01/23: Team Status Reports

The Capstone Experience

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Enterprise Learning Management System

• Project Description
  ▪ Extend Open-Source LMS: Moodle – Plug-In Based Dev.
  ▪ Migrate from existing Microsoft SQL Database
  ▪ Registration System, Recommendation system, certificate tracking, cost structure, educational material tracking, grade import/export, ad-hoc reports.

• Project Plan Document
  ▪ Functional Specification up-to-date
  ▪ Design Specification – waiting on customer feedback
  ▪ Technical Specification – WIP
Team Auto-Owners

Status Report

Enterprise Learning Management System

• Server Systems / Software
  ▪ Running, Stable.
  ▪ Microsoft Server 2008 with IIS7
  ▪ Microsoft SQL Server 2008 R2
  ▪ SVN server (VisualSVN) setup for Moodle Plug-in Dev.
  ▪ OpenSSH for Client delivery of development database
  ▪ Moodle 2.2 for development

• Development Systems / Software
  ▪ SQL Server Management Studio 2008
  ▪ Text Editors: VIM, Notepad++, etc.
  ▪ PHP Test Bed on Server
Team Auto-Owners

Status Report

Enterprise Learning Management System

• Client Contact
  ▪ Face-to-Face Meeting, Monday 1/16 @ Headquarters
  ▪ Weekly Conference Calls, Wednesdays 2:00 pm

• Team Meetings
  ▪ Mondays, Wednesdays 2:00 – 2:45 officially - rescheduling

• Team Organization
  ▪ Chris Marsh: Contact, Documentation, PHP Development
  ▪ Preston Skupinski: Server Admin, PHP Development
  ▪ Fai Wu: Moodle Plug-in Development, PHP Development
Team Auto-Owners

Status Report

Enterprise Learning Management System

Risks

• External Vendor Integration
  ▪ Automating registration of courses and importing of grades to/from external vendors. API may not exist, no knowledge of procedure, 10’s of vendors.
  ▪ Discussed with customer – decided to focus on the top one or two vendors, exploring vendor contacts through Auto-Owners to see if automation is feasible.

• Data Migration from Old Database to Moodle
  ▪ Must be done before most development begins; creation of migration solution through SQL script.
  ▪ Moving forward with higher level development first (UI), while waiting for client response.

• Other, Standard Risks coming from Learning New APIs/Software
Team Boeing

Status Report

Design, Fly, and Battle Simulator

• Project Description
  ▪ Flight simulator
  ▪ Multi-player dogfights
  ▪ Single-player obstacle courses
  ▪ Separate observer with replays

• Project Plan Document
  ▪ On GoogleDocs
  ▪ Screen mockups in PPT
  ▪ Schedule Estimates
  ▪ Risks
Team Boeing

Status Report

Design, Fly, and Battle Simulator

• Server Systems / Software
  ▪ Windows XP (not set up yet, server issues)
  ▪ Jenkins/SVN
  ▪ Windows environments set up with VMWare

• Development Systems / Software
  ▪ OpenSceneGraph (maybe using Bullet for physics)
  ▪ QTCreator (already set up with OSG)
  ▪ DIS 7 networking standard
Team Boeing

Status Report

Design, Fly, and Battle Simulator

• Client Contact
  ▪ Initial conference call 1/11
  ▪ Weekly call check-ins

• Team Meetings
  ▪ Weekly Friday meetings at minimum
  ▪ Tuesday Triage meetings

• Team Organization
  ▪ Client point of contact: David
  ▪ Technical roles based on previous experience
Risks

- Networking/Encryption
  - Very little previous experience within group
  - Previous projects for Boeing used as resource
- Physical simulation
  - Planes supposed to have HIGH level of interactivity
  - Start with basic model, work our way up
- Replays
  - Zero experience, likely requires compression/decompression
  - May need to be cut/severely scaled down
- Scope
  - Multiple vastly different modules
  - May need to cut or scale back multiple features
Team Dow

Status Report

Global Emissions Inventory Water Dashboard

• Project Description
  ▪ Web-based Dashboard for internal use
  ▪ Displays water table scarcity levels near DOW Plants
  ▪ Can be used to compare data at multiple locations world-wide
  ▪ To avoid DOW plants from over-stressing water strained areas

• Project Plan Document
  ▪ Template has been made
  ▪ Fairly good handle on function/design specs. Some technical specs are fuzzy.
  ▪ Need to figure out how to test
  ▪ We "know" our risks
Team Dow
Status Report

Global Emissions Inventory Water Dashboard

• Server Systems / Software
  ▪ Windows Server 2008 R2 - Up and running
  ▪ SQL Server 2008 R2 - Up and running
  ▪ SharePoint Server 2010 - Initial setup complete

• Development Systems / Software
  ▪ Windows 7 x64 Virtual Machines - Up and running
  ▪ MS Visual Studios 2010 - Up and running
  ▪ MS SharePoint Developer 2010 - Up and running
Team Dow

Status Report

Global Emissions Inventory Water Dashboard

• Client Contact
  ▪ Introductory meeting was held 1/13
  ▪ Weekly meetings setup up for Fridays, 2:30pm-3pm

• Team Meetings
  ▪ Team Status meetings held every Tuesday, 4pm
  ▪ Additional meetings held on Thursday, 4pm if necessary

• Team Organization
  ▪ Tony Curley, Client Contact & Project Facilitator
  ▪ Nate Henry, Developer & Systems Administrator
  ▪ James Solomon, Tester & Program Manager
Team Dow

Status Report

Global Emissions Inventory Water Dashboard

Risks

• MS SharePoint 2010
  ▪ Only 1 of us has real experience with it
  ▪ Customer gave tutorial

• Map Integration with SharePoint
  ▪ Get map to load in SharePoint/Adding to map
  ▪ Google and/or Customer

• Interfacing SharePoint, SQL Server, Visual Studio
  ▪ Getting different environments to share maps, pins, data, etc.
  ▪ Google and/or Customer

• Possible Additional Requirements
  ▪ Customer has lots of "nice to haves"
  ▪ Work faster
Mobile Avionics Weather

• Project Description
  ▪ Display Weather Maps
  ▪ Used in the Aviation Industry
  ▪ Intuitive, Easy to use
  ▪ Support for multiple users (i.e pilots, air traffic controllers, ground controllers)

• Project Plan Document
  ▪ Completed rough draft / Sent to client
Mobile Avionics Weather

- Server Systems / Software
  - Ubuntu Server for SVN
- Development Systems / Software
  - Xcode with iPhone 5 SDK
  - Eclipse with Android SDK
Team GE Aviation

Status Report

Mobile Avionics Weather

• Client Contact
  ▪ Conference call 13th
  ▪ On-site meeting at MSU, Monday 23rd

• Team Meetings
  ▪ Triage Meetings start today.
  ▪ Have met/plan on meeting every Mon, Wed, Fri

• Team Organization
  ▪ Team Gmail Account
    o Calendar
    o Email
Team GE Aviation

Status Report

Mobile Avionics Weather

Risks

• New to mobile Development
  ▪ Little to no previous experience
  ▪ Forums, Tutorial, Books

• Loss of GPS
  ▪ After a certain altitude GPS functionality on the tablets is non functional
  ▪ Bad Elf : Add-on. This gives fully functional GPS data

• REST Request with NOAA API
  ▪ REST Request response for weather information
  ▪ Currently have a working python script prototype
Food Safety Audits and Reports

• Project Description
  - Food Safety Auditors currently use paper forms
  - Online website to submit results of inspection
  - Used by employees only
  - Take a picture of any food violations

• Project Plan Document
  - Outline Created
  - Started Risks
Team Meijer
Status Report

Food Safety Audits and Reports
• Server Systems / Software
  ▪ HTML 5, CSS – Hello World
  ▪ C#.Net – Hello World
  ▪ MSQL 2008 Sever Reporting Services – still learning
• Development Systems / Software
  ▪ Supports Android & iOS Tablets
  ▪ Visual Studio 2010 – installed
  ▪ Windows Server 2008 – installed
Team Meijer

Status Report

Food Safety Audits and Reports

• Client Contact
  ▪ Met with team over phone
  ▪ Scheduled an in store visit next week

• Team Meetings
  ▪ Friday Mornings 10:30am
  ▪ Todo list for next week

• Team Organization
  ▪ Wooseuk – C# programmer
  ▪ Patrick – HTML5 guy
  ▪ Kyle – Client Contact and Design Specialist
Team Meijer

Status Report

Food Safety Audits and Reports

Risks

• Risk 1
  ▪ Lack of experience with SOAP
  ▪ Learn from tutorials

• Risk 2
  ▪ No experience with Server Reporting Services
  ▪ Discuss expectations with client

• Risk 3
  ▪ Testing web app through both tablet browsers
  ▪ Manage time effectively, allow more time for testing

• Risk 4
  ▪ Keeping our business contact properly informed
  ▪ Weekly meetings with company
Team Motorola Mobility

Status Report

Context Driven 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
  ▪ Provide the administrative functionality to allow content provider to manage the secondary content.

• Project Plan Document
  ▪ Assigned different work to team members.
  ▪ Report status on individual work regularly.
Team Motorola Mobility

Status Report

Context Driven Content Delivery

• Server Systems / Software
  ▪ Windows XP and Mac OS X
    o Environment/Virtual Machine ready for development
  ▪ Tomcat, Glass Fish, postSQL server
    o Installed/configured for exercise

• Development Systems / Software
  ▪ Restlet, MyBatis, PostgreSQL
    o Installed/configured for exercise
  ▪ Eclipse Java EE with Maven
    o Installed and ready for development
  ▪ jQuery, jQuery mobile
    o Used in exercise
  ▪ Cloud to Device framework
    o In setup process
Team Motorola Mobility

Status Report

Context Driven Content Delivery

• Client Contact
  ▪ Conference calls scheduled every Monday (5pm-6pm), and Friday (3pm-4pm).
  ▪ Daily contact via Google Talk and email

• Team Meetings
  ▪ Meeting after client’s conference call to assign individual task from client
  ▪ Daily contact via email to report status on individual task
  ▪ Triage Meetings every Wednesday 4:20-4:40

• Team Organization
  ▪ Tasks are assigned to team members immediately after conference calls
Team Motorola Mobility

Status Report

Context Driven 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 mobile, MyBatis, C2D framework
  ▪ Mitigation: Start working on learning them immediately
Team Mozilla

Status Report

In-Content Preferences for Firefox

• Project Description
  ▪ Move preferences page from pop out window to browser tab
  ▪ Increase user experience with easy to understand layout that utilizes space appropriately

• Project Plan Document
  ▪ Has been started
  ▪ Specifications have begun
In-Content Preferences for Firefox

• Server Systems / Software
  ▪ Set up Virtual Machines with Windows 7 on both machines
  ▪ Need to set up/decide what to do with server

• Development Systems / Software
  ▪ Installed VS2010 on windows 7, JEdit on OSX
  ▪ Successfully got code repository from Mozilla, already submitted two patches for review!
Team Mozilla

Status Report

In-Content Preferences for Firefox

• Client Contact
  ▪ Jared Wein (California)
  ▪ Blair McBride (New Zealand)

• Team Meetings
  ▪ Triage: Monday 2:25-2:45
  ▪ Weekly Conference Call: Monday 4:00pm (?)

• Team Organization
  ▪ Devan Sayles – Customer Liaison
  ▪ Rest - Undecided
Team Mozilla

Status Report

In-Content Preferences for Firefox

Risks

• Risk 1
  ▪ Lack of knowledge of code base/coding standards
  ▪ Look over code provided to best understand

• Risk 2
  ▪ Design issues
  ▪ Confirm all design decisions with the User Experience team at Mozilla

• Risk 3
  ▪ New technologies (XHTML, XUL, XBL, Javascript)
  ▪ Research and practice is the only way to learn new technologies
Team Plex Systems

Status Report

HTML5-Based WYSIWYG Label Designer

• Project Description
  ▪ Allow users to design manufacturing labels in a browser in an intuitive manner
  ▪ Create, Save, Load, Edit, and Manage functionalities
    o Printing functionality may be added later depending on client needs

• Project Plan Document
  ▪ Established the framework of the document
  ▪ Wrote a tentative timeline
  ▪ Rough draft of the Features section started
  ▪ Started the Application Specification section
Team Plex Systems

Status Report

HTML5-Based WYSIWYG Label Designer

• Server Systems / Software
  ▪ Windows Server 2008 R2 configured on server
  ▪ SQL Server 2008 set up and tested
  ▪ IIS 7 with ASP.NET web server up and running

• Development Systems / Software
  ▪ Installed Windows 7 virtual machines for dev/test
  ▪ Installed Visual Web Developer Express
  ▪ Obtained required libraries (jQuery, etc)
  ▪ Team leads have worked through several available examples to more closely learn the technologies we are working with
Team Plex Systems

Status Report

HTML5-Based WYSIWYG Label Designer

• Client Contact
  ▪ Had initial meeting with Client
  ▪ Plan to email weekly as needed
  ▪ Phone calls to follow up with more involved topics

• Team Meetings
  ▪ Meet formally twice a week after class

• Team Organization
  ▪ Development Lead, Project Manager – Michele
  ▪ Sys/DB Admin, Client Liaison – Matt
  ▪ Test Lead – Andrew
  ▪ All team members are cross functional regardless of main tasks
HTML5-Based WYSIWYG Label Designer
• Risks
  • Limited experience with web technologies
    ▪ No team member has done extensive web development
    ▪ Researched tutorials and reference resources
    ▪ Each team member is learning the technologies
• Project specification
  ▪ Design is very open
  ▪ Ask clients to nail down specifics and write code in an editable manner
  ▪ Provide examples early and often
• HTML5 is not uniformly supported
  ▪ Each browser implements HTML5 in its own way
  ▪ Before committing to a specific approach test in each major browser
Team Raytheon

Status Report

Android Secure VOIP Communication System

• Project Description
  ▪ Command and control communications in battle zone
  ▪ Utilizes Android handheld devices
  ▪ Secure VOIP communication
  ▪ Hands-free voice operation

• Project Plan Document
  ▪ Project plan template is set up
  ▪ Project plan research underway
  ▪ User interface in the works
  ▪ Application features are being determined
Team Raytheon

Status Report

Android Secure VOIP Communication System

• Server
  ▪ Ubuntu Server 10.10 up and running
  ▪ Asterisk Server setup and tested
  ▪ SVN & SSH both running

• Development Systems / Software
  ▪ Eclipse/Android SDK/Java setup
  ▪ Waiting on Android Devices
  ▪ Waiting on MX 4035 Radio
Team Raytheon

Status Report

Android Secure VOIP Communication System

• Client Contact
  ▪ Contact Established
  ▪ NDA’s Sent

• Team Meetings
  ▪ API/Task Related Research
  ▪ Work Environments Created

• Team Organization
  ▪ Ben: Prototype interface. Kyle: Asterisk and VOIP
  ▪ Forrest: Encryption and SIP. Calvin: SIP and Bluetooth
Android Secure VOIP Communication System

Risks

• Android Audio Capture
  ▪ Don’t know how to capture and process audio from the microphone.
  ▪ A few leads from the development community.

• VOIP over SIP
  ▪ SIP is a strange and complicated protocol.
  ▪ A few leads from the development community.

• TBSA, SmartEdge, Bluetooth Radio?
  ▪ What are they? How do they work?
  ▪ Clients will supply these at some point.

• Speech Recognition
  ▪ Is it possible in Android? How might we accomplish this?
  ▪ Hours of research.
Web Applications for Healthier Communities

• Project Description
  ▪ Enable users to create/edit health forms via the web
  ▪ Allow users to access a central database
  ▪ Replace paper forms with electronic forms
  ▪ Provide a print-friendly view for forms

• Project Plan Document
  ▪ Set up title page, table of contents, and subsections
  ▪ Using Photoshop for web mock-ups
  ▪ Discussing UI at team meetings
  ▪ Need to put discussions into writing
Team Spectrum Health

Status Report

Web Applications for Healthier Communities

• Server Systems / Software
  ▪ Server OS: Windows Server 2008
  ▪ Database: Microsoft SQL Server 2008
  ▪ SVN Server: Collabnet Subversion

• Development Systems / Software
  ▪ IDE: Visual Studio 2008
  ▪ Development languages: ASP.NET (C#) with Razor view engine, Javascript (jQuery), HTML5, CSS
  ▪ Source control: SVN with TortoiseSVN
Team Spectrum Health

Status Report

Web Applications for Healthier Communities

• Client Contact
  ▪ Seth Wentland: Webmaster
  ▪ Sergey Stoma: Architect

• Team Meetings
  ▪ Triage: Wednesday 5:00 – 5:20pm
  ▪ Client: Mondays

• Team Organization
  ▪ Client Contact: Brian
  ▪ Project Manager: Bret
Team Spectrum Health

Status Report

Web Applications for Healthier Communities

Risks

• Integrating SQL server with their data warehouse
  ▪ Custom C-Trac system currently used by Spectrum Health
  ▪ Model database schema after currently used schema

• Concurrency problems with multiple users
  ▪ Multiple users editing the same form at once can lead to lost data
  ▪ Research online for potential risks and solutions

• Client Communication
  ▪ Client is working on a liberal timeline
  ▪ Continue regular communication about Capstone deadlines

• Capability with mobile devices
  ▪ No team member with mobile development experience
  ▪ Read online tutorial/books on mobile development
Mobile Smart Video Player

• Project Description
  ▪ Smart Video Player for iPhone and iPad
  ▪ Rich Playback Experience
  ▪ Use metadata from Crowdsourcing
    ○ Hot-spots from other users

• Project Plan Document
  ▪ Skeleton of document complete
  ▪ First draft of Table of Contents, core functionalities, executive summary, acknowledgements
  ▪ First two weeks of Timetable completed
Team TechSmith

Mobile Smart Video Player

• Server Systems / Software
  ▪ Subversion control repository in use
  ▪ Windows Server 2008 set up, needs configuration

• Development Systems / Software
  ▪ Xcode with iOS SDK installed on iMac and MacBooks
  ▪ TechSmith Camtasia Studio installed and activated
  ▪ iOS devices – iPad and iPhone from TechSmith
  ▪ Received sample metadata from TechSmith
  ▪ Additional 17" MacBook Pro from TechSmith
  ▪ Virtual machine on iMac with Windows 7 installed
Team TechSmith

Status Report

Mobile Smart Video Player

• Client Contact
  ▪ Met at TechSmith location twice
  ▪ Meetings on every other Friday

• Team Meetings
  ▪ At least twice per week after class or on weekend

• Team Organization
  ▪ Client Contact: Scott Klum
  ▪ Project Manager: Yue Lu
  ▪ Program Manager: Meryl Dara Mabin
  ▪ System Administrator: Meryl Dara Mabin
Team TechSmith

Status Report

Mobile Smart Video Player

Risks

• Risk 1
  ▪ No programming experience with Objective C
  ▪ Stanford lectures on iTunes; iOS tutorial books; daily practice

• Risk 2
  ▪ Camtasia's video format is not iOS playable
  ▪ We will have to do some research into effective conversion

• Risk 3
  ▪ No experience with client-to-server communication
  ▪ TechSmith provided resources and guidelines, and we are in communication with a previous TechSmith Capstone member

• Risk 4
  ▪ Aggregating data will be mathematically difficult
  ▪ Scott has some experience; we will do research
Team Urban Science

Status Report

Infographics Generator

• Project Description
  ▪ Standalone webapp
  ▪ Lazy suzan infographic selector interface
  ▪ Example users are ford manager or someone at dealership
  ▪ Infographic framework

• Project Plan Document
  ▪ Discussed functional, design, and technical specs
  ▪ Started filling in skeleton document
  ▪ Gathered ideas for UML diagrams
  ▪ Created multiple screen mockups
Team Urban Science

Status Report

Infographics Generator

• Server Systems / Software
  ▪ Installed Windows Server 2008 with relevant web server tools
  ▪ Started learning IIS – have sample webpage up
  ▪ .Net framework 3.5 and SQL Server

• Development Systems / Software
  ▪ Visual Studio has been installed
  ▪ Contacted customer about providing iPad
  ▪ Working with customer on version control setup
Team Urban Science

Status Report

Infographics Generator

• Client Contact
  ▪ Had two conference calls with our customer
  ▪ Set up regular communications with customer

• Team Meetings
  ▪ Created agenda for each meeting
  ▪ Set up semi-weekly meetings outside of All Hands Meeting

• Team Organization
  ▪ Split front end and back end tasks
  ▪ Assigned roles to create accountability
Team Urban Science

Status Report

Infographics Generator

Risks

• Risk 1
  ▪ Unfamiliar with asp.net and HTML5
  ▪ Online tutorials and books/documentation

• Risk 2
  ▪ Customer gave ambiguous requirements
  ▪ Find focus using prototypes and elicitation

• Risk 3
  ▪ Not much free time overlap in schedules
  ▪ Email chains to keep communication, clear planning agendas

• Risk 4
  ▪ Little artistic experience
  ▪ Brainstorm and try to learn from other apps, what is popular