MICHIGAN STATE UNIVERSITY

The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University
Spring 2011

From Students…
…to Professionals

Course Goals

- Build a Significant Software System
- Work in a Team Environment
- Learn New Tools and Environments
- Build and Administer Systems
- Develop Communication Skills
- Develop Interview Talking Points
- Consider Issues of Ethics and Professionalism

Course Goals

- Teams of Students
- Build Significant Software System
  - Design
  - Develop
  - Debug
  - Document
  - Deliver
- For Corporate Clients
- In 15 (Short) Weeks

Project Deliverables

- Project Plan Document & Presentation
- Alpha Presentation
- Beta Presentation
- Project Software & Documentation
- Project Video
- Design Day

See Major Milestones.

All-Hands Meetings

- MW, 3:00-3:50pm, 2400 Engineering Building
- Presentations By
  - Professor
  - Teams
    - Status Reports
    - Formal Presentations
      - Project Plan
      - Alpha
      - Beta
    - Project Videos
  - Guest Speakers

All-Hands Meetings

01/10: Course Overview
01/12: Project Plan
01/17: (Martin Luther King Day, No Meeting)
01/19: Project Schedule and Risk
01/24: Team Status Reports
01/26: Prototyping
01/31: Team Project Plan Presentations
02/02: Team Project Plan Presentations
02/07: Team Project Plan Presentations
02/09: Team Project Plan Presentations
02/14: Resume Writing and Interviewing
02/16: Creating and Giving Presentations
02/21: Team Alpha Presentations
02/23: Team Alpha Presentations
02/28: Team Alpha Presentations
03/02: Team Alpha Presentations
03/07: (Spring Break, No Meeting)
03/09: (Spring Break, No Meeting)
03/14: Design Day and the Project Videos
03/16: Camtasia Demo
03/21: Team Status Reports
03/23: Team Status Reports
03/28: Team Status Reports
03/30: Team Status Reports
04/04: Team Beta Presentations
04/06: Team Beta Presentations
04/11: Team Beta Presentations
04/13: Team Beta Presentations
04/18: Ethics and Professionalism
04/20: Intellectual Property and Copyright
04/25: Team Project Videos
04/27: Team Project Videos and All Deliverables
04/28: Design Day Setup
04/29: Design Day
05/03: Team Project Videos

MICHIGAN STATE UNIVERSITY

The Capstone Experience

Team Auto-Owners

Department of Computer Science and Engineering
Michigan State University
Spring 2011

From Students…
…to Professionals

Auto-Owners Insurance
Life Home Car Business
The "No Problem" People®

Auto-Owners Insurance | Providing Life, Home, Car, Business Insurance - Windows Internet Explorer

http://www.auto-owners.com/

Live Search

Auto-Owners Insurance | Providing Life, Home, C...

Page Tools

Auto-Owners Insurance

Customer Center | Career Center | Media Center

Our Products | Find an Agency | Corporate Information | Customer Claims | search | Go!

Life
protecting your family

Home
property & liability

Car
security while on the road

Business
guarding your investment

The "No Problem" People®

Have questions? Want coverage? See why thousands of customers nationwide rely on Auto-Owners for "No Problem" service in life, home, car, or business insurance.

CUSTOMER CENTER

Find an Agency

Career Center

Team Auto-Owners
Project Overview

Agent Multimedia Advertisement Builder

- Build Auto-Owners Advertisements
  - Customized by and for Independent Agents
  - Utilize Corporate Templates
- User Features
  - Upload Text, Photos, Images, Audio, and Video
  - Save , Open , Edit, Produce, and Submit
  - Shopping Cart
- Administrative Features
  - Manage User Profiles
  - Manage Ad Templates
  - Review, Approve, and Track Ads
- Technologies
  - Java / Eclipse
  - Struts 2
  - DB2 (Relational Database)

Auto-Owners Insurance
Life Home Car Business
The "No Problem" People®

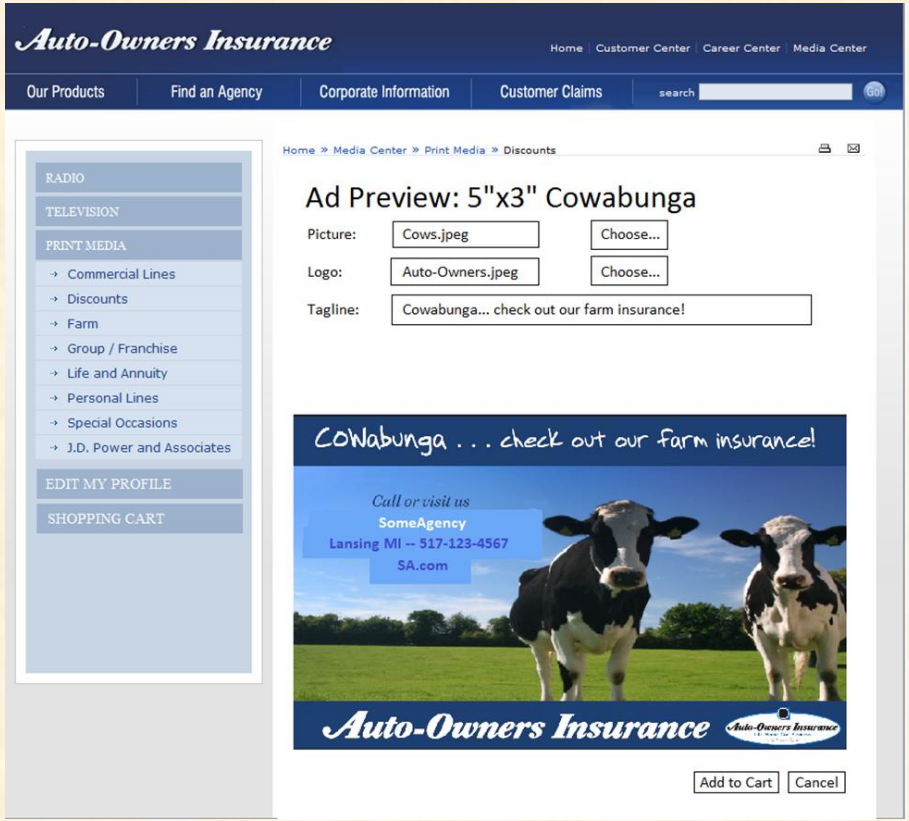
The Capstone Experience

Team Auto-Owners Team Photo

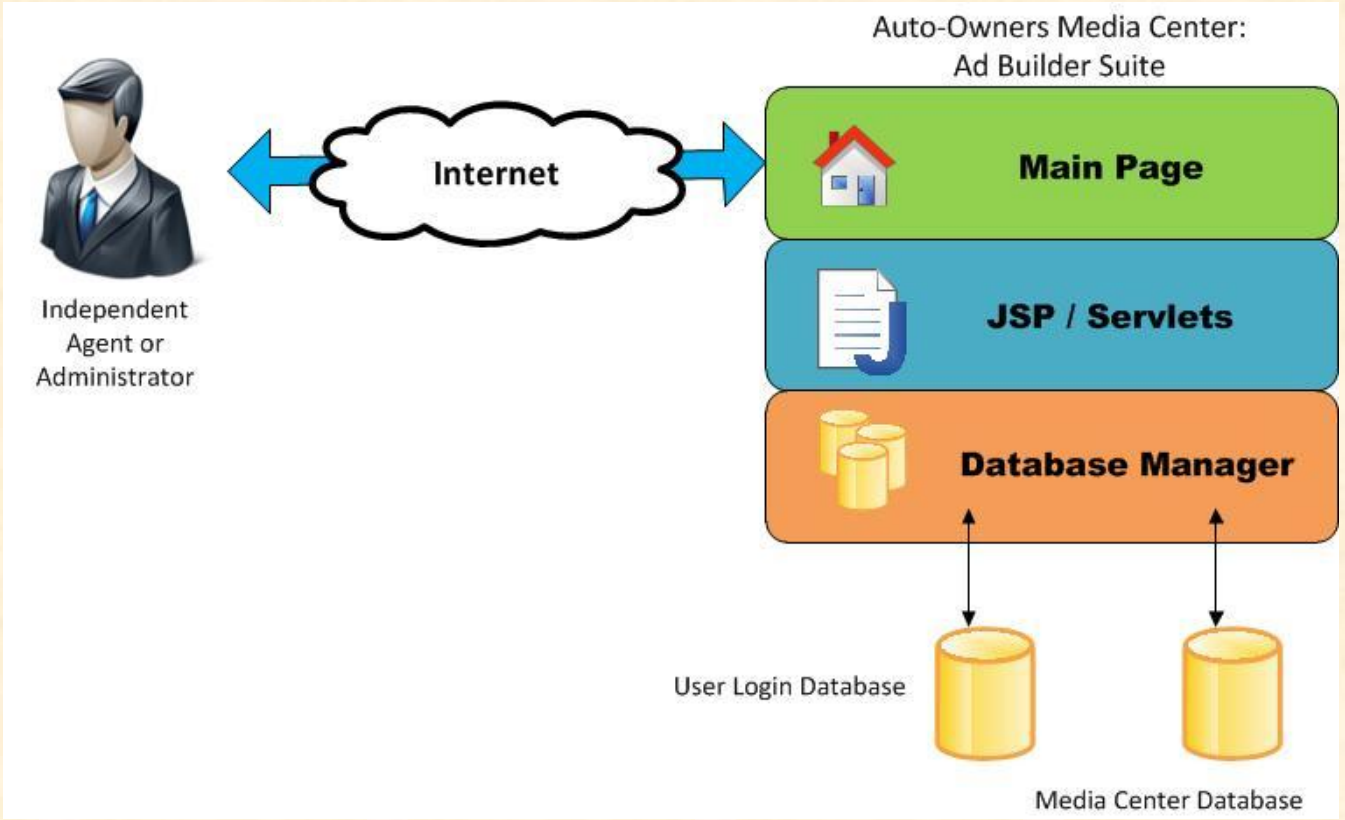
Team Auto-Owners
Screen Mockup

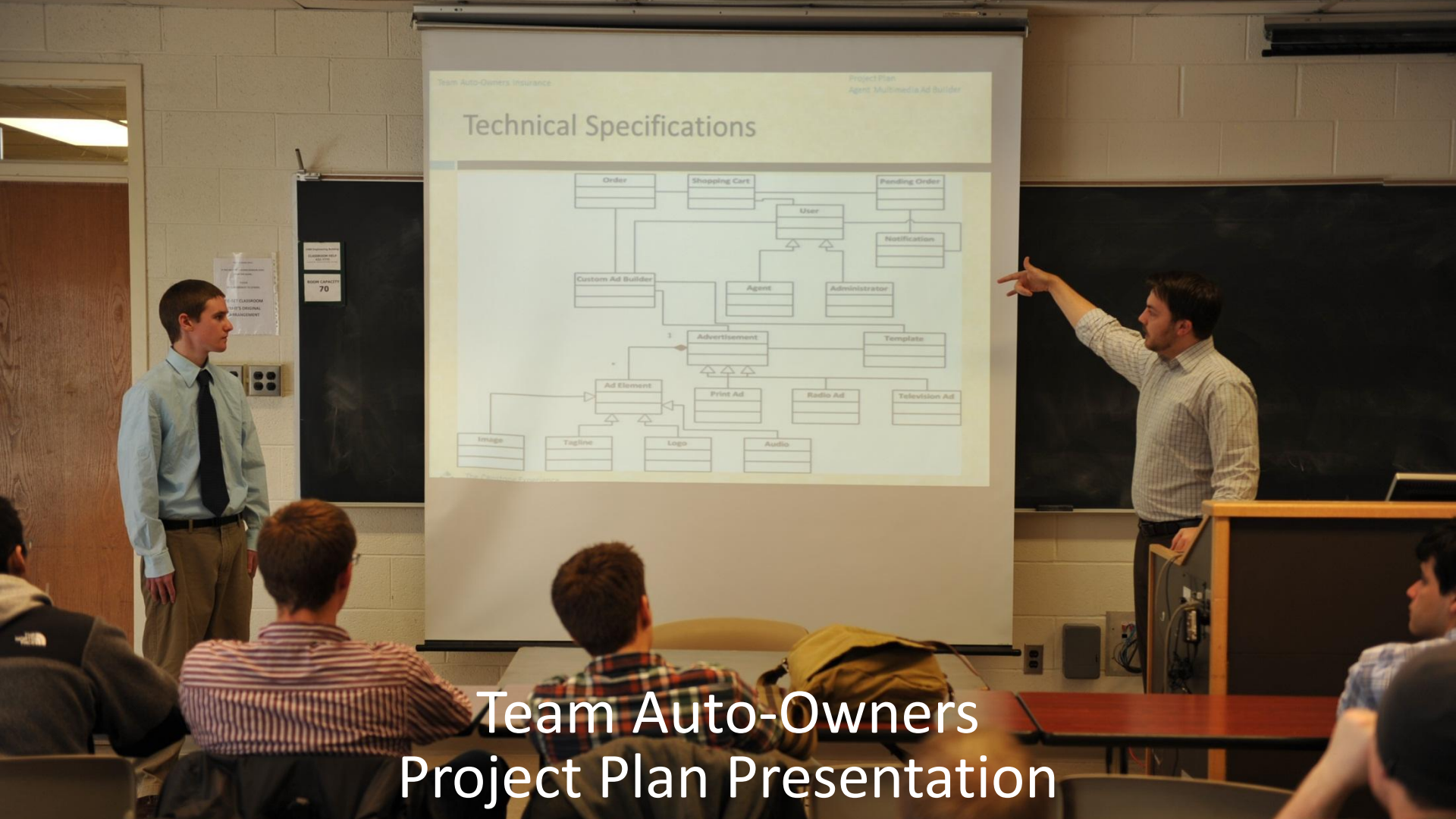
Team Auto-Owners
Project Plan Presentation

Team Auto-Owners
Screen Mockups



Team Auto-Owners
Architecture Diagram

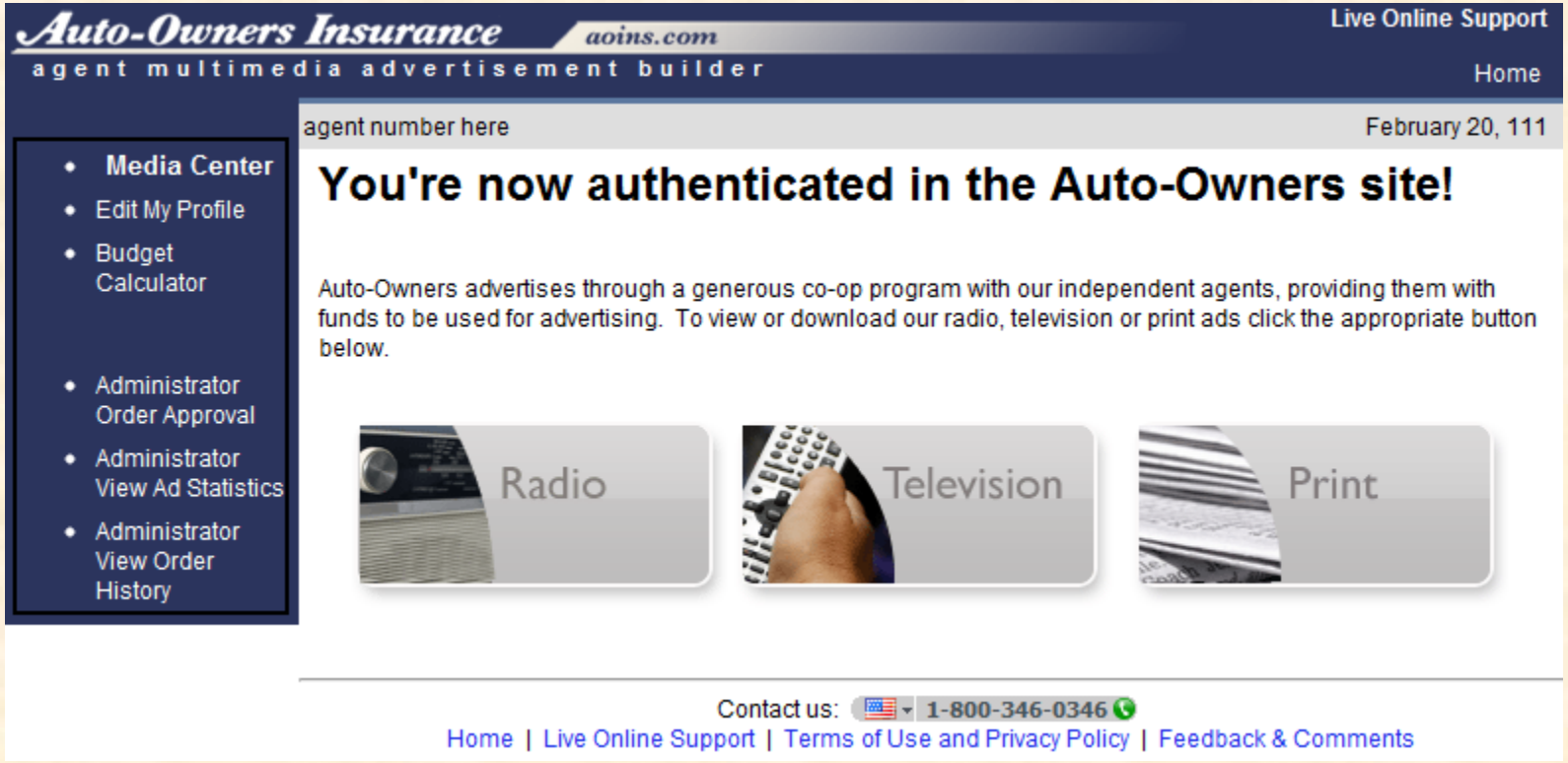




Team Auto-Owners Project Plan Presentation

Team Auto-Owners
Alpha Presentation

Welcome Page



Team Auto-Owners
Alpha Presentation

Team Auto-Owners
Alpha Presentation

Custom Print Ad Generation

Headline . . .

Copy.....
.....
.....
.....

Call or visit us

Spartan Insurance

East Lansing • 517-955-6543

spartan@insurance.com

Auto-Owners Insurance

Auto-Owners Insurance
Life Home Car Business

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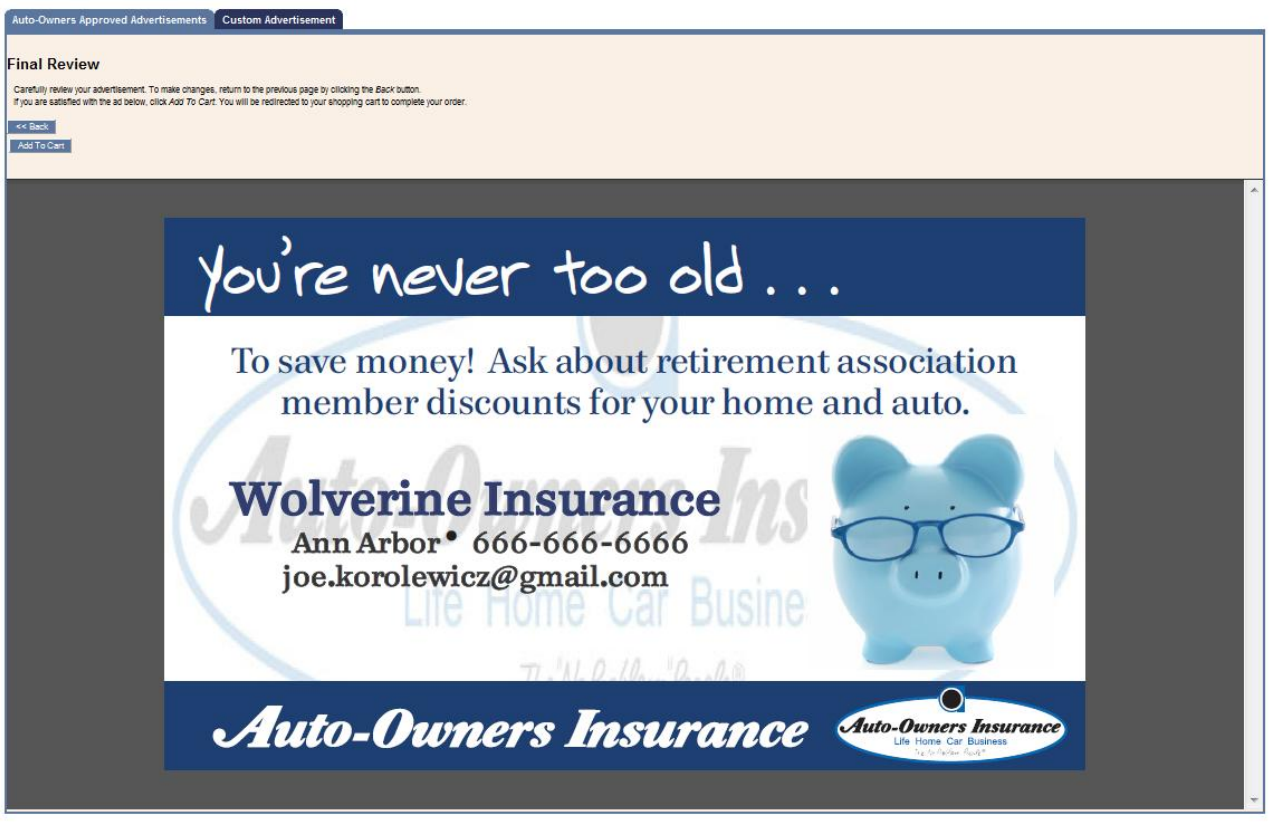
Team Auto-Owners
Alpha Presentation

Team Auto-Owners
Beta Presentation

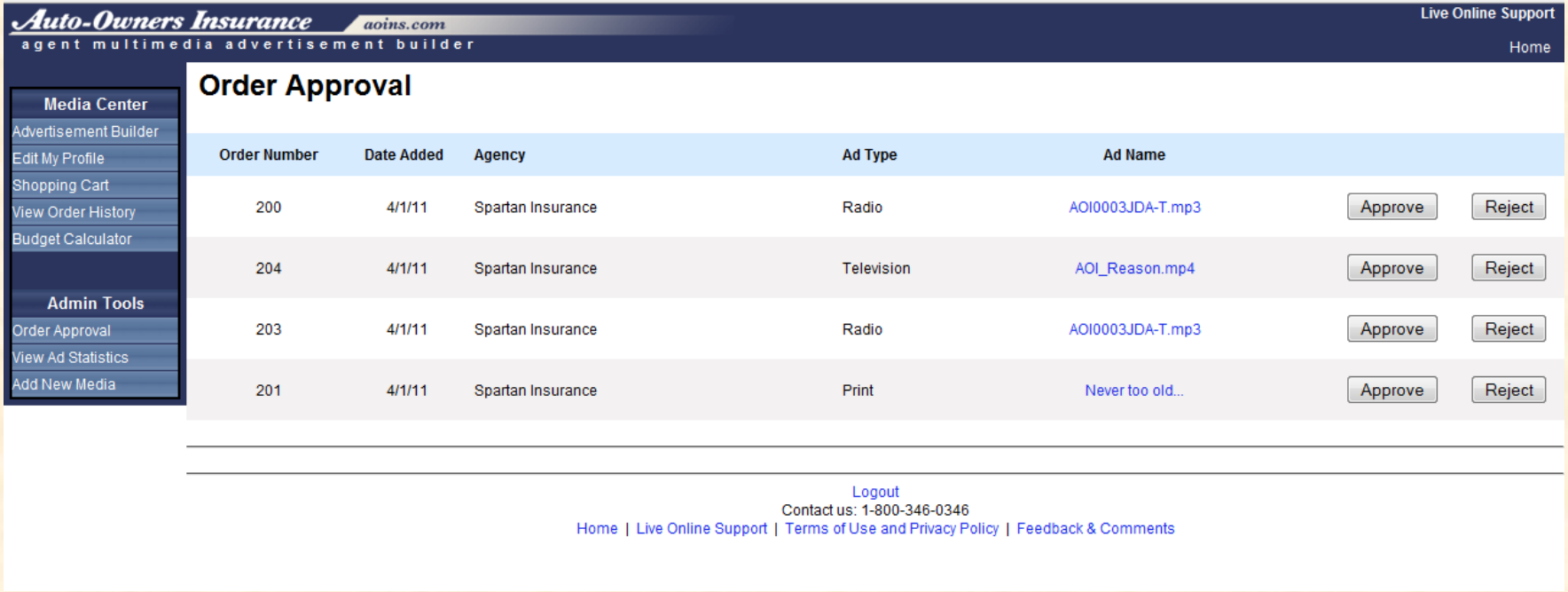
Review Print Ad



Team Auto-Owners
Beta Presentation

Team Auto-Owners
Beta Presentation

Administrator Approval



The Capstone Experience

Team Auto-Owners
Beta Presentation

Team Auto-Owners
Design Day

MICHIGAN STATE UNIVERSITY

The Capstone Experience

Team Boeing

Department of Computer Science and Engineering
Michigan State University
Spring 2011

From Students…
…to Professionals

BOEING

The Boeing Company - Windows Internet Explorer

http://www.boeing.com/

Bing

Favorites | The Boeing Company | Page | Safety | Tools

Corporate Governance | Employment | Employee/Retiree | Ethics | Suppliers | Secure Logon

BOEING

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BA stock price 55.21 [+ 0.07] at 4:14 PM ET on Dec 29

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Quick Links:

- Commercial Airplanes
- Integrated Defense Systems
- Boeing Capital Corporation
- Employment & Diversity
- Employee/Retiree
- Environment
- Global Corporate Citizenship
- Government Operations

Special Feature

- 787 Milestones

In The News:

Boeing-Built DIRECTV 12 Satellite Delivers 1st Signals From Space

Boeing: Brigade Combat Team Modernization Increment 1 to Enter Production

Boeing, Air Austral Announce Order for Two Next-Generation 737-800s

Boeing Delivers Four Next-

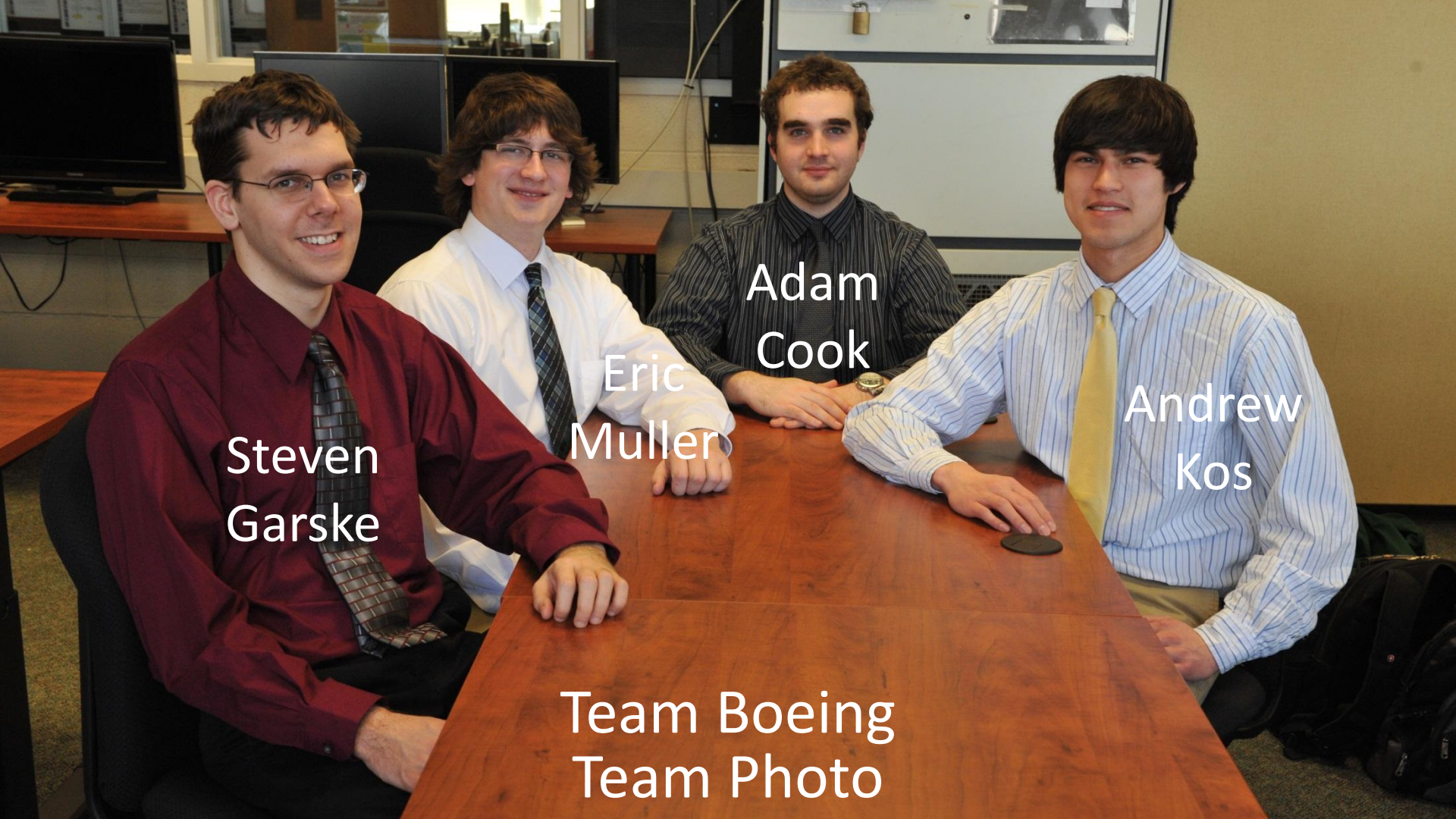
Team Boeing
Project Overview

BAPS: Battle Aircraft Position Share

- 3D Game
  - Two Teams
  - Destroy Targets of Opposing Team
  - Use Aircraft with Various Capabilities
- Features
  - Similar to Chess and Battleship
  - Variety of Targets, Radars, and Weapons
  - Weather
  - Network-Based with Encryption
- Technologies
  - C++ and Python
  - OpenSceneGraph (OSG)
  - Blender (3D Modeling)
  - Internetworking
  - Windows XP, Windows 7

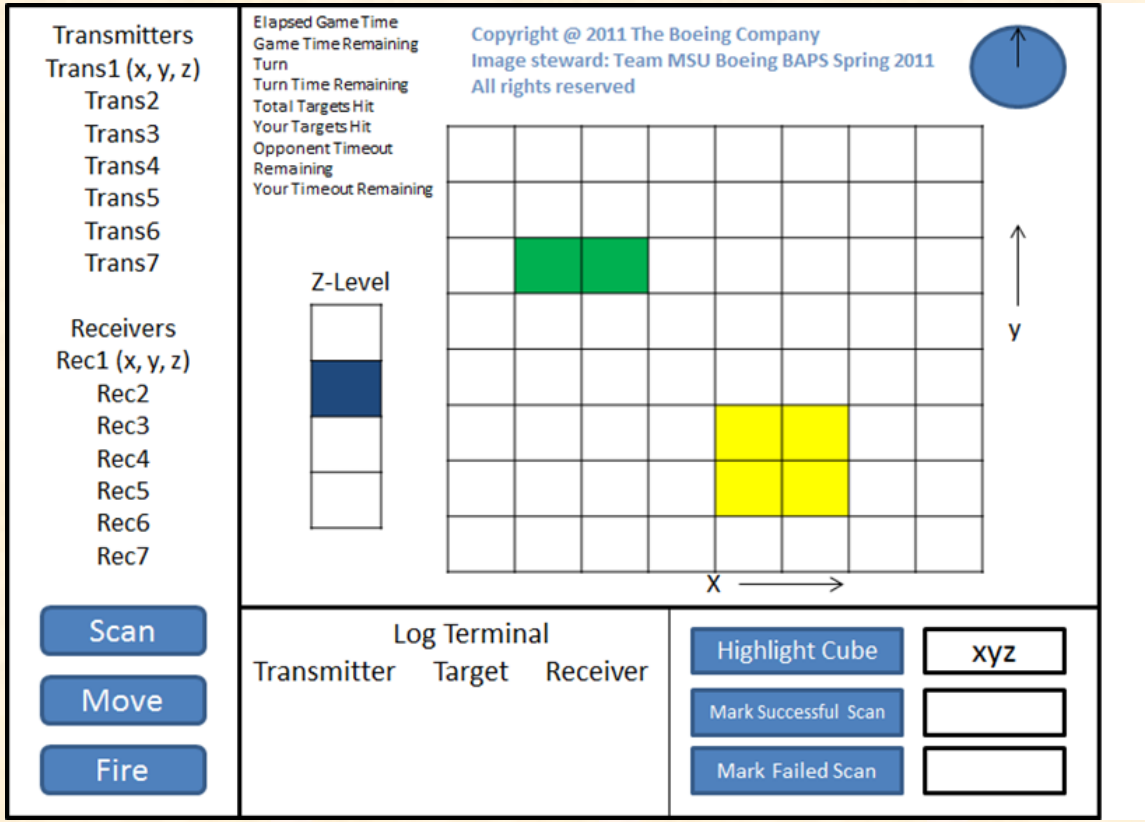
BOEING

The Capstone Experience



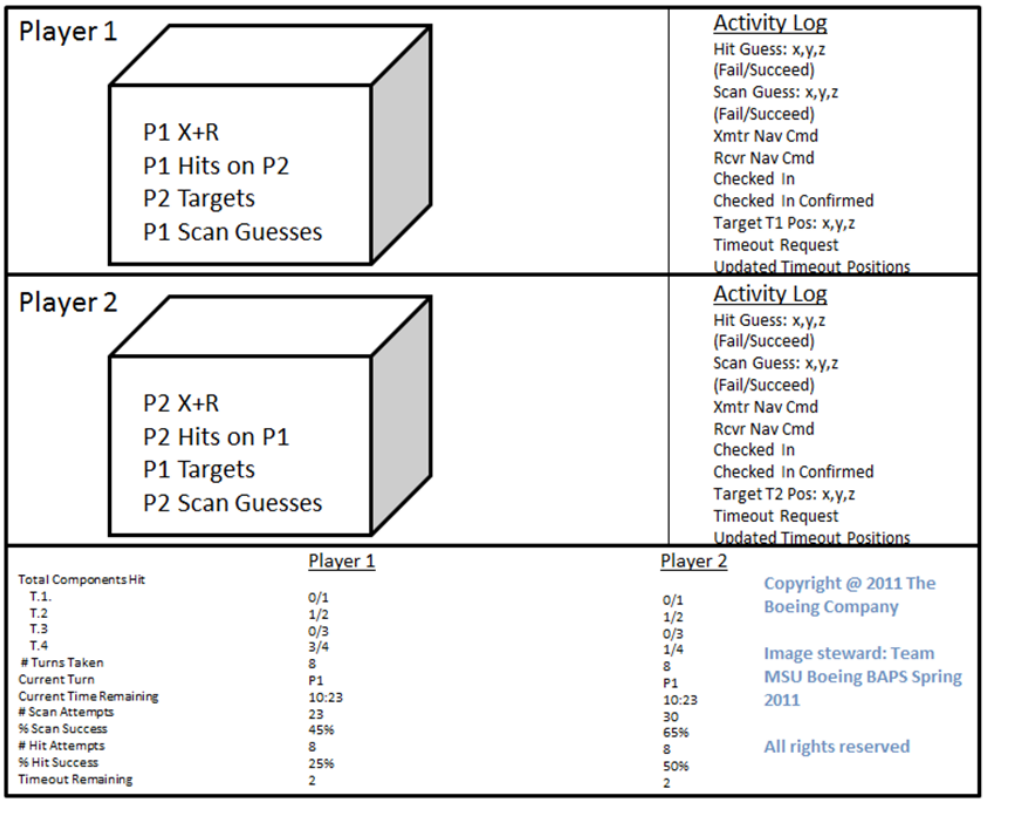
Team Boeing
Team Photo

Team Boeing
Screen Mockup

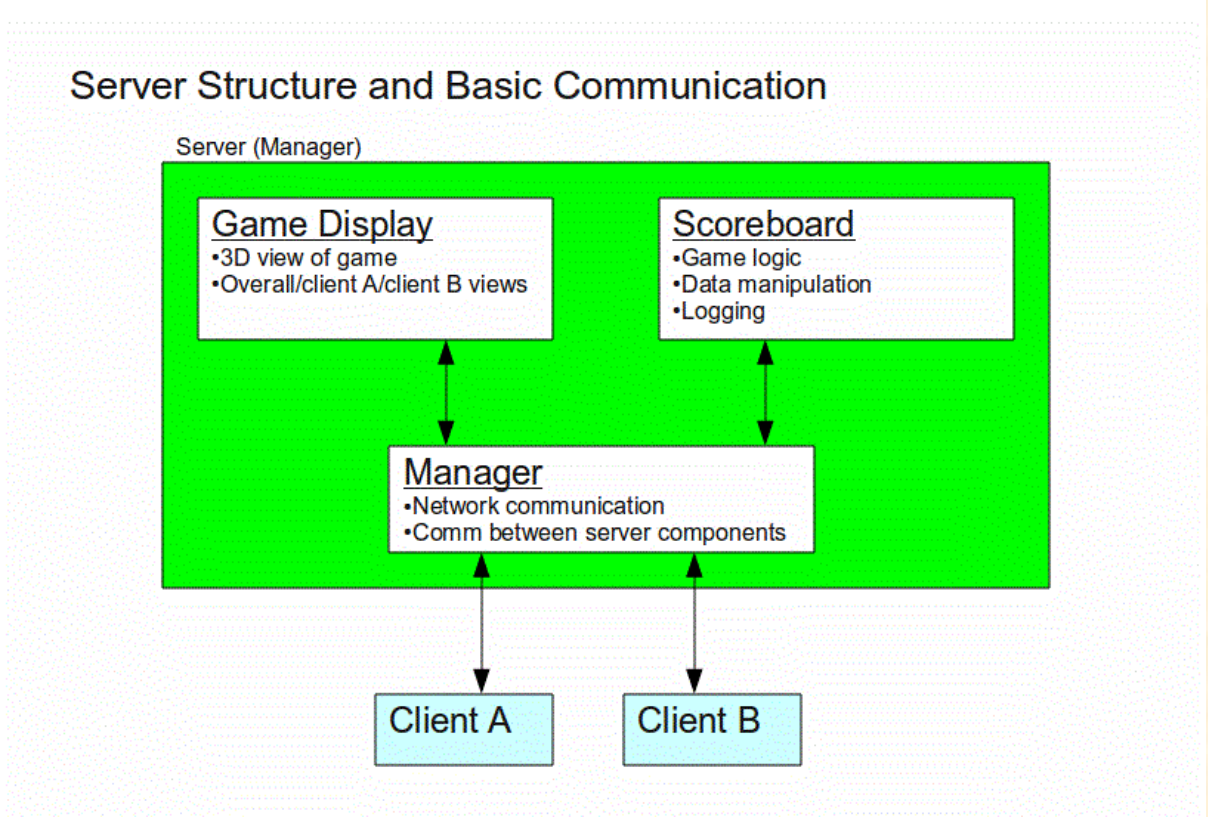


Team Boeing
Project Plan Presentation

Team Boeing
Screen Mockup



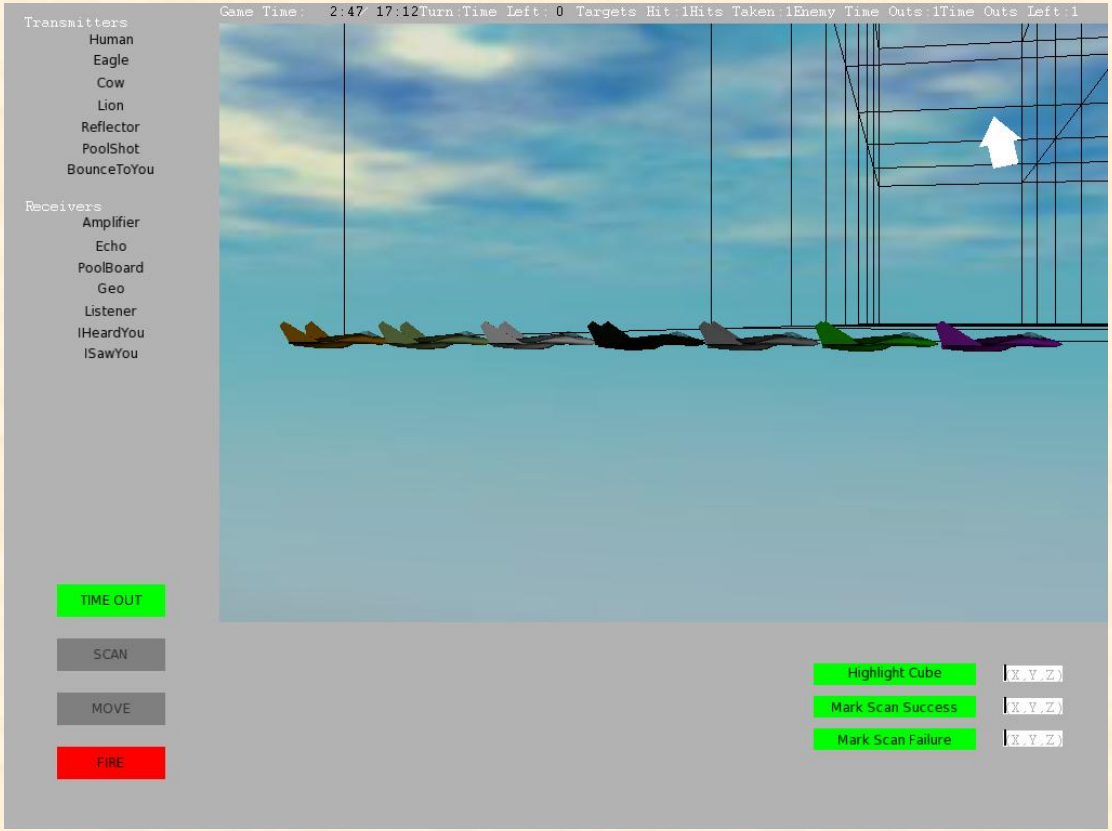
Team Boeing
Architecture Diagram



Team Boeing
Project Plan Presentation

Team Boeing
Alpha Presentation

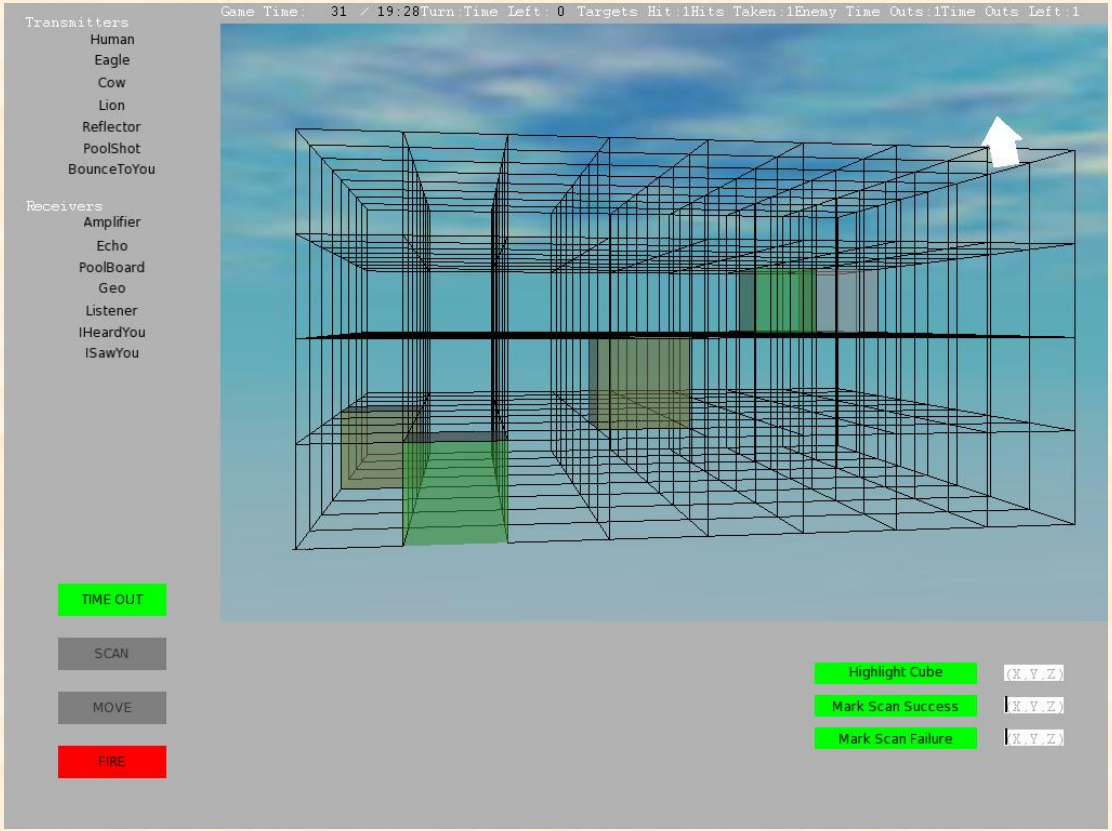
Player Transmitters



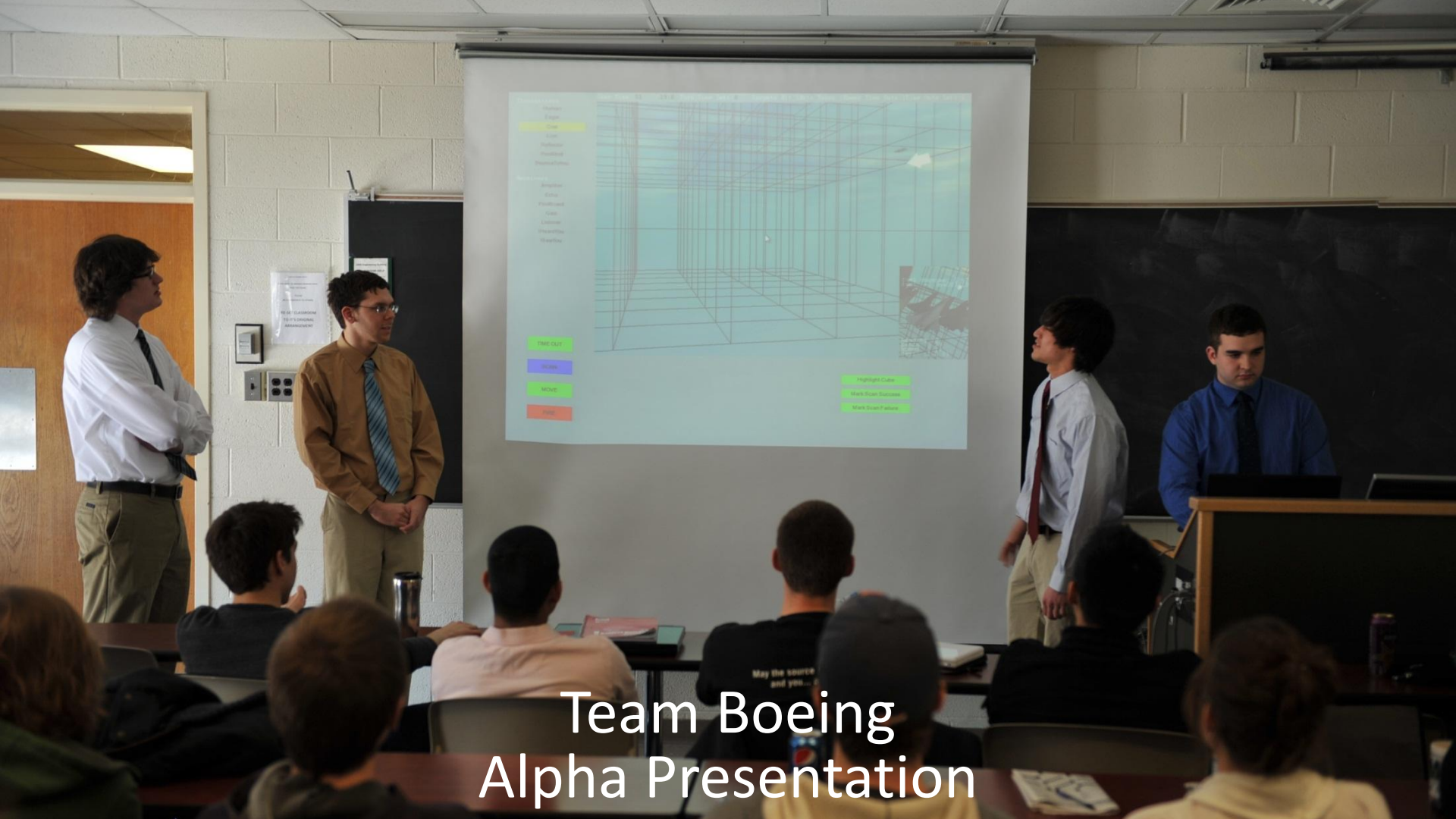
Team Boeing
Alpha Presentation

Team Boeing
Alpha Presentation

Game Board Highlighting



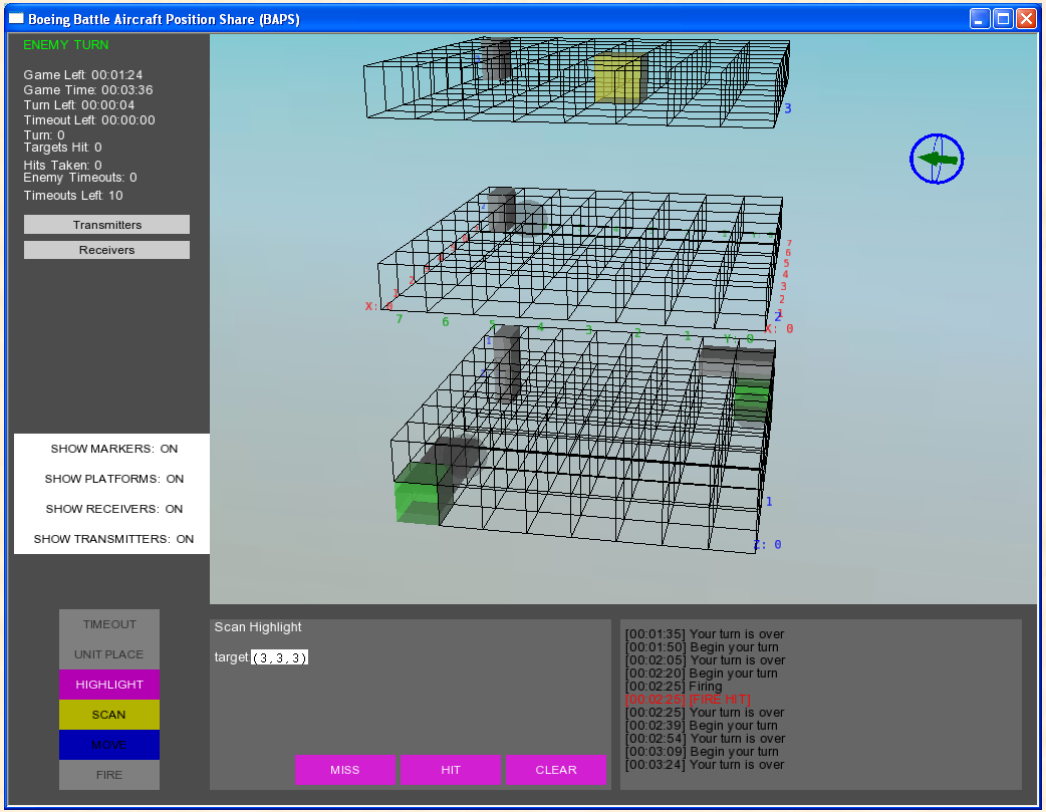
The Capstone Experience



Team Boeing
Alpha Presentation

Team Boeing
Beta Presentation

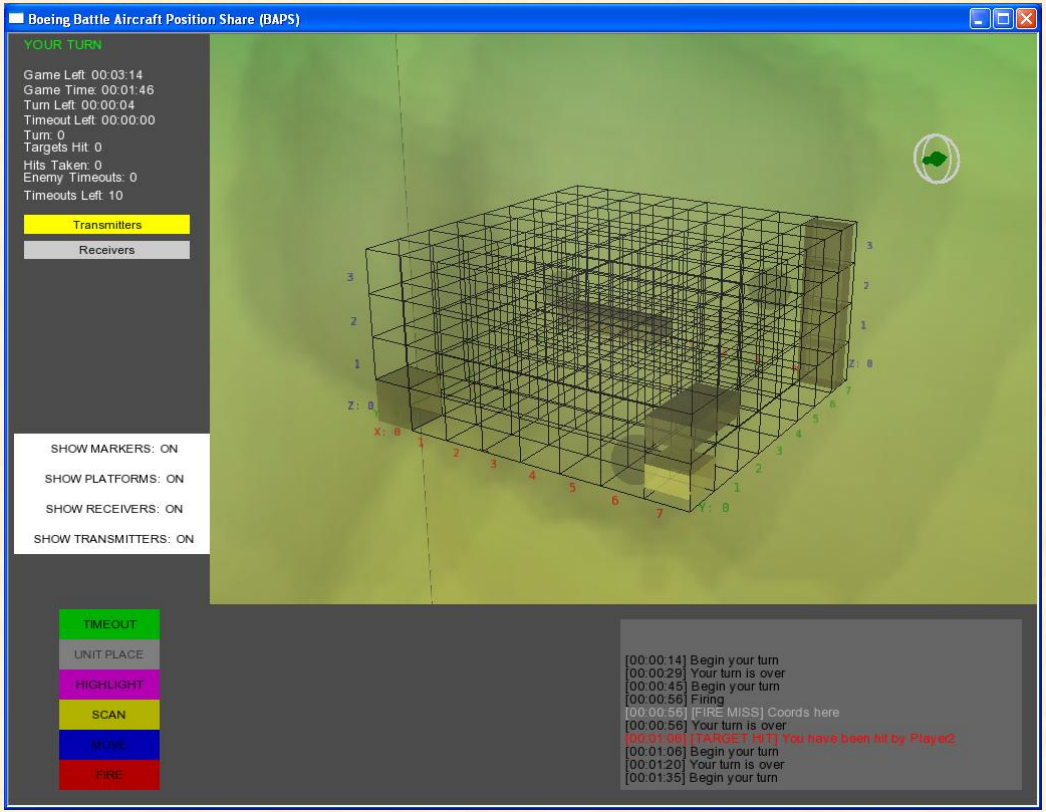
Highlight Window



Team Boeing
Beta Presentation

Team Boeing
Beta Presentation

Player Hit



Team Boeing
Beta Presentation

Team Boeing
Design Day

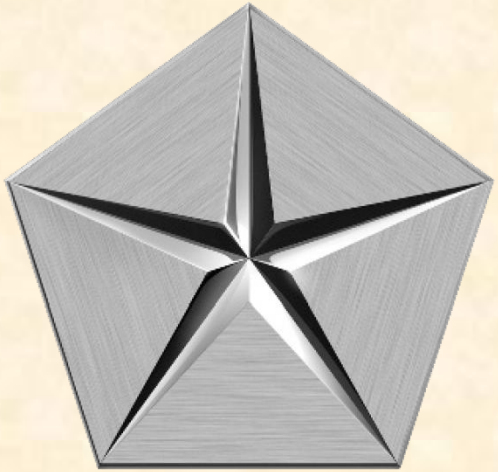
MICHIGAN STATE UNIVERSITY

The Capstone Experience

Team Chrysler

Department of Computer Science and Engineering
Michigan State University
Spring 2011

From Students…
…to Professionals



CHRYSLER

http://www.chrysler.com/en/
Official Chrysler Site - Autos, ...
CHRYSLER
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Search Chrysler.com
VEHICLE LINEUP
Find A Dealer
ZIP
Build My Own
Shopping Tools
For Owners
WATCH OUR TV COMMERCIALS
300
S
STYLE BOOSTER
MEET THE NEW CHRYSLER 300S

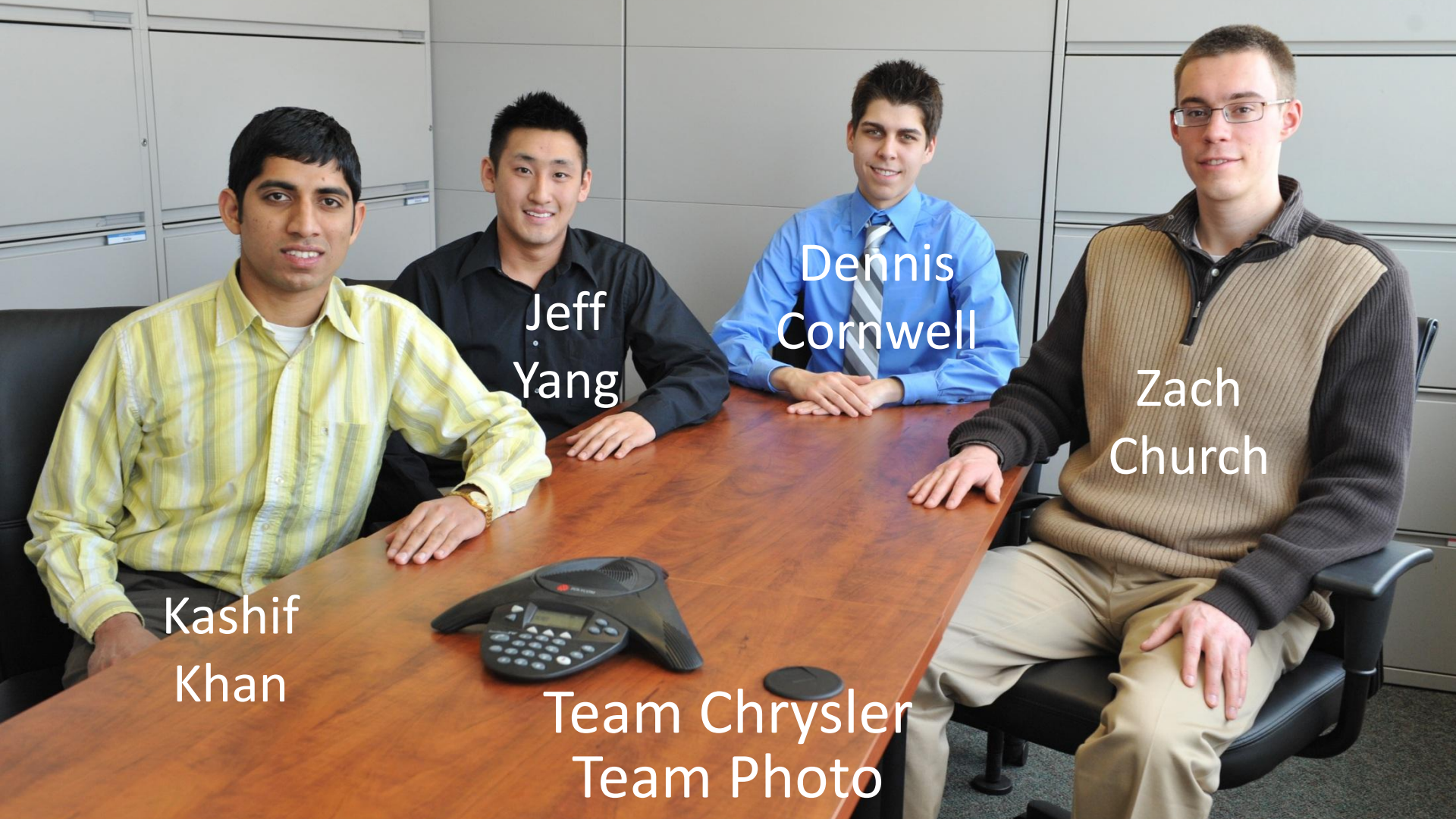
Team Chrysler
Project Overview

Fleet Auction Distribution and Sale Optimizer

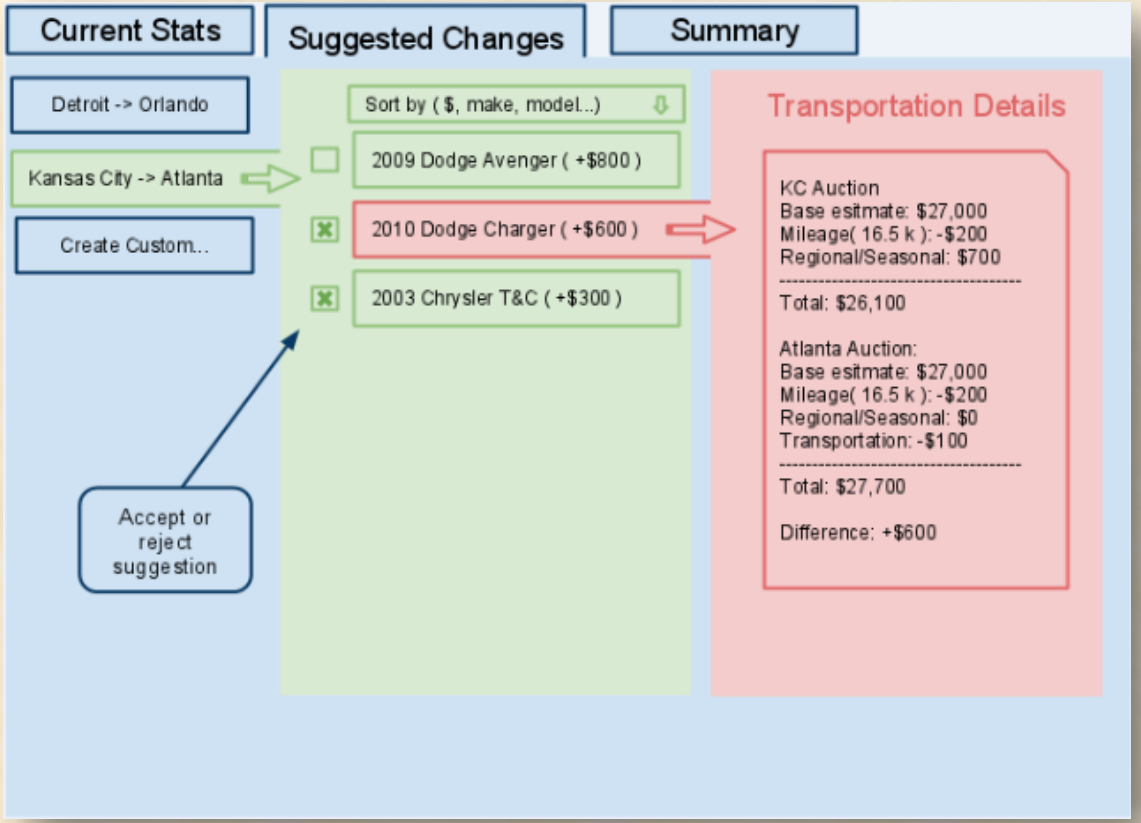
- Fleet
  - Vehicles
    - Group of Vehicles Cars, Trucks, Etc.
    - Owned by Company, Dealers, or Daily Rental Companies
  - Marshaling Yards
    - Returned Fleet Vehicles
    - Assigned to Auction by Chrysler
- Optimize Fleet Auction Sales Net Revenue
  - Distribute Vehicles Geographically
  - Maximize Net Sales Revenue Based On
    - Current Vehicle Location
    - Historical Sales Data
    - Transportation Costs
- Features
  - Web Application
  - Form and Map Interface
  - Drag-and-Drop Vehicle from Site to Site
  - Revenue Models and Forecast Reports
- Technologies
  - Java (or JavaScript)
  - SQL (Database Structured Query Language)
  - Google Maps

CHRYSLER

The Capstone Experience


Jeff
Yang
Dennis
Cornwell
Zach
Church
Kashif
Khan
Team Chrysler
Team Photo

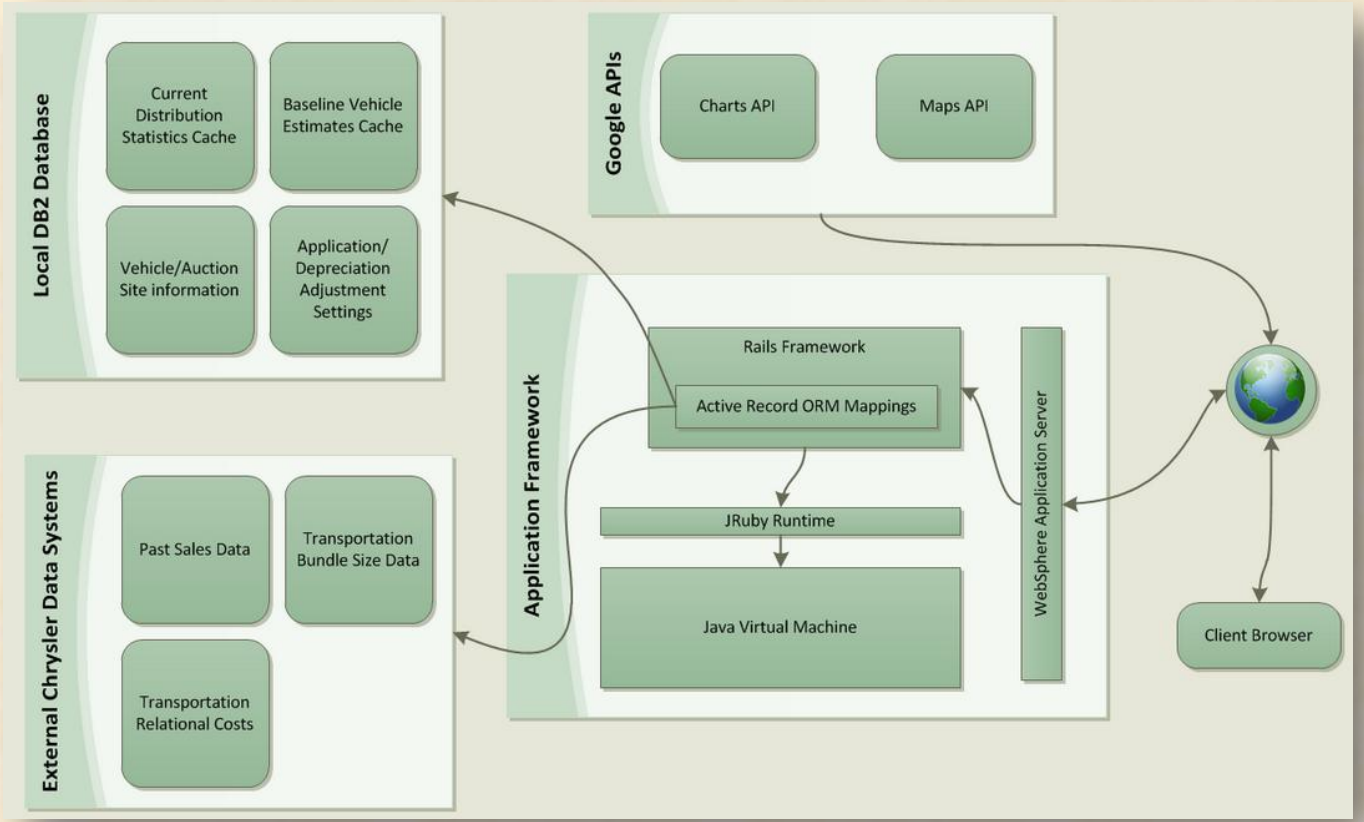
Team Chrysler
Screen Mockup



Team Chrysler
Project Plan Presentation

Team Chrysler
Screen Mockup

Team Chrysler
Architecture Diagram

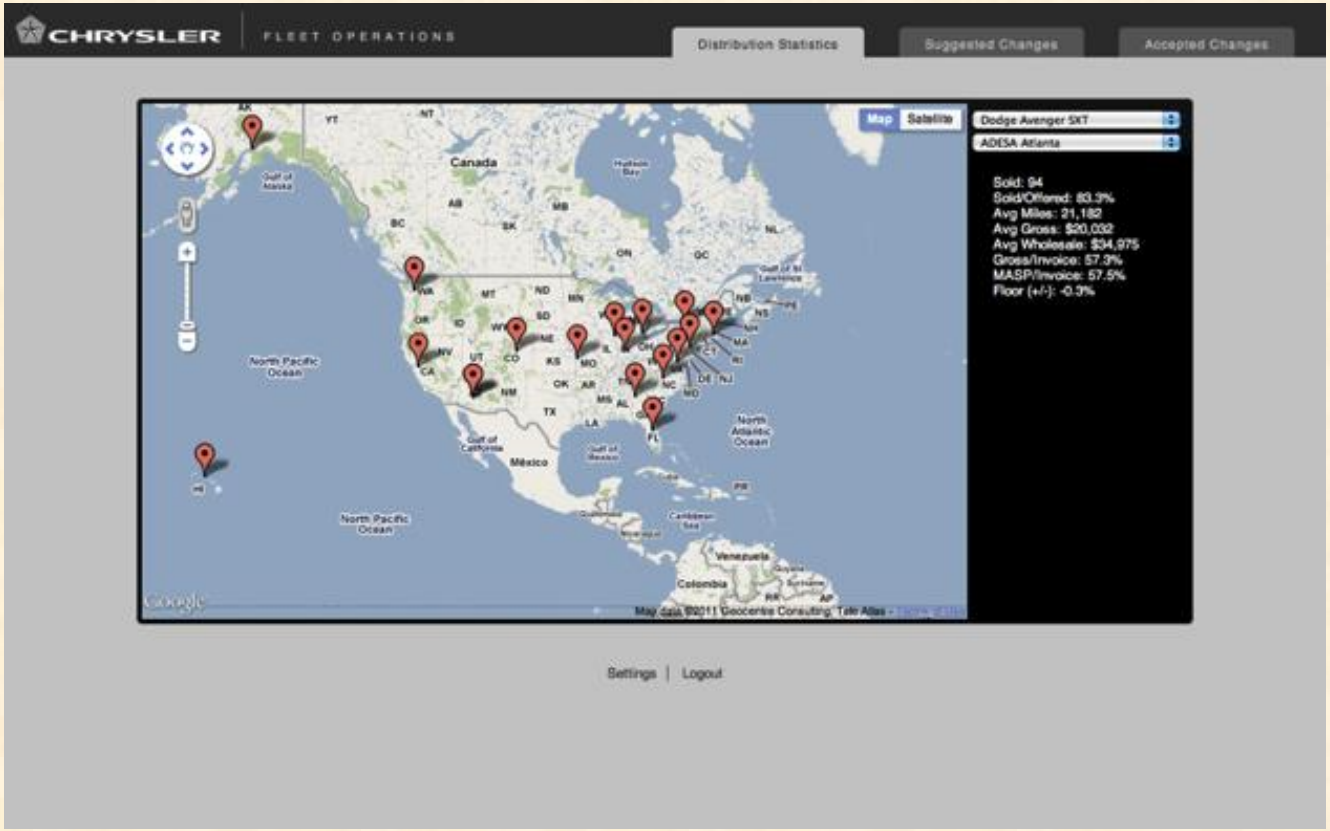


Team Chrysler
Project Plan Presentation

Team Chrysler

Alpha Presentation

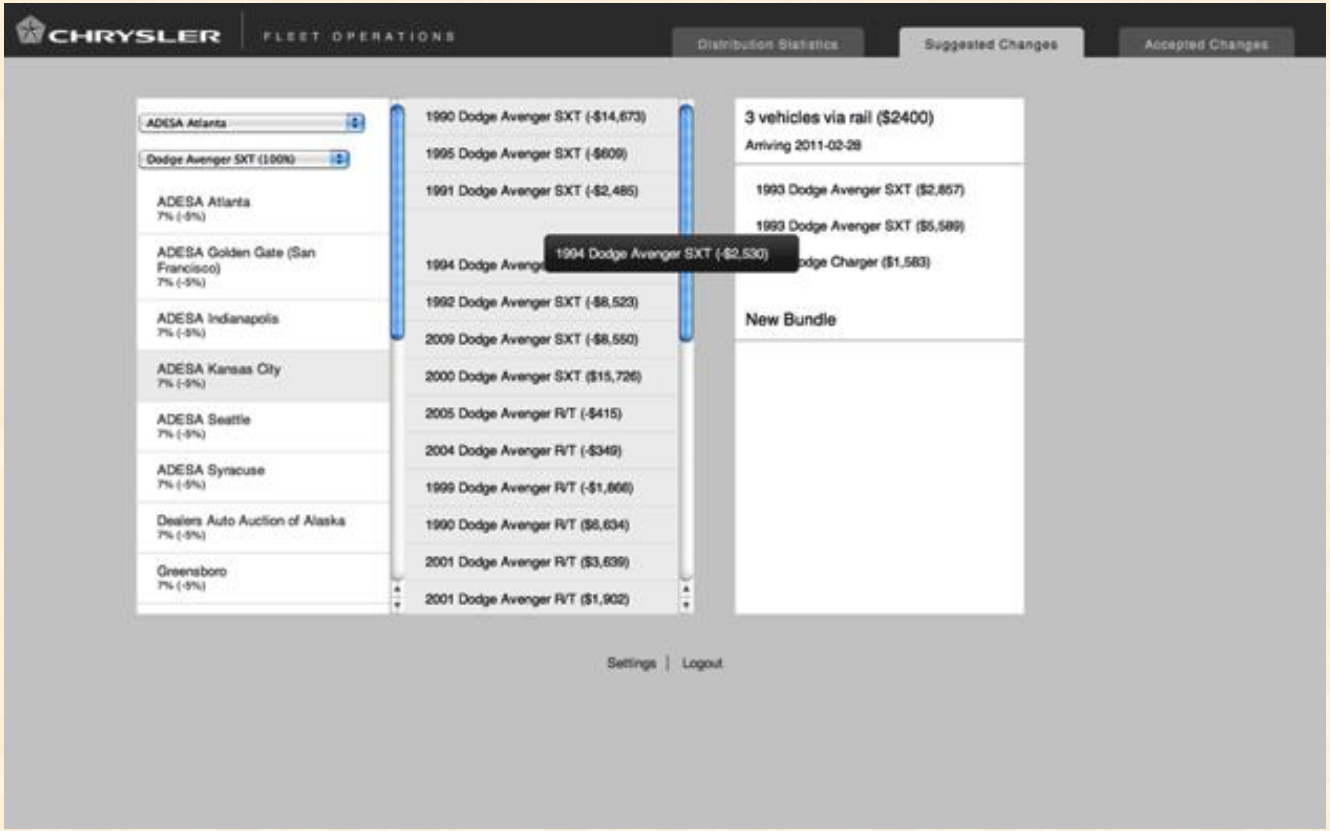
Distribution Statistics



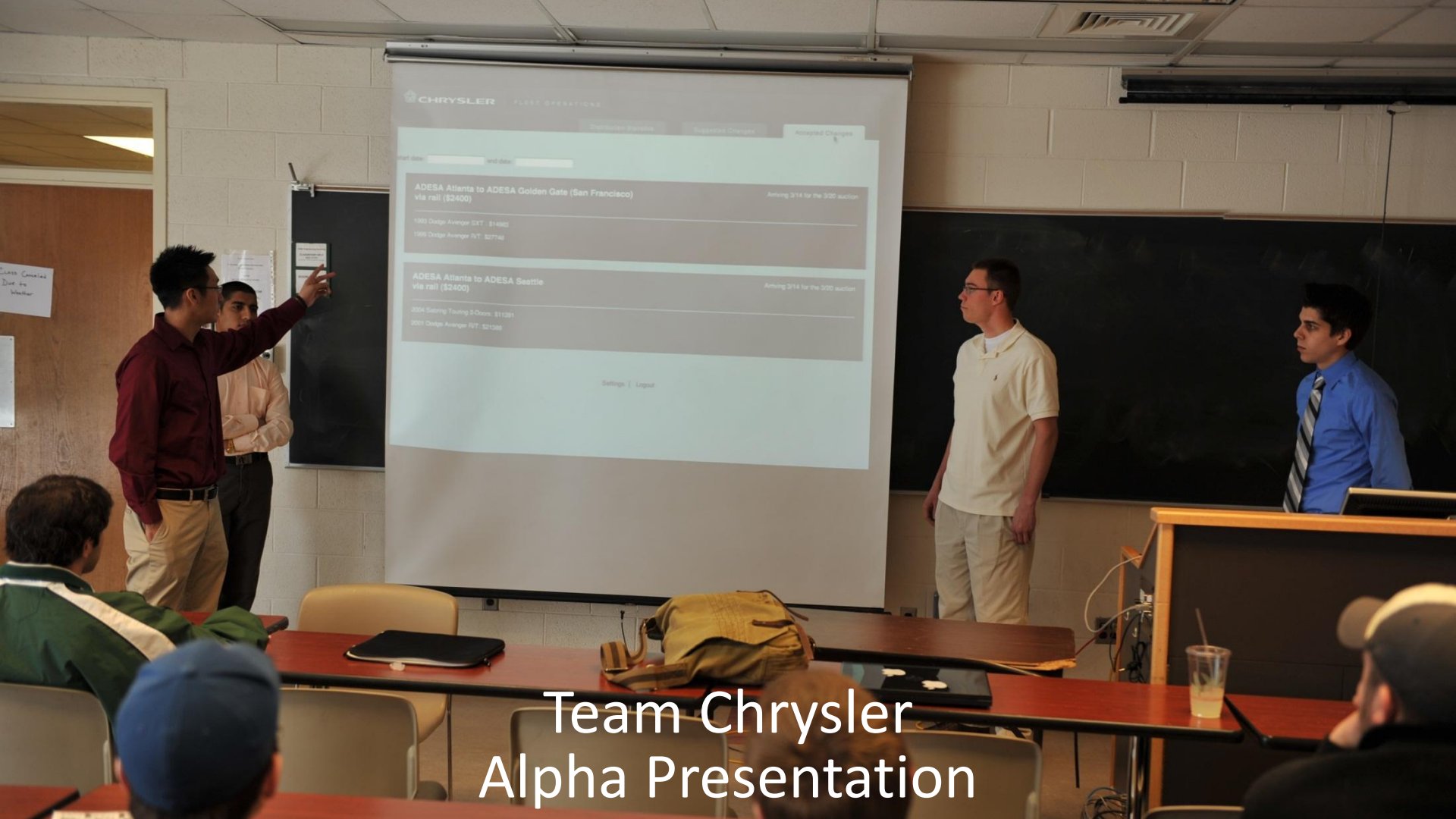
Team Chrysler
Alpha Presentation

Team Chrysler
Alpha Presentation

Suggested Changes



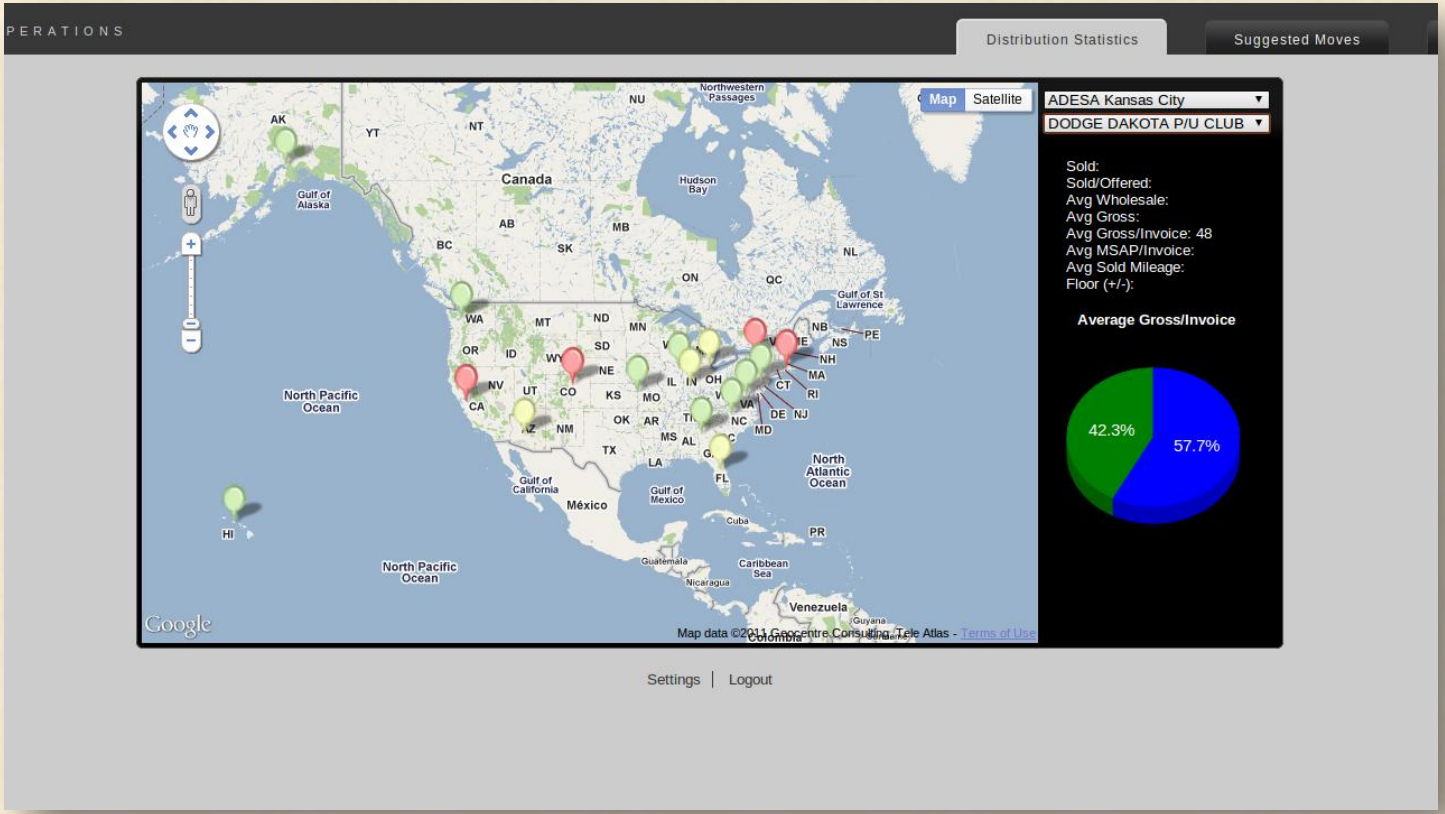
The Capstone Experience



Team Chrysler
Alpha Presentation

Team Chrysler
Beta Presentation

Current Distribution Statistics



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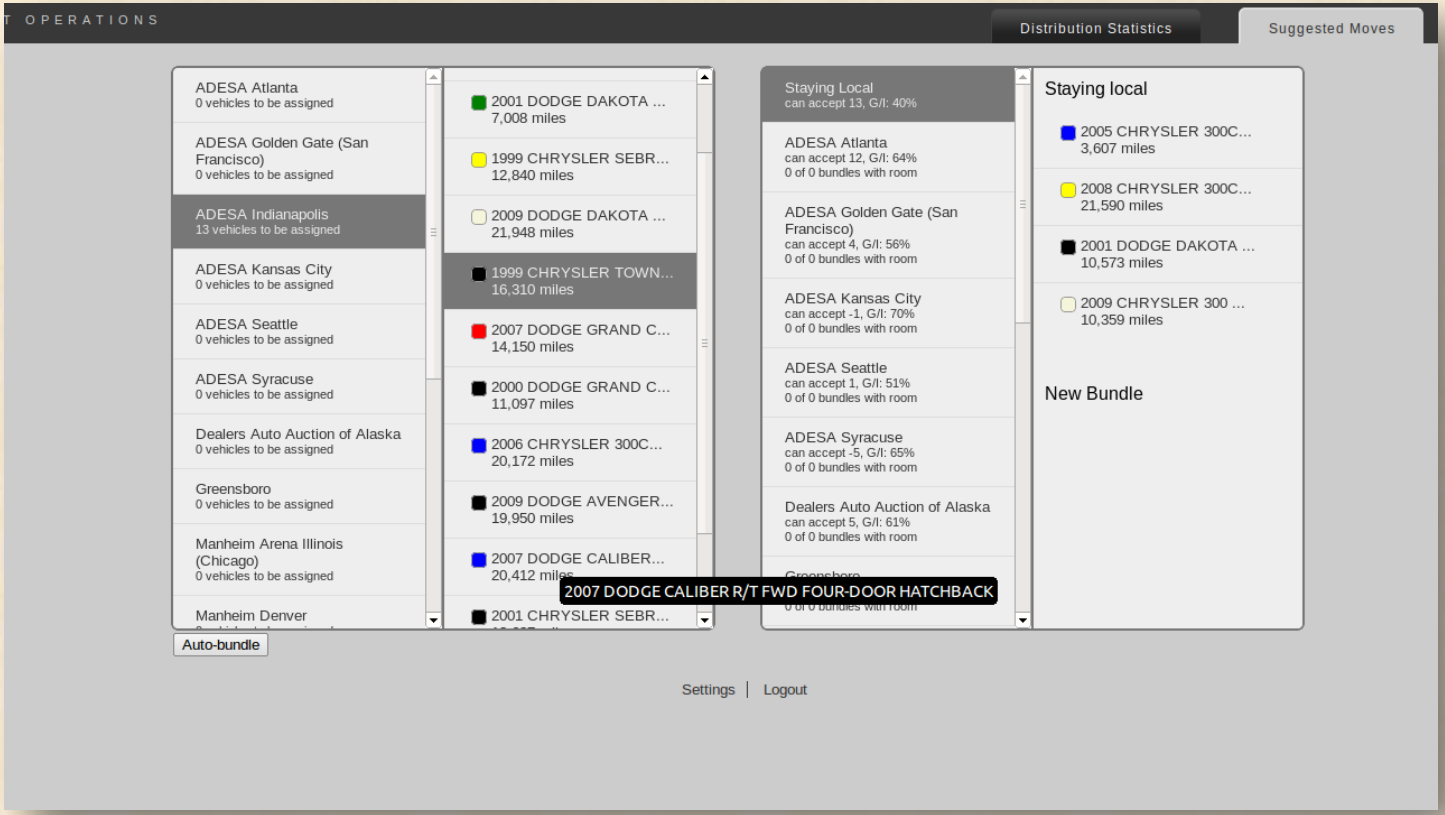
Team Chrysler
Beta Presentation

Team Chrysler
Beta Presentation

Suggested Transports/Bundles



The Capstone Experience

Team Chrysler
Beta Presentation

Team Chrysler
Design Day

MICHIGAN STATE UNIVERSITY

The Capstone Experience

Team Dow

Department of Computer Science and Engineering
Michigan State University
Spring 2011

From Students…
…to Professionals

DOW

http://www.dow.com/

The Dow Chemical Company

SEARCH

MYACCOUNT

DOW

PRODUCTS AND SERVICES | INVESTOR RELATIONS | OUR COMPANY | NEWS | SUSTAINABILITY | ENERGY | INNOVATION | CAREERS

Dow Education Video Entered in National Contest

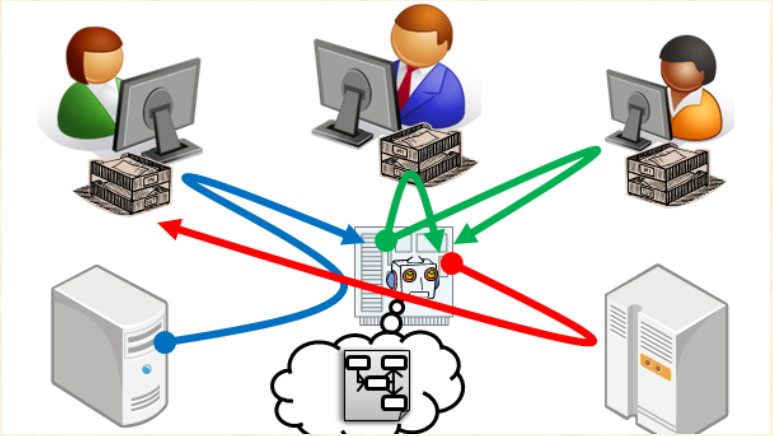
Dow Announces Third Quarter Earnings

The Human Element

Team Dow
Project Overview

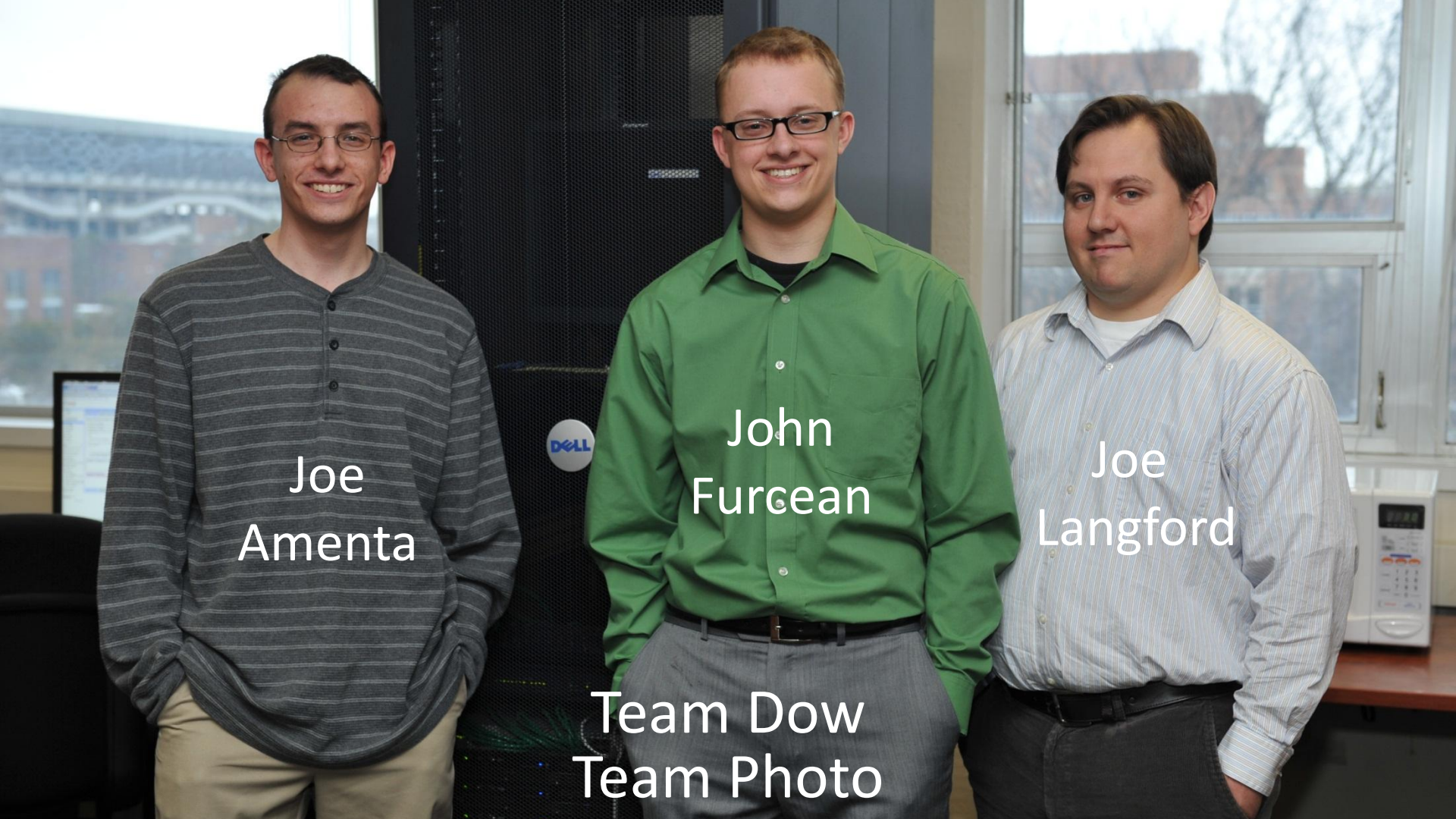
Business Approval System

- Business Workflow Approval
  - Sequence of Connected Steps
  - Used to Approve Business Requests
- Spending Delegation of Authority
  - Authorization to Spend Money
  - Based On
    - Requester
    - Sequence of Authorized Approvers
- Features
  - Administrative and User Interfaces
  - Device Agnostic
    - Web Browsers
    - Mobile Devices
  - Microsoft SharePoint Farm Solution
- Technologies
  - Microsoft SharePoint 2010
  - Web Application Programming
  - Blackberry (Java)
  - iPhone and iPad (Objective-C)

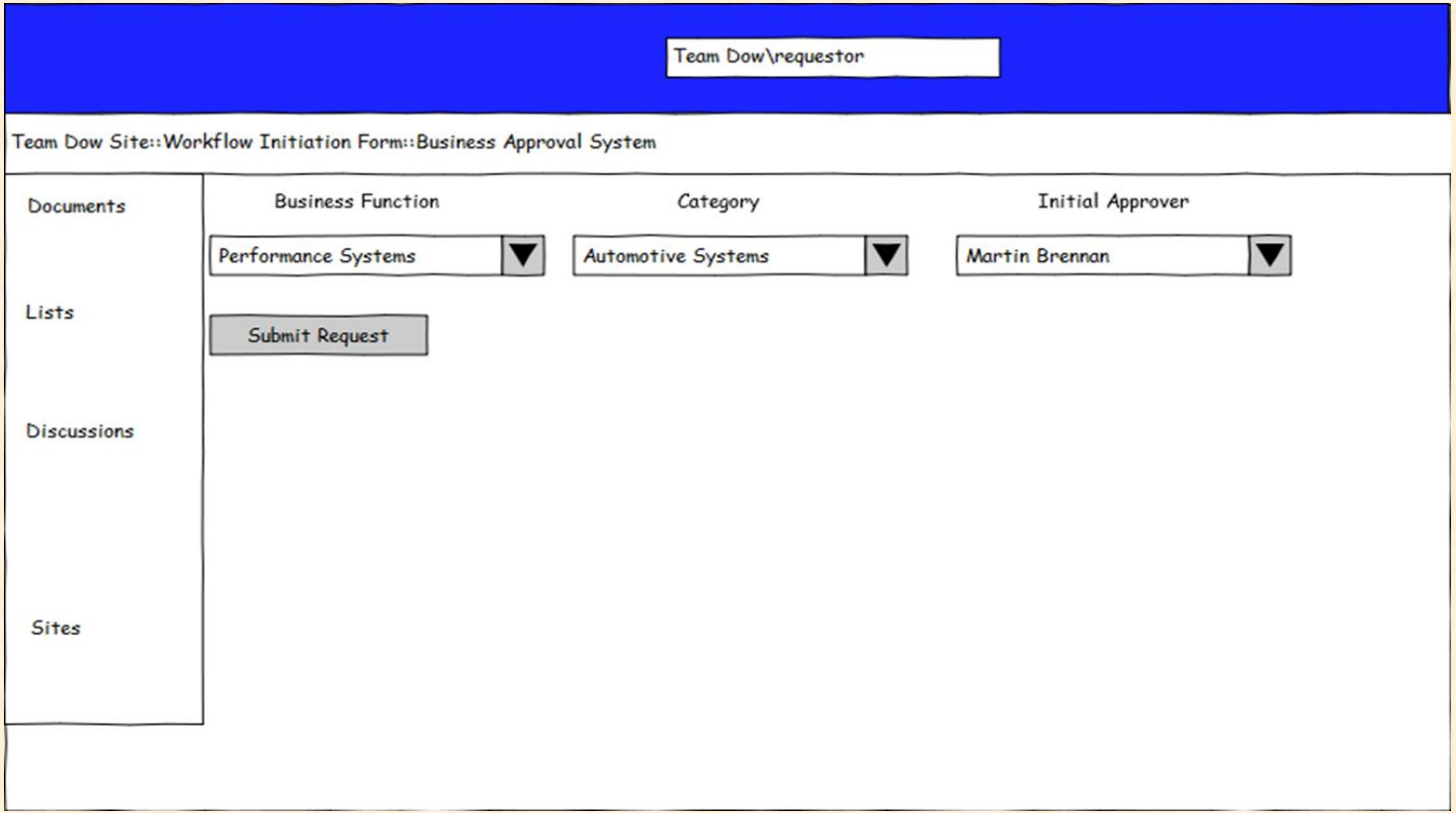


DOW®

The Capstone Experience


Joe
Amenta
John
Furcean
Joe
Langford
Team Dow
Team Photo

Team Dow
Screen Mockup

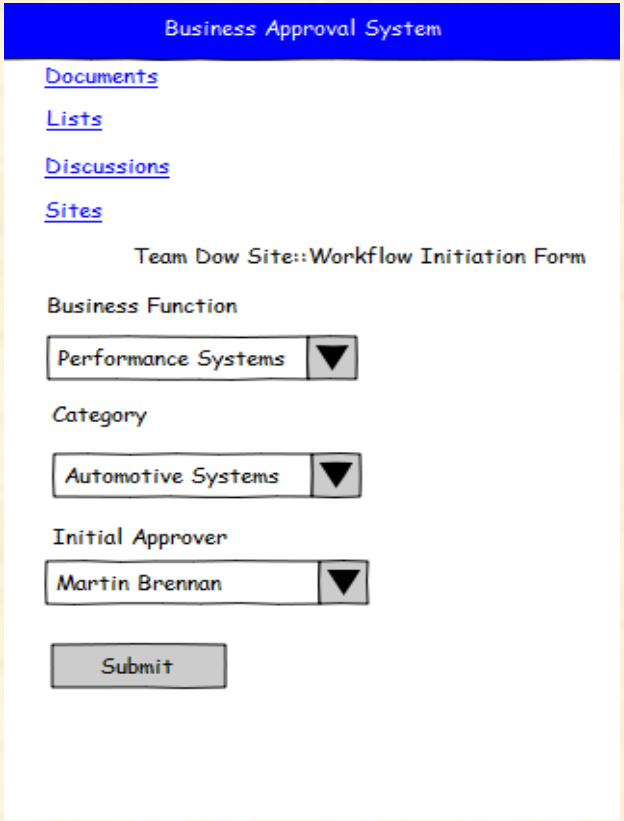


Team Dow
Project Plan Presentation

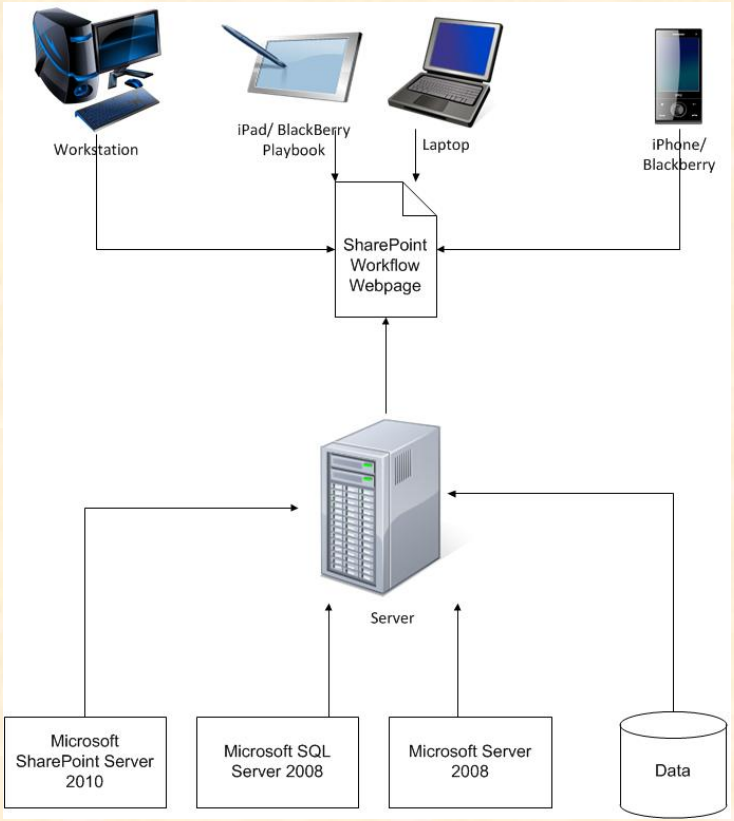
Team Dow

Screen Mockup

Mobile Device



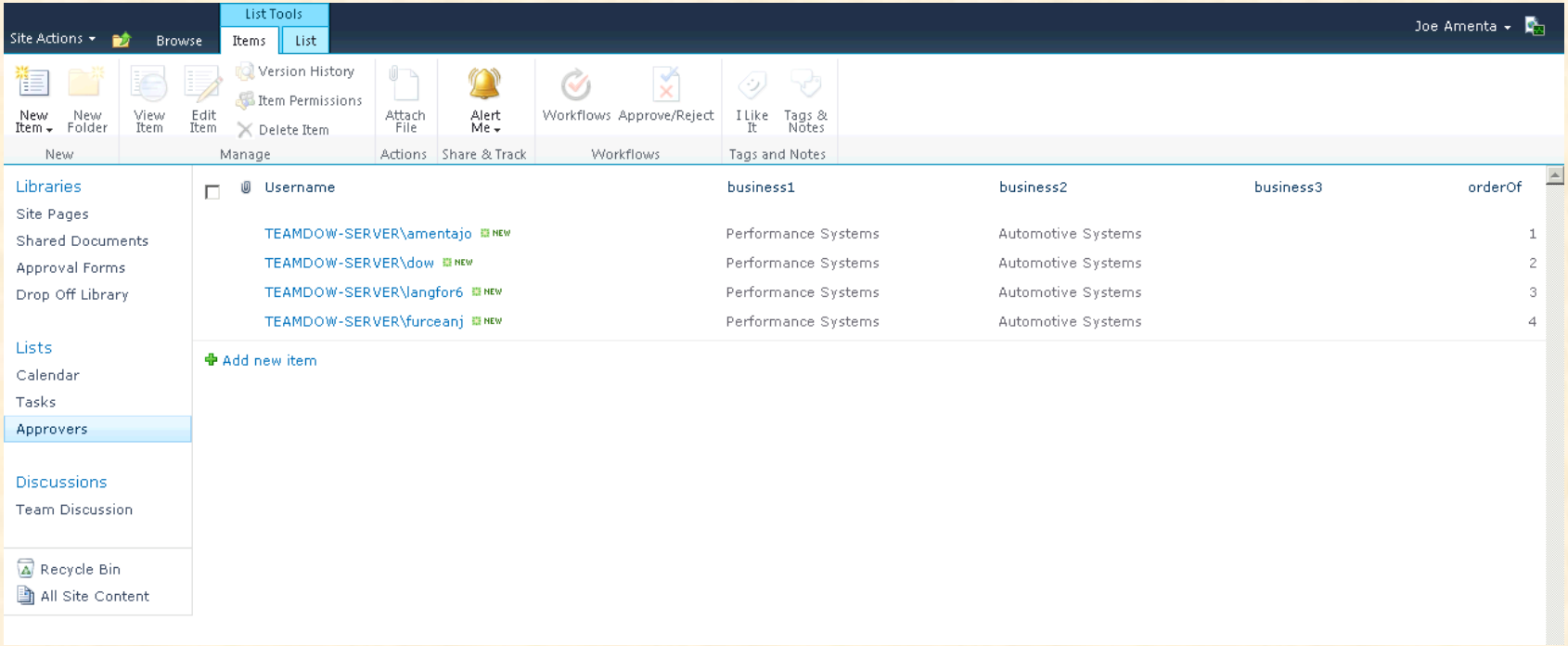
Team Dow
Architecture Diagram



Team Dow
Project Plan Presentation

Team Dow
Alpha Presentation

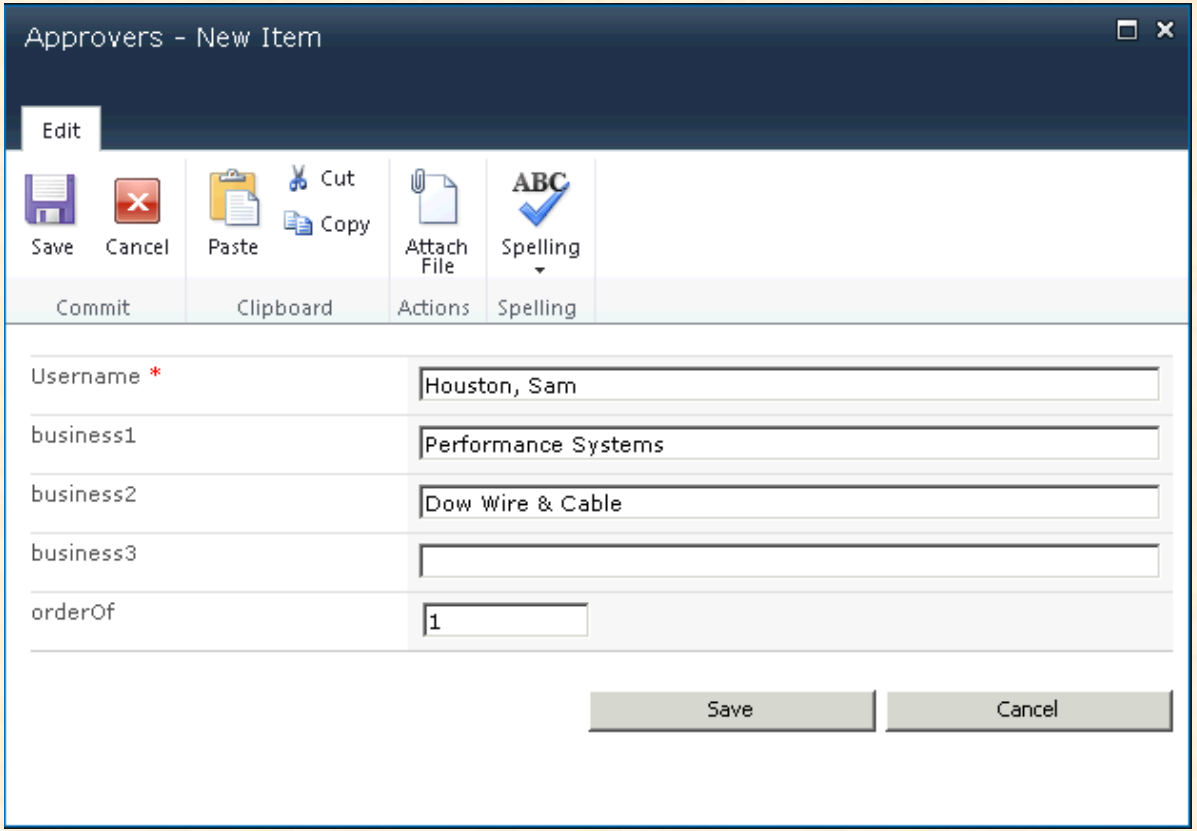
List of Approvers



Team Dow
Alpha Presentation

Team Dow
Alpha Presentation

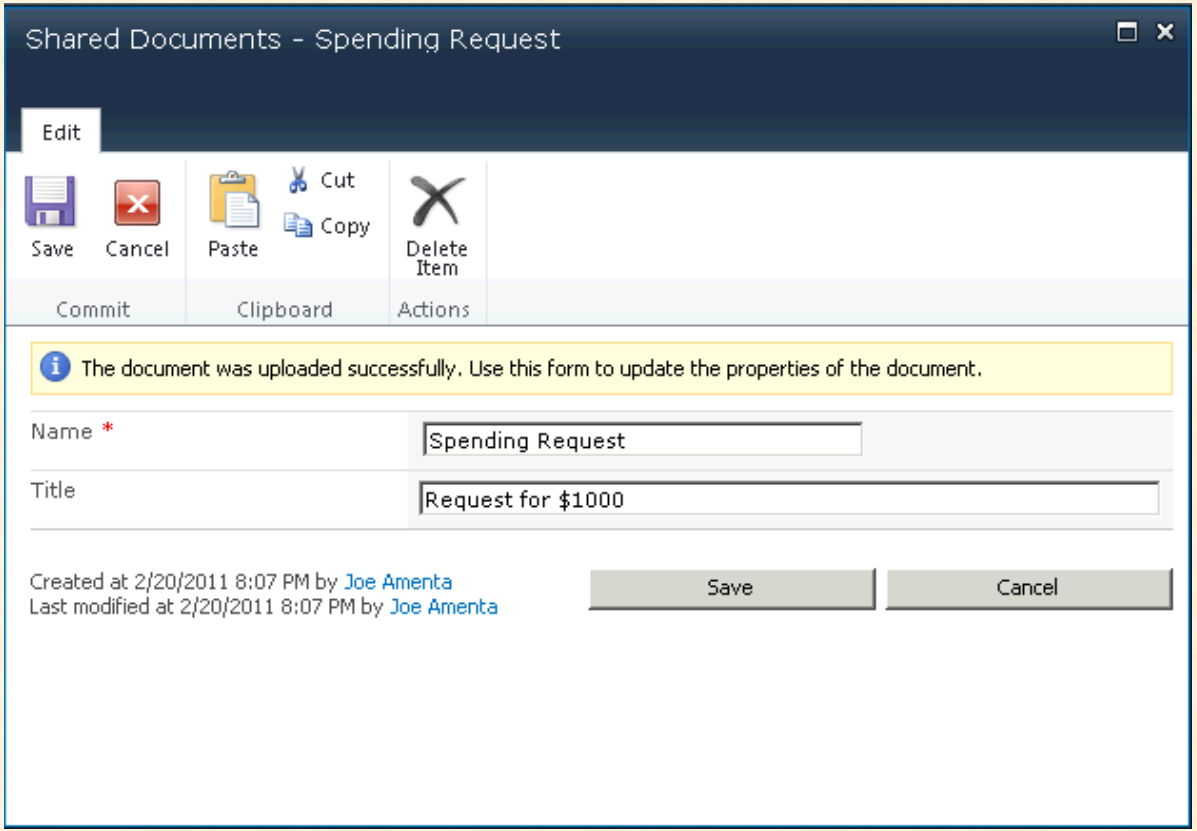
Adding Request Approver



Team Dow
Alpha Presentation

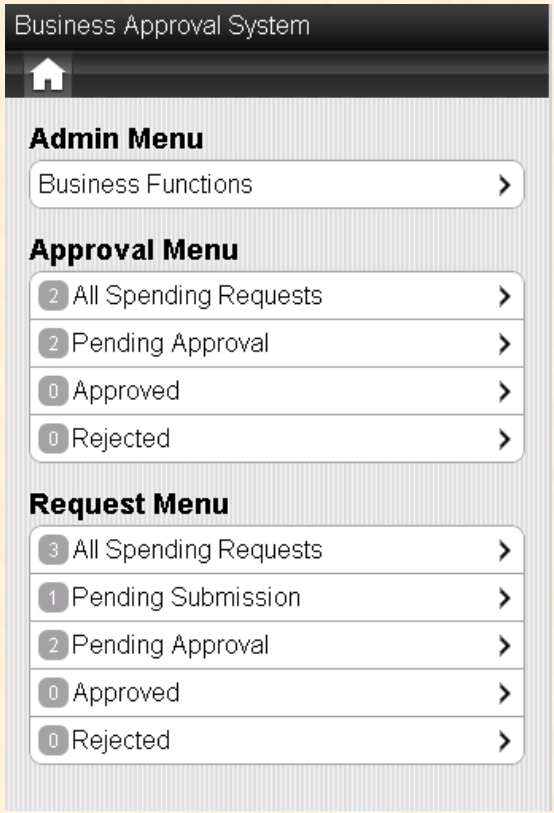
Team Dow
Alpha Presentation

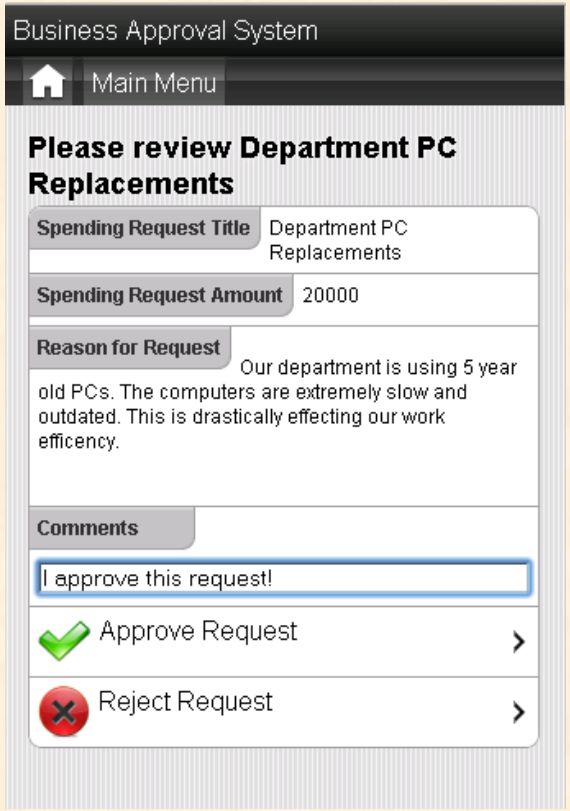
New Spending Request

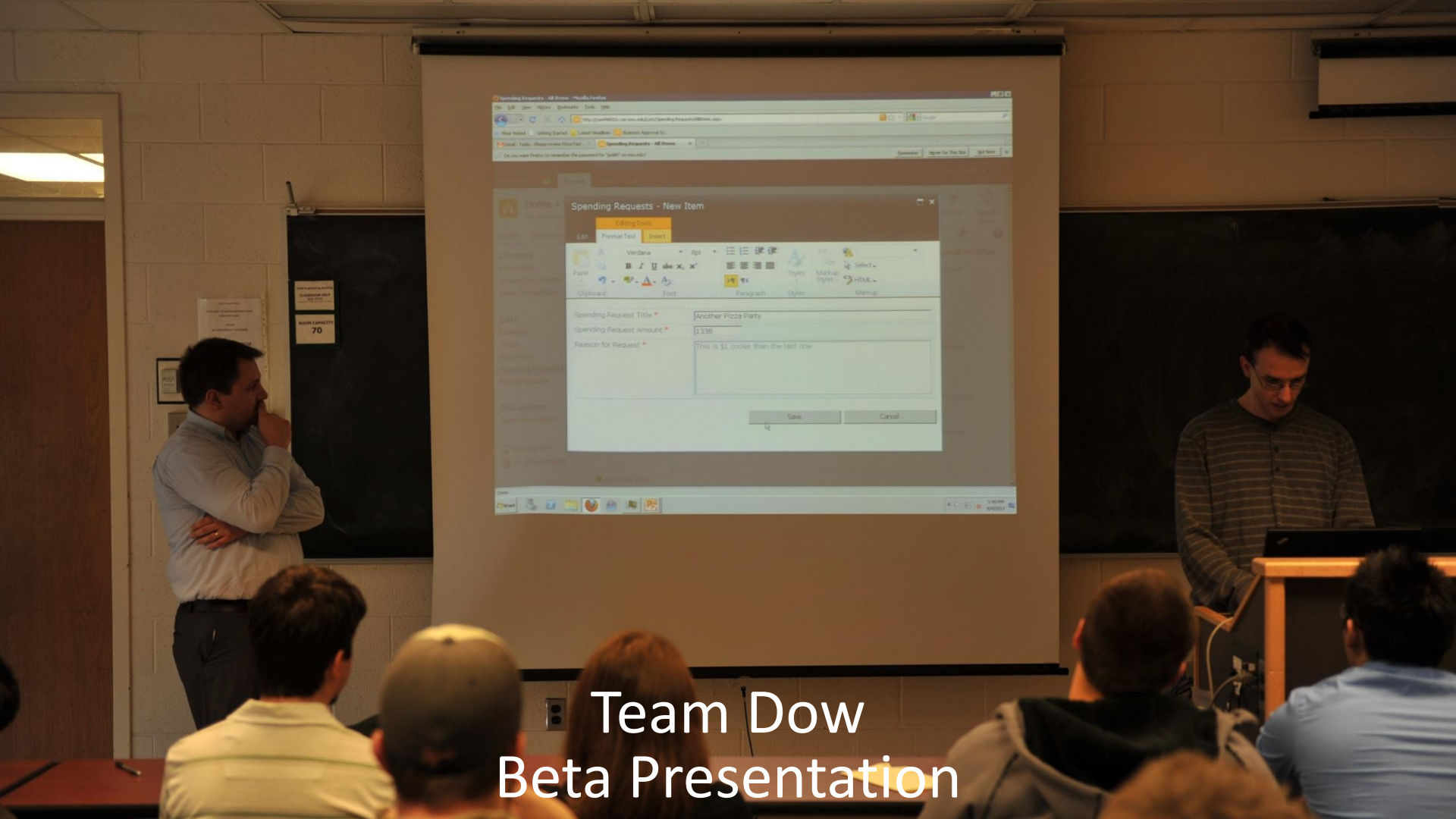


Team Dow
Beta Presentation

iPhone App



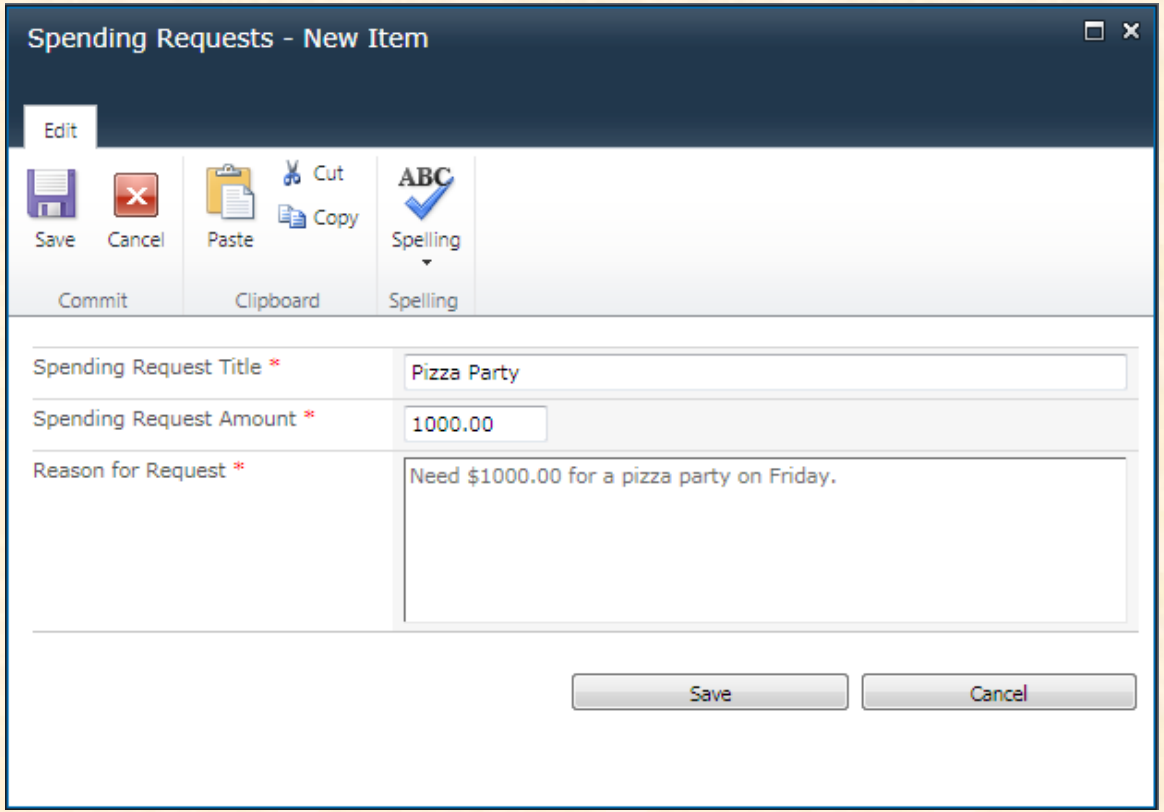


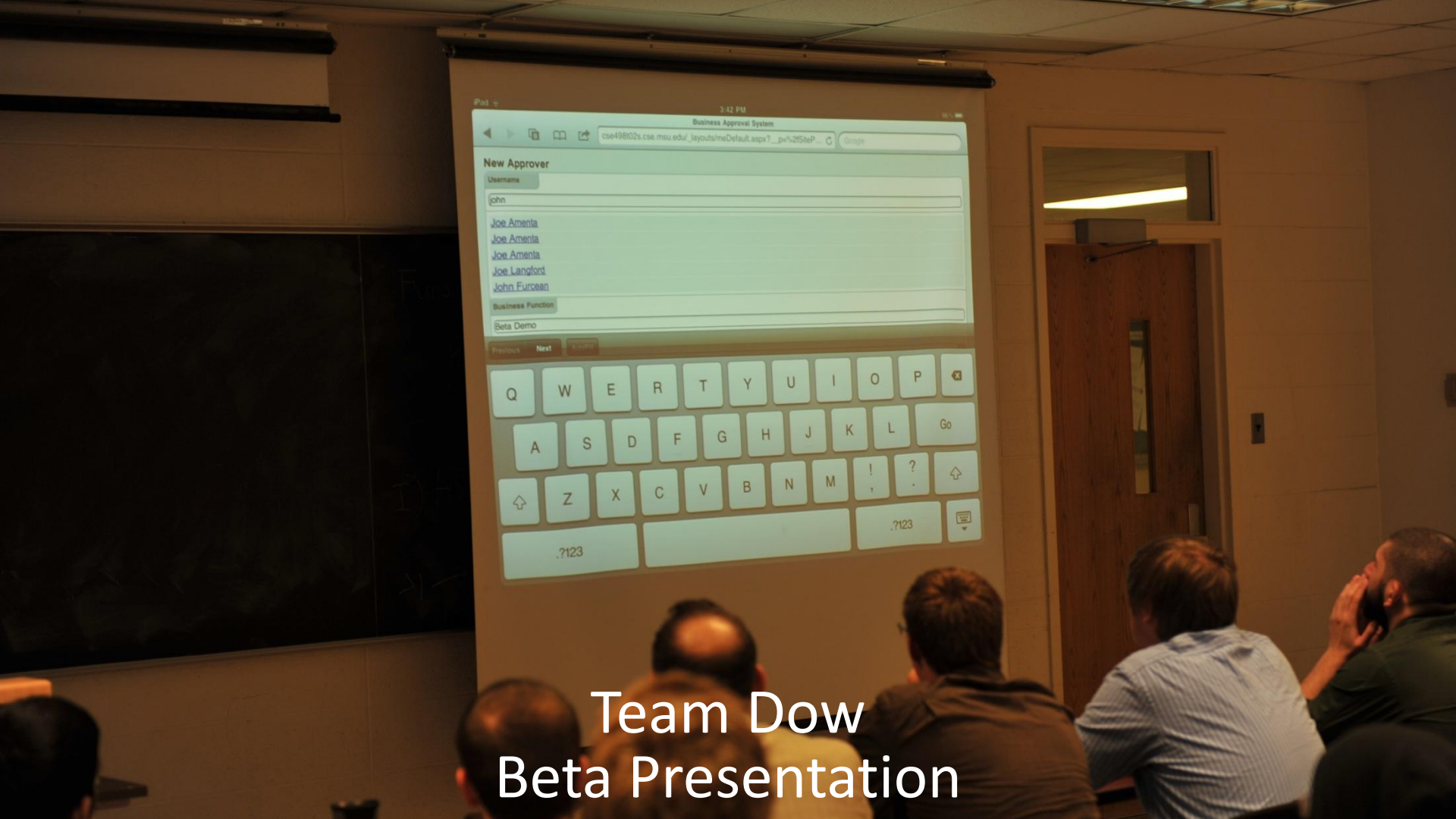


Team Dow
Beta Presentation

Team Dow
Beta Presentation

New Request





Team Dow
Beta Presentation

Team Dow
Beta Presentation

Team Dow
Design Day

MICHIGAN STATE UNIVERSITY

The Capstone Experience

Team GE Aviation

Department of Computer Science and Engineering
Michigan State University
Spring 2011

From Students…
…to Professionals

GE - Aviation - Windows Internet Explorer

http://www.geaviation.com/

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12,405,144* hours

The GE90 reaches 10 million hours of flight

★ Estimated based on fleet averages

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Our Services
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Sign-In
-- Sign In -- GO

GEnx-2B First Engine to Test

GE's GEnx-2B engine for the new Boeing 747-8 airplane achieves 70,000 Lbs. takeoff thrust in first test.

The right engine. Right now.

Explore program milestones, specifications, downloads and more for GE's next

GE Stock
Dec 29, 2009 at 16:00 ET 15.44 +0.10

OnPoint℠

Interactive

Team GE Aviation
Project Overview

MSU Next Generation Flight Deck

- Pilot Tasks
  - Aviate
  - Navigate
  - Communicate
  - Manage Systems
- MSU Capstone Flight Deck, V1
  - Integrate Previous Capstone Projects
  - Add New Features and Functionality
  - Integrate with X-Plane
- Aviation Use Case
  - Real Life
  - Demonstrate Improved
    - Efficiency
    - Safety
- Technologies
  - X-Plane
  - Previous Capstone Projects
    - Synthetic Vision Display, Fall 2009
    - Lateral Map Display, Spring 2010
    - Super Synoptics, Fall 2010
  - Open GL, GL Studio, GLUT, GLEW

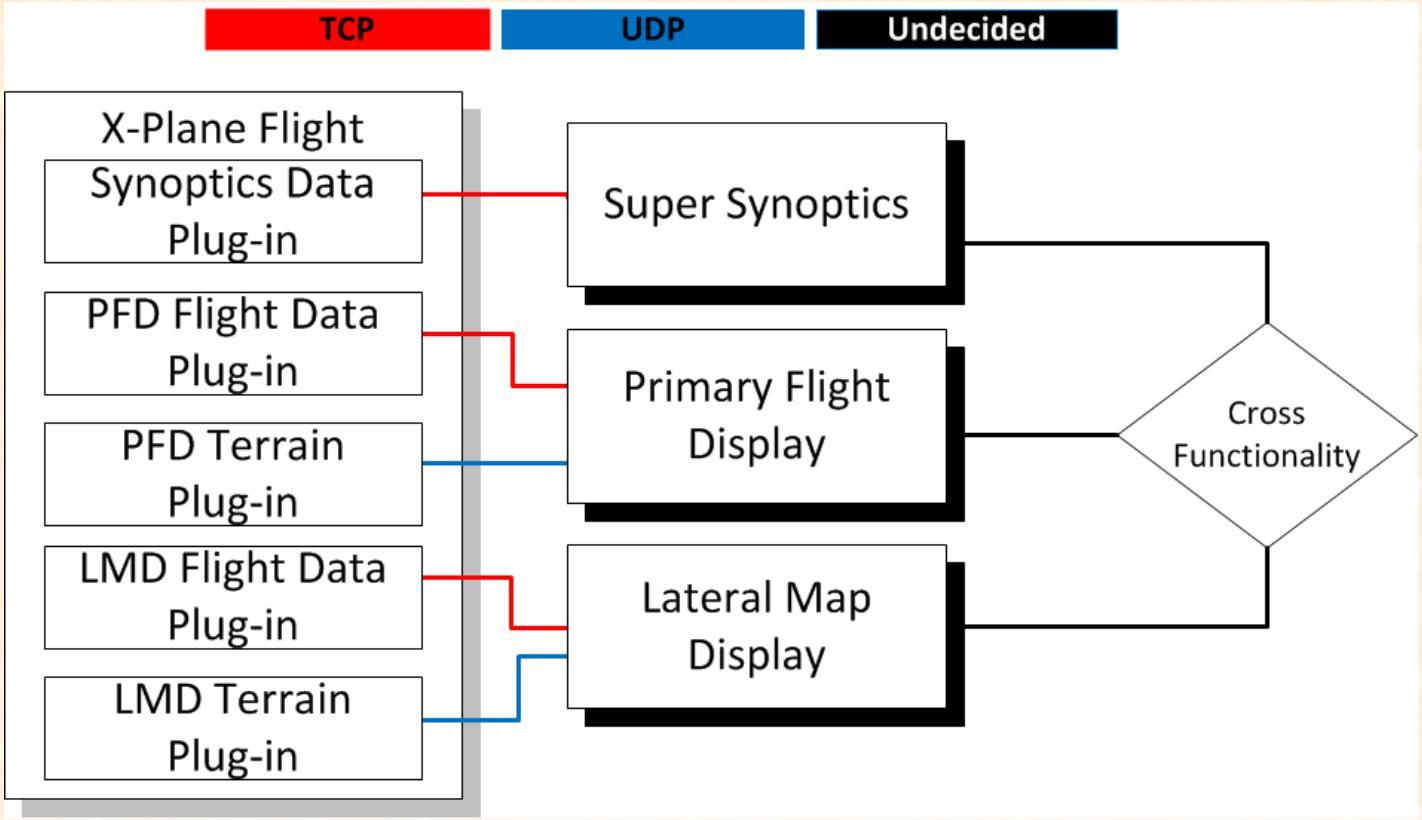
The Capstone Experience

Team GE Aviation
Team Photo

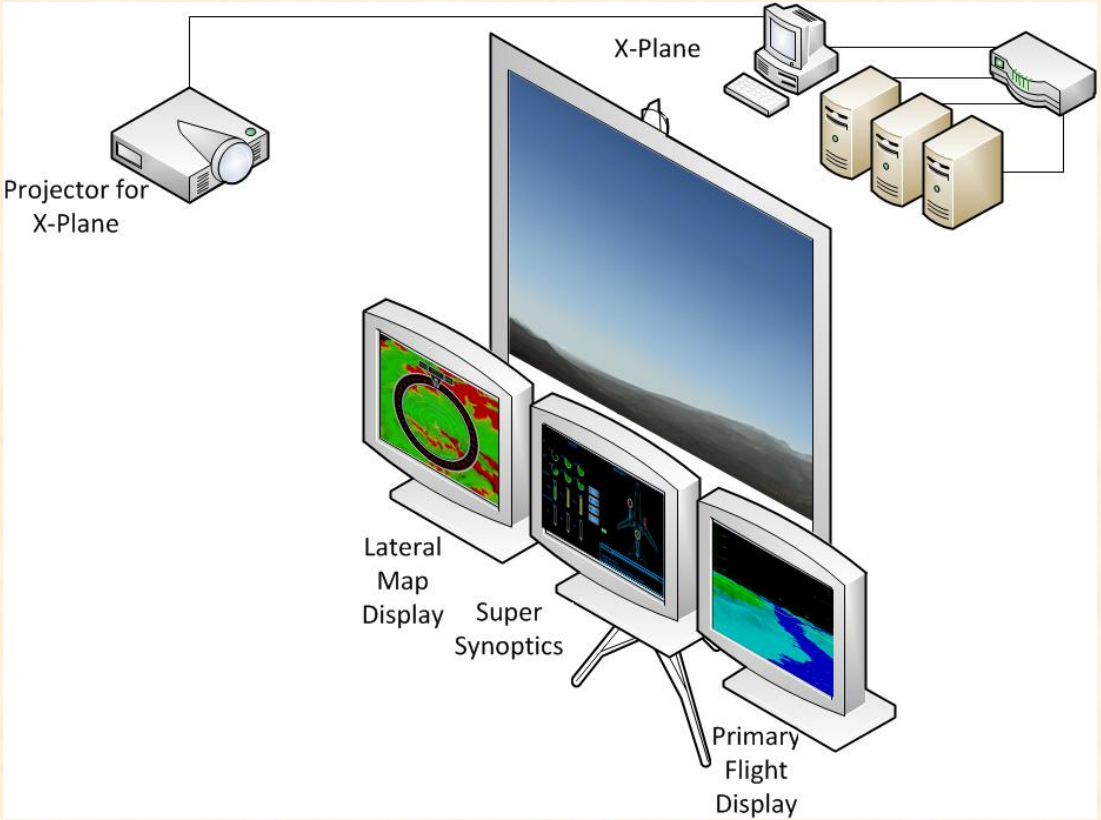
Team GE Aviation
Screen Mockup

Team GE Aviation
Project Plan Presentation

Team GE Aviation
Architecture Diagram



Team GE Aviation
Hardware Setup

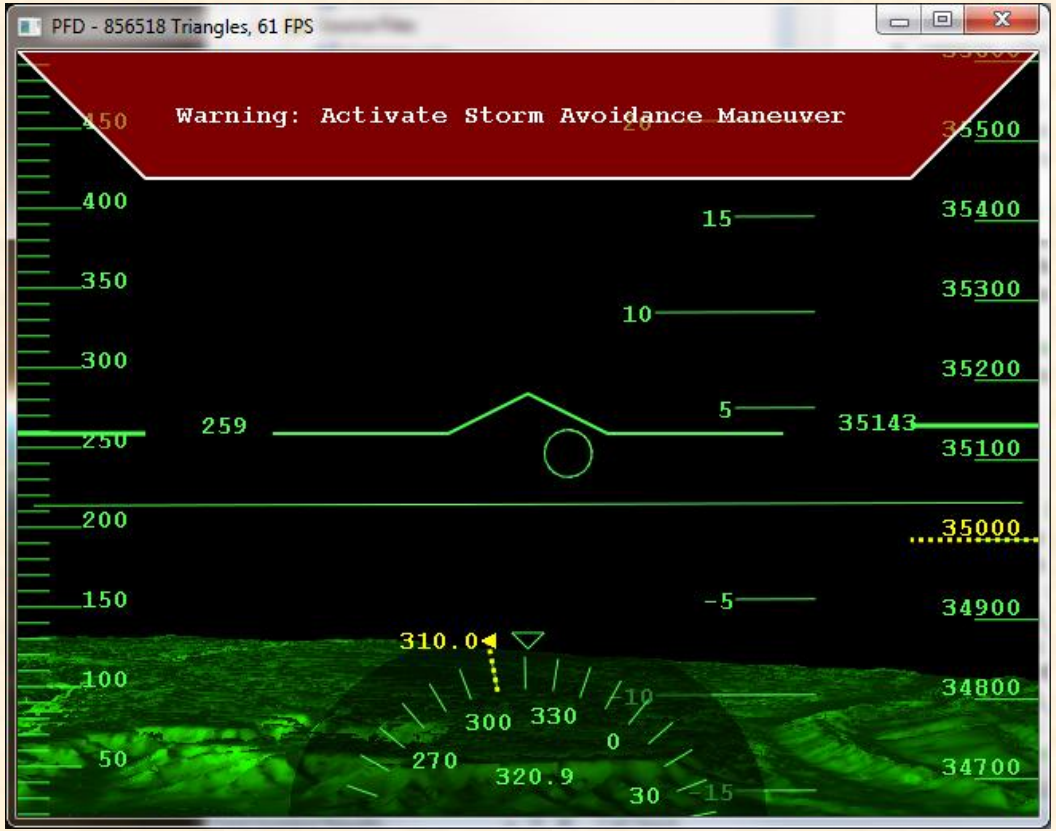


Team GE Aviation
Project Plan Presentation

Team GE Aviation

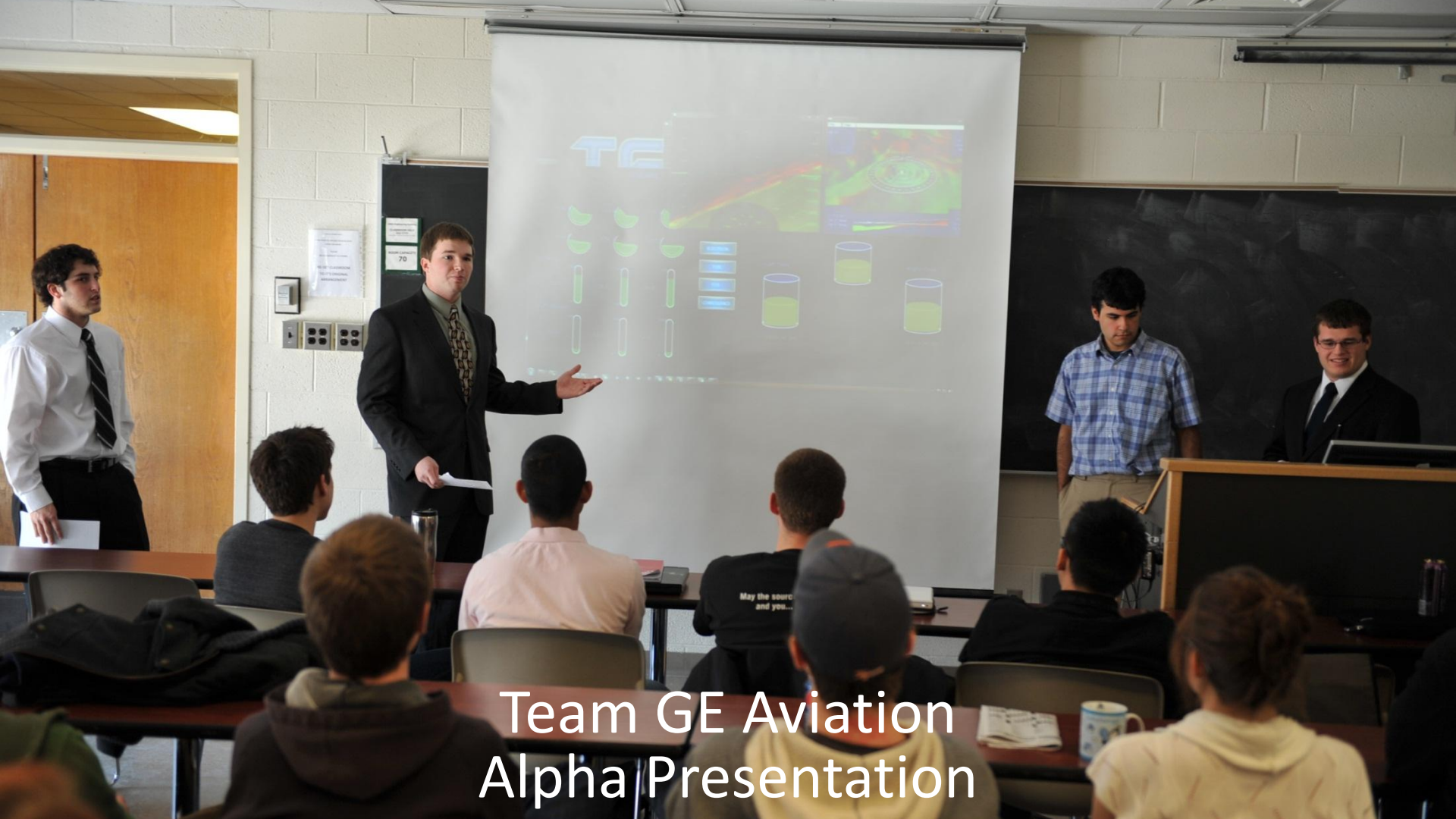
Alpha Presentation

Weather Avoidance (PFD)



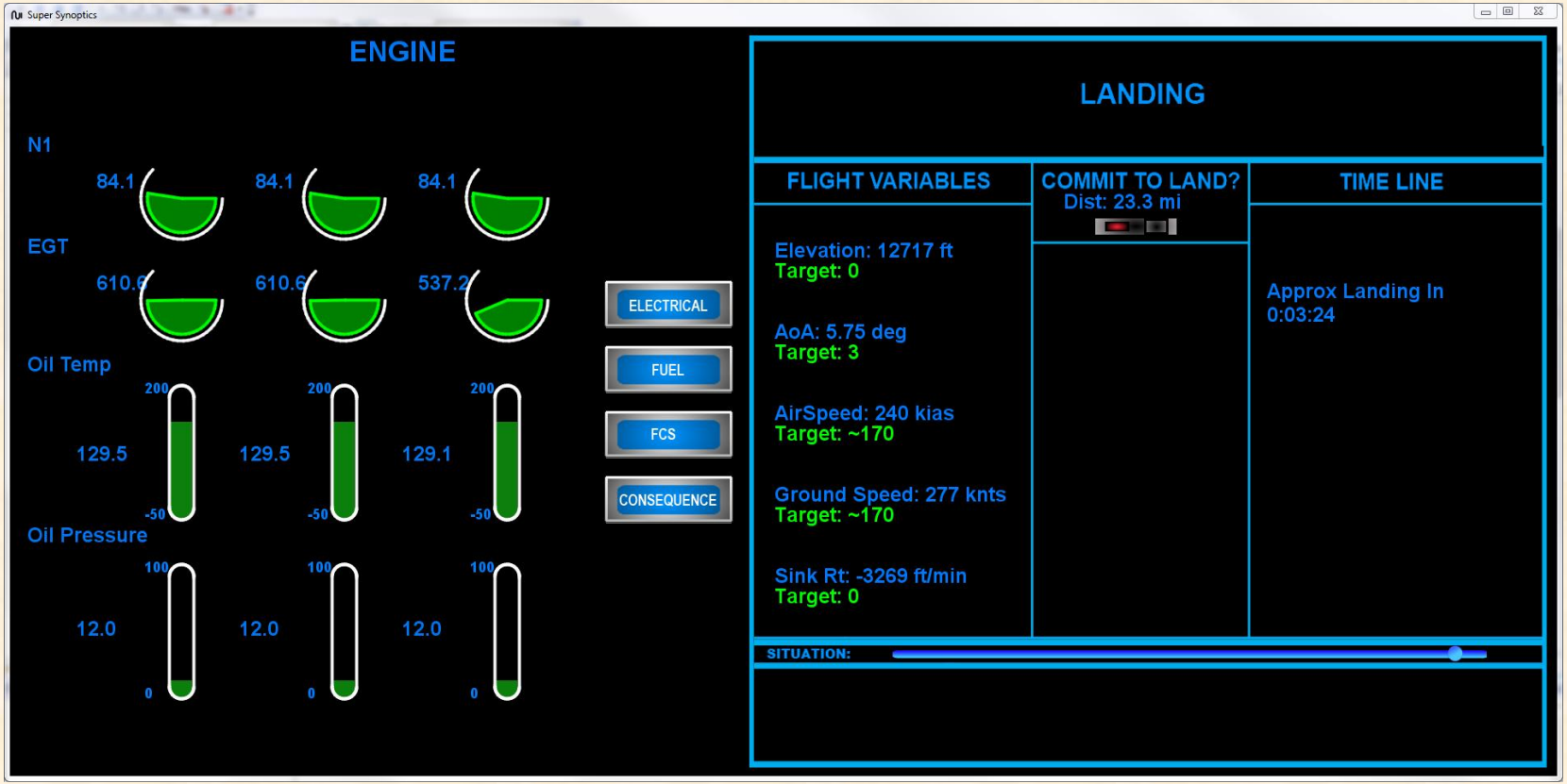
Team GE Aviation
Alpha Presentation

Weather Avoidance (LMD)


Team GE Aviation
Alpha Presentation

Team GE Aviation
Alpha Presentation

Super Synoptics

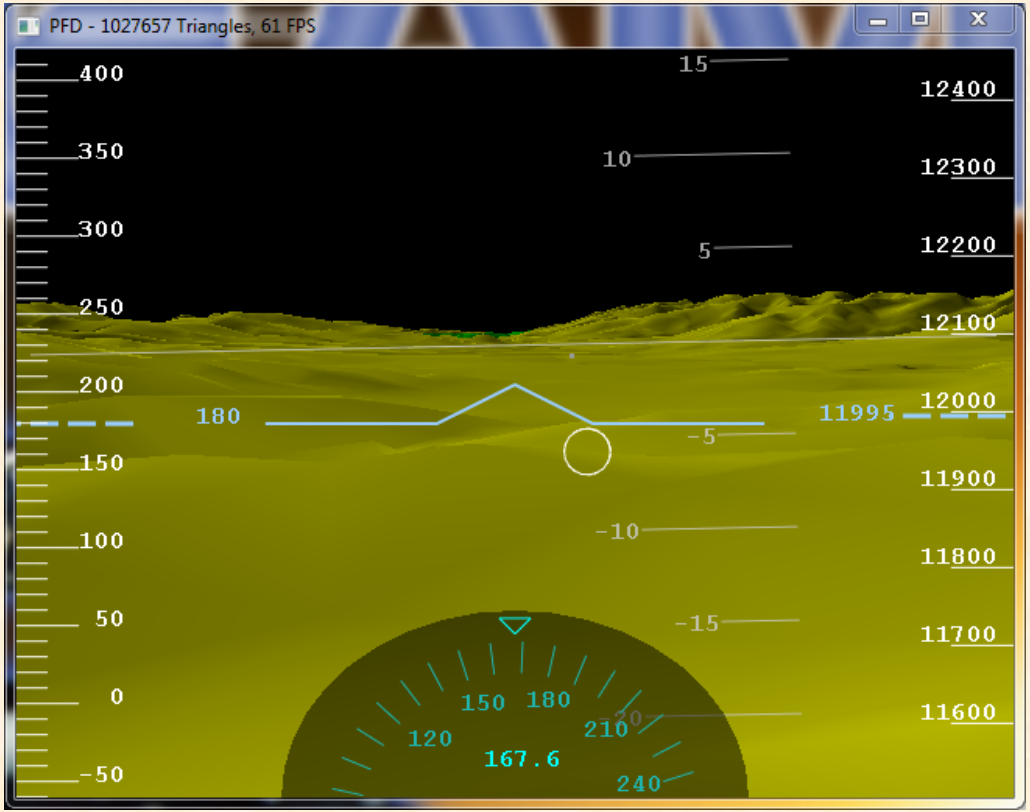


Team GE Aviation
Alpha Presentation

Team GE Aviation

Beta Presentation

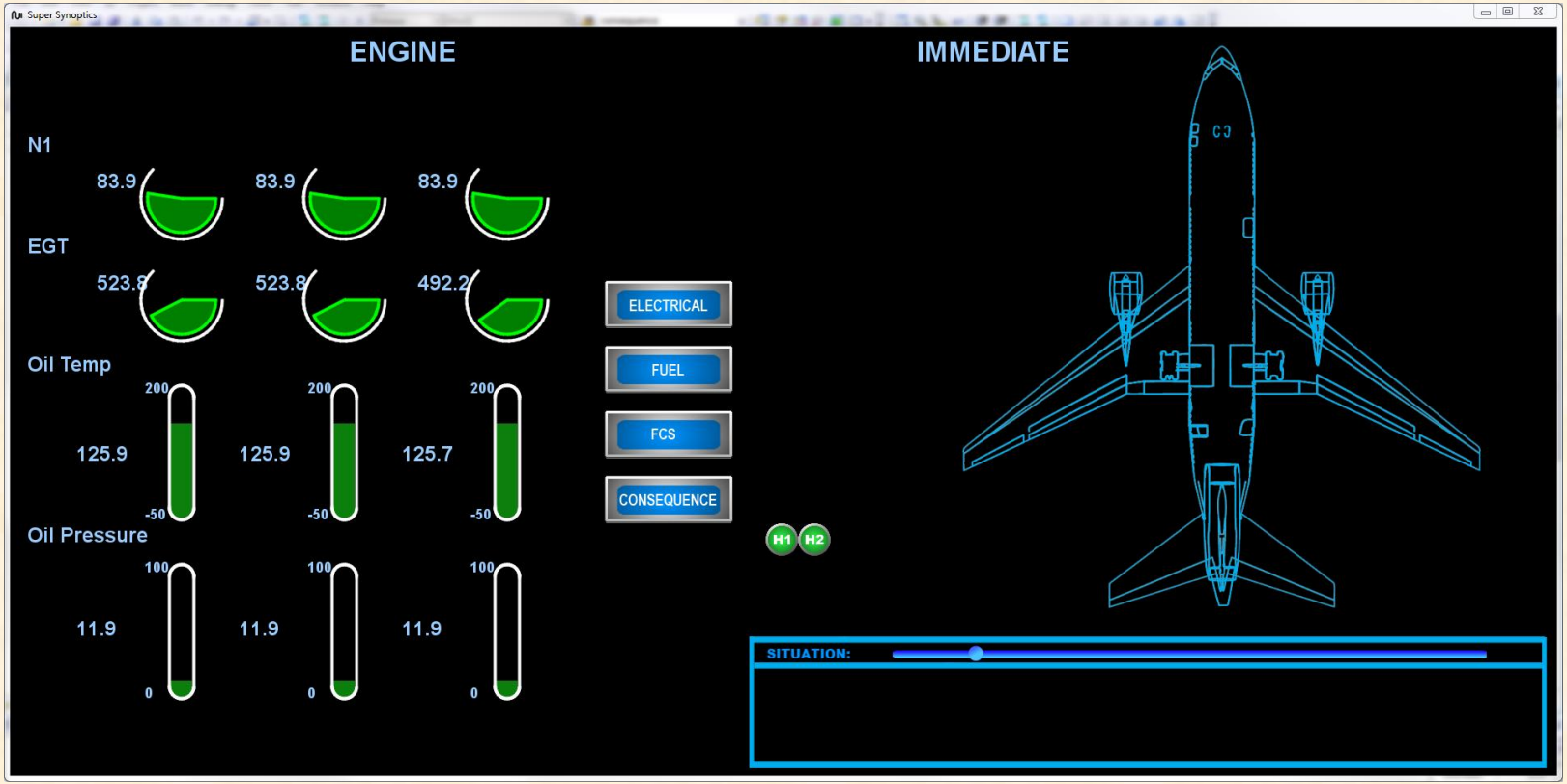
Primary Flight Display



Team GE Aviation
Beta Presentation

Team GE Aviation
Beta Presentation

Super Synoptics



The Capstone Experience

Team GE Aviation
Beta Presentation

Team GE Aviation
Design Day

MICHIGAN STATE UNIVERSITY

The Capstone Experience

Team Medtronic

Department of Computer Science and Engineering
Michigan State University
Spring 2011

From Students…
…to Professionals

Medtronic

Medtronic, the world leader in medical technology and pioneering therapies - Windows Internet Explorer

http://www.medtronic.com/

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Medtronic

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Choose a health condition or therapy to learn how we may help you feel better

Medtronic Worldwide

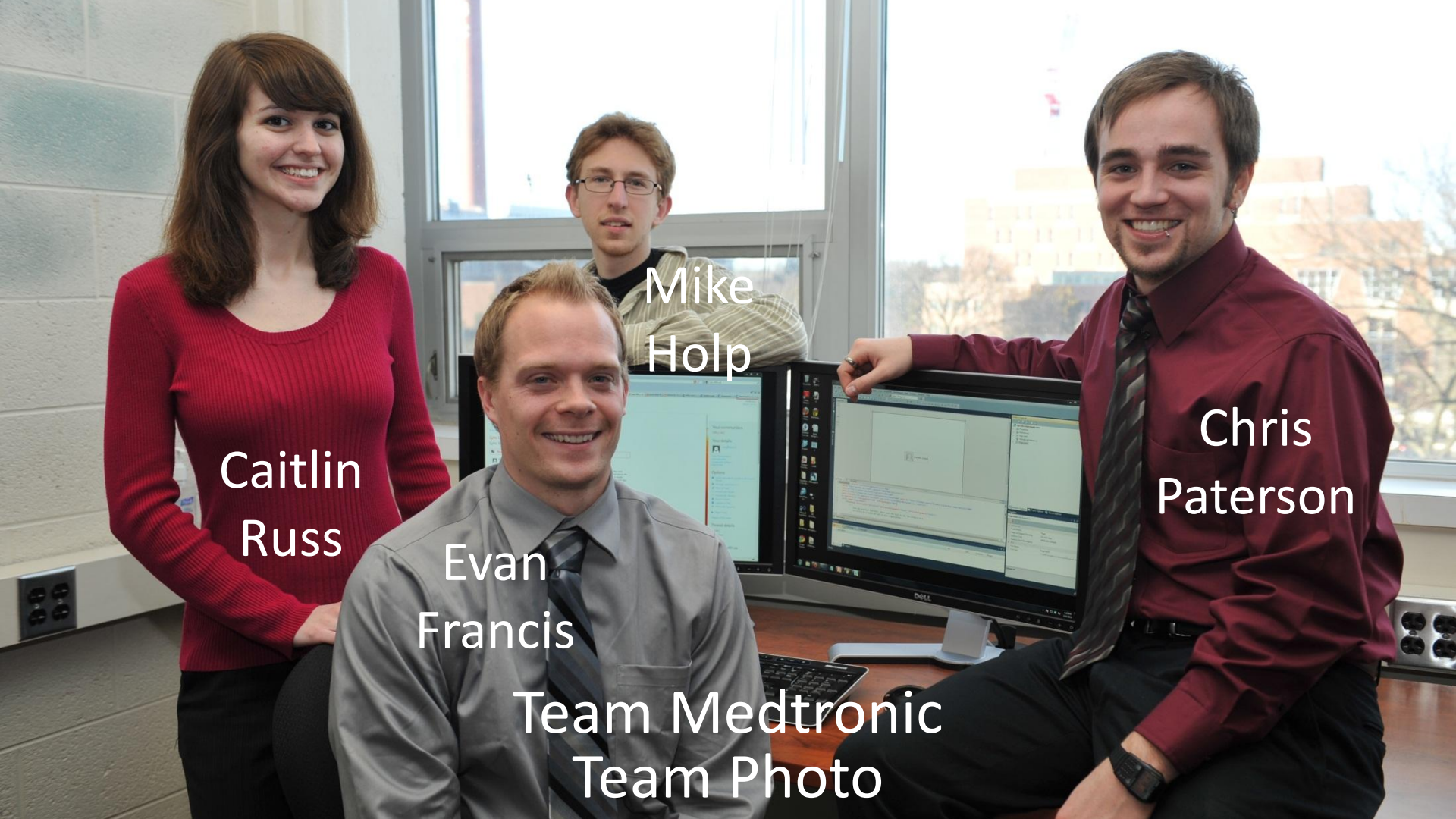
Team Medtronic
Project Overview

Cloud-Based Athletics Operations Center

- University Athletics Information Portal
  - Resources
    - People (Coaches, Athletes, Managers, Trainers, Etc.)
    - Facilities (Practice, Training, Meeting, Etc.)
    - Etc.
  - Information
    - Schedules (People, Facilities, Teams, Etc.)
    - Athlete Health Records
    - Videos (Scouting, Training, Etc.)
    - News Feeds
    - Weather and Travel Conditions
    - Etc.
- User Features
  - People Presence
  - Calendaring, Emailing, Instant Messaging
  - Video Conferencing
  - Etc.
- Technologies
  - ASP.net, C#.net
  - Microsoft Office 365 Cloud Services
  - Microsoft Azure Cloud Services
  - Microsoft HealthVault

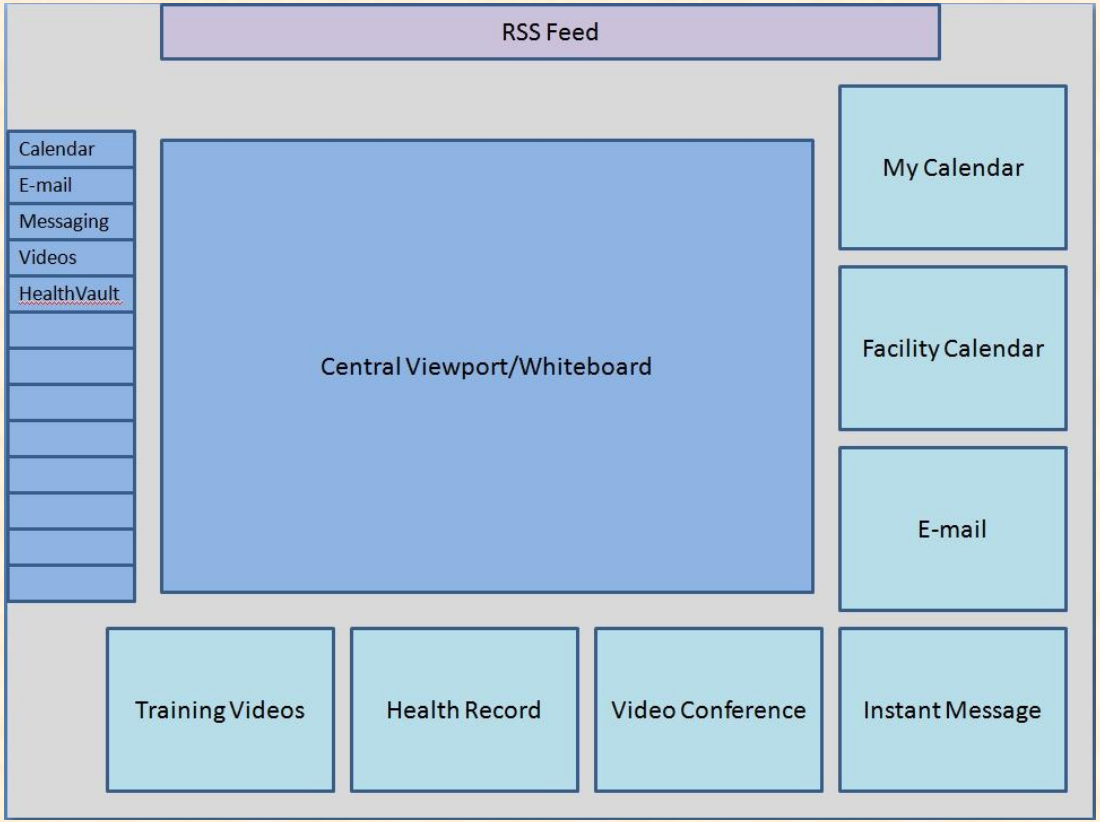
Medtronic

The Capstone Experience



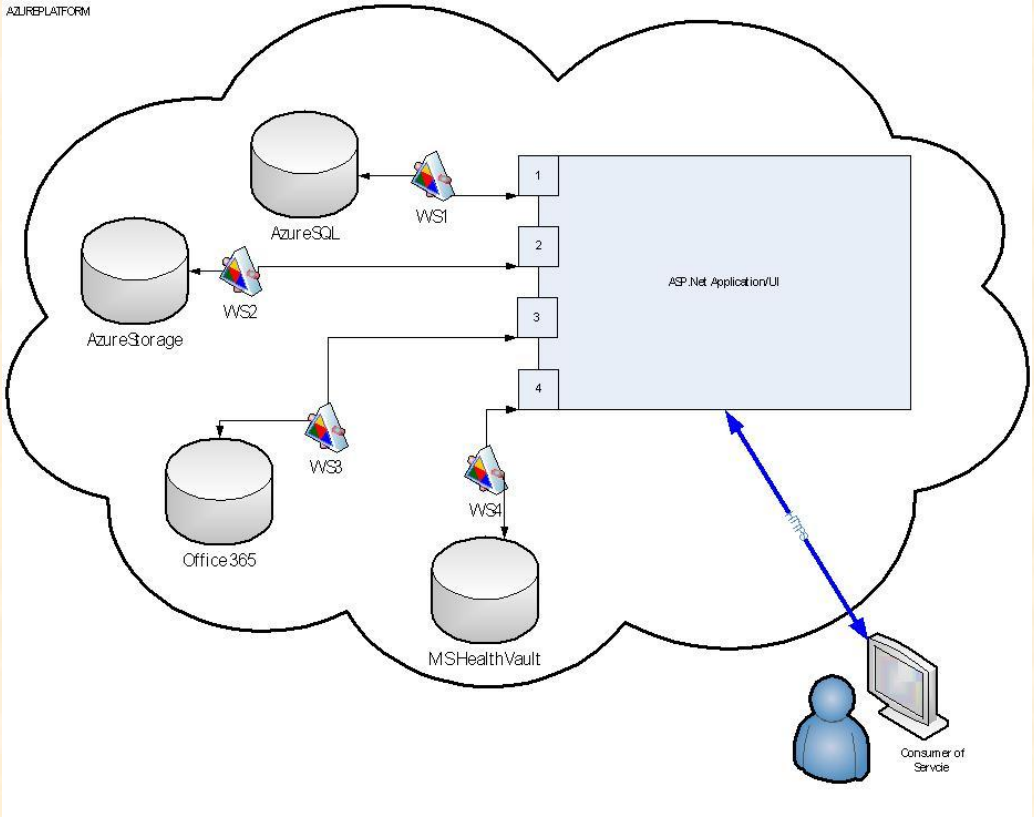
Team Medtronic Team Photo

Team Medtronic
Screen Mockup



Team Medtronic
Project Plan Presentation

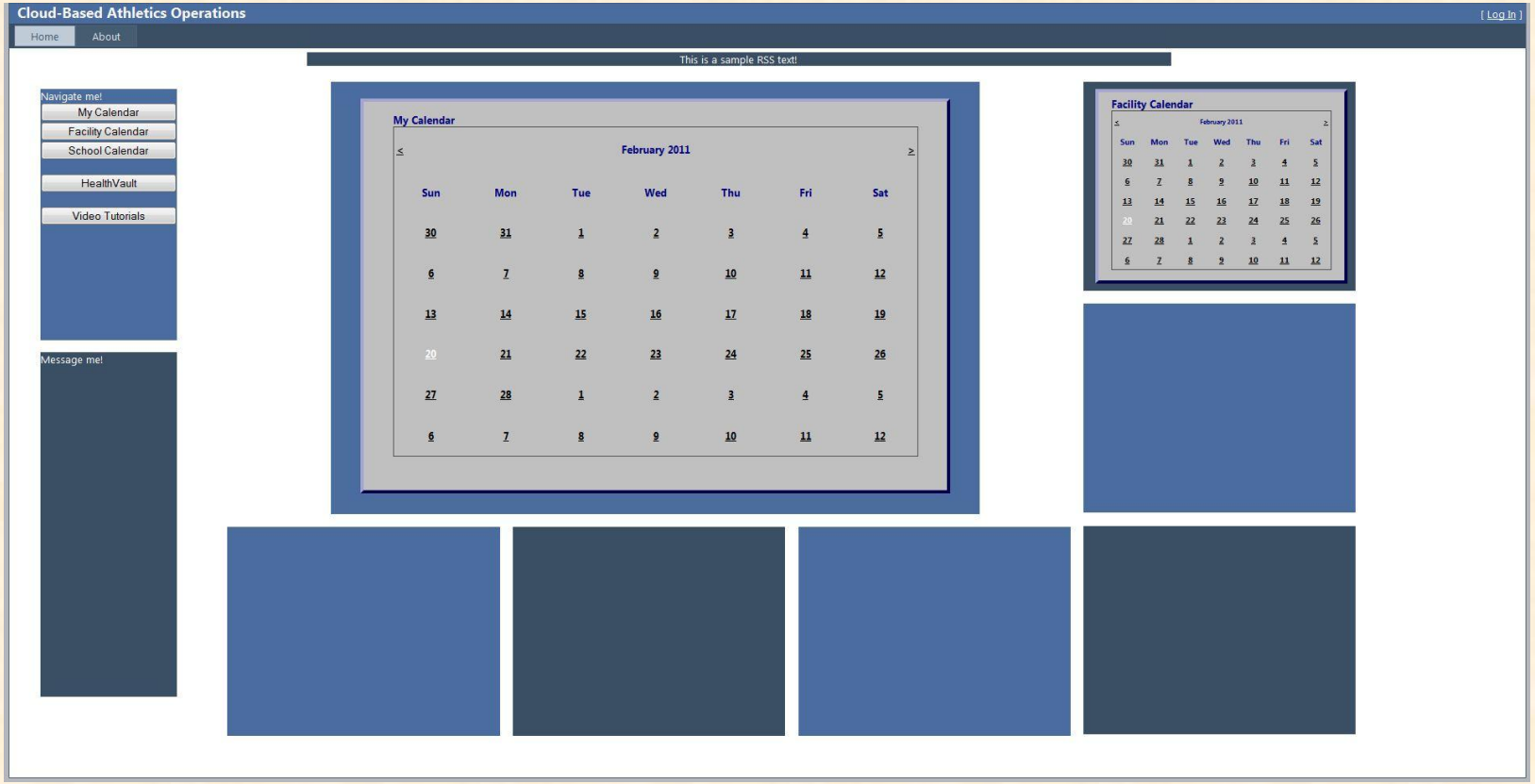
Team Medtronic
Architecture Diagram



Team Medtronic
Project Plan Presentation

Team Medtronic
Alpha Presentation

Personal Calendar

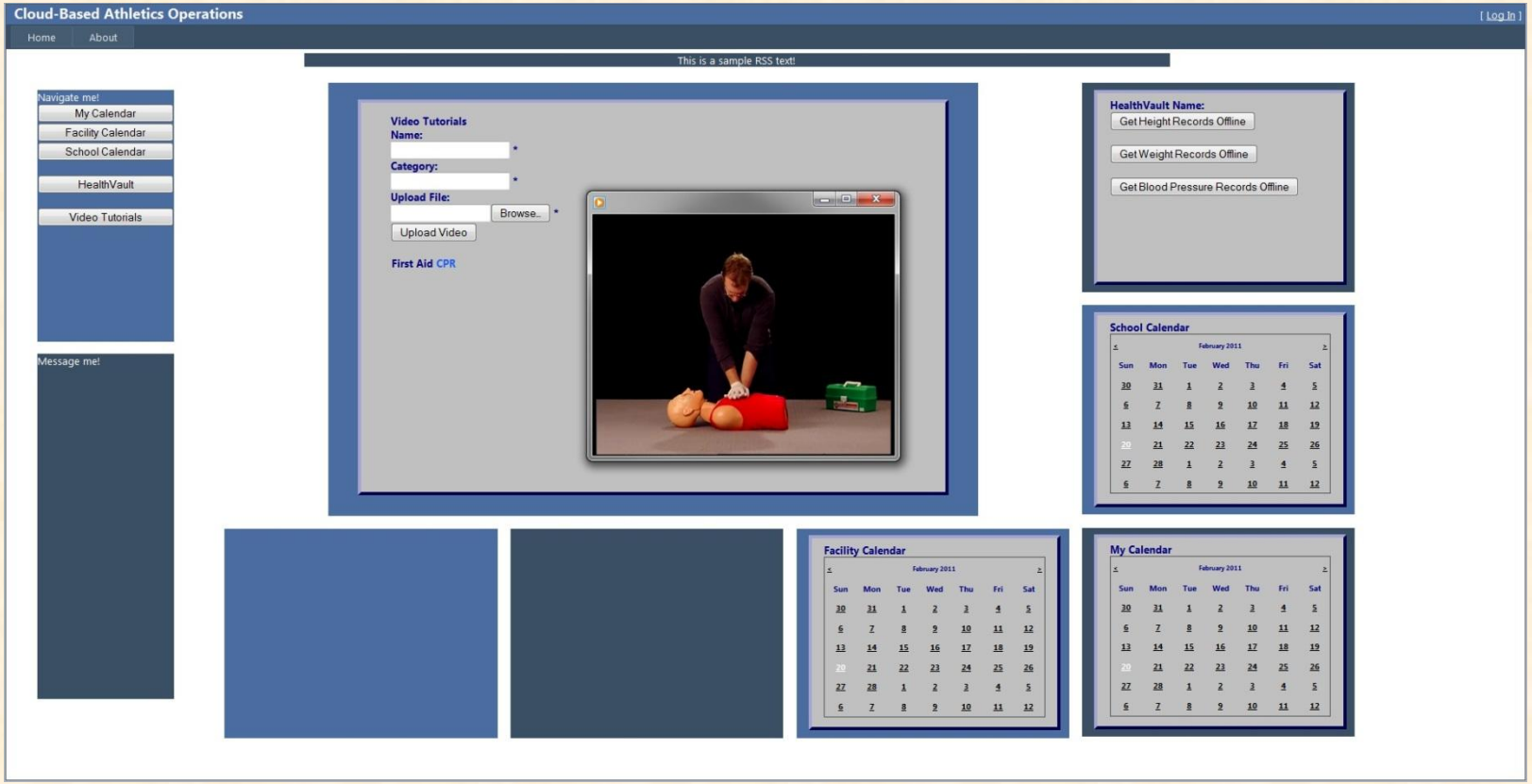


The Capstone Experience

Team Medtronic
Alpha Presentation

Team Medtronic
Alpha Presentation

Video Tutorials

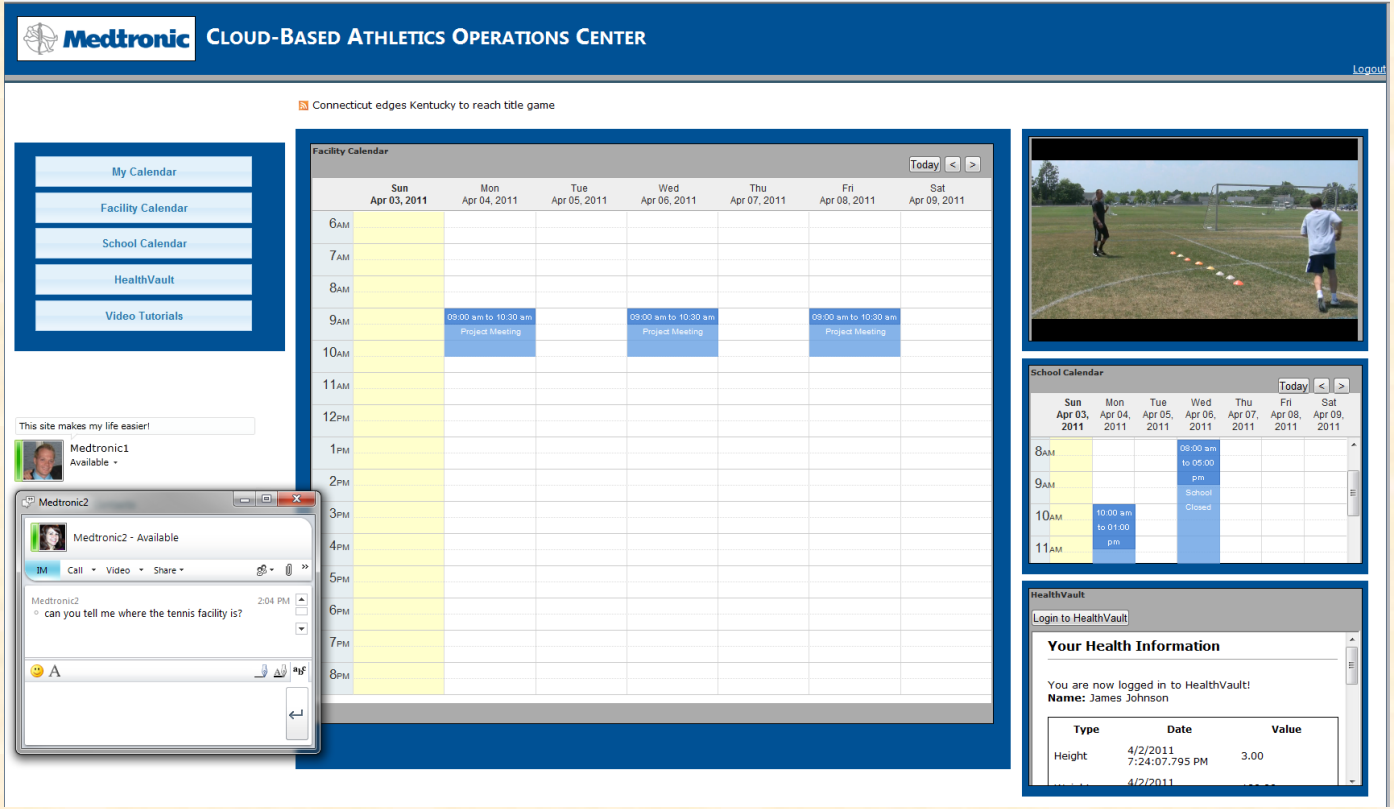


The Capstone Experience

Team Medtronic
Alpha Presentation

Team Medtronic
Beta Presentation

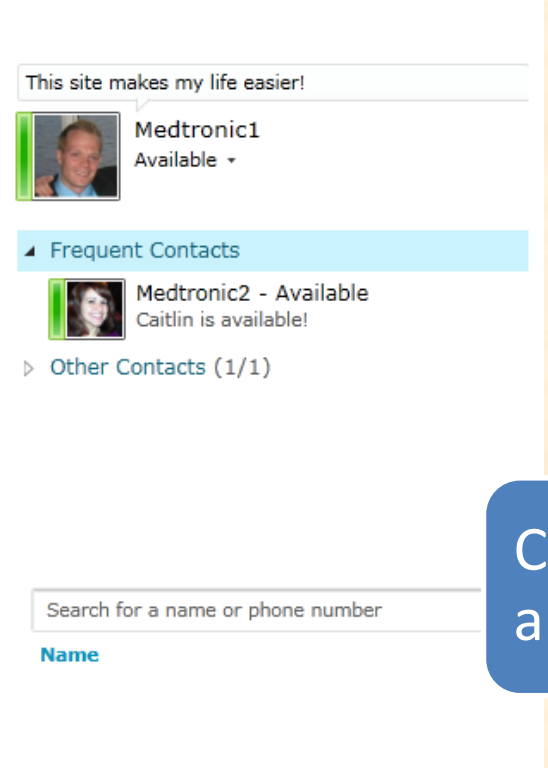
Main Interface

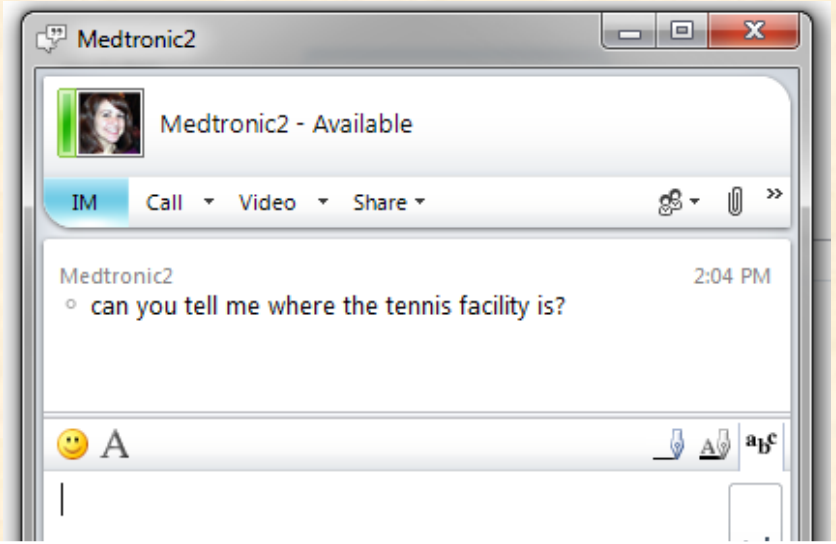


Team Medtronic
Beta Presentation

Team Medtronic
Beta Presentation

Lync Presence Controls





Communicate with instant messaging and video conferencing

The Capstone Experience

Team Medtronic
Beta Presentation

Team Medtronic
Design Day

MICHIGAN STATE UNIVERSITY

The Capstone Experience

Team Meijer

Department of Computer Science and Engineering
Michigan State University
Spring 2011

From Students…
…to Professionals

meijer

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Search | All Products | GO

Grocery | Drugstore | Kitchen & Dining | Furniture | Home & Crafts | Garden & Outdoor | Sports & Recreation | Pet | Online Sale

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Spend Your Meijer Gift Card, Get FREE Standard Shipping!

dailysteal

dailysteal

16 Hrs 41 Mins 28 Secs

Acoustic Research

After Christmas
Online Clearance
Save 20-60%!

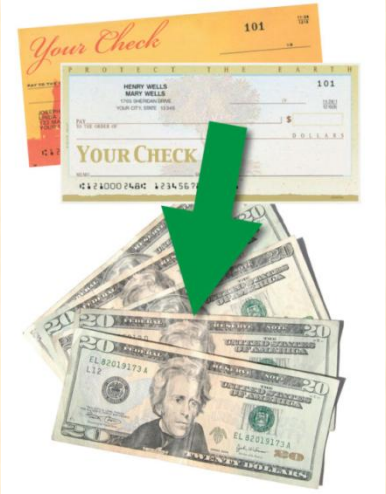
clearance

save 20-60%

Team Meijer
Project Overview

Consumer Payroll Check Cashing Analytics

- Consumer Payroll Check Cashing Service
  - In Store At Service Desk
  - Users Must Enroll 7 Days in Advance
  - Uses Third Party Authentication Service (Certegy)
- Design and Implement Reporting Features
  - Ad Hoc Reports by Customer, Store, Date, Etc.
  - Fraud Analysis
    - Reports by Store, Groups of Stores, and All Stores
    - Upload and Store Images of Returned Checks
    - Print Automated Prosecution Package for Law Enforcement
  - Predictive Alerts Engine
  - Transaction Trending
- Technologies
  - Microsoft Visual Studio 2010
  - Microsoft Office 2007, 2010
  - Microsoft SQL Server 2008
  - Microsoft SQL Server Reporting Services (SSRS)



meijer®

The Capstone Experience

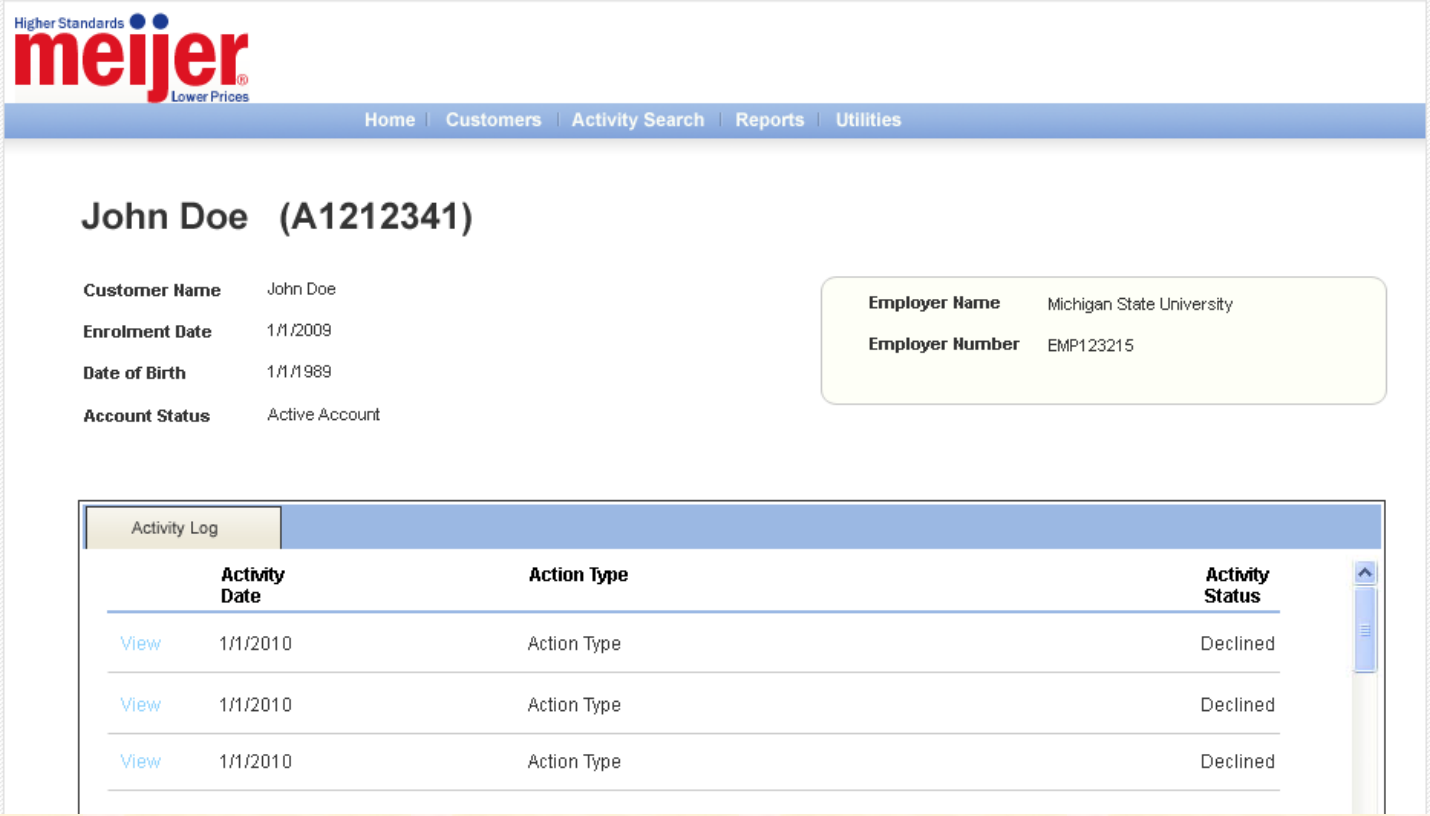
Team Meijer Team Photo

Team Meijer
Screen Mockup

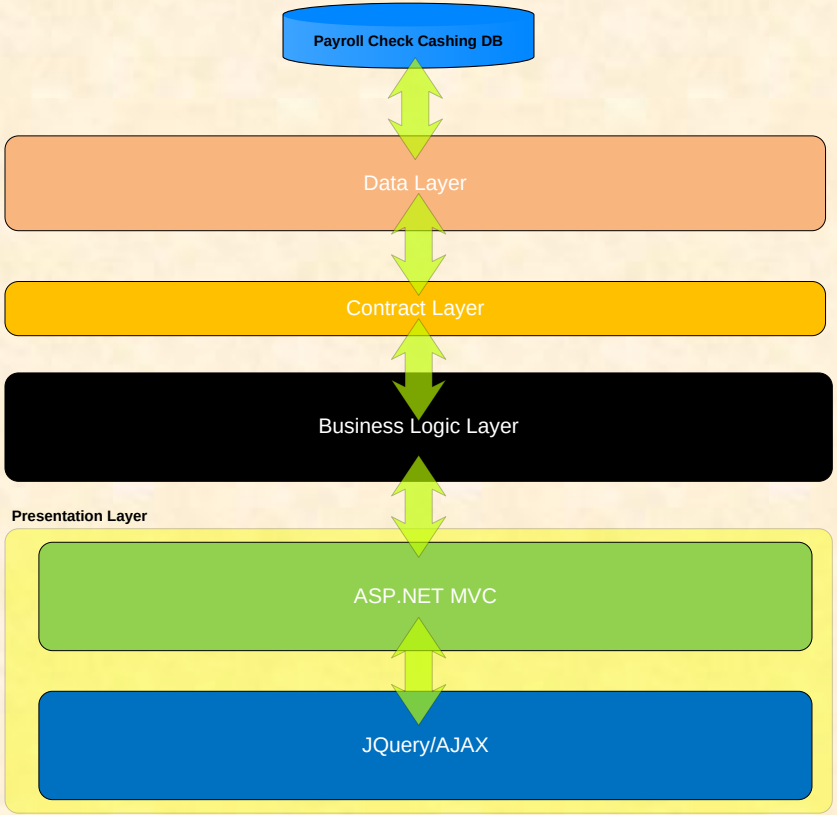
The Capstone Experience

Team Meijer
Project Plan Presentation

Team Meijer
Screen Mockup



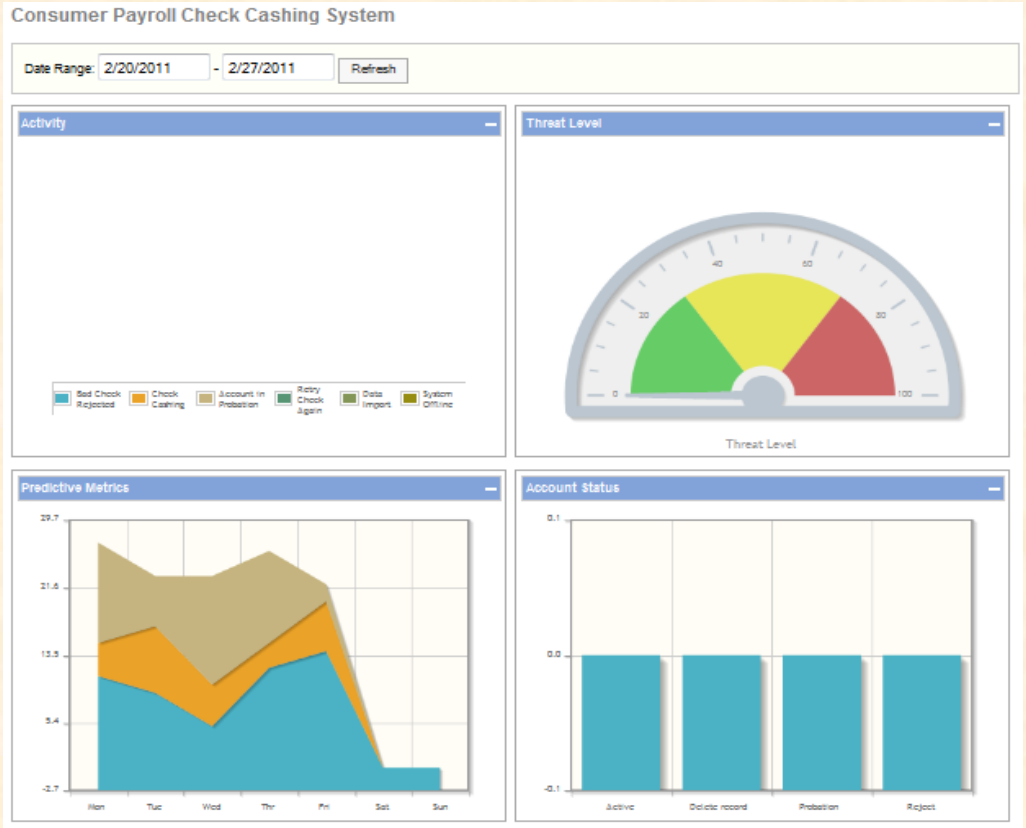
Team Meijer
Architecture Diagram



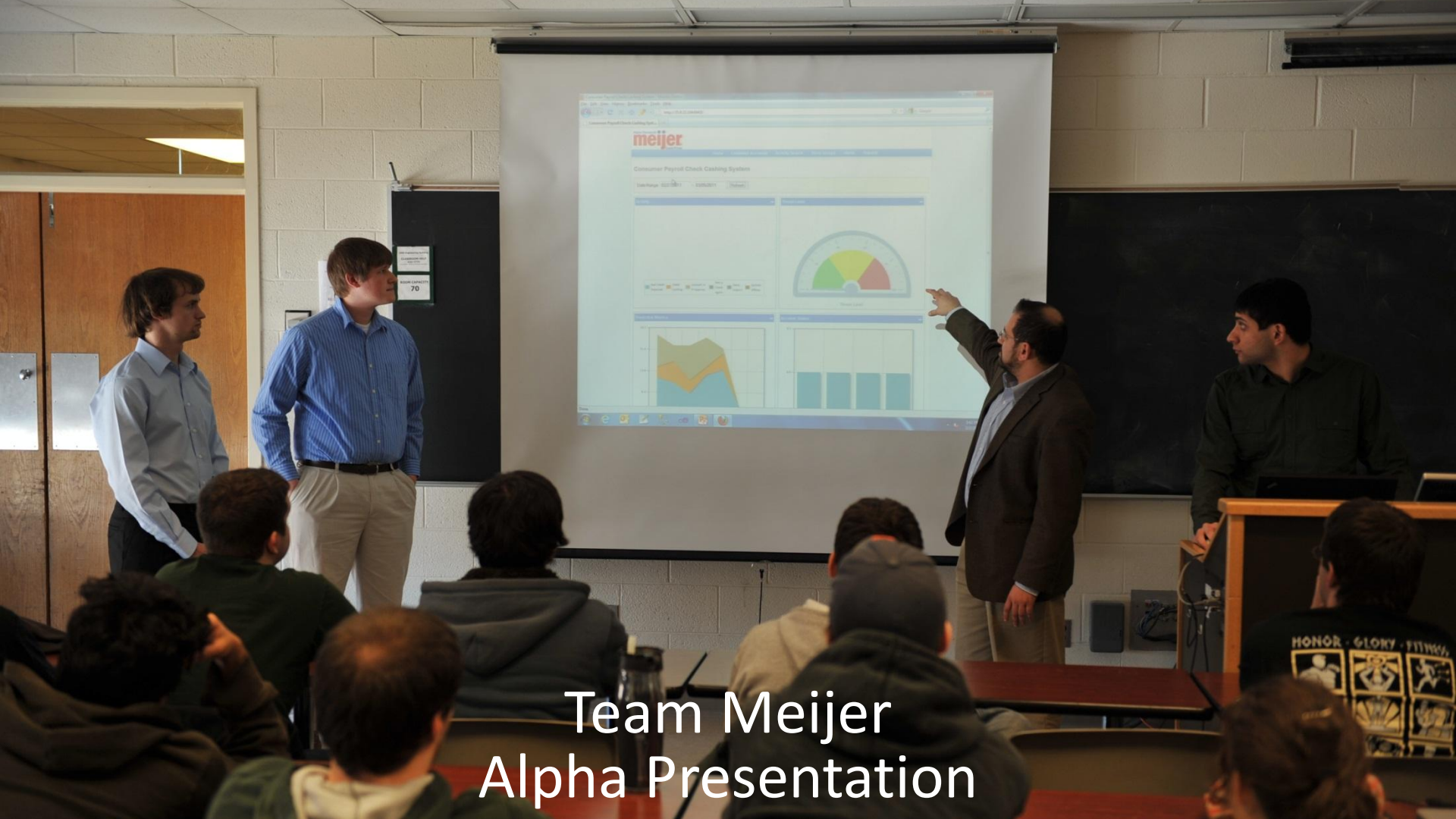
Team Meijer
Project Plan Presentation

Team Meijer
Alpha Presentation

Dashboard Screen



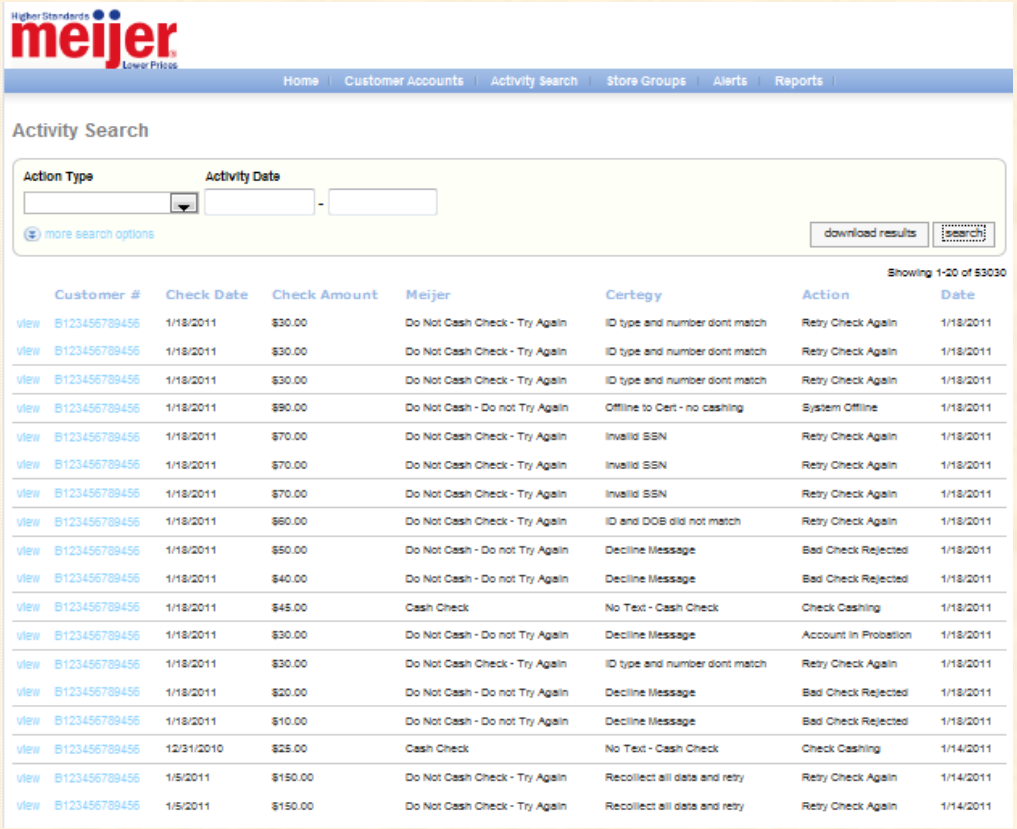
The Capstone Experience



Team Meijer
Alpha Presentation

Team Meijer
Alpha Presentation

Activity Search Screen

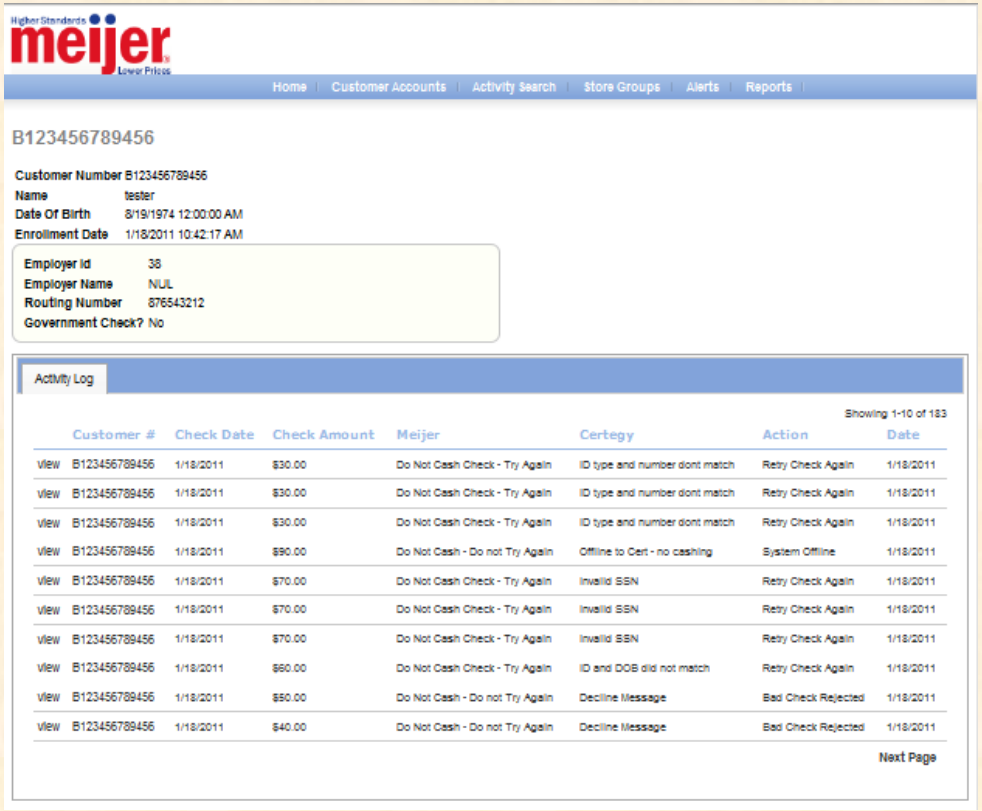


	Customer #	Check Date	Check Amount	Meijer	Certegy	Action	Date
view	B123456789456	1/18/2011	$30.00	Do Not Cash Check - Try Again	ID type and number dont match	Retry Check Again	1/18/2011
view	B123456789456	1/18/2011	$30.00	Do Not Cash Check - Try Again	ID type and number dont match	Retry Check Again	1/18/2011
view	B123456789456	1/18/2011	$30.00	Do Not Cash Check - Try Again	ID type and number dont match	Retry Check Again	1/18/2011
view	B123456789456	1/18/2011	$90.00	Do Not Cash - Do not Try Again	Offline to Cert - no cashing	System Offline	1/18/2011
view	B123456789456	1/18/2011	$70.00	Do Not Cash Check - Try Again	Invalid SSN	Retry Check Again	1/18/2011
view	B123456789456	1/18/2011	$70.00	Do Not Cash Check - Try Again	Invalid SSN	Retry Check Again	1/18/2011
view	B123456789456	1/18/2011	$70.00	Do Not Cash Check - Try Again	Invalid SSN	Retry Check Again	1/18/2011
view	B123456789456	1/18/2011	$60.00	Do Not Cash Check - Try Again	ID and DOB did not match	Retry Check Again	1/18/2011
view	B123456789456	1/18/2011	$50.00	Do Not Cash - Do not Try Again	Decline Message	Bad Check Rejected	1/18/2011
view	B123456789456	1/18/2011	$40.00	Do Not Cash - Do not Try Again	Decline Message	Bad Check Rejected	1/18/2011
view	B123456789456	1/18/2011	$45.00	Cash Check	No Text - Cash Check	Check Cashing	1/18/2011
view	B123456789456	1/18/2011	$30.00	Do Not Cash - Do not Try Again	Decline Message	Account in Probation	1/18/2011
view	B123456789456	1/18/2011	$30.00	Do Not Cash Check - Try Again	ID type and number dont match	Retry Check Again	1/18/2011
view	B123456789456	1/18/2011	$20.00	Do Not Cash - Do not Try Again	Decline Message	Bad Check Rejected	1/18/2011
view	B123456789456	1/18/2011	$10.00	Do Not Cash - Do not Try Again	Decline Message	Bad Check Rejected	1/18/2011
view	B123456789456	12/31/2010	$25.00	Cash Check	No Text - Cash Check	Check Cashing	1/14/2011
view	B123456789456	1/5/2011	$150.00	Do Not Cash Check - Try Again	Recollect all data and retry	Retry Check Again	1/14/2011
view	B123456789456	1/5/2011	$150.00	Do Not Cash Check - Try Again	Recollect all data and retry	Retry Check Again	1/14/2011

Team Meijer
Alpha Presentation

Team Meijer
Beta Presentation

Customer Info Screen

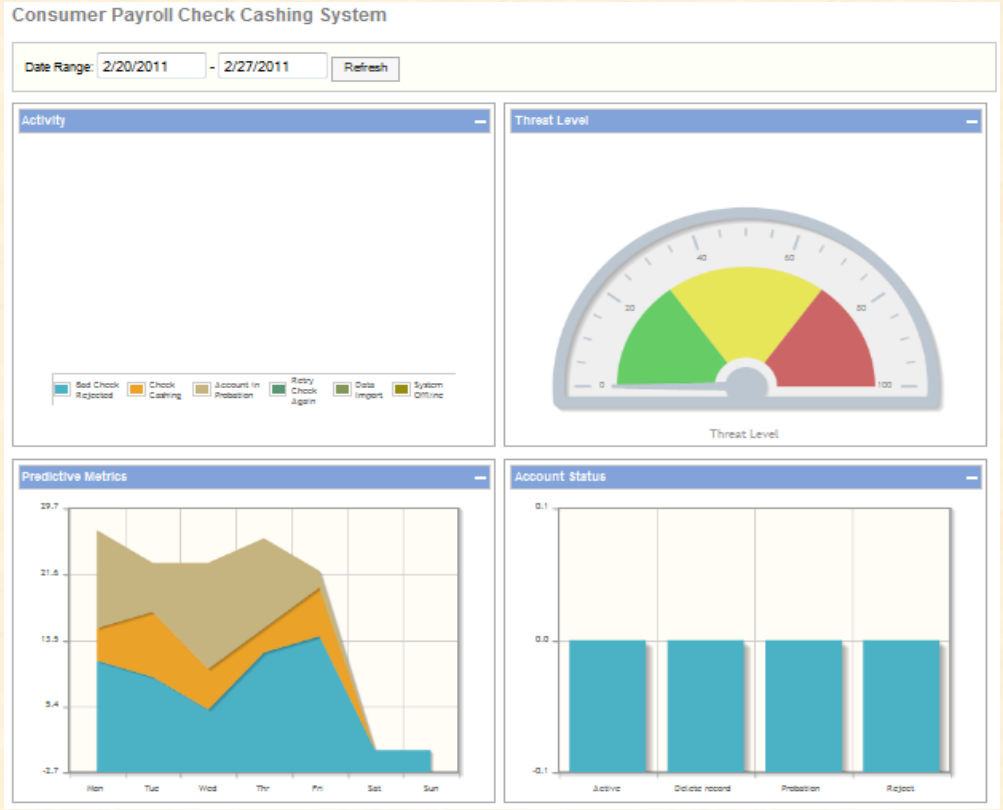


The Capstone Experience

Team Meijer
Beta Presentation

Team Meijer
Beta Presentation

Dashboard Screen



The Capstone Experience

Team Meijer
Beta Presentation

Team Meijer
Design Day

MICHIGAN STATE UNIVERSITY

The Capstone Experience

Team Motorola Mobility

Department of Computer Science and Engineering
Michigan State University
Spring 2011

From Students…
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MOTOROLA

Motorola Home - Motorola USA - Windows Internet Explorer

http://www.motorola.com/us

Bing

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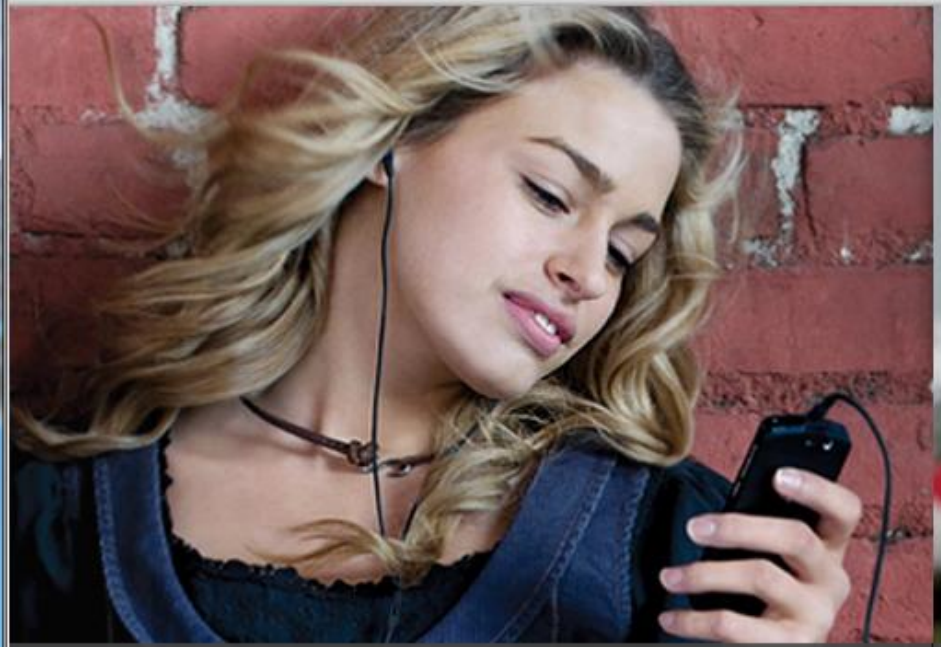
Motorola Home - Motorola USA

Page Safety Tools

USA (change location)

Search

WELCOME TO **MOTOROLA**



FOR **CONSUMERS**

FOR **BUSINESS**

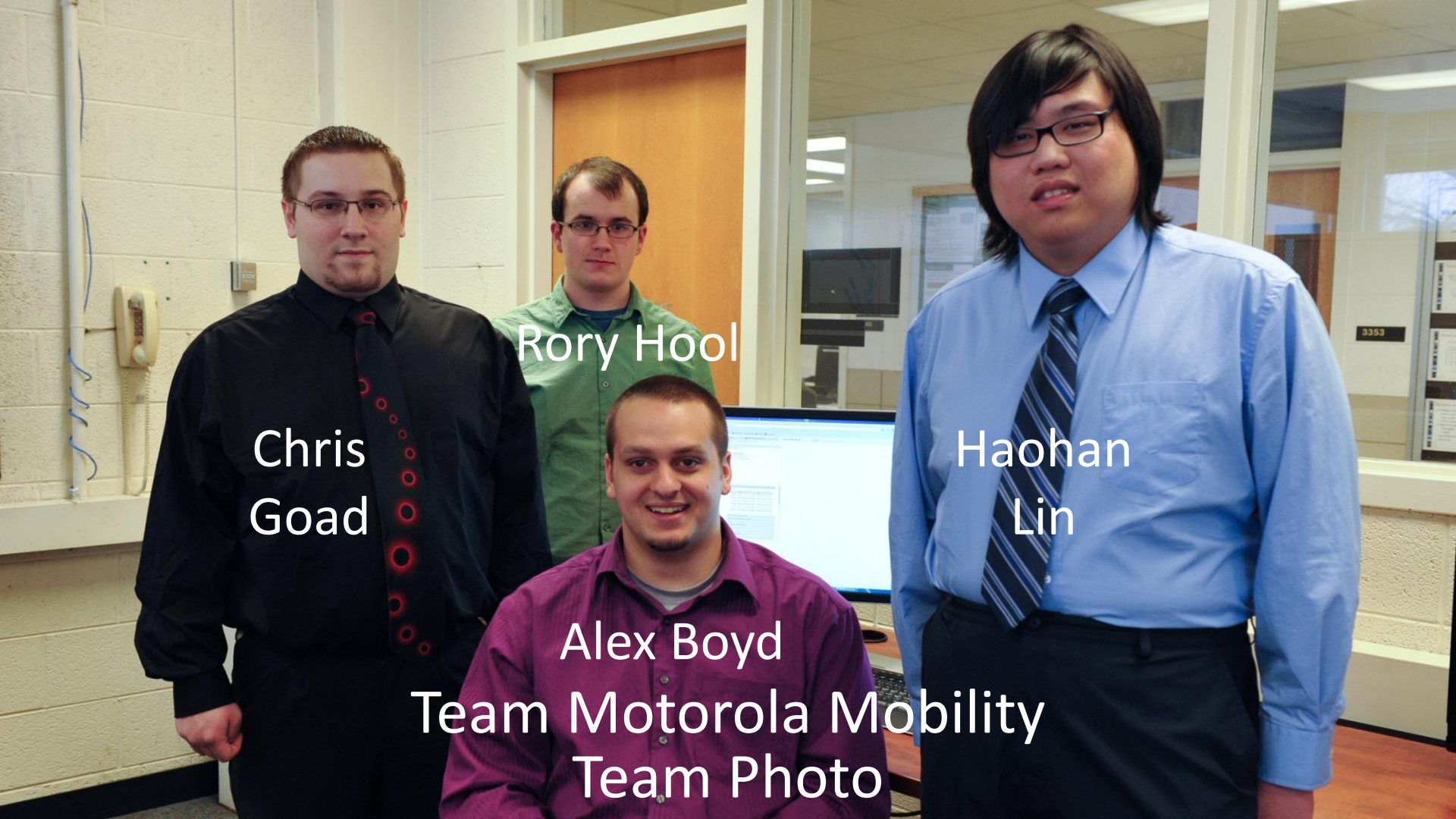
Team Motorola Mobility
Project Overview

Enhance Programming Guide Authoring System

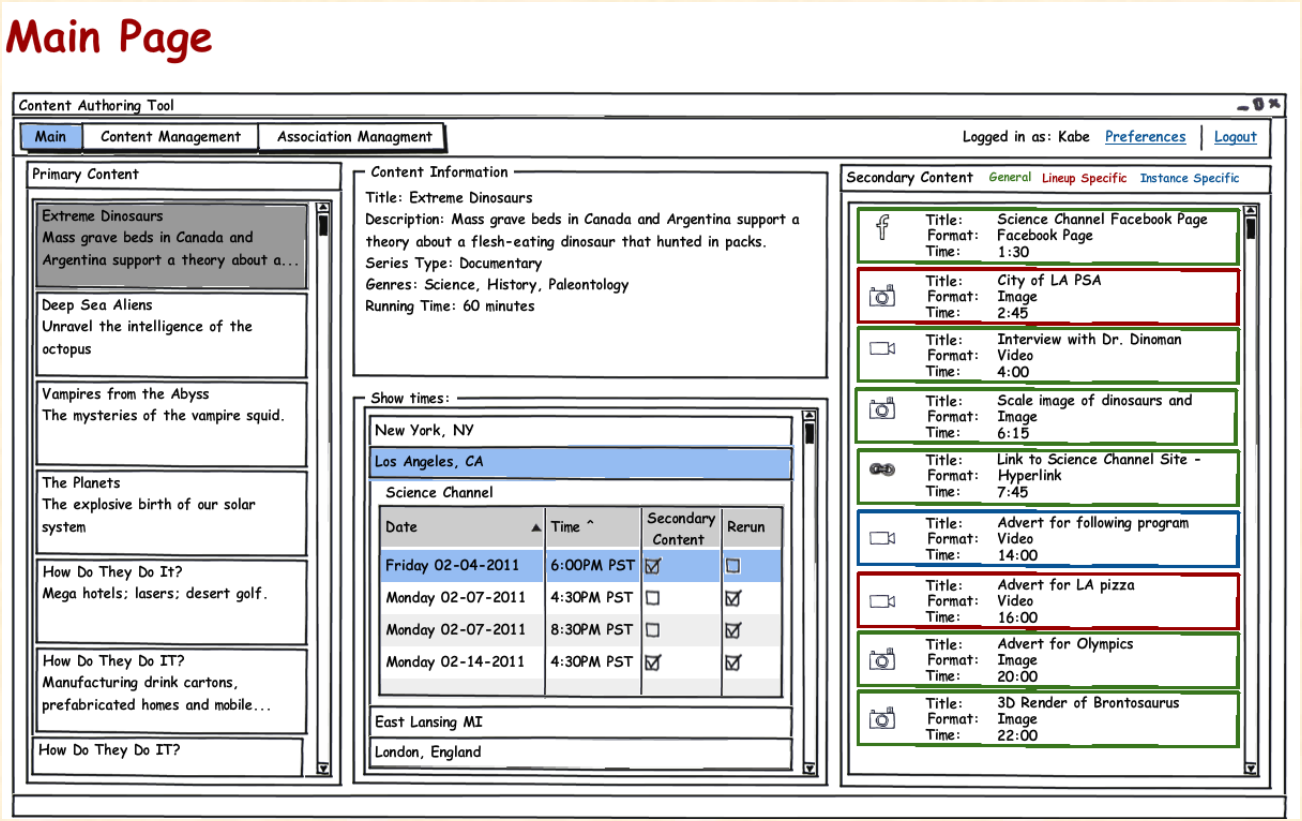
- Enhanced Program Guides for Mobile Devices, Fall 2010
  - Provide Enhanced Information
    - Actor Biographies
    - Merchandise Seen on Show
    - Etc.
  - Pushed to Mobile Devices
    - While Consumer Watches Content
    - Non-Intrusive Manner
- Project Extensions
  - Life Cycle Management System
    - Network Operators (e.g., Comcast)
    - Content Providers (e.g., NBC Universal, Disney)
  - Secondary Metadata
    - Triggers
    - Synchronization
    - Display in Selectable Layers
  - Consumer Interactivity with Metadata
- Technologies
  - Java (Servlets, JEE, JSE)
  - Web Services (RESTful)
  - Web Development (XML, JSON, JavaScript, GWT)
  - iPhone, iPad Development (Objective-C)
  - Android Development (Java)

MOTOROLA

The Capstone Experience

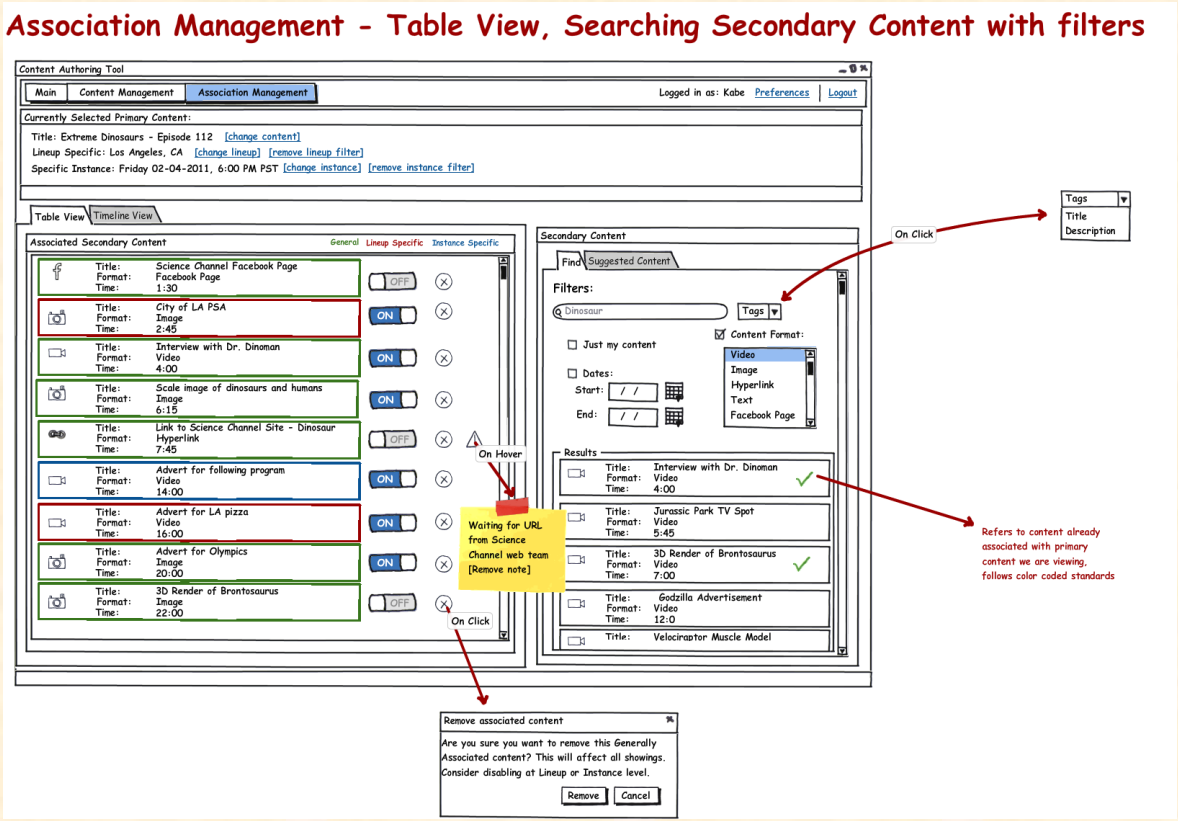

Rory Hool
Chris
Goad
Haohan
Lin
Alex Boyd
Team Motorola Mobility
Team Photo

Team Motorola Mobility
Screen Mockup



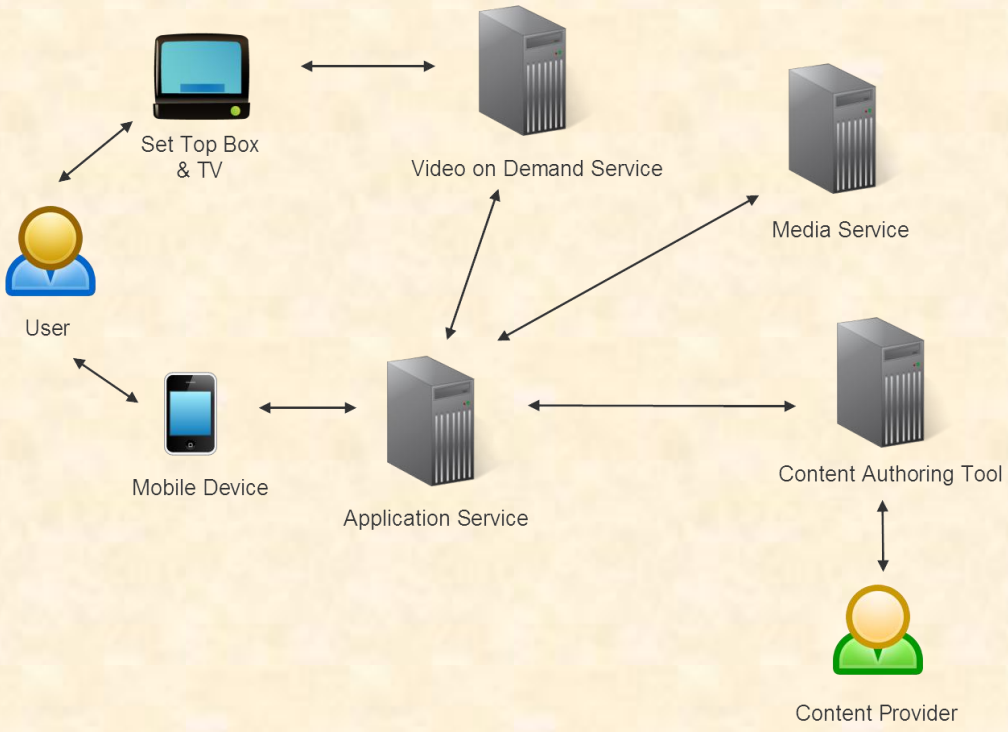
Team Motorola Mobility
Project Plan Presentation

Team Motorola Mobility
Screen Mockup



The Capstone Experience

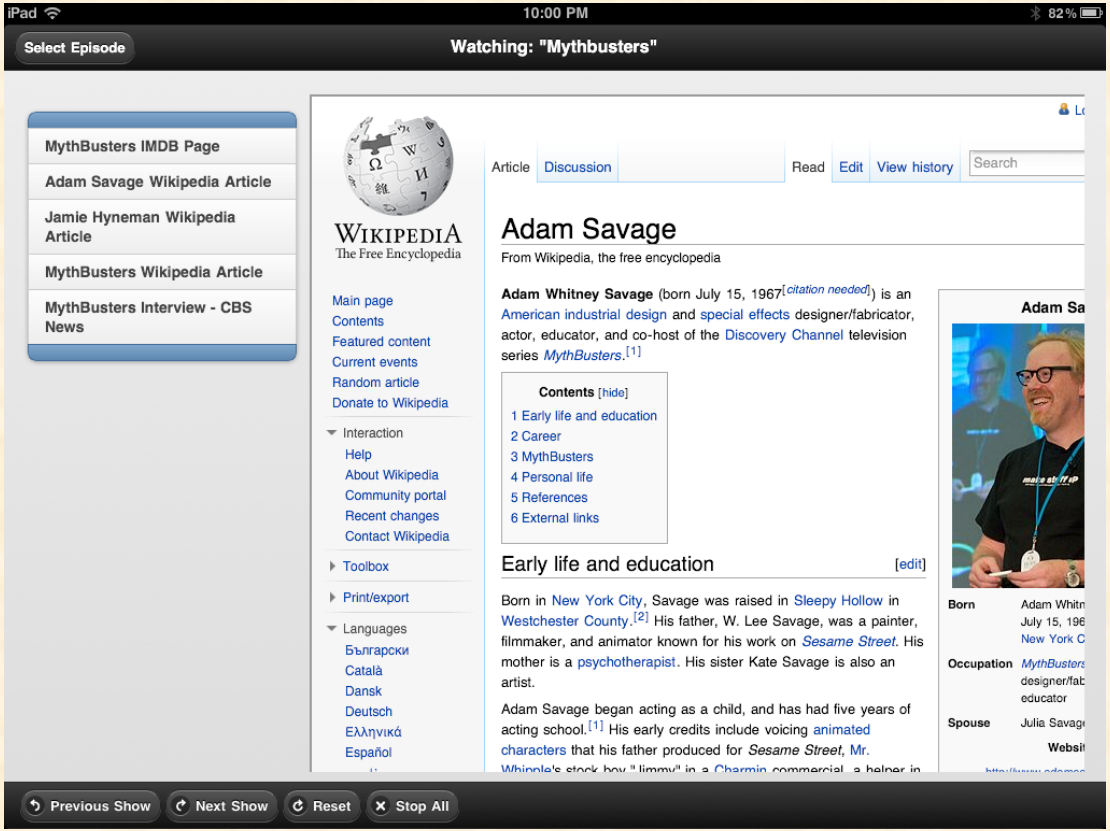
Team Motorola Mobility
Architecture Diagram



Team Motorola Mobility Project Plan Presentation

Team Motorola Mobility
Alpha Presentation

View of Secondary Content

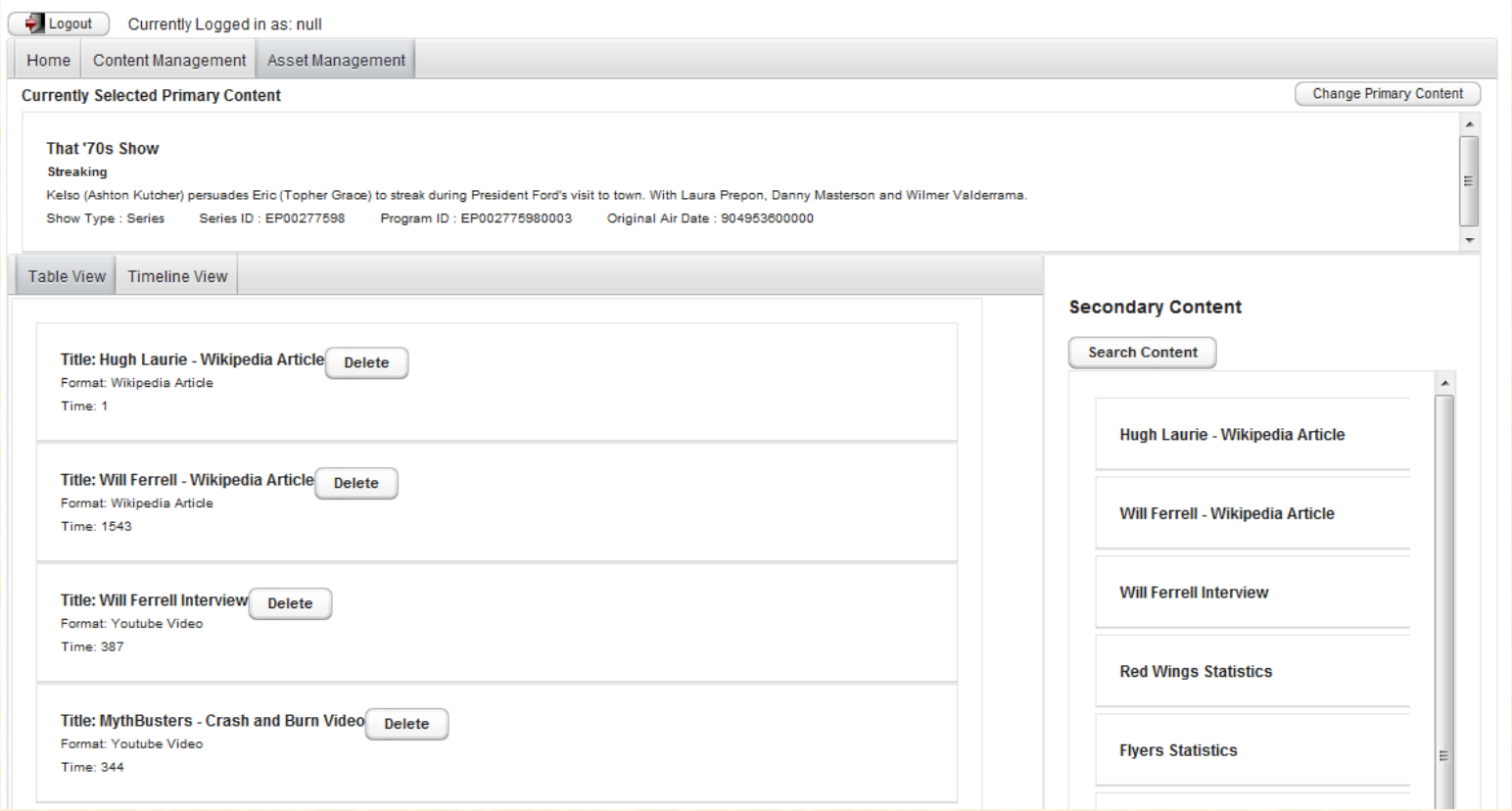


The Capstone Experience

Team Motorola Mobility
Alpha Presentation

Team Motorola Mobility
Alpha Presentation

Association Management



The Capstone Experience

Team Motorola Mobility
Alpha Presentation

Team Motorola Mobility
Alpha Presentation

Team Motorola Mobility
Beta Presentation

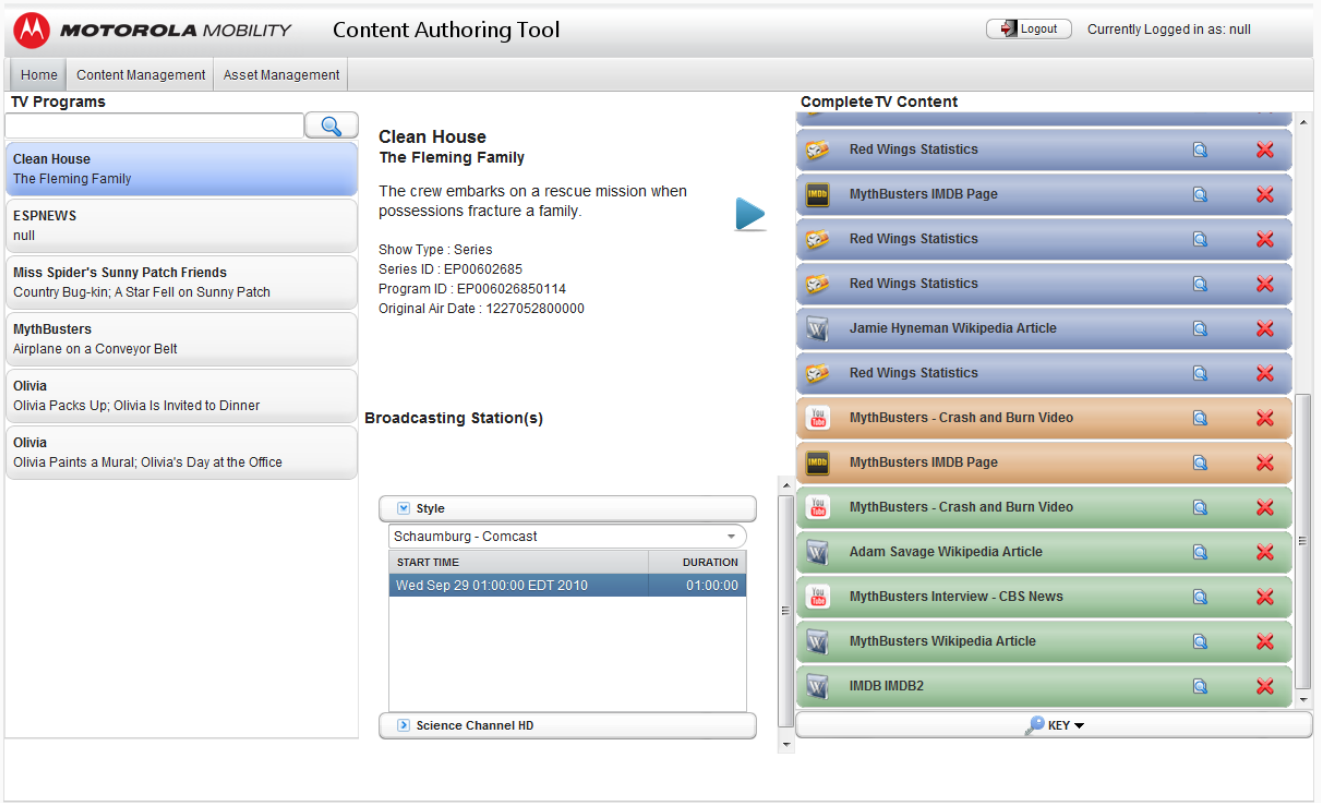
"CompleteTV" Mobile App

The Capstone Experience

Team Motorola Mobility
Beta Presentation

Team Motorola Mobility
Beta Presentation

Content Authoring Tool



The Capstone Experience

Team Motorola Mobility
Beta Presentation

Team Motorola Mobility
Design Day

MICHIGAN STATE UNIVERSITY

The Capstone Experience

Team Raytheon

Department of Computer Science and Engineering
Michigan State University
Spring 2011

From Students…
…to Professionals

Raytheon

Raytheon

Top Stories »

- Eleven Raytheon Employees to Be Honored at 2011 BEYA Awards
- Raytheon-sponsored Study Examines Global Math Learning
- Wounded Warrior Project Expands With Raytheon Support
- Time Names XOS 2 'Most Awesomest' Invention of 2010

Raytheon

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Technology & Innovation »

RACR Takes Flight With a Series of Successful Demonstrations

ELCAN's DigitalHunter Riflescope Hits the Mark

Raytheon-Boeing JAGM Team Verifies Rocket Motor During Flight Test

Raytheon Insight »

Raytheon Company Announces Agreement to Acquire Applied Signal Technology, Inc.

Raytheon's Support of the Armed Services

Raytheon Wins 2010 Safety Excellence Award From AIA

Newsroom »

Raytheon BBN Technologies Awarded Defense Funding to Advance Optical Communications and Imaging
Posted: Tue, 21 Dec 2010 09:00:00 -0500

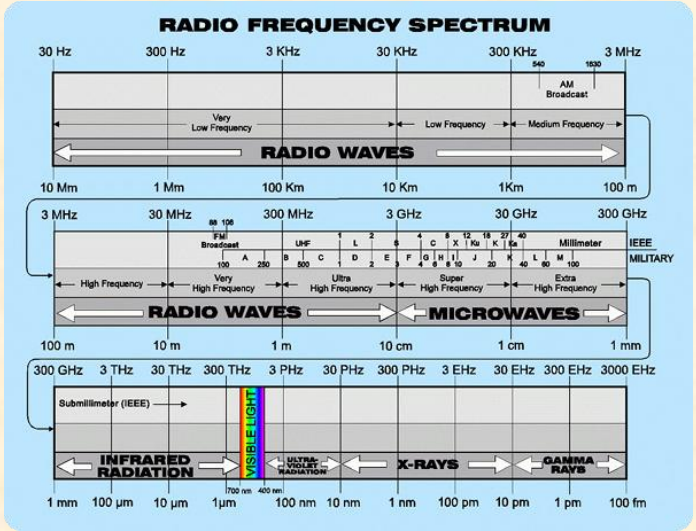
Raytheon Company Announces Agreement to Acquire Applied Signal Technology, Inc.
Posted: Mon, 20 Dec 2010 07:00:00 -0500

Raytheon Intelligence-Sharing System Begins Operations at Ramstein Air Base, Germany

Team Raytheon
Project Overview

Radio Spectrum Analyzer for Mobile Platforms

- Optimize Use of Radio Frequency Spectrum
  - Identify and Analyze Used Frequency Ranges
  - Recommend Frequency Range to Use
    - To Maximize Bandwidth and Minimize Noise
    - For Tuning and Controlling Military Radios
    - Based on Spectrum Allocation Policies
- Design Features
  - User Interface
    - Manage Spectrum Allocation Policies
    - Display Frequency Usage and Assignments
  - Platform Independent
    - Embedded Platforms (e.g., Radios)
    - Android Smartphones
    - Laptops and iPad-Like Devices
  - Web Service to Manage Spectrum
    - Usage and Assignments
    - Allocation Policies
  - Interoperable with C
- Technologies
  - C, C++
  - Web Application Programming
  - Web Services
  - Raytheon TacLink® EZConnect™



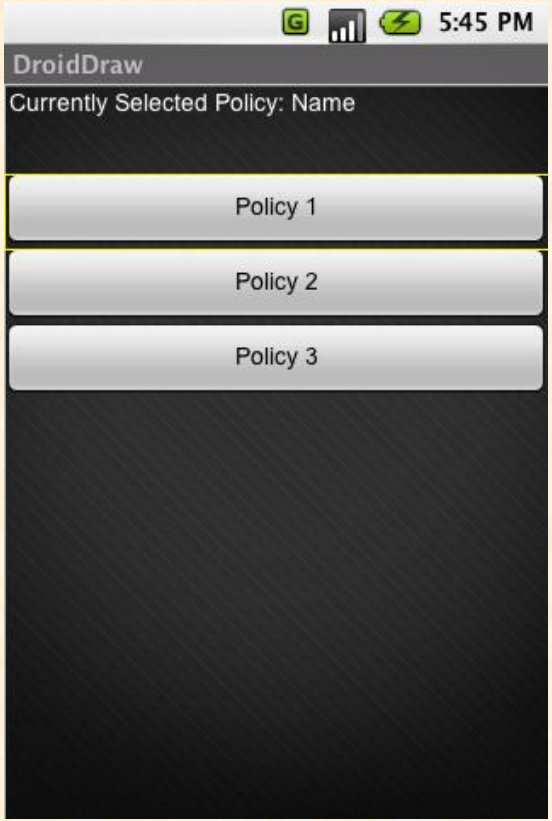
Raytheon

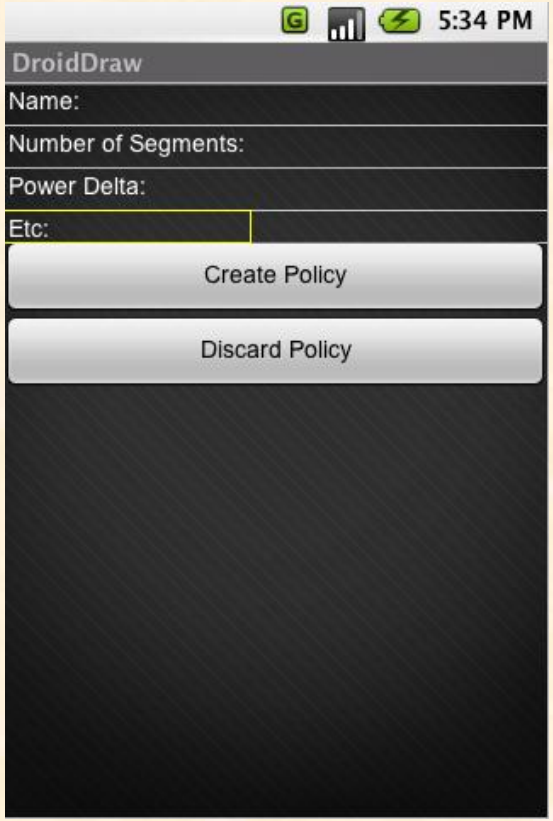
The Capstone Experience

Will
Bonner
Matt
Bowser
Jimmy
Voss
Srinivasa
Settaluri
Team Raytheon
Team Photo

Team Raytheon

Screen Mockup

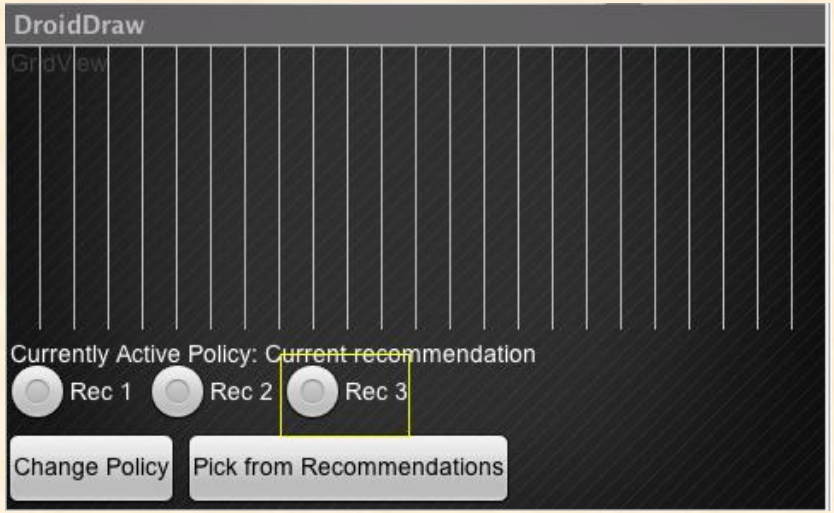


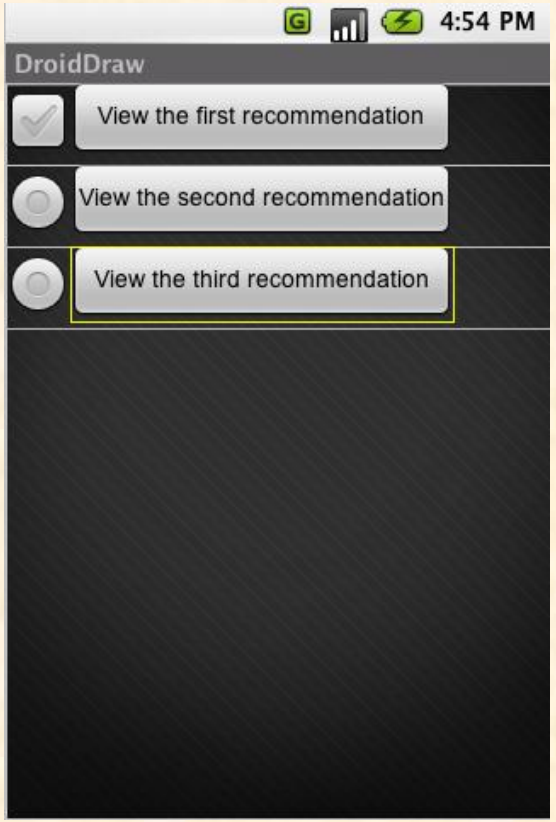


Team Raytheon
Project Plan Presentation

Team Raytheon

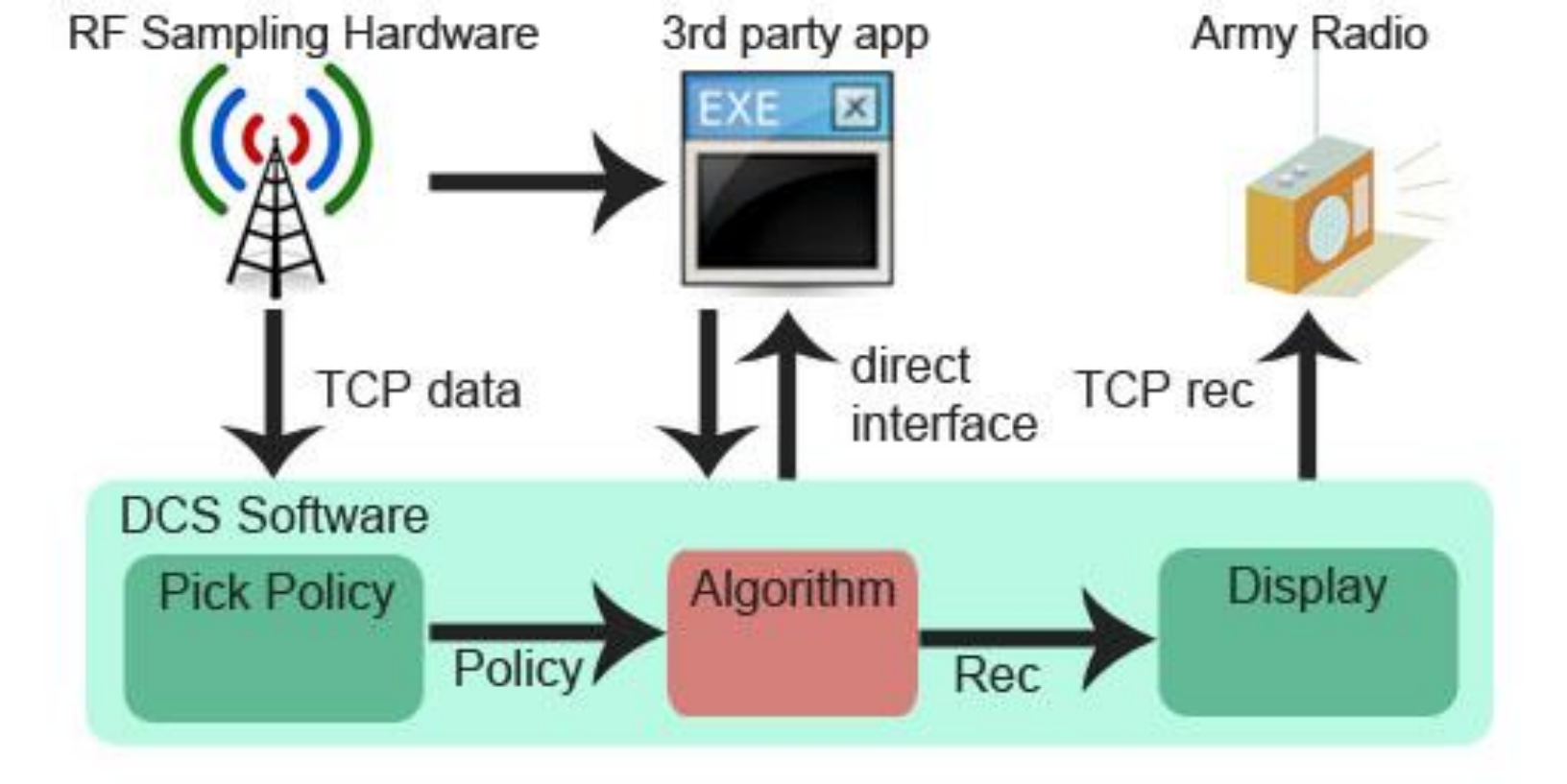
Screen Mockup

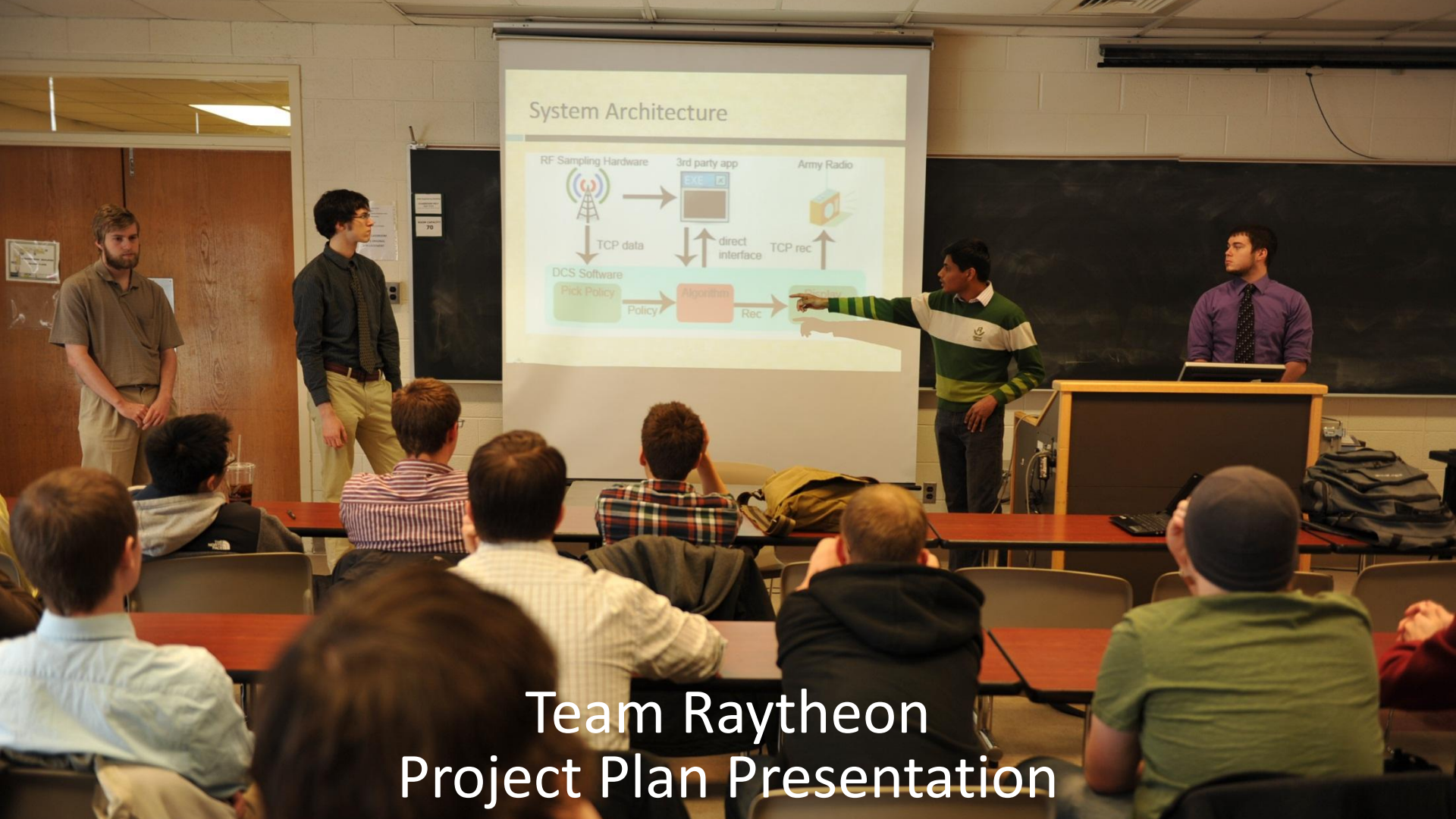




Team Raytheon

Architecture Diagram



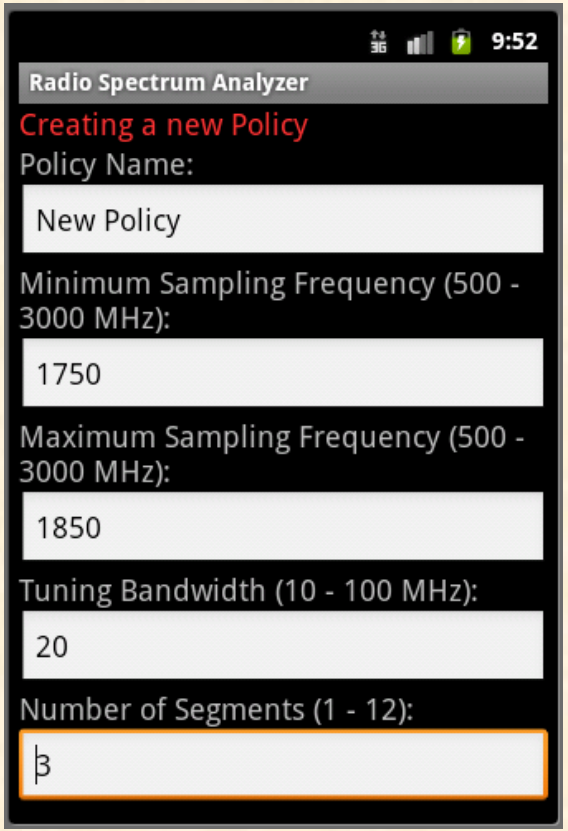


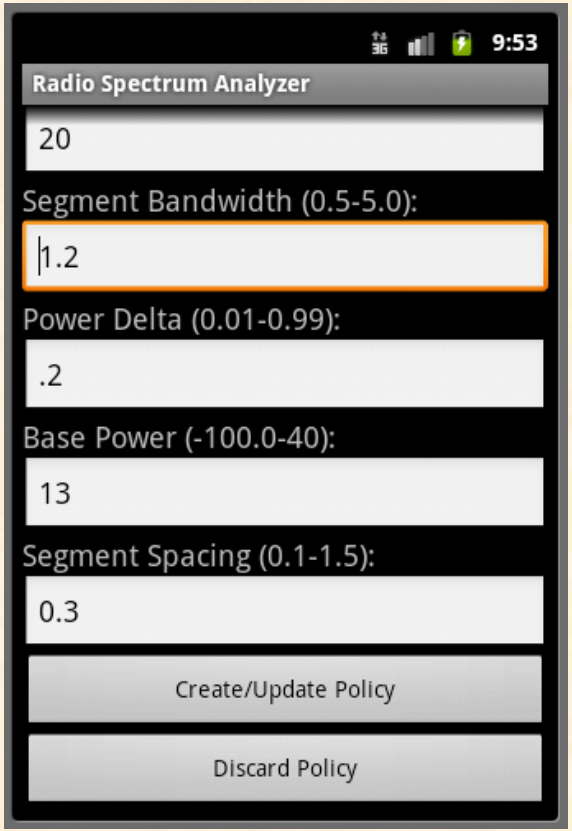
Team Raytheon
Project Plan Presentation

Team Raytheon
Alpha Presentation

Team Raytheon
Alpha Presentation

Policy Create/Edit

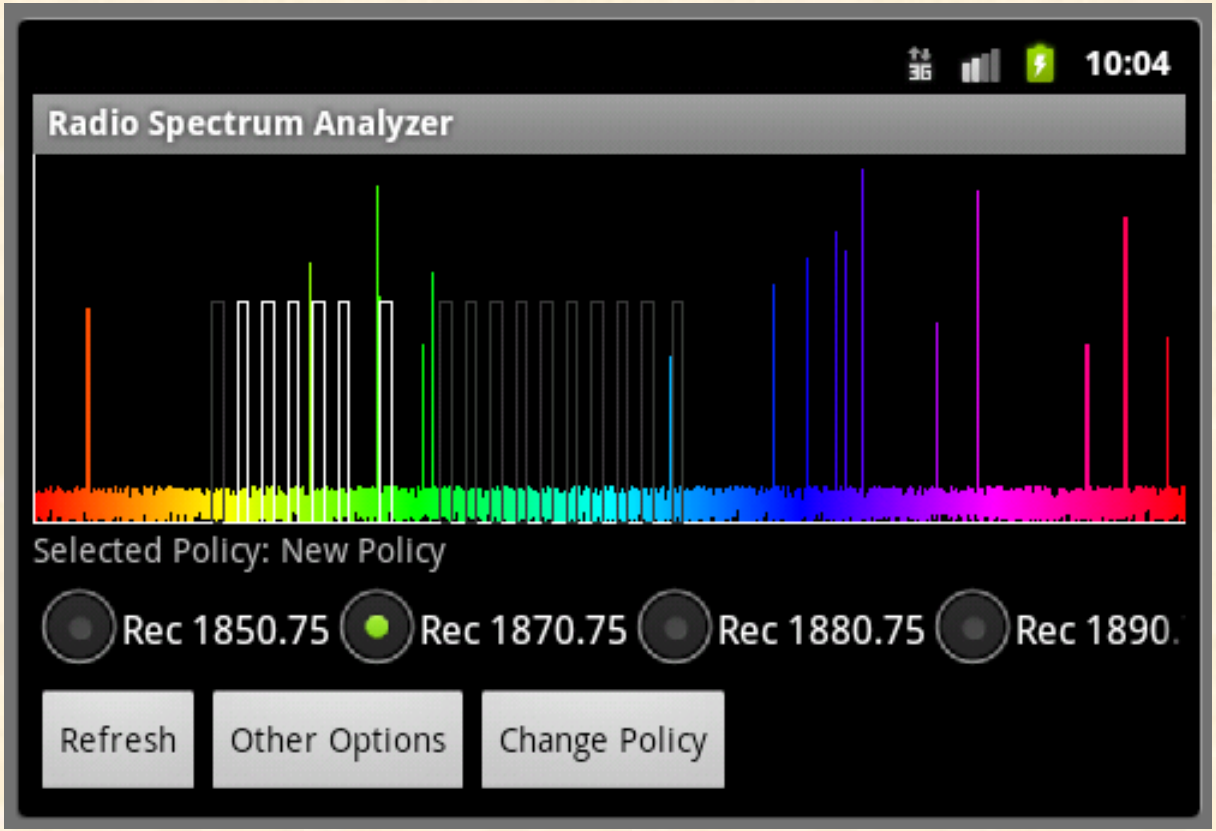




Team Raytheon
Alpha Presentation

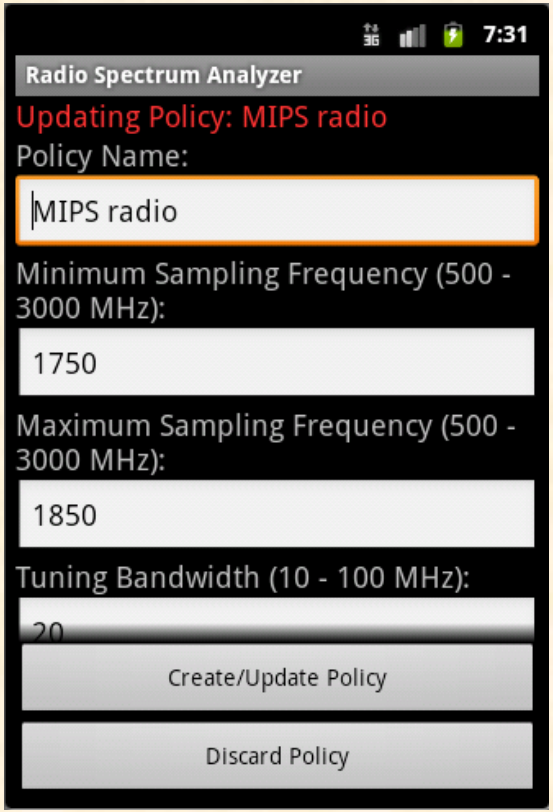
Alpha Presentation

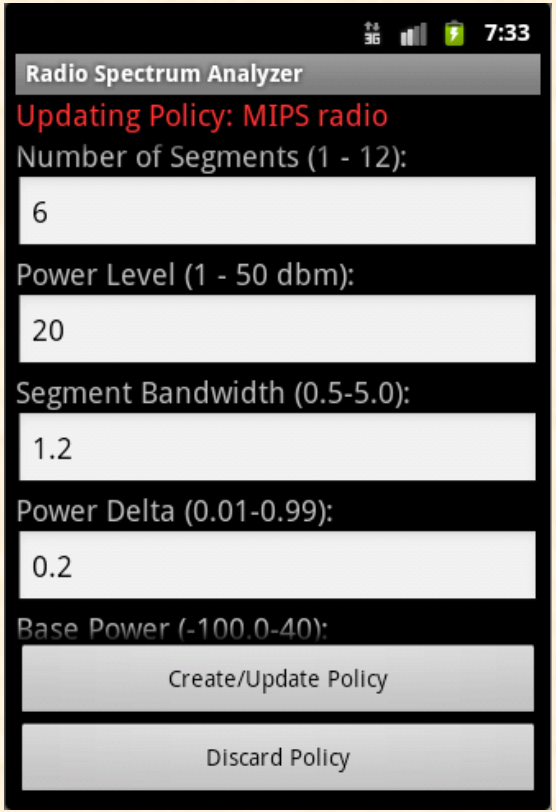
Spectrum View

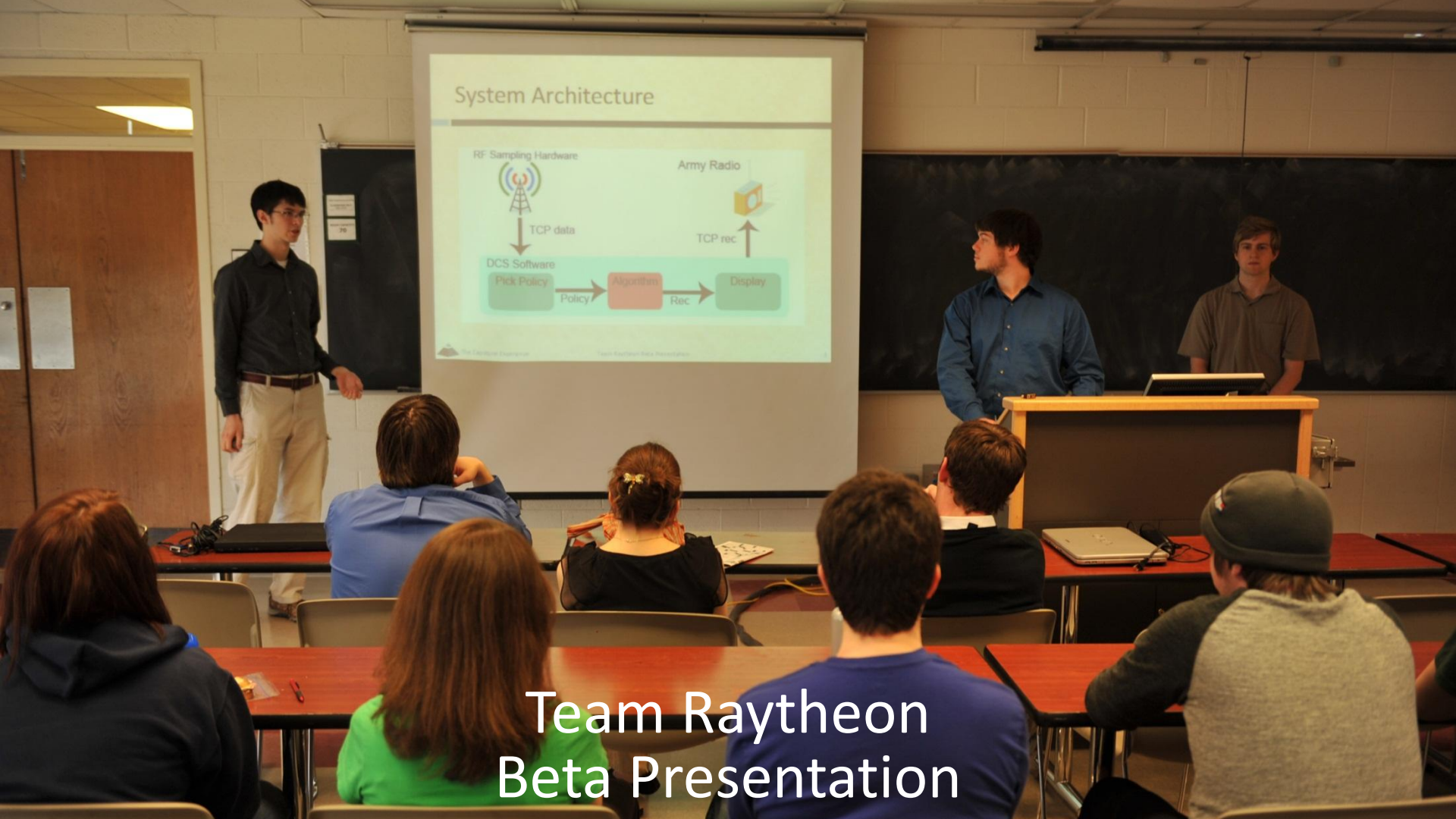


Team Raytheon
Beta Presentation

Edit and Create Radio Policies







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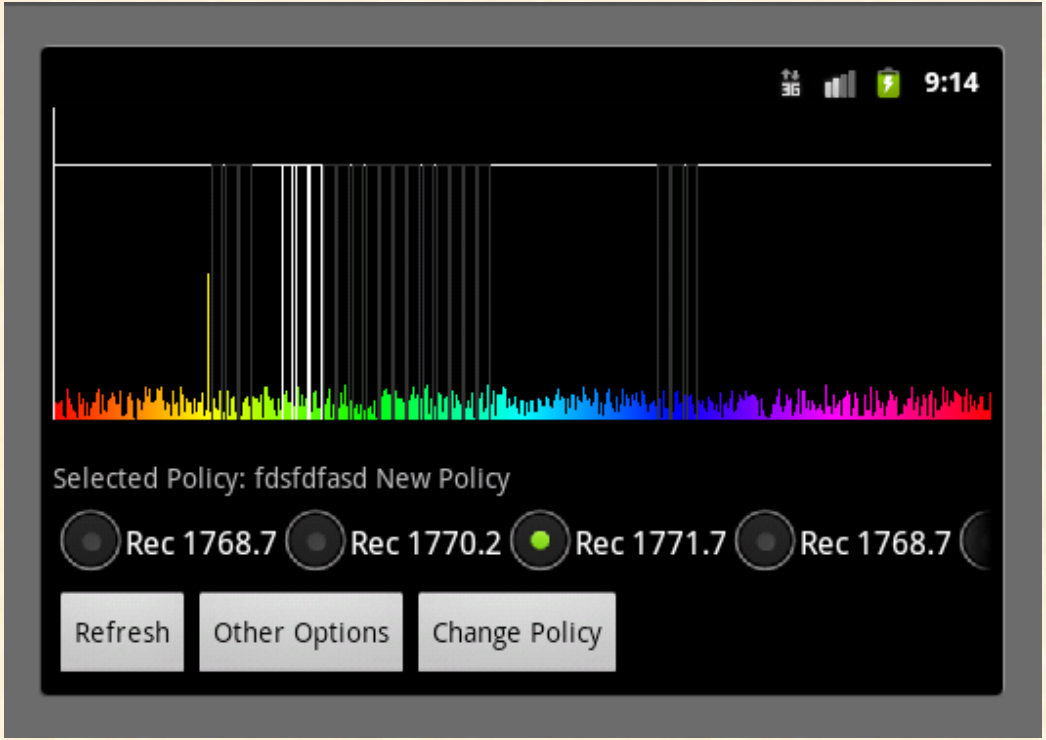
Beta Presentation

Beta Presentation

View Radio Recommendation



Team Raytheon
Beta Presentation

Team Raytheon
Design Day

MICHIGAN STATE UNIVERSITY

The Capstone Experience

Team Sparrow

Department of Computer Science and Engineering
Michigan State University
Spring 2011

From Students…
…to Professionals

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http://www.sparrow.org/

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- For Patients
- For Physicians
- For Associates

Our services: quick view

Latest news

Lansing woman looks forward to Christmas at home after Sparrow surgeons save hand | December 16, 2010

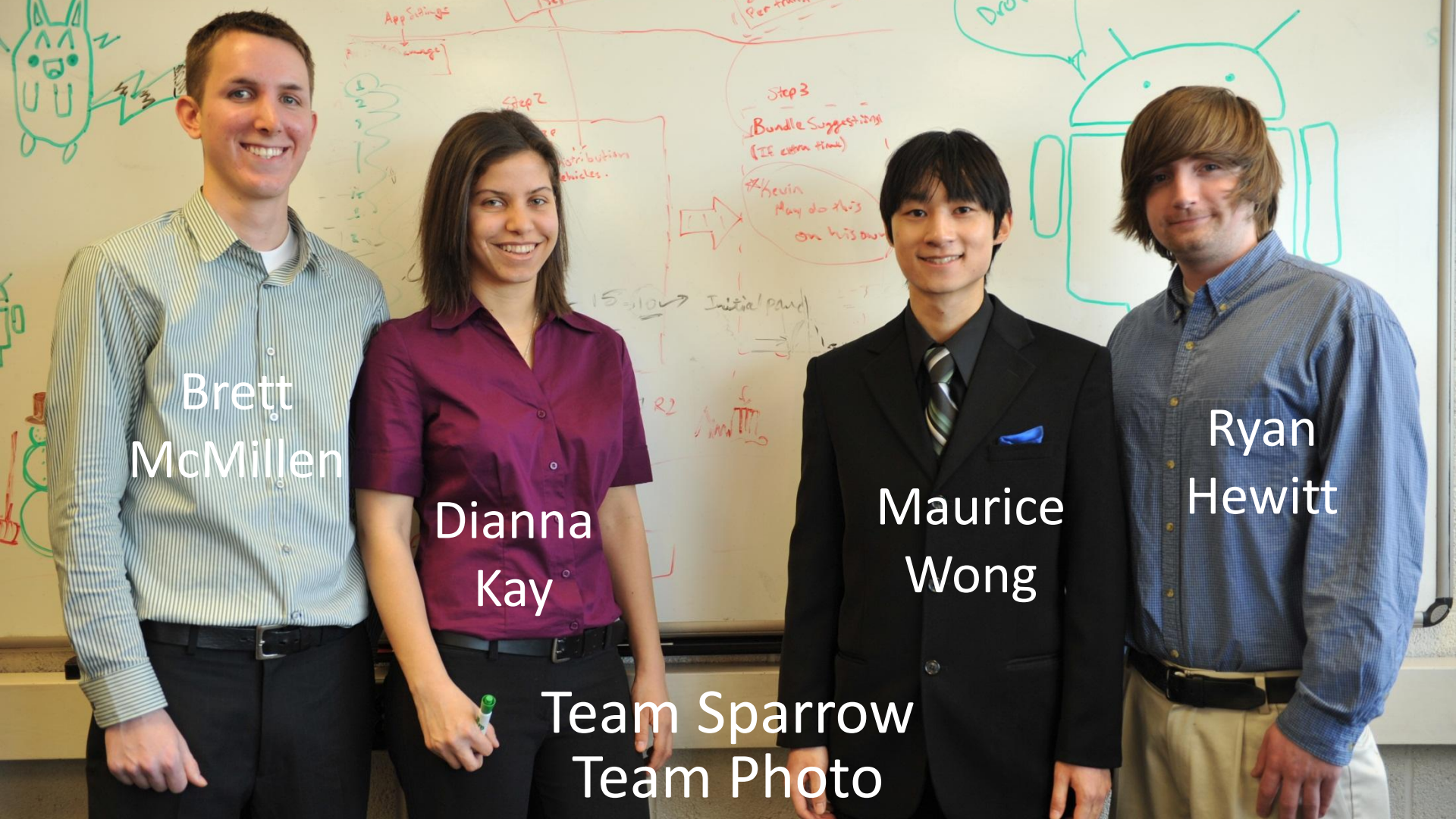
Team Sparrow
Project Overview

iSupport Center

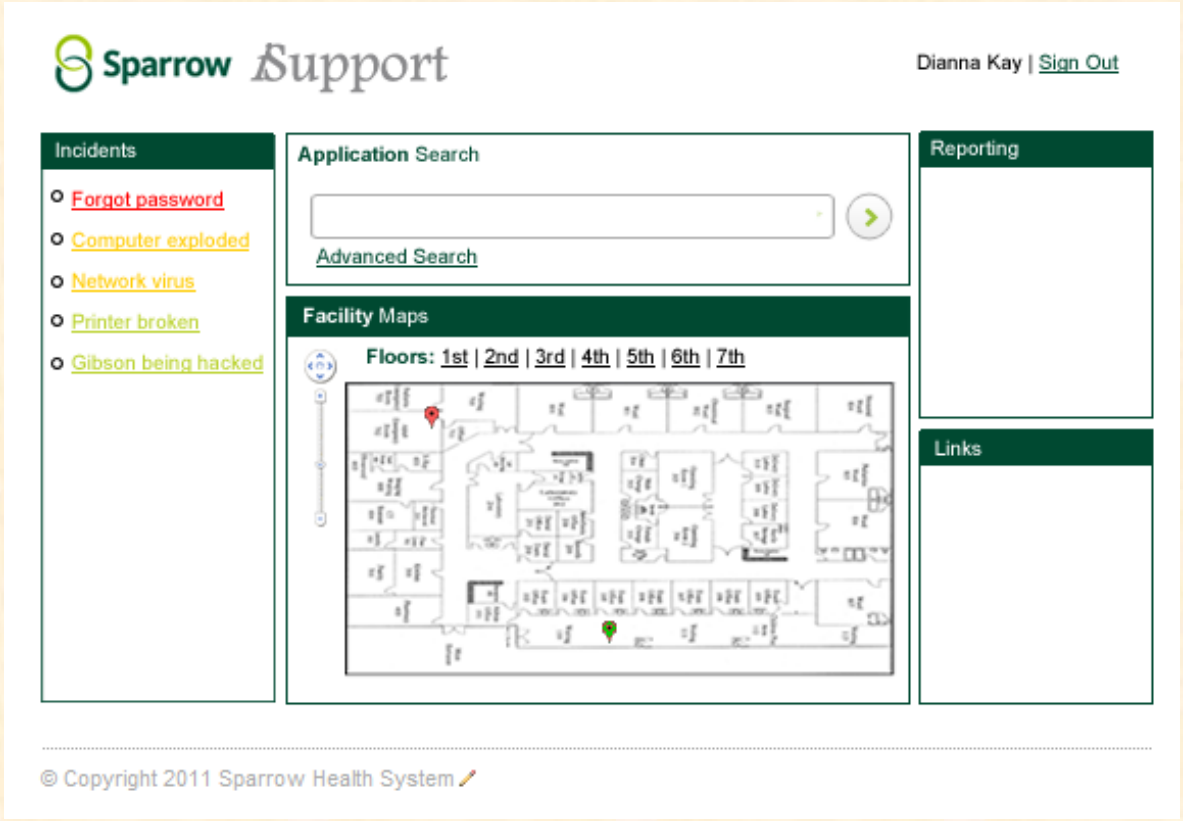
- Medical Informatics at Sparrow
  - 400+ Applications and Systems
    - Patient Medical Information
    - Schedules (Doctors, Patients, Operating Rooms)
    - Etc.
  - Delivery Critical (Matter of Life and Death)
    - Accurately, Timely, and Securely
    - Anytime and Anywhere
- iSupport Center
  - Manage IT Systems and Services
  - Improve Reliability and Response Time
  - Features
    - Catalogue
    - Maintain Licensing and Updates
    - Report, Assign, Track, and Resolve Problems
    - Etc.
- Technologies
  - Microsoft .NET
  - Microsoft SharePoint
  - Microsoft SQL Server
  - Symantec Altris Management Suites
  - Under Construction

Sparrow

The Capstone Experience

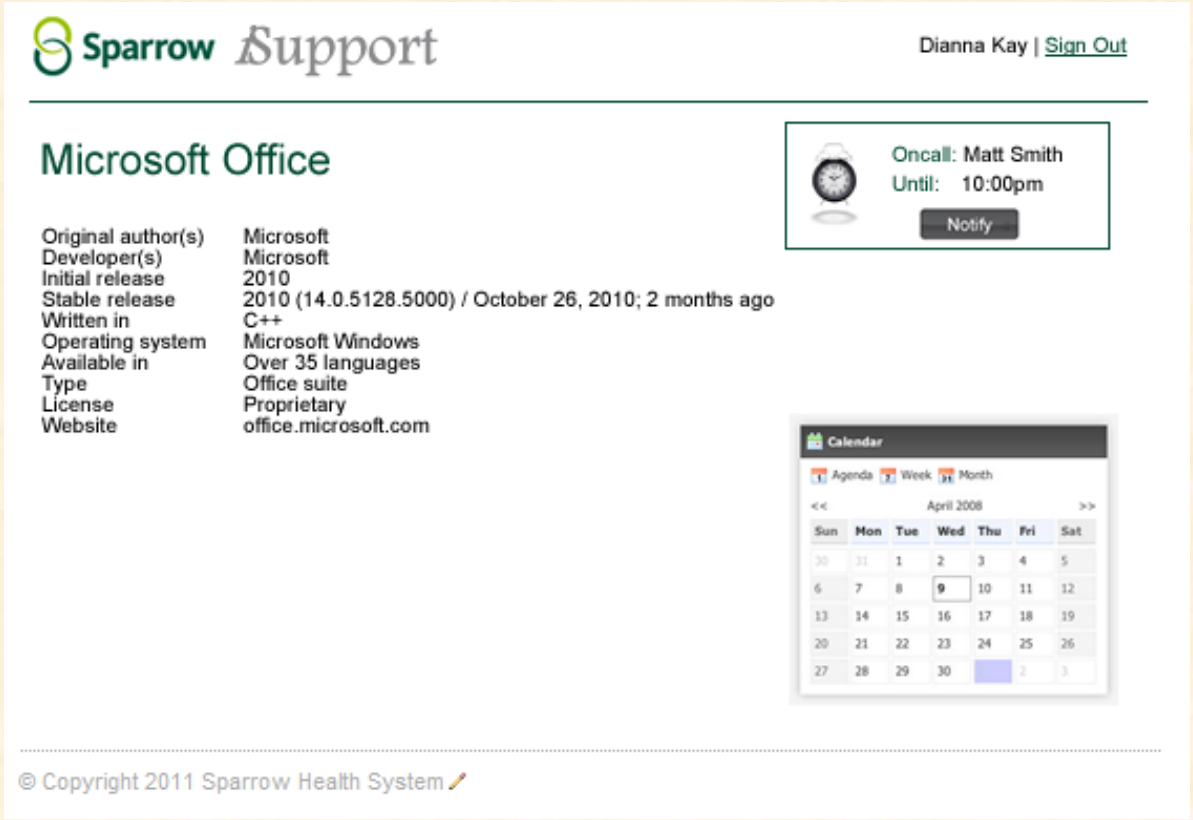

Brett McMillen
Dianna Kay
Maurice Wong
Ryan Hewitt
Team Sparrow Team Photo

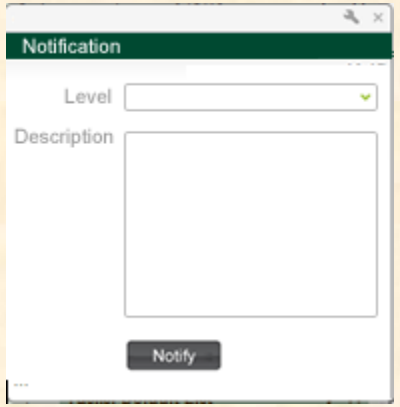
Team Sparrow
Screen Mockup



Team Sparrow
Project Plan Presentation

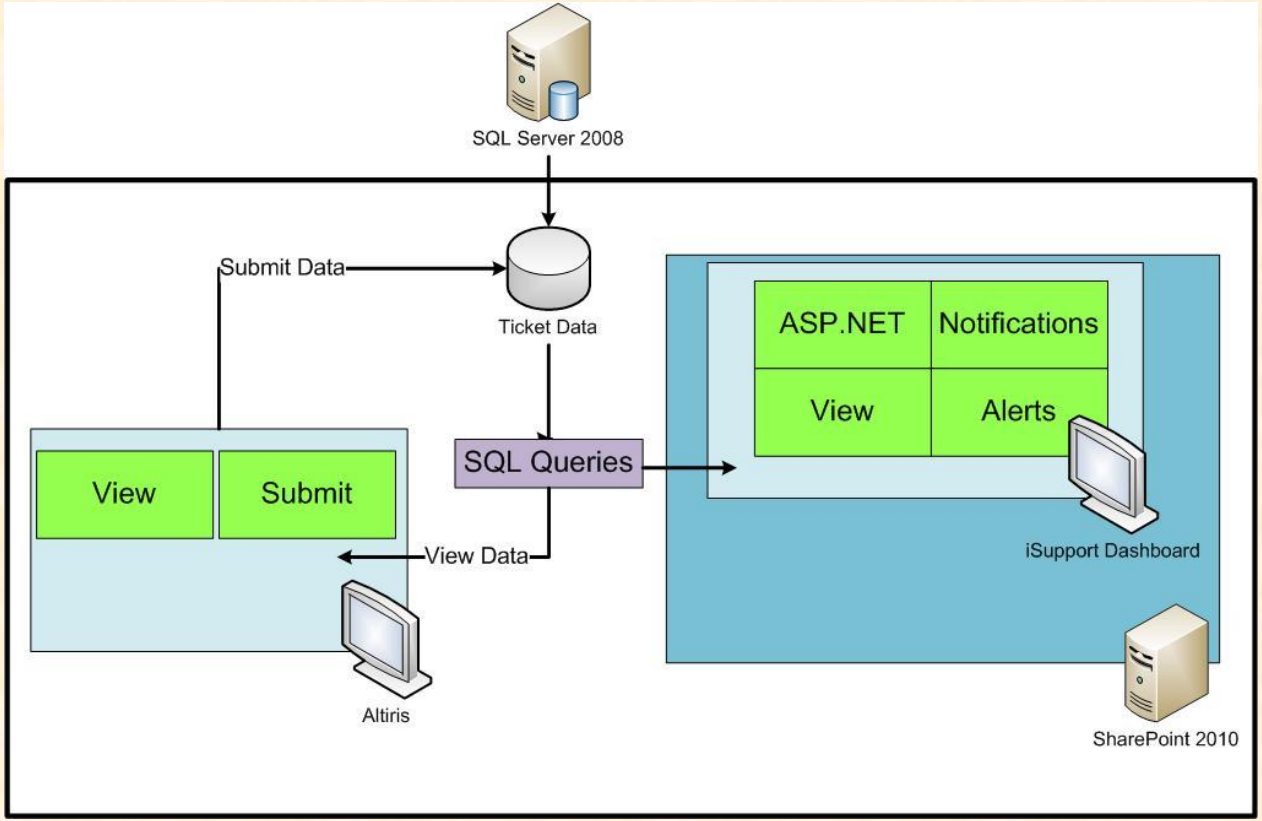
Team Sparrow
Screen Mockup





The Capstone Experience

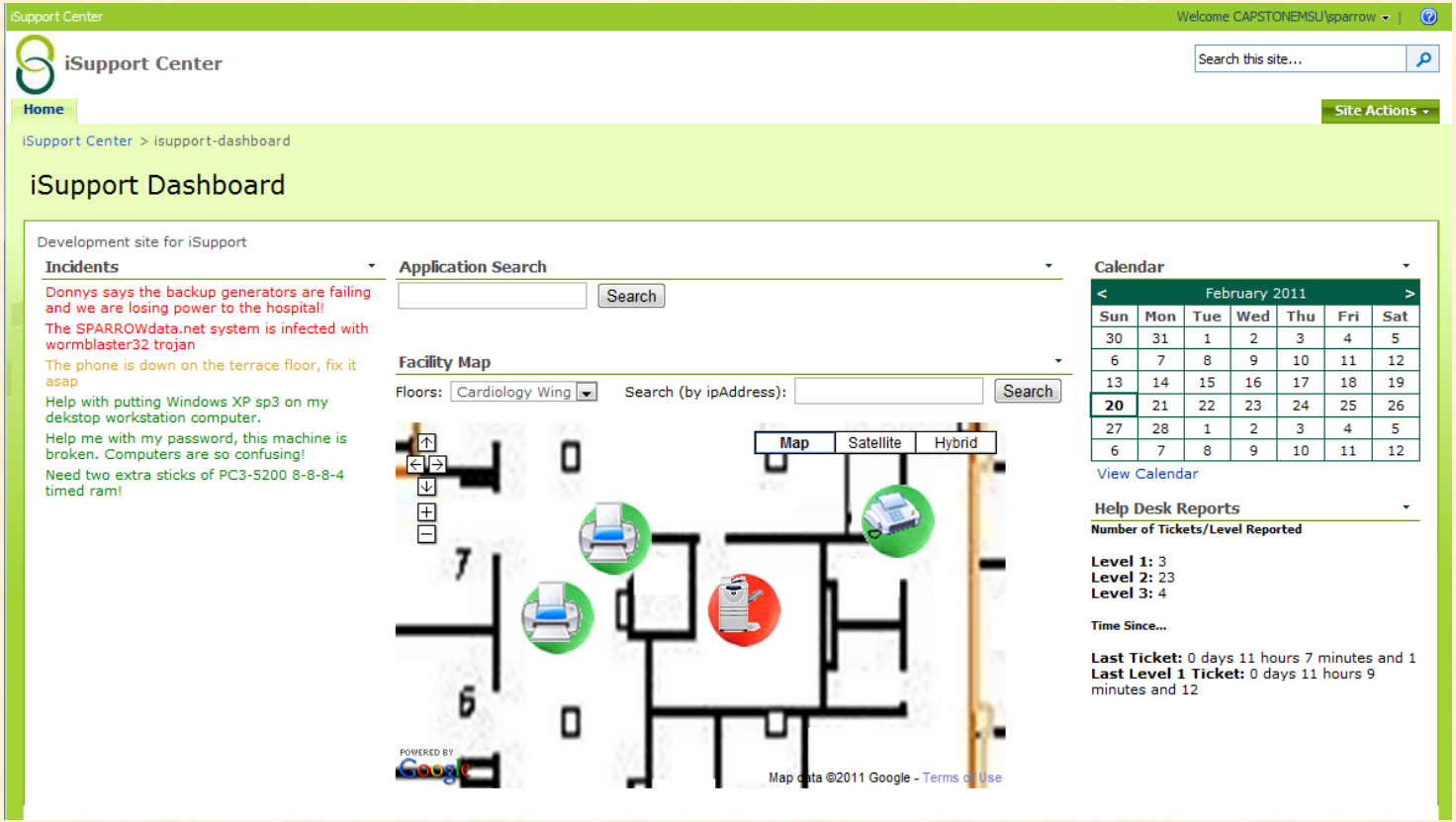
Team Sparrow
Architecture Diagram



Team Sparrow
Project Plan Presentation

Team Sparrow
Alpha Presentation

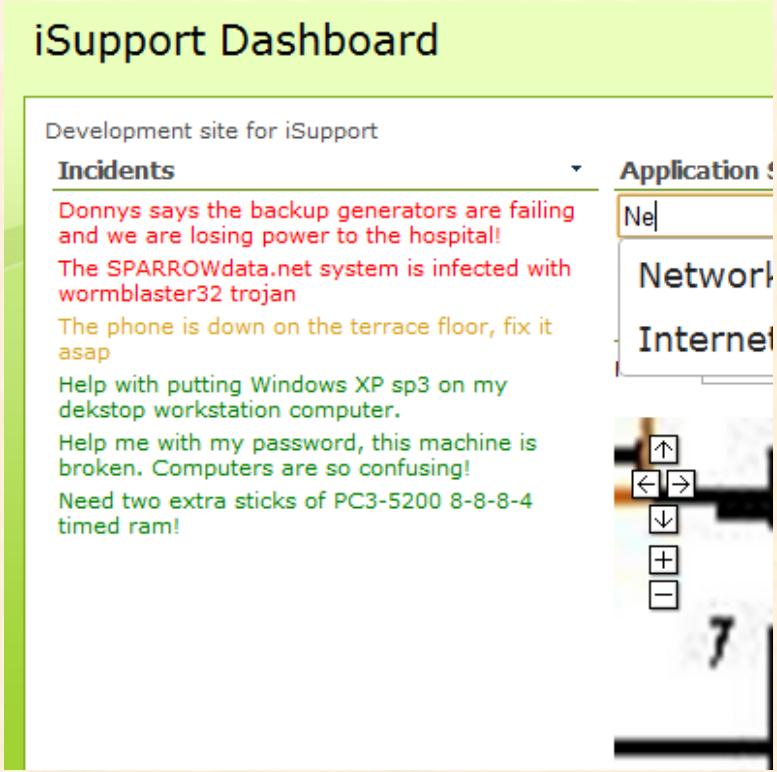
iSupport Dashboard



Team Sparrow
Alpha Presentation

Team Sparrow
Alpha Presentation

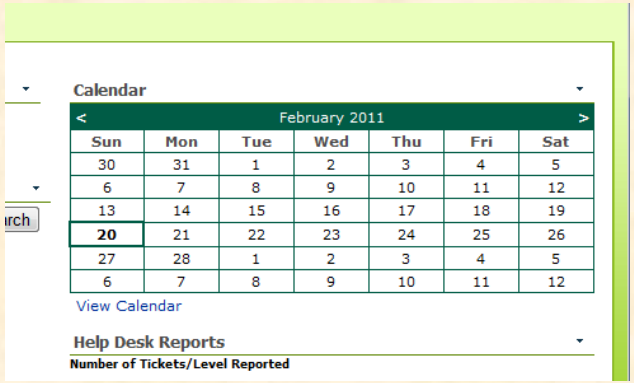
Incident List



The Capstone Experience

Team Sparrow
Alpha Presentation

On-Call Calendar



The Capstone Experience

Team Sparrow
Alpha Presentation

Team Sparrow
Beta Presentation

iSupport Dashboard

Home

Search this site...

My Incidents

[55556] | The SPARROWdata.net system is infected with wormblaster32 trojan

[60000] | Ebola virus escaped our quarantine facilities, head for evacuation chambers.

[56123] | The phone is down on the terrace floor, fix it asap

[87087] | Breakout of the flu, need all personnel machine desanitized on floors 3 and 4.

[95959] | Zone31100bldg3flPFS-EC2000/CA: This is just a test to see how long i can ...

Previous | Next ->
View Group Members' Incidents
Last Updated: Sun Apr 3 21:24:34 PDT 2011

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- Reports

Application Locator

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Facility Map

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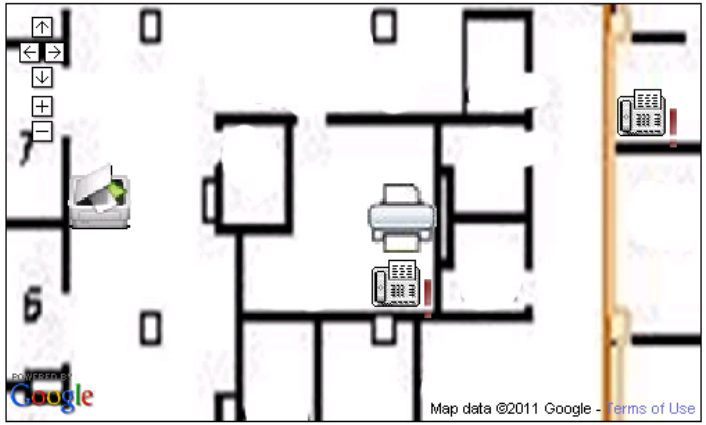


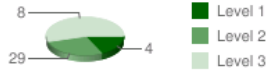
On-Call Calendar

April, 2011

S	M	T	W	T	F	S
27	28	29	30	31	1	2
		1:00			5:00	
3	4	5	6	7	8	9
		3:00		7:00		
10	11	12	13	14	15	16
						10:0
17	18	19	20	21	22	23
6:00						
24	25	26	27	28	29	30
			8:00			

Help Desk Reports

Number of Tickets Today



The Capstone Experience

Team Sparrow
Beta Presentation

Team Sparrow
Beta Presentation

My Incidents

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Previous | Next ->

View Group Members' Incidents

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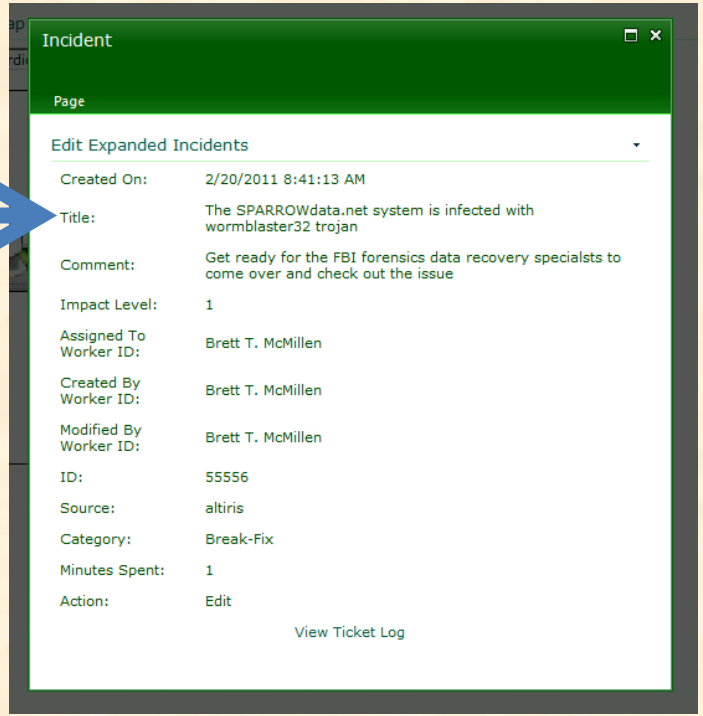

The Capstone Experience

Team Sparrow
Beta Presentation

Team Sparrow
Design Day

MICHIGAN STATE UNIVERSITY

The Capstone Experience

Team TechSmith

Department of Computer Science and Engineering
Michigan State University
Spring 2011

From Students…
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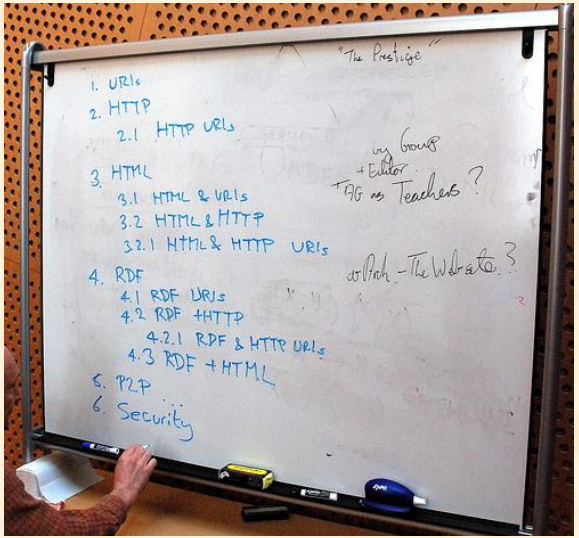
Documentation

Team TechSmith
Project Overview

WhiteCaps: Mobile Whiteboard Capture Solution

- TechSmith Screen Capture Solutions
  - Jing
  - Snagit
  - Camtasia
- Whiteboard Capture Solution
  - Capture, Annotate and Share
  - Via Mobile Phone and the Cloud
- Features
  - User Accounts
  - Upload, Share, Annotate, and View
  - Contextual Metadata
    - Location, Date, and Time
    - QR (Quick Response) Codes
  - Content History and Notifications
  - Photo Deskewing and Stitching
- Technologies
  - Apple iOS iPhone SDK, C, Objective-C
  - Google Android SDK, Java
  - Microsoft .NET, C#, WPF
  - Microsoft Azure Cloud Computing and Web Services

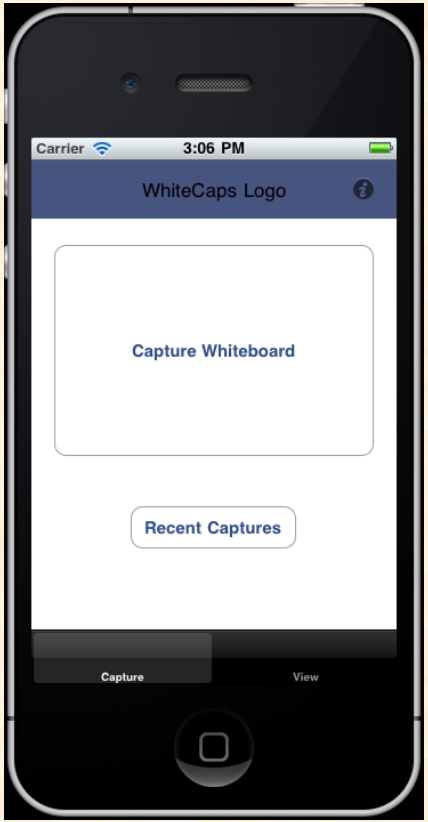


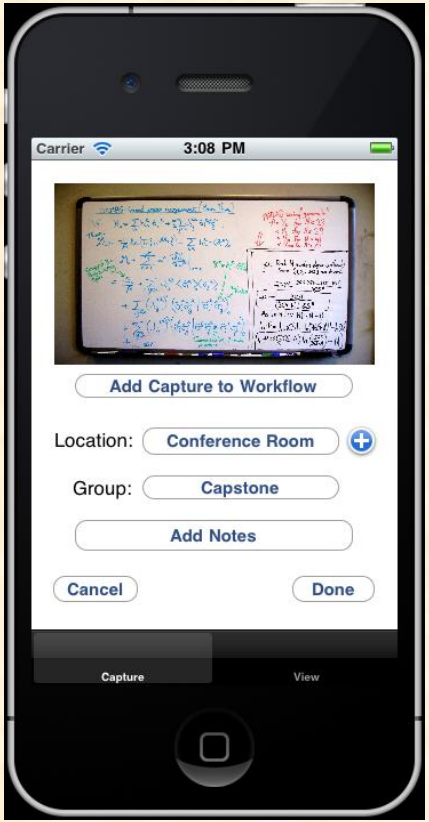
TechSmith

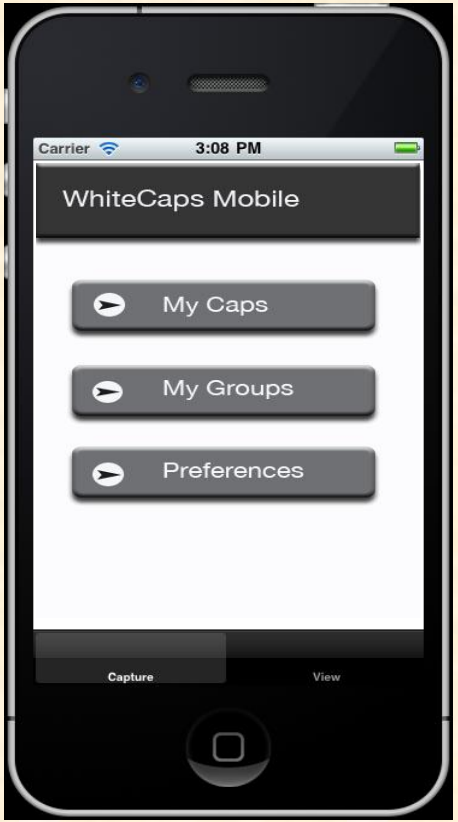
The Capstone Experience

Dillon Walls
Rob Allie
Cassi Miller
Matt Dobson
Team TechSmith Team Photo

Team TechSmith
Screen Mockups

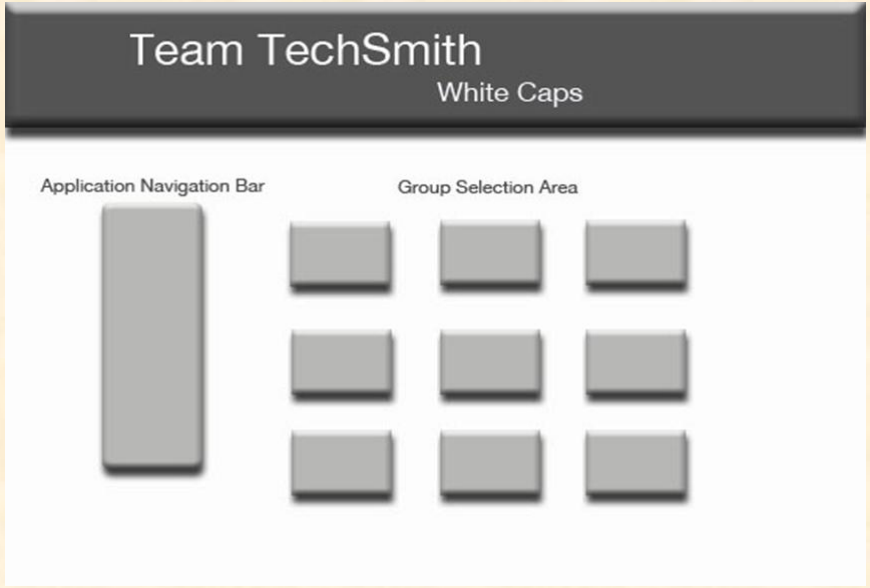


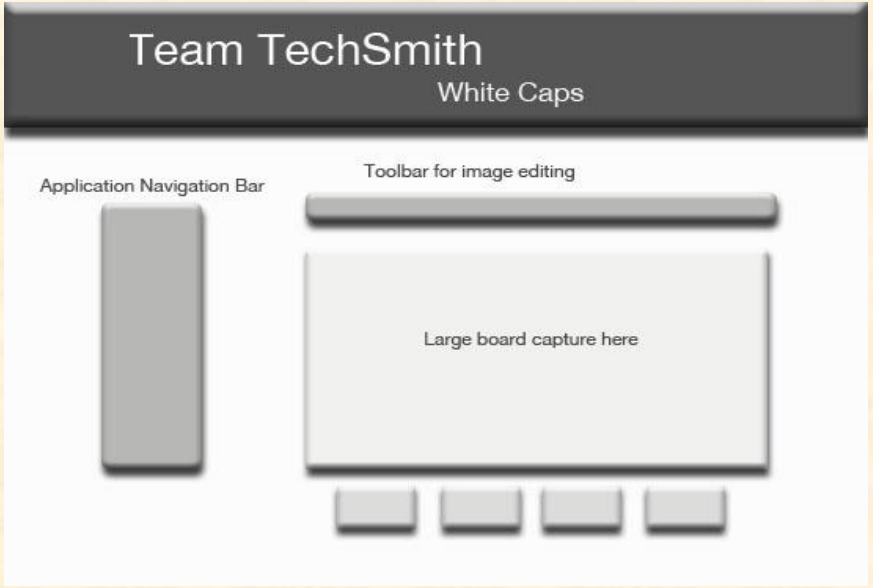




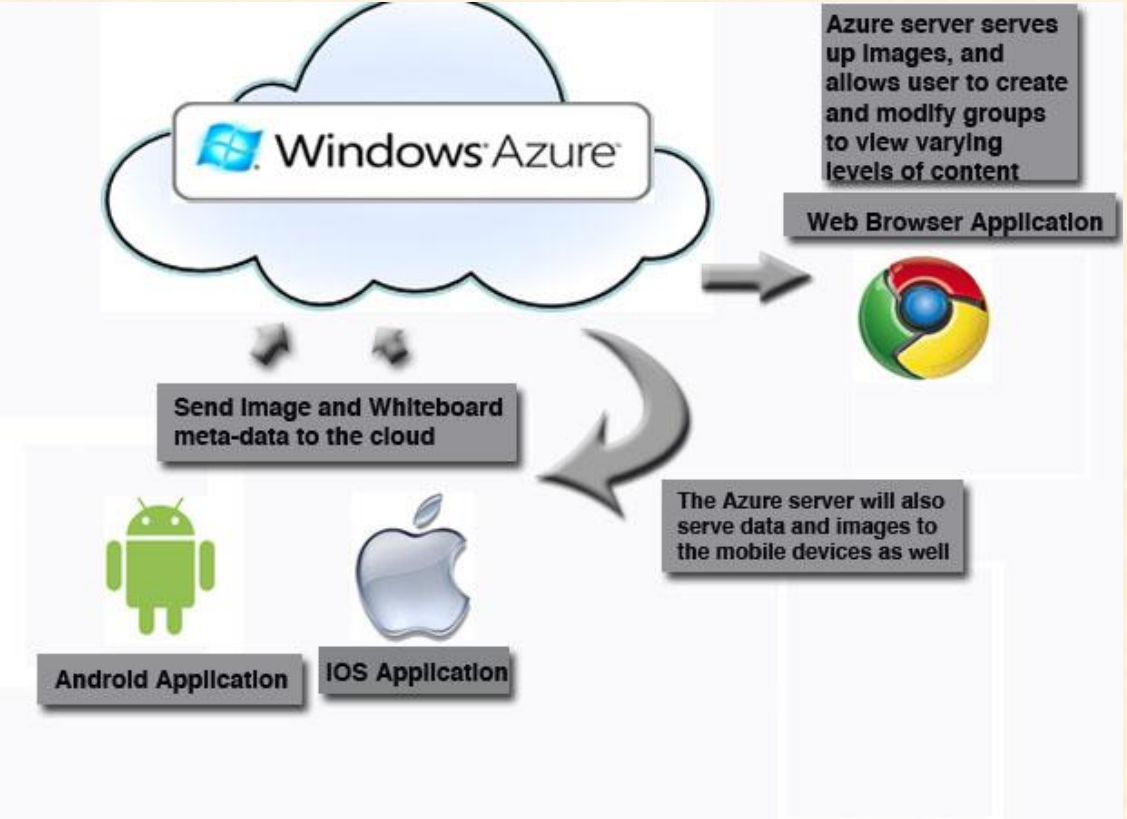
Team TechSmith
Project Plan Presentation

Team TechSmith
Screen Mockups





Team TechSmith
Architecture Diagram



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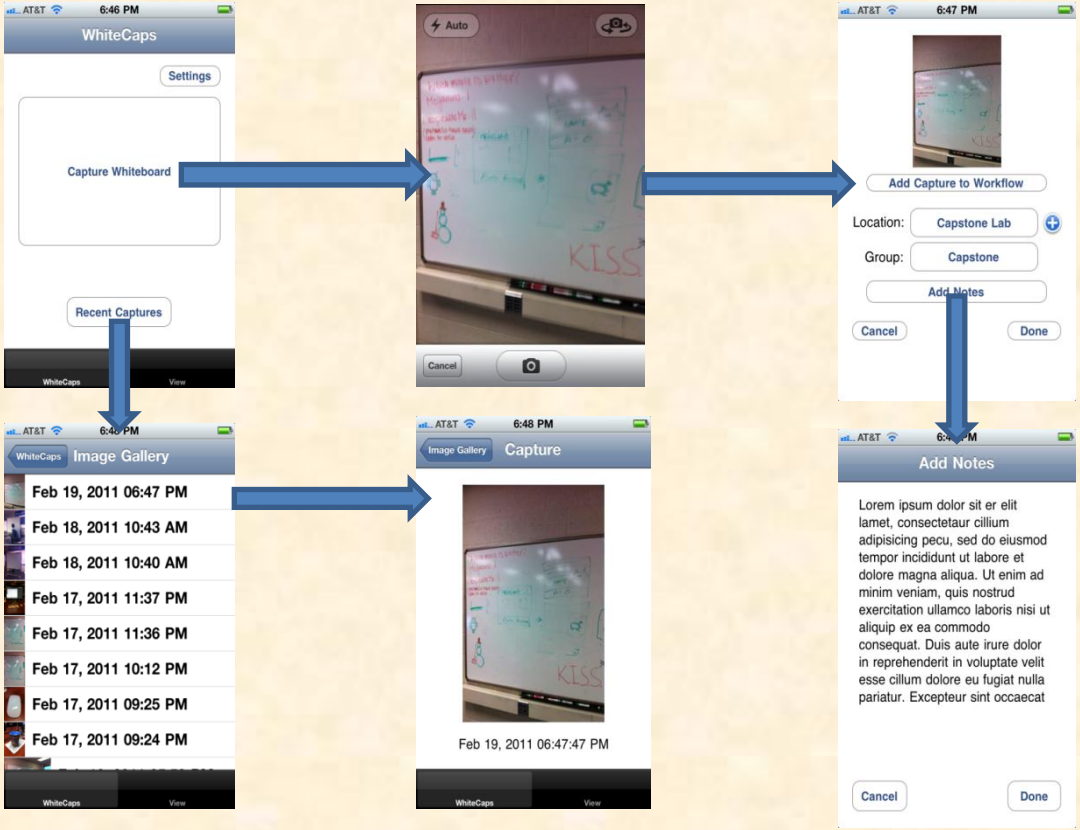
Project Plan Presentation

Team TechSmith
Alpha Presentation

Team TechSmith
Alpha Presentation

WhiteCaps Use Case



Team TechSmith
Alpha Presentation

Team TechSmith
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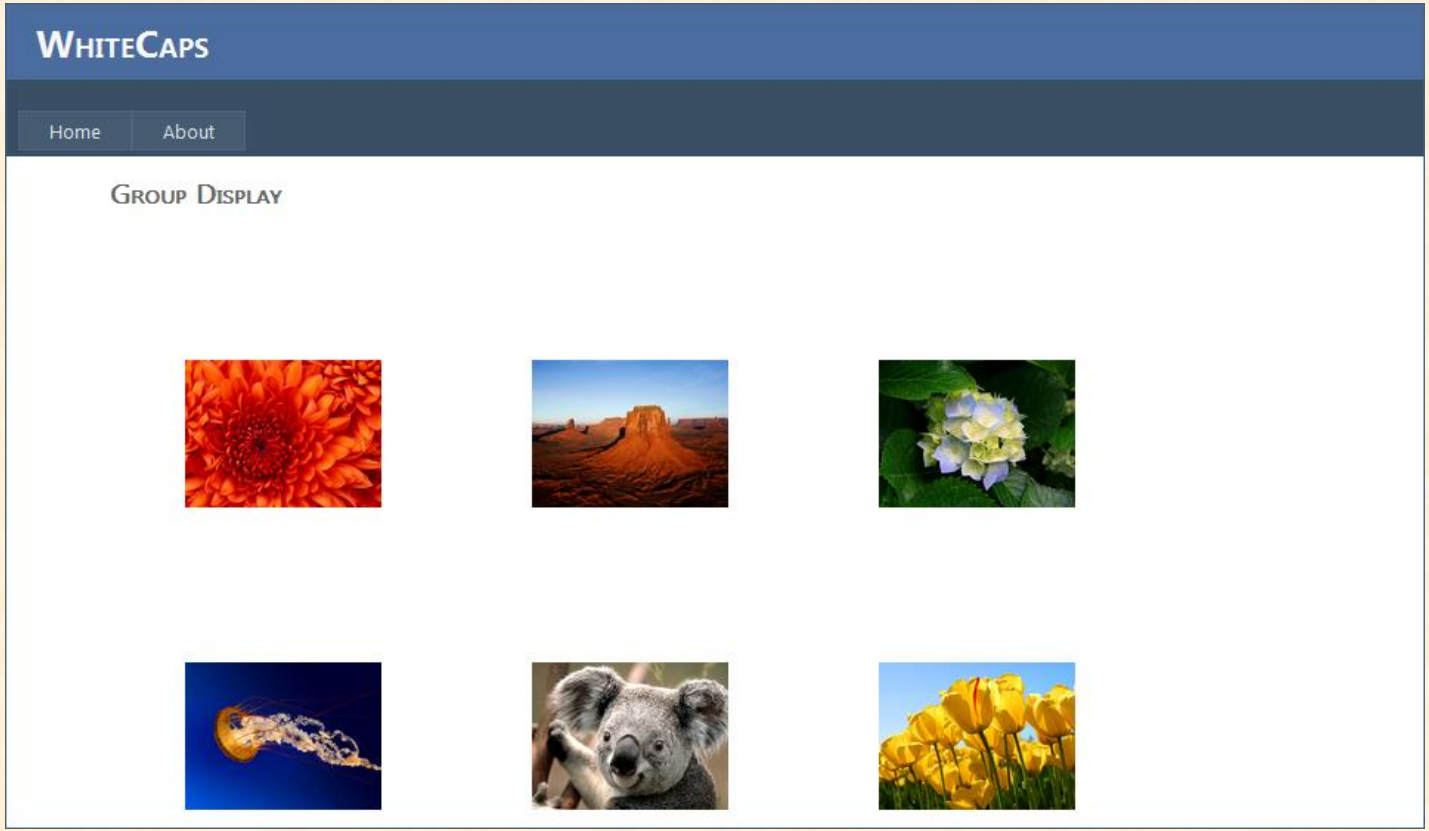
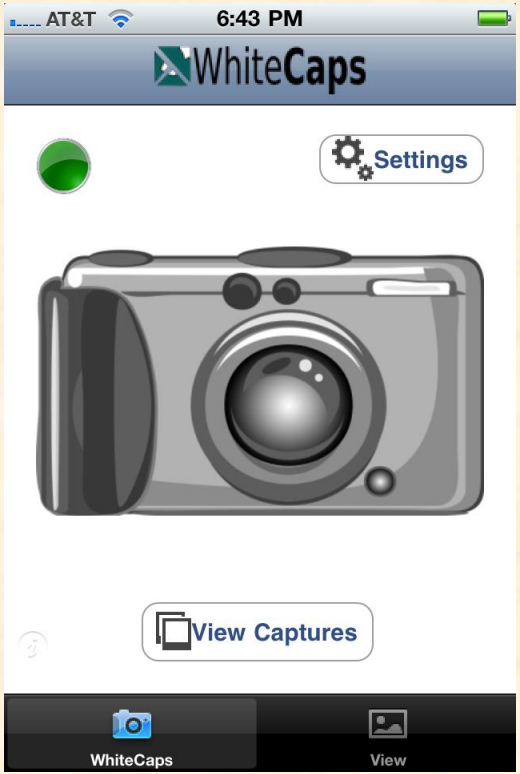
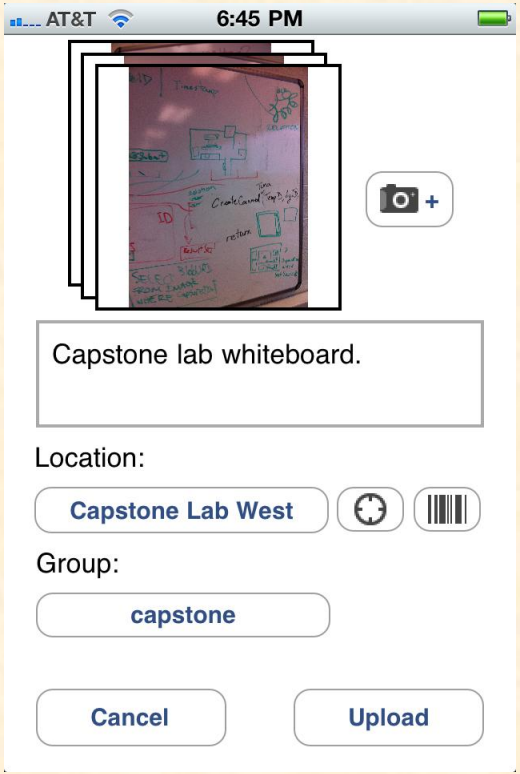
Browse Single Group

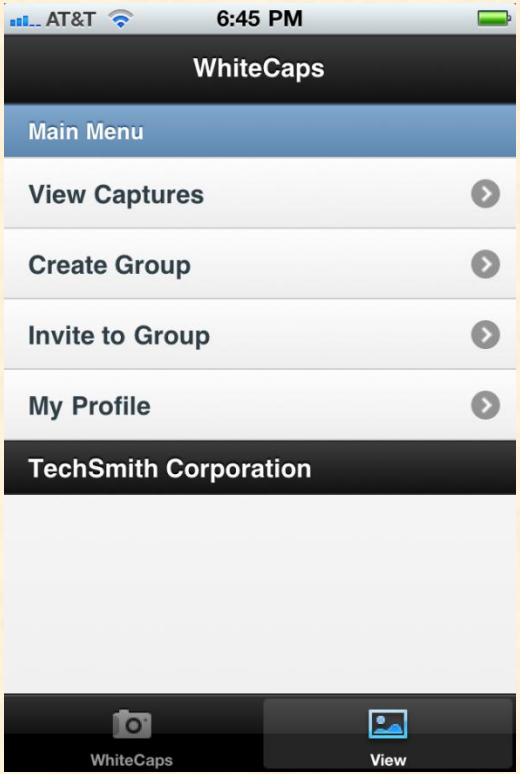


Team TechSmith
Beta Presentation

iPhone App





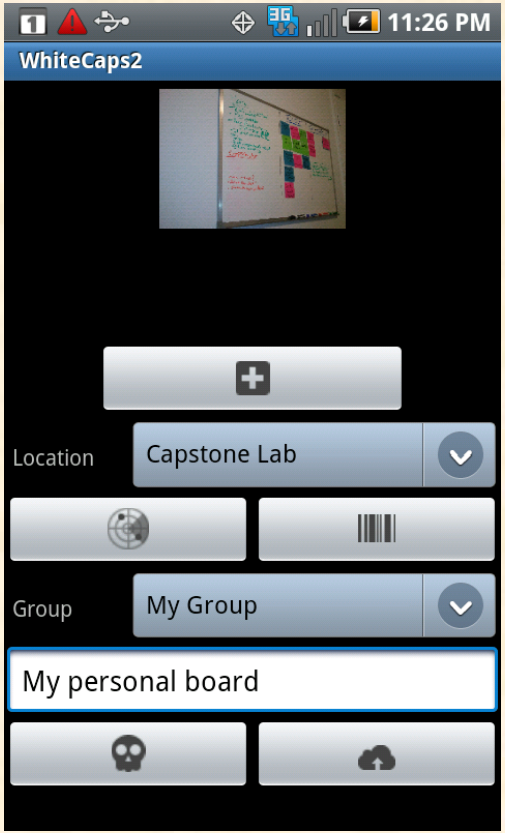


Team TechSmith
Beta Presentation

Team TechSmith
Beta Presentation

Team TechSmith
Beta Presentation

Android App



Team TechSmith
Beta Presentation

Team TechSmith
Design Day

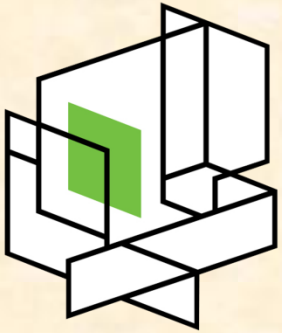
MICHIGAN STATE UNIVERSITY

The Capstone Experience

Team Urban Science

Department of Computer Science and Engineering
Michigan State University
Spring 2011

From Students…
…to Professionals



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Urban Science Home Page - Windows Internet Explorer

http://www.urbanscience.com/

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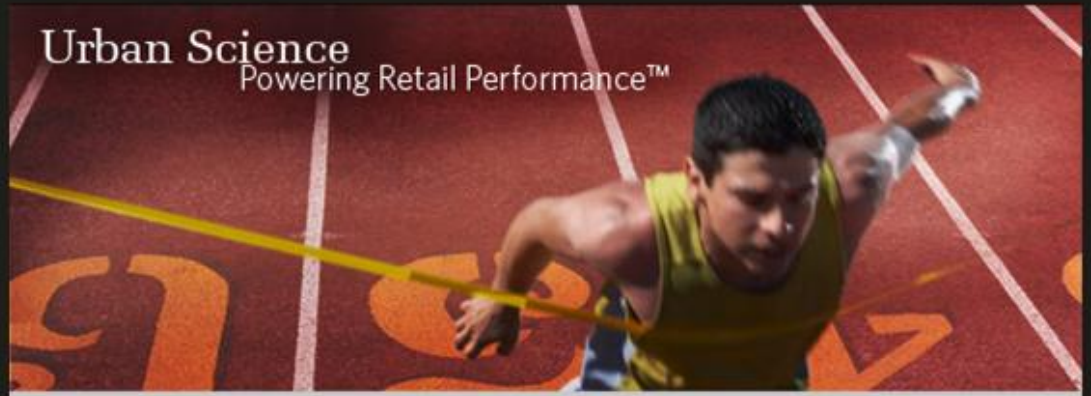

To achieve extraordinary results, you need to look beyond the obvious. Urban Science can help.

At Urban Science we live and breathe the simple concept that successful retail operations are all about location, performance and satisfied customers. To bring this idea to life, we create and analyze market and consumer data like no one else.

Using a unique combination of analytics, proprietary software and experience, we help our automotive and retail clients plan effectively, define and measure performance, and develop sales and marketing programs that deliver results.

Solutions

Results

Latest News:

Urban Science tells 1to1 Weekly that orphaned customers can be a real opportunity... Read more...

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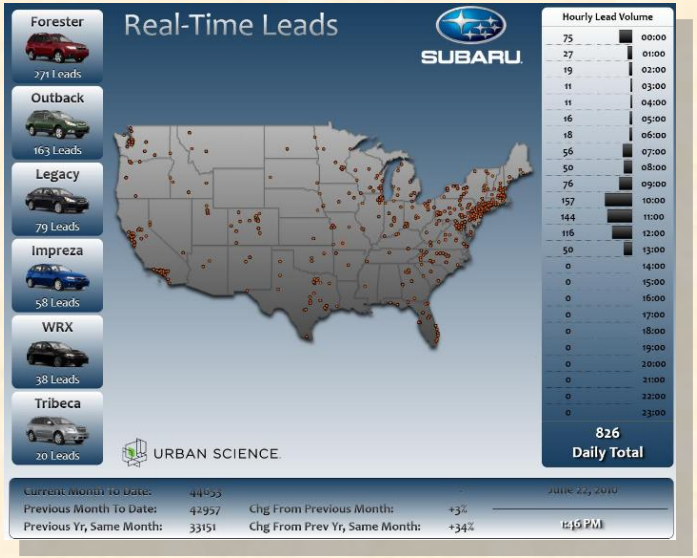
Contact Us

1.800.321.6900 EMAIL

Team TechSmith
Project Overview

Bringing LeadVision to the Web

- LeadTV
  - Visualization of Automotive Sales Leads
  - “TV” Model
    - Client-Based Application
    - Displayed on Dedicated Monitor
    - Little or No Interaction
- Web LeadTV
  - Browser-Based
  - Enhanced Capabilities and Usability
- Features
  - Customize Leads Visualized
    - By Brands and/or Models
    - By Top 5
    - Etc.
  - Zoom and Pan
  - Time Shifting
  - Etc.
- Technologies
  - Web Application Programming
  - Java and/or Silverlight
  - SQL Databases



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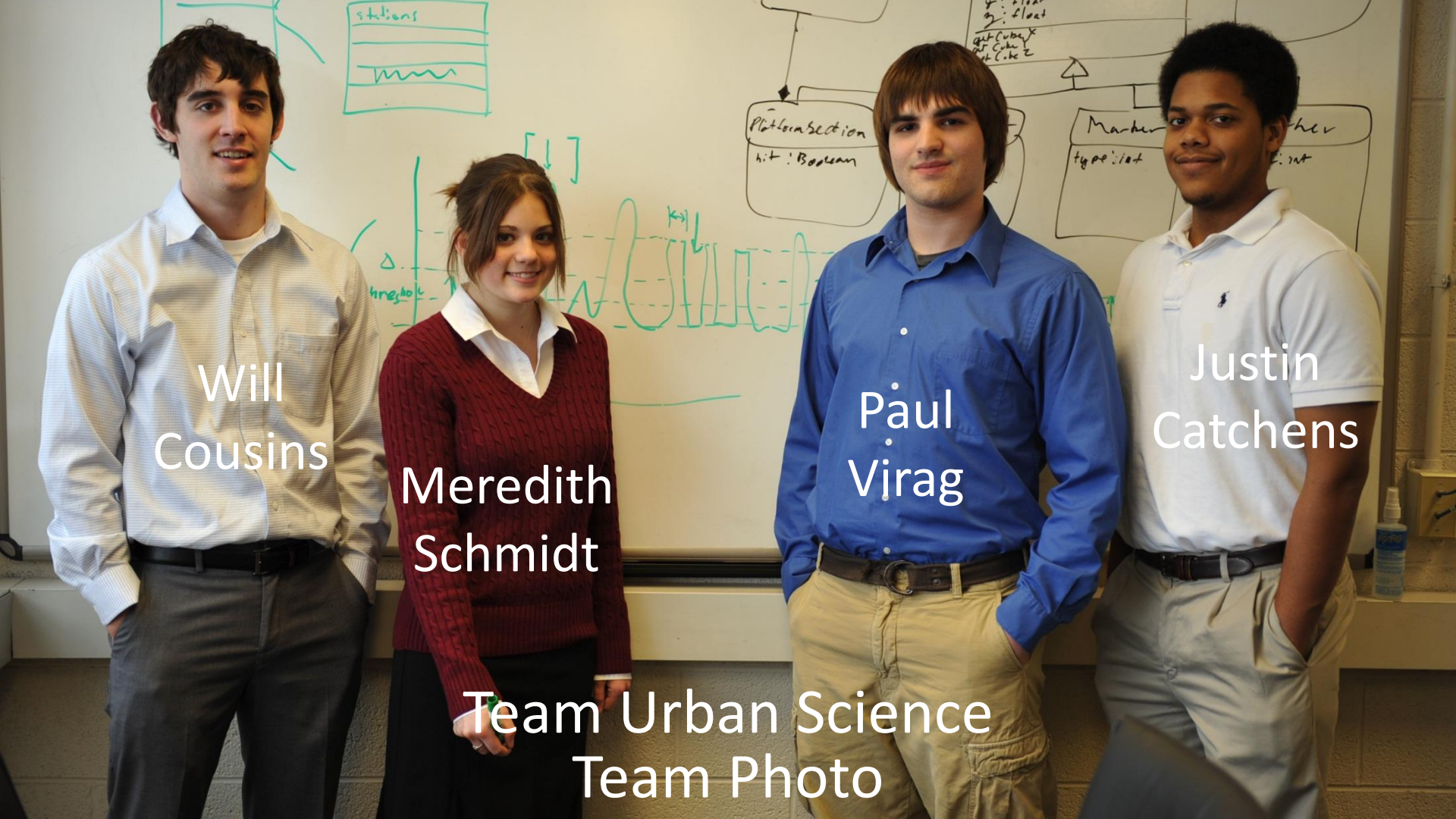
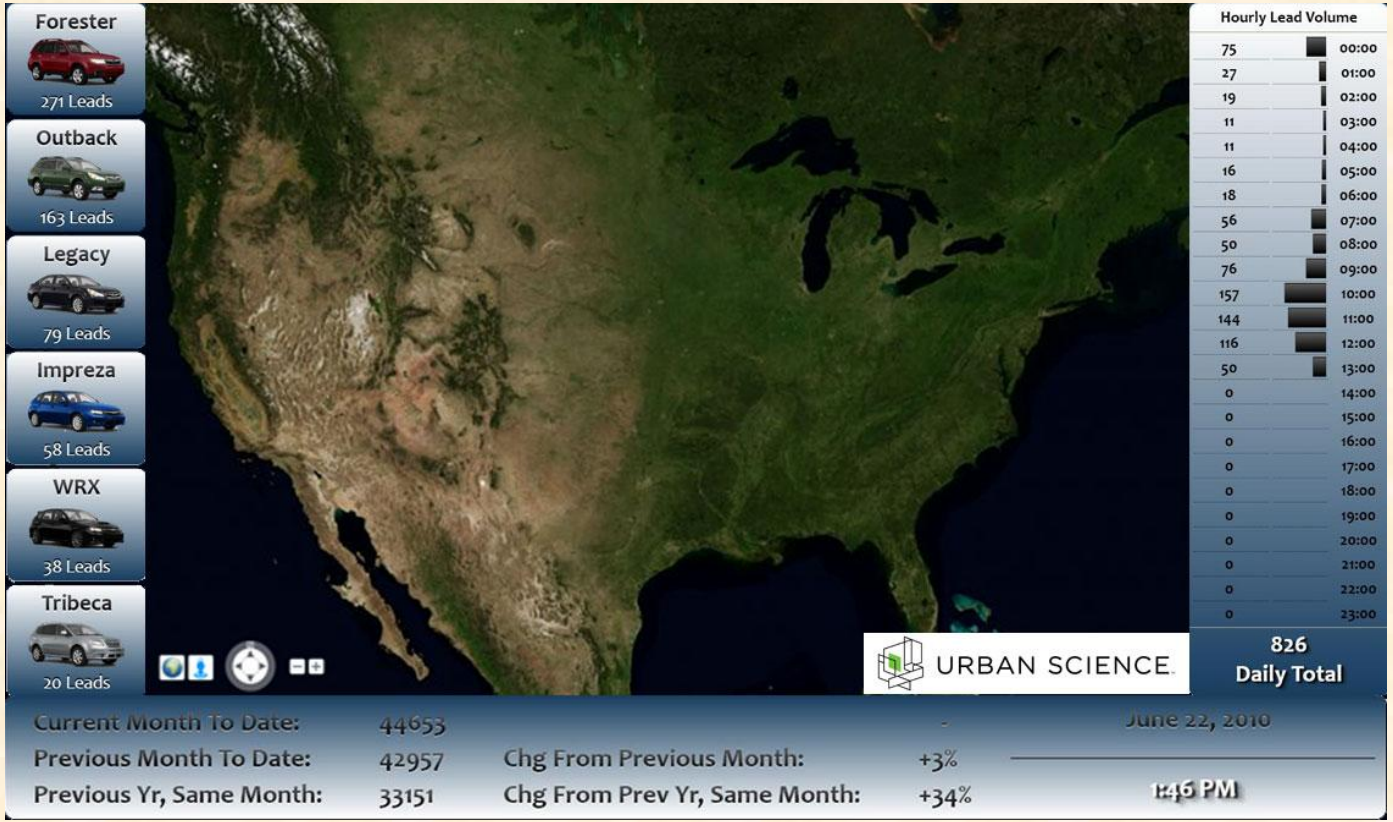
The Capstone Experience



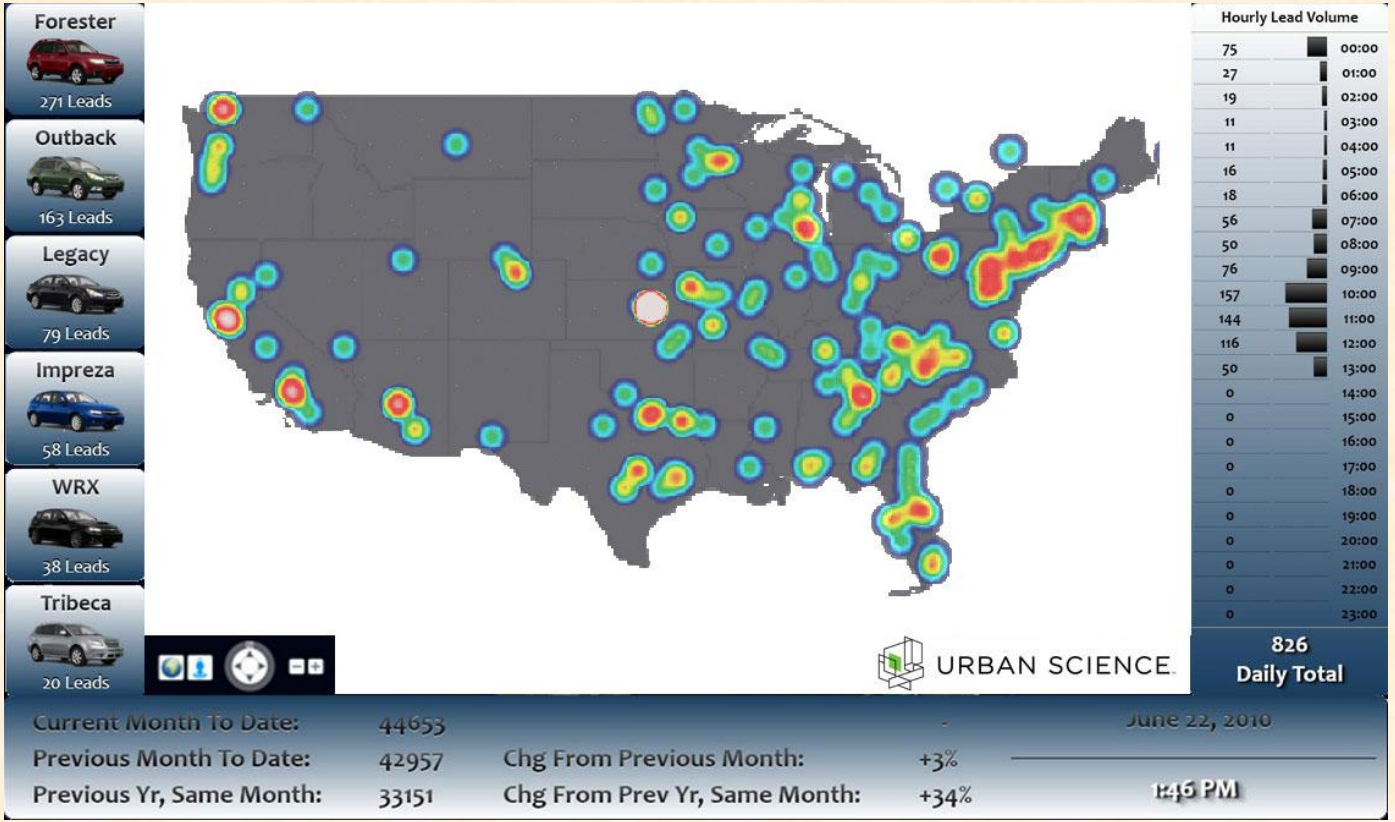
Team Urban Science
Team Photo

Team Urban Science
Screen Mockup

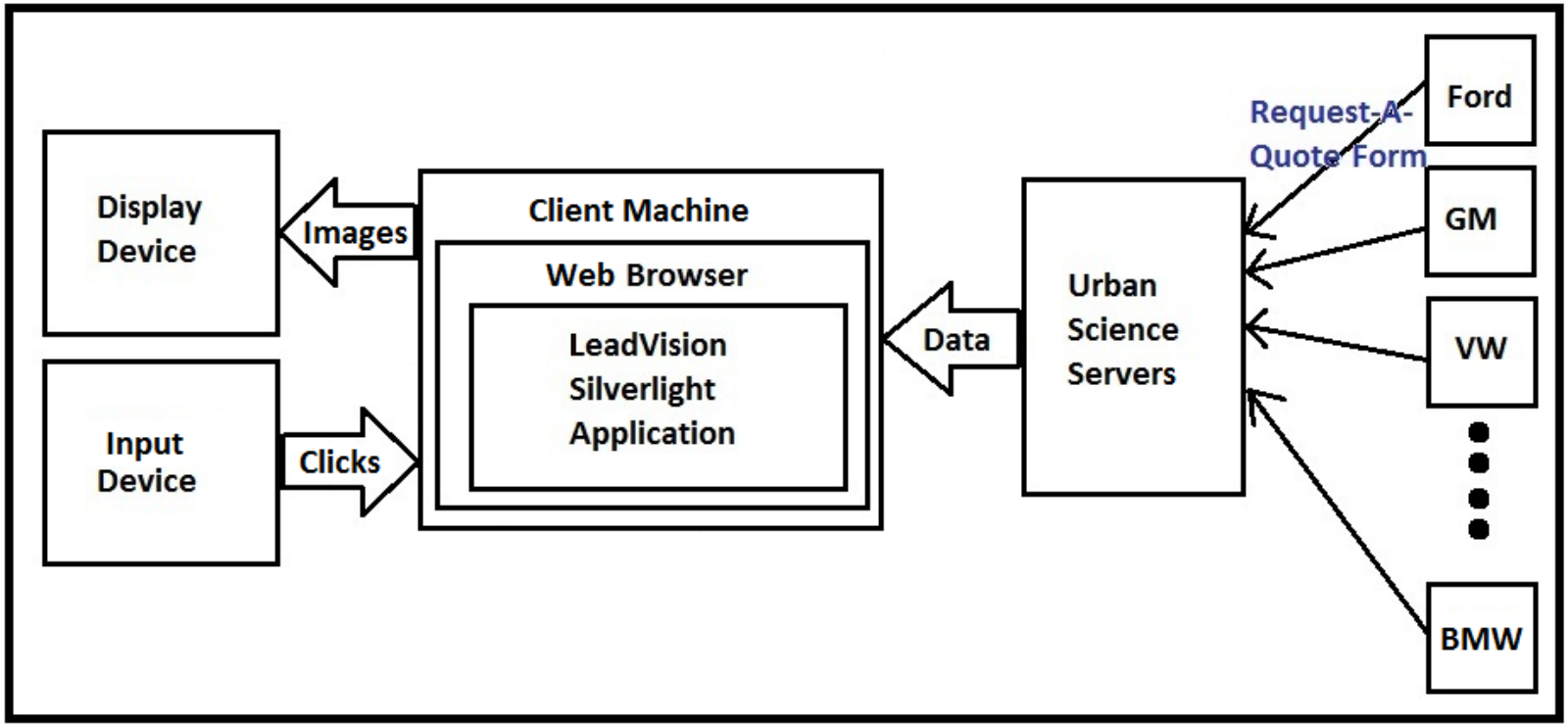


Project Overview
• Creating an interactive version of LeadVision
• Audience: customers walking into a dealership/corporate office
• "Lead" – request sent by customer
• No user input needed
• Daily lead data shown
Team Urban Science Project Plan
Team Urban Science
Project Plan Presentation

Team Urban Science
Screen Mockup



Team Urban Science
Architecture Diagram



Team Urban Science Project Plan Presentation

Team Urban Science
Alpha Presentation

Car Buttons and Ticker

The Capstone Experience

Team Urban Science
Alpha Presentation

Team Urban Science
Alpha Presentation

Audi Lead in L.A.

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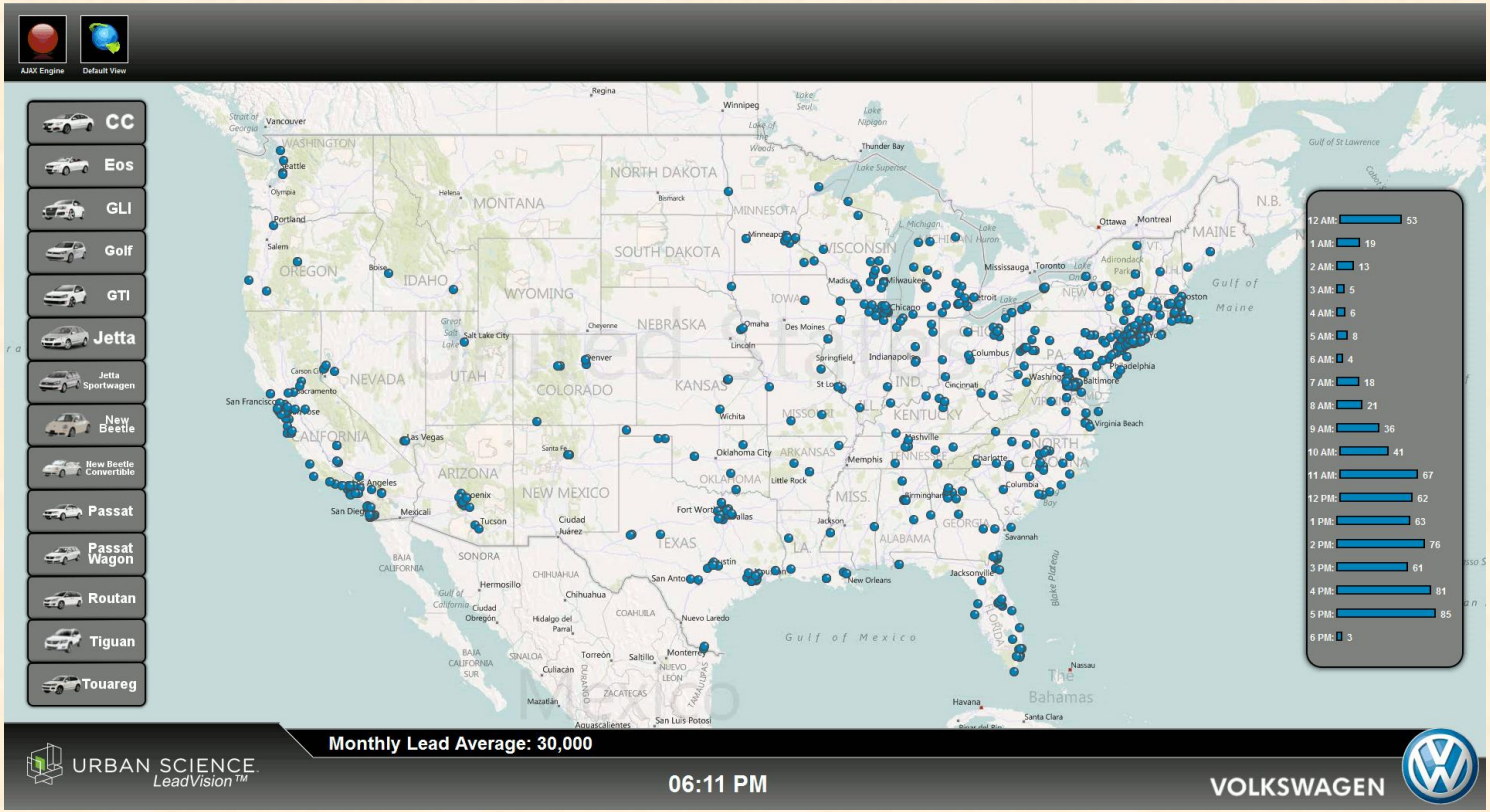
Team Urban Science
Alpha Presentation

Team Urban Science
Beta Presentation

LeadVision Default View



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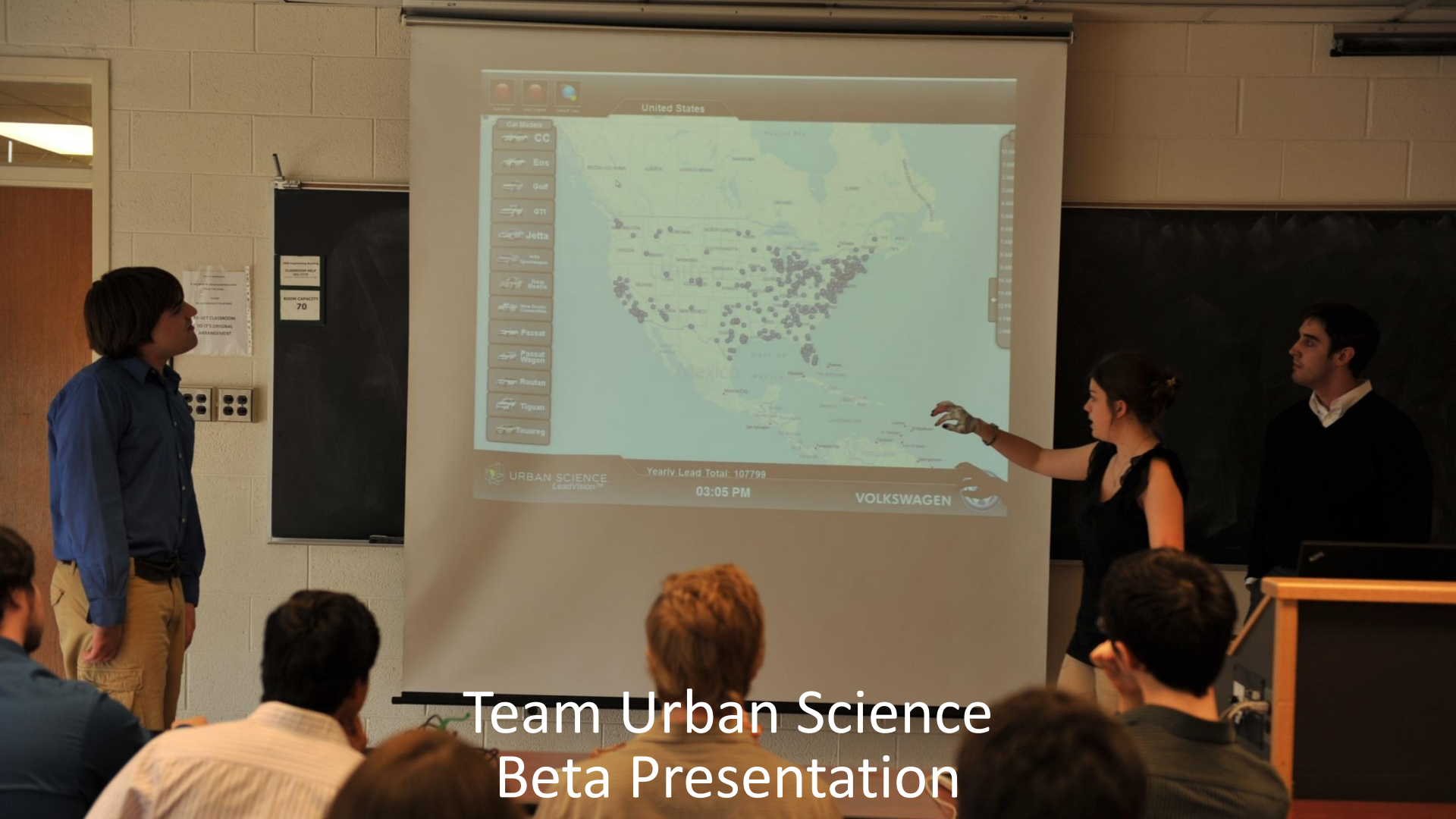

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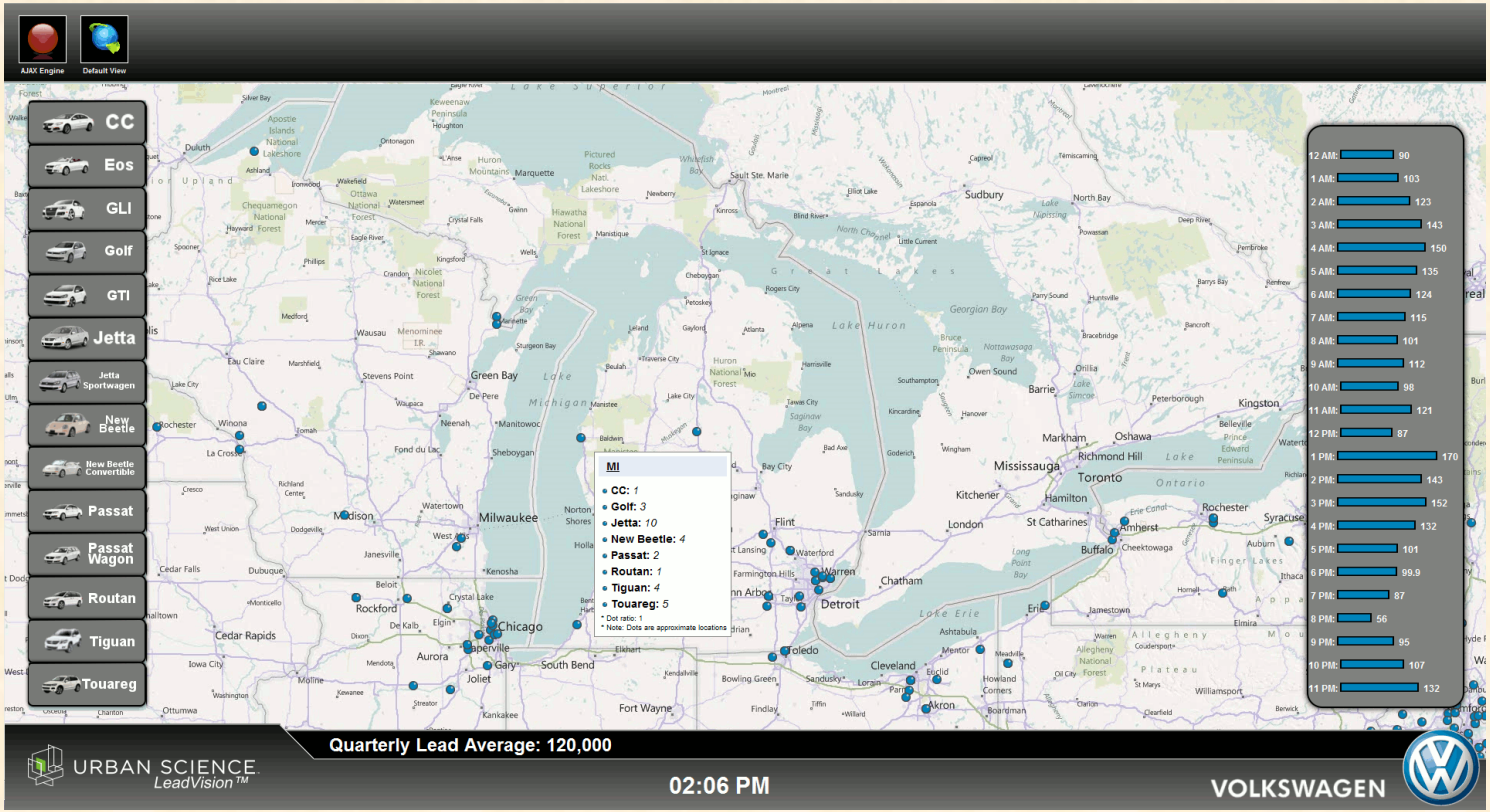
Beta Presentation

Team Urban Science
Beta Presentation

LeadVision Mouse-Over



The Capstone Experience

Team Urban Science
Beta Presentation

Team Urban Science
Design Day

MICHIGAN STATE UNIVERSITY

The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University
Spring 2011

From Students…
…to Professionals

Capstone Lab
View of Spartan Stadium

Capstone Lab
View of Spartan Stadium

MICHIGAN STATE UNIVERSITY

The Capstone Experience

Design Day Award Winners

April 30, 2010

From Students…
…to Professionals

Auto-Owners Exhibition Award

Team GE Aviation, Spring 2010

Flight Deck Lateral Map Display

Jason Ridgon, Jordan Clare, Cory Sites, Adam Dupler

Presented by Ron Simon of Auto-Owners Insurance

Chrysler Praxis Award

Team Boeing, Spring 2010

XML Texture Composition

Jeremiah Cunningham, Jessica Parks, Marc Coleman, Jonathan Harris

Presented by Rick Rose of Chrysler

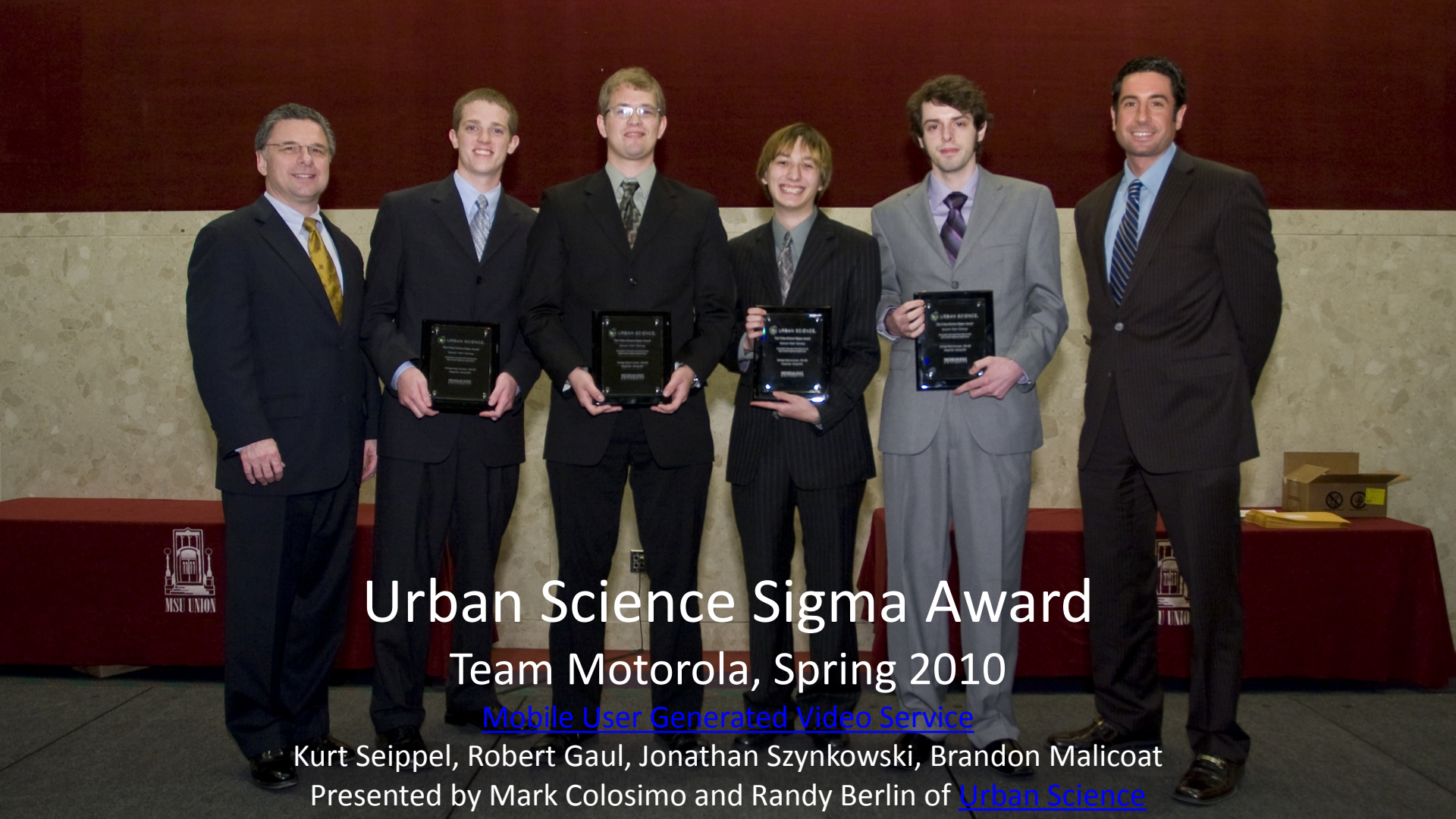
TechSmith Screencast Award

Team Medtronic, Spring 2010

Mobile Health Management System

Michael Keesey, Kevin Chen, Karthik Chokkaram, Meghan McNeil

Presented by Dean Craven of TechSmith



Urban Science Sigma Award

Team Motorola, Spring 2010

Mobile User Generated Video Service

Kurt Seippel, Robert Gaul, Jonathan Szynkowski, Brandon Malicoat

Presented by Mark Colosimo and Randy Berlin of Urban Science

MICHIGAN STATE UNIVERSITY

The Capstone Experience

Design Day Award Winners

December 10, 2010

From Students…
…to Professionals

Auto-Owners Exhibition Award

Team Meijer, Fall 2010

ITS Products and Services Request System

Matt Packowski, Austin McCarty, Andrew Thielking

Presented by Scott Lake and Bob Buchanan of Auto-Owners Insurance

Chrysler Praxis Award

Team Motorola, Fall 2010

Enhanced Program Guide for Mobile Devices

Andrew Rossow, Drew Hanlon, Tim Aubel, Brian Cripe

Presented by Karen Wrobel of Chrysler

TechSmith Screencast Award

Team Medtronic, Fall 2010

Medtronic Wellness Portal

Zach Riggle, Joe Heldt, Chris Van Wiemeersch, Vu Bui

Presented by Dean Craven of TechSmith

Urban Science Sigma Award

Team GE Aviation, Fall 2010

Super Synoptics

Adam Breece, Shawn Henry Adams, Nick Rafalski

Presented by Randy Berlin of Urban Science

MICHIGAN STATE UNIVERSITY

The Capstone Experience

Design Day Award Winners

April 29, 2011

From Students…
…to Professionals

Auto-Owners Exhibition Award

Raytheon, Spring 2011

Dynamic Spectrum Access for Network Radios

James Voss, William Bonner, Matt Bowser, Srinivasa Settaluri

Presented by Scott Lake and Bob Buchanan of Auto-Owners Insurance

Chrysler Praxis Award

Team Boeing, Spring 2011

BAPS: Battle Aircraft Position Share

Steven Garske, Eric Muller, Adam Cook, Andrew Kos

Presented by Karen Wrobel of Chrysler

TechSmith Screencast Award

Team Medtronic, Spring 2011

Cloud-Based Athletics Operations Center

Caitlin Russ, Evan Francis, Michael Holp, Christopher Paterson

Presented by Dean Craven of TechSmith

Urban Science Sigma Award

Team Sparrow, Spring 2011

iSupport Center

Brett McMillen, Dianna Kay, Maurice Wong, Ryan Hewitt

Presented by Randy Berlin of Urban Science

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The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University
Spring 2011

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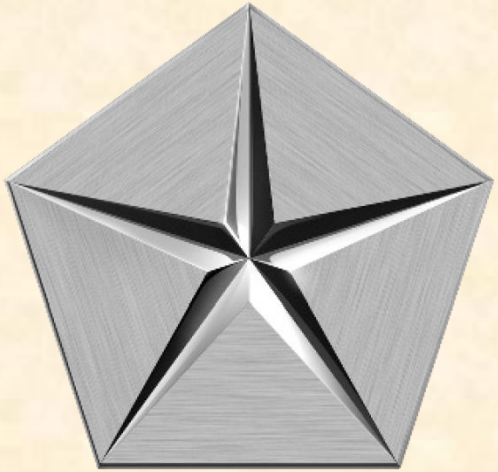
Auto-Owners Insurance
Life Home Car Business
The "No Problem" People®

BOEING



CHRYSLER

DOW

Medtronic

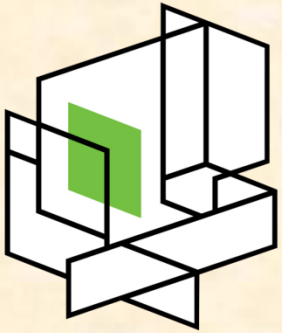
meijer

MOTOROLA

Raytheon

Sparrow

TechSmith®



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