view data (metrics)
 - Store historical values for all metrics
 - Provide metric goals if appropriate
 - Enable graphing functionality for data
- Project Plan Document
 - Created document outline
 - Assigned individual tasks to each team member

Team Meijer

Status Report

(2 of 4)

IT Metrics Repository - Technologies

- Server Systems / Software
 - Windows Server 2008 R2
 - SQL Server 2012
 - SQL Server Reporting Services (SSRS)
 - Internet Information Services (IIS)
 - Team Foundation Server 2012
- Development Systems / Software
 - Visual Studio 2012 – C#.Net & ASP.Net
 - SQL Server Management Studio



Team Meijer

Status Report

(3 of 4)

IT Metrics Repository – Team and Clients

- Conference Call with Clients
 - 1/14/13 – Introduction, Overview of Project and Technologies
 - 1/25/13 scheduled for 10 a.m.
 - Ongoing contact through email
- Team Meetings
 - Mondays and Wednesdays 4pm
 - Tuesdays and Thursdays 3pm
- Team Organization
 - Anthony – Program Manager, Developer, Tester
 - Bob – Client Contact, Systems Administrator, Developer, Tester
 - David – Database Administrator, Developer, Tester



Team Meijer

Status Report

(4 of 4)

IT Metrics Repository

Risks

- Provide mobile-device compatibility
 - Application should be accessible and formatted for mobile use
 - Research methods on mobile compatibility
- SQL Server Reporting Services (SSRS)
 - Utilize SSRS to display metrics in graphical form
 - Research information on SSRS
- Database schema
 - Provide an efficient database structure
 - Normalize the database



Team Mozilla

Status Report

(1 of 4)

Multi-Touch Gestures for Firefox on Mac OS X

- Project Description
 - Pinch and double tap to zoom in/out
 - Rotate on synthetic documents
- Project Plan Document
 - Outlined, basic stuff done (glossary, summary, etc.)
 - Functional, Design, and Technical Specifications nearly done
 - Sent to client for review



Team Mozilla

Status Report

(2 of 4)

Multi-Touch Gestures for Firefox on Mac OS X

- Server Systems / Software
 - Ubuntu Server 12.04
 - Git repository, pulls from Mozilla
 - User accounts with SSH access
- Development Systems / Software
 - Git repositories, pull from our server
 - Building done by Mozilla's "mach" program
 - Text editors for editing source
 - GDB for debugging



Team Mozilla

Status Report

(3 of 4)

Multi-Touch Gestures for Firefox on Mac OS X

- Client Contact
 - Weekly video meetings, Fridays at 2:35 PM
 - Constant contact via IRC
- Team Meetings
 - Tuesdays and Fridays at 2:15 PM
 - Meet with Meredith, Tuesdays 2:35 PM
- Team Organization
 - Project Manager—Brandon Waterloo
 - Developers—Raymond Heldt, Guilherme de Araujo



Team Mozilla

Status Report

(4 of 4)

Multi-Touch Gestures for Firefox on Mac OS X Risks

- Understanding Firefox
 - Need to understand structure of browser
 - Mitigation: Study into data flow for gestures, get help from community
- Coding standards
 - Mozilla has high code quality standards
 - Mitigation: Write good code up-front, understand standards
- Writing our own tests
 - Create test code to test our features
 - Mitigation: Look at test code for regular snap zoom



Team MSUFCU

Status Report

(1 of 4)

Mobile Calendar

- Project Description
 - A calendar for MSUFCU employees to see company wide events
 - A web interface to add/edit events and news
 - Secure authentication with the web service
 - iPhone and Android native apps
- Project Plan Document
 - Functional specifications: 90% complete
 - Technical specifications: 50% complete
 - Schedule: 80%
 - Testing plan: 90%



Team MSUFCU

Status Report

(2 of 4)

Mobile Calendar

- Server Systems / Software
 - Ubuntu server
 - LAMP stack
 - Git for version control
- Development Systems / Software
 - OS X 10.8 w/Windows 7 via VMWare on the iMac
 - Xcode for iOS, Eclipse for Android, Sublime Text 2 for web

Team MSUFCU

Status Report

(3 of 4)

Mobile Calendar

- Client Contact
 - Met with client on-site for initial consult
 - Updates via email once a week
- Team Meetings
 - After All Hands, 45 min
 - Additional as needed
- Team Organization
 - Project Manager - Clay
 - Contact point - Mike

Team MSUFCU

Status Report

(4 of 4)

Mobile Calendar

Risks

- Risk 1
 - Android ADK
 - Research!
- Risk 2
 - Push notification
 - Google
- Risk 3
 - Encryption (https)
 - Google
- Risk 4
 - MSUFCU internal systems
 - Requested documentation



Team Spectrum Health

Status Report

(1 of 4)

SLA Management and Metric Reporting System

- Project Description
 - System for defining, approving, tracking, reporting, and displaying metrics
 - Must be flexible – new metrics and scorecards
 - Securely control and link all information related to a metric
- Project Plan Document
 - Started rough draft
 - Worked out a detailed breakdown of features



Team Spectrum Health

Status Report

(2 of 4)

SLA Management and Metric Reporting System

- Server Systems / Software
 - Windows Server 2008
 - MySQL Server, PHP, PHPMyAdmin, Git repository, Active Directory
- Development Systems / Software
 - Dreamweaver
 - IIS up and running



Team Spectrum Health

Status Report

(3 of 4)

SLA Management and Metric Reporting System

- Client Contact
 - Two conference calls
 - Scheduled weekly Friday conference calls for 9:30 A.M.
- Team Meetings
 - Every Sunday at 11 A.M.
 - Every Monday/Wednesday at 2 P.M.
- Team Organization
 - Ian – Project Manager, System Admin, Tester
 - Lisa – Client Contact
 - Shen - Developer



Team Spectrum Health

Status Report

(4 of 4)

SLA Management and Metric Reporting System Risks

- Risk 1
 - Active Directory for permissions control
 - Mitigation - Researching methods for accessing user information
- Risk 2
 - Flexibility of the system
 - Mitigation – Working with client to determine the extent of the flexibility and rigorous testing
- Risk 3
 - Little experience with PHP/MySQL
 - Mitigation – Familiarizing ourselves with the technologies



Team TechSmith

Status Report

(1 of 4)

American Sign Language Learning App

- Project Description
 - Learning and teaching tool
 - Interactive
 - Student watches YouTube video
 - Records themselves and sends to teacher
 - Teacher annotates and critiques
- Project Plan Document
 - List of Milestones
 - Broke down to sub-milestones
 - Ranked in order of perceived importance/difficulty



Team TechSmith

Status Report

(2 of 4)

American Sign Language Learning App

- Server Systems / Software
 - Windows Server 2012
 - GIT
 - Google Drive for internal documents
- Development Systems / Software
 - Running Windows 8
 - Using VMware Fusion on Mac OS X
 - Microsoft Visual Studio Express 2012

Team TechSmith

Status Report

(3 of 4)

American Sign Language Learning App

- Client Contact
 - Visited TechSmith 1/11
 - Conference calls every Wednesday at 2:15 pm
 - Weekly update email sent after Triage
- Team Meetings
 - M, W 3:50-4:45
 - Triage, W 4:45-5:05
- Team Organization
 - Project Manager: Adam Crane
 - Lead Developer: Malcolm Doering
 - Database Administrator: Michelle Truong



Team TechSmith

Status Report

(4 of 4)

American Sign Language Learning App

Risks

- How to develop Windows RT apps?
 - New development environment
 - Tutorials
- How do we maintain our servers?
 - No experience dealing with them
 - Research
- How do we annotate video?
 - Major project feature
 - Use examples from a previous course
- How do we test our app?
 - Time constraints
 - Following a process before writing code



Team Urban Science

Status Report

(1 of 4)

Dealership Consultant Mobile App

- Project Description
 - Allows consultants to search for and find dealers based on location
 - Displays KPI (Key Performance Indicators) for a selected dealer
 - Provides recommendations based on KPIs
 - Allows consultants to record meeting information
- Project Plan Document
 - Outline created
 - Initial rough draft completed



Team Urban Science

Status Report

(2 of 4)

Dealership Consultant Mobile App

- Server Systems / Software
 - Windows Server 2008 installed
 - SQL Server 2012 installed
 - PHP installed
 - Version Control (Git repository) created
- Development Systems / Software
 - Xcode installed
 - Researching HTML5, PHP, SQL, C# and Xcode



Team Urban Science

Status Report

(3 of 4)

Dealership Consultant Mobile App

- Client Contact
 - Initial conference call of January 11, 2013
 - Meeting at client's office on January 18, 2013
 - Scheduled weekly conference call on Fridays at 10:30am
- Team Meetings
 - Met on January 8, 14, 19 and 21
 - Scheduled weekly meetings on Mondays at 2:00pm
- Team Organization
 - Joseph Greer – Project manager, client contact and development
 - Austin Hendry – Development and testing
 - Yevgeny Khessin – System admin, development and testing



Team Urban Science

Status Report

(4 of 4)

Dealership Consultant Mobile App

Risks

- SQL Database
 - No prior experience with SQL
 - Researching and creating queries
- iPad Application Development
 - No prior experience with mobile development
 - Created “hello world” application and researching
- Bing Maps API
 - No prior experience with Bing Maps
 - Researching API for Bing Maps
- C#, PHP and HTML5
 - No prior knowledge of languages
 - Performing research on languages and basic coding



Team Whirlpool

Status Report

(1 of 4)

Guided Cooking and Recipe App

- Project Description
 - Develop/Manage cloud based database of recipes
 - Interact with oven's own database
 - Web app interface for recipes
 - Send cooking instructions to oven
- Project Plan Document
 - Document outline in place



Team Whirlpool

Status Report

(2 of 4)

Guided Cooking and Recipe App

- Server Systems / Software
 - Apache with PHP
 - Ubuntu
 - MySQL
- Development Systems / Software
 - Eclipse with PHP
 - VMWare Windows 7 Machine
 - GIT code repository



Team Whirlpool

Status Report

(3 of 4)

Guided Cooking and Recipe App

- Client Contact
 - In person meeting on 1/16, weekly conference calls scheduled
 - Box.com resource repository set up
- Team Meetings
 - Meetings twice a week
 - Readily available on email/mobile
- Team Organization
 - Google calendar
 - List of smaller/manageable milestones



Team Whirlpool

Status Report

(4 of 4)

Guided Cooking and Recipe App

Risks

- Risk 1
 - Limited or no knowledge of some technologies
 - Google, Textbooks, Example Code
- Risk 2
 - Web to Oven Communication
 - Build/Test prototype to send simple messages
- Risk 3
 - Converting database from SQLite to MySQL
 - Try converting smaller tables first
- Risk 4
 - Mapping outside recipes to our database
 - Build/Test prototype using simple websites

