MICHIGAN STATE
UNIVERSITY

09/12: Team Status Reports

The Capstone Experience

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From Students…
        …to Professionals

Team Auto-Owners

Status Report

Pig "E" Bank

- Project Description
  - Online deposits to annuities
  - Allows friends and relatives to give gifts
  - Available in both desktop and mobile forms
  - Payment methods include pay pal, credit card, electronic fund transfers

- Project Plan Document
  - Started work on the Project Plan Document
  - Working on the Architecture plan for the client due Friday
  - Plan to present Project Plan elements to client by Friday
  - Have the document critiqued by AO so it can done by Saturday

Team Auto-Owners

Status Report

Pig "E" Bank

- Server Systems / Software
  - Server is running and accessible by the client
  - Apache HTTP used to broadcast website
  - Mobile and Desktop website on the server
- Development Systems / Software
  - Started working on our ASP .NET environment
  - We are familiarizing ourselves on jQuery Mobile and Ember.js
  - Visual Studio installed and in use, and working with jQuery Mobile

Team Auto-Owners

Status Report

Pig "E" Bank

- Client Contact
  - Have met with client twice and established a weekly meeting time
  - Received a CSS style sheet and more technology specifics
- Team Meetings
  - Our team has agreed to meet after each class
  - Our team triage meetings with Meredith will be after class on Wednesdays
- Team Organization
  - Nathan S - Main Client Contact/Server Management
  - David W – Web Development
  - Ben S – C# Development

Team Auto-Owners

Status Report

Pig "E" Bank

- Risk 1
  - Having one website be compatible with many devices while maintain desirable aesthetics
  - Lots of testing and researching mobile development technologies
- Risk 2
  - Zero experience with jQuery Mobile and Ember.js
  - Lots of time researching and familiarizing with these tools
- Risk 3
  - Getting a back-end database connected to our server
  - Running many things by our clients which have a heavy IT background
- Risk 4
  - Running transactions through various payment options
  - Finding libraries or researching third party options that make this feature easier

Team Boeing

Status Report

Design, Fly, and Compete Sim Suite V 2.0

- Project Description
  - Add networking capabilities
    - High-level architecture, Distributed interactive simulation, JSON
  - Develop web version
    - Support of Chrome and Safari, intended for mobile use

- Project Plan Document
  - Rough draft has been started
  - Discuss points with client on Thursday
  - Revise through the weekend

Team Boeing

Status Report

Design, Fly, and Compete Sim Suite V 2.0

- Server Systems / Software
  - Don't have access to our server
  - We do have SVN access

- Development Systems / Software
  - iMac came premade, MacBook was rebuilt
  - Game compiling and running on both

Team Boeing

Status Report

Design, Fly, and Compete Sim Suite V 2.0

- Client Contact, Jayson Vincent
  - Had first meeting with client Sept 6
  - Weekly meeting set for Thursday, 1 – 2pm EST
- Team Meetings
  - Meeting with Meredith Wednesday at 9:55 AM
  - Available on Fridays, if necessary
- Team Organization
  - Managing tasks with Microsoft Project
  - Using single gmail account & gdocs for sharing information
  - Roles including project manager, customer liaison, test lead, and build librarian have been assigned

Team Boeing

Status Report

Design, Fly, and Compete Sim Suite V 2.0
Risks

- Port project to HTML5
  - No one knows the process, or much about HTML5
  - Currently researching options with promising leads

- Performance issues
  - Simulation is already sluggish, and perf will likely get worse on web
  - Need to identify our bottleneck(s)
  - QTCreator appears to have some profiling tools

Team Ford

Status Report

MyKey Report Card

- Project Description
  - Driving Habits Report Card
  - Emergency Warnings via Text/E-Mail/Twitter
  - Android/Web App
- Project Plan Document
  - Document Skeleton
  - Design Diagrams
  - Technologies Finalized
  - Mock-ups in progress

Team Ford

Status Report

MyKey Report Card

- Server Systems / Software
  - Installed MS Server 2008
  - Installed MS SQL Server
  - Git Version Control System
  - Set Up Remote Desktop
- Development Systems / Software
  - Installed Eclipse/Android SDK/OpenXC API
  - Installed Visual Studio and set up for ASP.net
  - HTML 5 Demo Page / Android Test App
  - Interfaced with CAN Translator via USB

Team Ford

Status Report

MyKey Report Card

- Client Contact
  - Michael Volk - Design IT Portfolio Specialist
  - Wednesdays 2-3 PM
- Team Meetings
  - Tues/Thur 12:30PM
- Team Organization
  - Point of Contact – Andrew Crouch
  - 50/50 Split

Team Ford

Status Report

MyKey Report Card

Risks

- Risk 1
  - Learn OpenXC Platform
  - Online Documentation/Examples
- Risk 2
  - Sending Text messages from Android/HTML5
  - Online Research/Collaborate with Team Meijer
- Risk 3
  - ASP.net
  - MS Tutorials and Documentation
- Risk 4
  - Android to MS SQL Server
  - Online Documentation/Examples

Team GE Aviation

Status Report

Mobile Satellite Viewer

- Project Description
    - View and manipulate ultra-high resolution satellite images
    - For the iOS platform
    - Geo-located touch sensitivity
    - Fast, efficient, and easy to use
- Project Plan Document
    - The project plan document is begun.
    - We've already started writing each of the sections.
    - We are meeting with the client on Thursday to hopefully clarify some details of the project.

Team GE Aviation

Status Report

Mobile Satellite Viewer

- Server Systems / Software
    - Setup Git repository for SCM
    - Setup Debian Squeeze server
- Development Systems / Software
    - Development environment and tools are ready to go
    - Code walkthrough on last semester group's code.
    - Work started on a prototype for handling GeoTIFF images.

Team GE Aviation

Status Report

Mobile Satellite Viewer

- Client Contact
  - Conference call with Dashiell on 9/05
  - Scheduled in person meeting for 9/13
- Team Meetings
  - First meeting on 8/30
  - Setup regular meetings for Thursdays
- Team Organization
  - Chose Mateus as our point of contact
  - Mateus – Project Manager, Zack – Sysadmin, Andrew - Developer

Team GE Aviation

Status Report

Mobile Satellite Viewer

Risks

- iOS platform
  - No one has worked with the iOS platform before.
  - Spend time ramping up to the iOS platform with tutorials and demos.
- Geo-referencing data
  - We have very little combined experience working with geo-referencing data.
  - Research libraries for parsing and using geo-referencing data found in GeoTIFF images.
- CATiledLayer
  - Library used by the last team for displaying large images. We're not sure if it will scale to the size of images we are going to be working with.
  - Develop a prototype using CATiledLayer to gauge its efficiency. Explore alternative methods and techniques.
- GeoTIFF image format
  - No one on our team had heard of the GeoTIFF format before this project.
  - Mitigation: We have done some research on the GeoTIFF format and are investigating libraries to assist in the handling of the GeoTIFF images.

Team Google

Status Report

Indexing System Mobile Dashboard

- Project Description
  - Display graphs with limited phone screen space
  - Use App Engine database back end
    - Hold and serve data
  - Native Android app to request and display data from AppEngine
- Project Plan Document
  - Not Started
  - Plan for draft submitted to Andy by Thursday Morning

Team Google

Status Report

Indexing System Mobile Dashboard

- Server Systems / Software

  - Ubuntu Server set up with Accounts

  - Server holds SVN repository

- Development Systems / Software

  - Installed and familiarized with Eclipse & Android SDK

  - Investigating Android graphing library: Achartengine

  - Working with Google Protocol buffers
    - Data serialization

  - Familiarizing with AppEngine and its data-store

Team Google

Status Report

Indexing System Mobile Dashboard

- Client Contact
  - Established Contact with Andy Kreling
  - Set up weekly Google Hangout Thursdays at 7pm
- Team Meetings
  - Triage with Meredith Wednesdays 2:40pm - 3:00pm
  - Weekly meetings yet to be set up
  - Schedules to be given to Jason by Wednesday
- Team Organization
  - Customer Contact: Karthik
  - Server Administrator and Project Manager: Jason

Team Google

Status Report

Indexing System Mobile Dashboard

Risks

- Android Application Development
  - No Android development experience on team
  - Research and tutorials to be completed by each team member
- Graphing on Android
  - Is this a feasible to display Indexing System Graphs
  - Get test data and graph ready to check – Also look into web display
- App Engine Programming
  - No app engine programming experience and using its datastore
  - Back-End team to use tutorials on storing and retrieving data
- Android App and App Engine Communication
  - No experience creating web service for requests and data transfers
  - Ask other teams who have web service experience and more tutorials

Team Meijer

Status Report

IT ePager System

- Project Description
  - Page IT Team Members
  - Via Web App
  - To Address Specific Issues
    - Computer System Failure
    - Power Outage
- Project Plan Document
  - Create the Database
  - Implement Code for Desired Features
  - Add Preferred Functionality
  - Test/Correct Errors and Bugs

Team Meijer

IT ePager System

- Server Systems / Software
  - Microsoft SQL server 2008
  - Microsoft .NET (4.0), ASP.NET
  - IIS Web Server
  - Entity Framework
- Development Systems / Software
  - Visual Studio 2010
  - C#
  - Git
  - Support for iOS and Android if applicable

Team Meijer

Status Report

IT ePager System

- Client Contact
  - Alan Baldridge (Project Lead)
  - Bruce Abernethy (Technical Lead)
- Team Meetings
  - Thursdays, 7:30
  - Conference Calls – 1:00 pm Friday
  - Trip(s) to Grand Rapids
  - Various times during the week

Team Meijer
Status Report

IT ePager System

Risks

- Design
  - Broad Project Description
  - Solution: frequent contact with clients

- Server
  - Little to no experience maintaining a server
  - Solution: research from online sources (tutorials, forums, etc…)

- Development Tools/Software
  - No experience with ASP.NET
  - No experience with mobile apps
  - Sending emails/pages/texts in a C# application
  - Solution: Make simple test programs to get familiar with libraries
  - Solution: Test prototype thoroughly

Team Mozilla

Status Report

Reader Mode for Desktop Firefox

- Project Description
  - Create alternate viewing mode for webpages
  - Save content to view later
  - Sync saved reading list across devices
  - Redo user interface
- Project Plan Document
  - Outline by Monday 9/10
  - Review outline
  - First draft done by 9/15
  - Email to client

Team Mozilla

Status Report

Reader Mode for Desktop Firefox

- Server Systems / Software
  - Mercurial
  - Bugzilla
  - IRCCloud
  - Firefox Open Source Code Base
- Development Systems / Software
  - JavaScript
  - HTML / CSS
  - XUL

Team Mozilla

Status Report

Reader Mode for Desktop Firefox

- Client Contact
  - Jared Wein – Firefox Engineer
  - Lucas Rocha – Mobile Firefox Engineer
- Team Meetings
  - Mondays at 12pm with client
  - Triage meeting Wednesday at 2:20pm
  - Multiple meetings in lab throughout the week
- Team Organization
  - IRC group

Status Report

Reader Mode for Desktop Firefox
Risks

- Firefox Sync
  - Syncing reading list between desktop and mobile
  - Research into bookmarks (Which are cross platform)

- Bugzilla
  - Learn Mozilla process for submitting code
  - Get feedback from fixing simple bugs

- Web Development
  - Learn Mozilla web technologies (XUL)
  - Ask Chelsea / follow tutorials

Team Quicken Loans

Status Report

Secure Note Taking and Collaboration Tools

- Project Description
  - Secure Note Taking Tool for Desktop and Mobile
  - Web Application
  - Fun and Easy to Use for Employees
- Project Plan Document
  - Install Server and Setup Database
  - Develop HTML 5 based Web App
  - Meet Quicken Loans Security Standards
  - Usability Focus

Team Quicken Loans

Status Report

Secure Note Taking and Collaboration Tools

- Server Systems / Software

  - Windows Server 2012 Running

  - Microsoft SQL Server 2012 Enterprise Edition Running

- Development Systems / Software

  - Coda 2, MSU SVN, Eclipse, Xcode Setup

  - HTML5, JavaScript, C#, ASP.Net

Team Quicken Loans

Status Report

Secure Note Taking and Collaboration Tools

- Client Contact
  - Thursdays 2:00-2:30
  - Bill Parker, Christina Mathes, John Carr, Patrick Hartford
- Team Meetings
  - Tuesdays 2:00-2:30
- Team Organization
  - Richard Hofmeister: Lead Software Developer and Tester
  - Justin Mrkva: User Experience and IT Expert
  - Nicholas Speeter: Lead Web App Developer
  - Reed Fielstra: Project Manager and Web App Developer

Team Quicken Loans

Status Report

Secure Note Taking and Collaboration Tools
Risks

- Security
  - Need to Meet Quicken Loan Standards
  - Frequent Contact with QL Security Manager
- Web App Mobile Usability
  - Web App must work across mobile platforms
  - Testing and tweaking based on specific mobile device browser
- Integration of all Note Storage Features
  - Audio, Video, Text, Free Hand Drawing Capabilities
  - Store as files, references in database
- Storage and Queries of MetaData
  - Need to Search for Notes based on tags, Note data, etc.
  - Proper Database and SQL design

Team Spectrum Health

Status Report

Medication Shortages Dashboard

- Project Description
  - Manage and display shortages of medication
  - Aggregate medication manufacturing data and medication inventory
  - 'Proof-of-concept' application
    - Not integrating with client's system
- Project Plan Document
  - Currently not in-progress, beginning work Thursday
  - 'Planning Friday' with full team
    - Planning out first couple weeks of development
    - Working on drafting project plan

Team Spectrum Health

Status Report

Medication Shortages Dashboard

- Server Systems / Software
  - Currently up and running
  - Providing version control, SSH, Web hosting
    - Accessible by client for testing, feedback
- Development Systems / Software
  - Personal machines are hooked up remotely for server login, VCS updating/committing
  - Installed OSes to Lab machines, logins are ready, computers are good-to-go
  - Easy to install and add any extra software that is necessary during development, as needed

Team Spectrum Health

Status Report

Medication Shortages Dashboard

- Client Contact
  - Multiple conference calls with both business analysis team and technical team
  - Recurring conference calls on weekly basis to keep client in the loop, receive feedback

- Team Meetings
  - Scheduled to having to meetings on Fridays to talk about development progress, plan next week(s) of development
  - Have had talks about development methodology and collaborative nature of team's approach to the project

- Team Organization
  - Other than primary client contact (Eric), no specific roles
  - Entire team is responsible for the project, deliverables, and deadlines

Medication Shortages Dashboard

Risks

- Ruby on Rails Inexperience
  - Little team experience working with the Ruby programming language and the Rails web application framework
  - Mitigation
    - Learning syntax and web application 'best practices' (MVC pattern)
    - Trusting in team members and having the ability to approach teammates for assistance
- Team Member Availability
  - Difficulty finding time where all team members are available for in-lab work, meetings, etc.
  - Mitigation
    - Scheduling outside of 'optimal hours', i.e. evening/nights, weekends and 'making the time'
    - Well-defined acceptance criteria for features, allowing for remote productivity
- Possible Project 'Churn'
  - Client is interested in using project as a proof-of-concept, which may lead to back-and-forth on design, development, features, etc.
  - Mitigation
    - Recurring conference calls, keeping the project collaborative and visible/accessible to the client
    - Leveraging mockups to finalize design and features of the system without significant development work
    - Identifying and preventing 'feature creep'
- Data Aggregation
  - Application needs to aggregate data from external sources to meet business needs
    - This is a 'showstopper'
  - Mitigation
    - Early development must focus on this core part of the application

Team TechSmith

Status Report

Snagit Power Tools

- Project Description

  - To use newly updated Snagit COM SDK.

  - Demonstrate ease of use of SDK.

  - Create and design plugins that use Snagit SDK.

  - Ensure code is well-documented and readable.

- Project Plan Document

  - Not Started.

  - Plan to Start Today and work on over the week.

Team TechSmith

Status Report

Snagit Power Tools

- Server Systems / Software
  - TechSmith's GitHub Server.
  - Email sent asking for access, should have permissions soon.
- Development Systems / Software
  - Visual Studio 2010 – Downloaded, not installed.
  - Microsoft COM.
  - COM languages such as C#, C++, Visual Basic.
  - Snagit SDK.
  - Facebook/Twitter/Google Maps API.

Snagit Power Tools

- Client Contact
  - Have met in person at TechSmith facilities, and discussed specifics.
  - Set up weekly and monthly meetings.
- Team Meetings
  - Monday After TA meeting
  - Thursday 7:00 PM
  - TA Meeting – Monday 10:10-10:30 AM
- Team Organization
  - Inside Man: David Markachev
  - Server Master: Ben Blaut
  - Project Manager: Kyle Gosen

Snagit Power Tools
Risks

- Lack of Familiarity with COM – Showstopper
  - Need to use COM to communicate with Snagit.
  - Snagit Documentation provides instructions/samples.
- Snagit SDK – Showstopper
  - Documentation still in "beta" phase.
  - Contact mentors/figure it out.
- Third-Party API's – Medium
  - Facebook/Twitter/Google Maps SDK.
  - Research/learn/memorize/read documentation/samples.

Team Urban Science

Status Report

Web-Based Geography Management

- Project Description
  - Demonstrate the ability to interact with a map on multiple devices. (Desktop and Mobile)
  - Find elegant solutions to performing interactions on tablet devices.
  - Organize territory in a hierarchy with indefinite number of levels.
  - Show visual and text representation of what has changed and export the results.

- Project Plan Document
  - Started discussing requirements with client
  - Meeting on Friday to go over requirements with client
  - Started working on draft for Friday

Team Urban Science

Status Report

Web-Based Geography Management

- Server Systems / Software
  - Wiped server and installed Microsoft Server 2008
  - Installed Microsoft SQL Server
- Development Systems / Software
  - Installed Windows, VS 2010, SQL Mgmt Studio, and Office
  - Created a code repository, wiki, and issue tracking
  - Installed source control
  - Received iPad from Dr. D

Team Urban Science

Status Report

Web-Based Geography Management

- Client Contact
  - Scheduled weekly conference call with client on Fridays
  - Already had 2 conference calls
- Team Meetings
  - Team meets at least twice a week on Tues and Thurs
- Team Organization
  - Started looking at roles. (Forrest is DB guy)
  - Defined some short term and long term requirements

Team Urban Science

Status Report

Web-Based Geography Management

Risks

- ASP.NET MVC4
  - None of the team has worked with ASP.NET before.
  - We are going through tutorials online and experimenting in Visual Studio.
- Limited experience with Web technologies
  - Team as a whole has limited experience with JavaScript, AJAX, HTML5, and others.
  - Online tutorials, reference texts, and experimenting
- New to Microsoft SQL Server
  - New to Microsoft SQL Server
  - Looking into stored procedures and the entity framework
- Bing Maps
  - None of the team has worked with Bing Maps
  - Online tutorials and documentation

Team Whirlpool

Status Report

Connected Appliances Analytics Dashboard

- Project Description
  - Receive data stream from appliances (JSON) and customer data (.csv)
  - Parse the data sources and store in a SQL database
  - Display static dashboards in a web interface
  - Allow for ad-hoc queries from authorized users
- Project Plan Document
  - Skeleton created, functional specs complete
  - Initial database schema defined
  - User interface design in process
  - Rudimentary system architecture designed

Team Whirlpool

Status Report (2 of 4)

Connected Appliances Analytics Dashboard

- Server Systems / Software

  - Ubuntu server with LAMP stack installed

  - Xfce GUI installed on server

  - Public "under construction" page published

- Development Systems / Software

  - Eclipse installed as the primary IDE

  - Subclipse for SVN integration with Assembla

  - Unfuddle for project management and bug tracking

Team Whirlpool

Status Report

Connected Appliances Analytics Dashboard

- Client Contact
    - Meeting at MSU on 9/7, at Whirlpool on 9/14
    - Weekly conference call on Friday mornings
- Team Meetings
    - Triage meetings on Monday afternoons
    - Team meeting following Friday conference call
- Team Organization
    - Basic roles and specialties determined
    - Peer programming development strategy

Team Whirlpool

Status Report

Connected Appliances Analytics Dashboard

Risks

- How do we utilize JSON?
  - None of the team has worked with this notation before
  - Working with the client to obtain example feeds
- How do we manage two parsers inserting into the same DB?
  - Programs will parse data in two formats and place in a SQL database
  - Planning to obtain example data and begin development early
- How do we program a background service?
  - The team lacks experience programming for this purpose
  - Begin lightweight prototyping of rudimentary tasks
- How do me minimize feature creep?
  - This project could easily grow outside of the capabilities of the team
  - Communicating with the client to define scope and reduce creep