

MICHIGAN STATE
UNIVERSITY

The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University
Fall 2012



*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, 1145 Engineering Building
- Presentations By
 - Professor
 - Teams
 - Status Reports
 - Formal Presentations
 - Project Plan
 - Alpha
 - Beta
 - Project Videos
 - Guest Speakers



All-Hands Meetings

08/29: Capstone Overview
09/03: (Labor Day, No Meeting)
09/05: Project Plan
09/10: Risks and Prototyping
09/12: Team [Status Report Presentations](#)
09/17: Team [Project Plan Presentations](#)
09/19: Team [Project Plan Presentations](#)
09/24: Team [Project Plan Presentations](#)
09/26: Team [Project Plan Presentations](#)
10/01: Resume Writing and Interviewing
10/03: Career Gallery
10/08: Schedule and Teamwork
10/10: Creating and Giving Presentations
10/15: Team [Alpha Presentations](#)
10/17: Team [Alpha Presentations](#)
10/22: Team [Alpha Presentations](#)
10/24: Team [Alpha Presentations](#)

10/29: [Design Day](#) and the [Project Videos](#)
10/31: Camtasia
11/05: Team [Beta Presentations](#)
11/07: Team [Beta Presentations](#)
11/12: Team [Beta Presentations](#)
11/14: Team [Beta Presentations](#)
11/19: Team Status Reports
11/21: Team Status Reports
11/26: Ethics and Professionalism
11/28: Intellectual Property and Copyright
12/03: [Project Videos](#)
12/05: [Project Videos](#) and [All Deliverables](#)
12/06: [Design Day Setup](#)
12/07: [Design Day](#)
12/11: [Project Videos](#)



The Capstone Experience

Team Auto-Owners

Department of Computer Science and Engineering
Michigan State University
Fall 2012



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



Auto-Owners Insurance

Life Home Car Business

The "No Problem" People®

Auto-Owners Insurance

OUR PRODUCTS

CORPORATE INFORMATION

CUSTOMER CLAIMS

Enter a Keyword

Find

▼ Find a Local Agency

Enter a Zip Code

Find

or Search by Address



Quality Coverage in 26 States

► Start an Auto Quote

► Customer Log In

"Highest in customer satisfaction
with the Auto Insurance Claims
Experience, four years in a row."

-- J.D. Power and Associates



Life Insurance
Protecting your family

Home Insurance
Property and liability

Car Insurance
Security while on the road

Business Insurance
Guarding your investment

Team Auto-Owners Project Overview

Pig “E” Bank

- Functionalities
 - Make Electronic Deposits Into Annuity Accounts
 - By Annuity Policyholder, Family, and Friends
 - Via Web Apps, Both Classic and Mobile
- Features
 - Secure Account Management
 - Deposits Based On Policyholder Name and DOB
 - By Policy Holder and Non-Policy Holders
 - Via Credit Cards, PayPal, and EFTs
 - Special Events Gift Selection
 - Birthday, Graduation, Retirement, Etc.
 - Send Card with Deposit Amount to Annuity Policy Holder
 - Support Various Mobile Devices
 - Print and Email Confirmations for Customers and Agents
 - Display Agent Contact Information
 - Administrative Application for Report Generation
- Technologies
 - Microsoft C#, ASP.NET 4.0
 - Microsoft SQL Server 2012
 - jQuery Mobile
 - Ember.js
 - QUnit



Lansing, Michigan



Team Auto-Owners

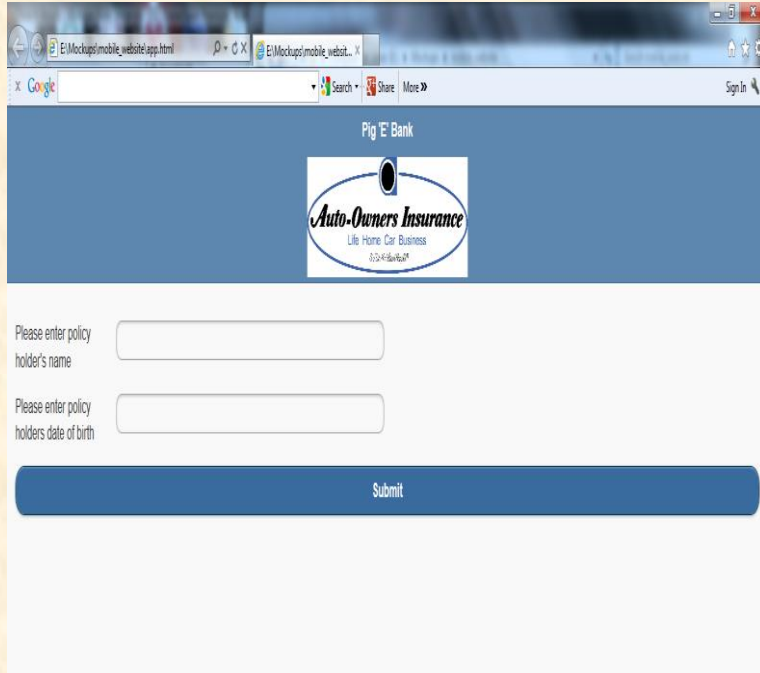
David Ward, Benjamin Szymczak, Nathan Sriro



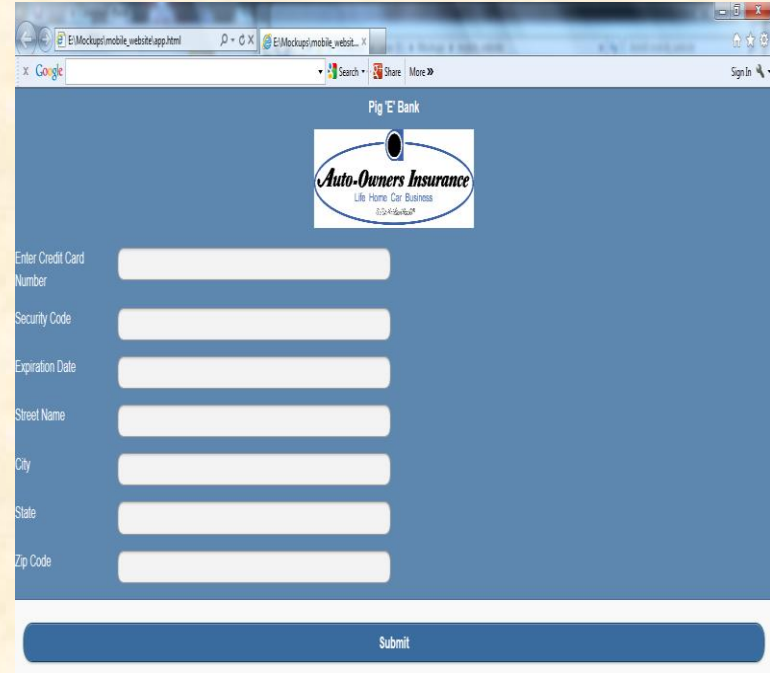
Team Auto-Owners Project Plan Presentation

Team Auto-Owners Project Plan Presentation

Screen Mockups



This screen mockup shows the registration form for the Auto-Owners Insurance mobile website. The browser window has two tabs, both titled 'E:\Mockups\mobile_website\app.html'. The address bar shows 'Google'. The page header includes the 'Pig 'E' Bank' logo and the 'Auto-Owners Insurance' logo with the tagline 'Life Home Car Business'. The form consists of two text input fields: 'Please enter policy holder's name' and 'Please enter policy holders date of birth'. A blue 'Submit' button is located at the bottom of the form.

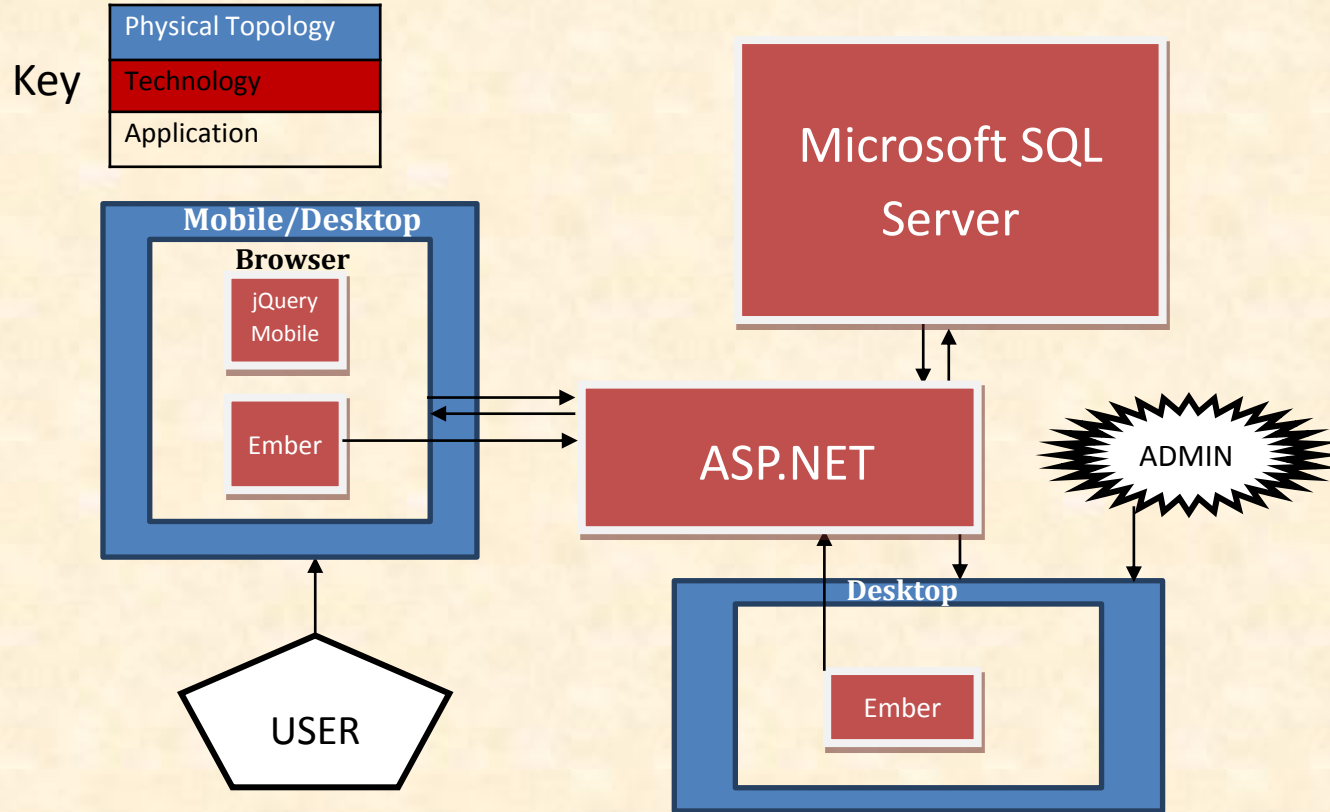


This screen mockup shows the login form for the Auto-Owners Insurance mobile website. The browser window has two tabs, both titled 'E:\Mockups\mobile_website\app.html'. The address bar shows 'Google'. The page header includes the 'Pig 'E' Bank' logo and the 'Auto-Owners Insurance' logo with the tagline 'Life Home Car Business'. The form consists of seven text input fields: 'Enter Credit Card Number', 'Security Code', 'Expiration Date', 'Street Name', 'City', 'State', and 'Zip Code'. A blue 'Submit' button is located at the bottom of the form.

Team Auto-Owners

Project Plan Presentation

Architecture Diagram





Team Auto-Owners Project Plan Presentation

Team Auto-Owners Project Plan Presentation

Screen Mockups

9:59 PM 94%

Pig 'E' Bank

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

Please enter policy holder's name

Please enter policy holders date of birth

Submit

10:03 PM 95%

Pig 'E' Bank

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

Deposit Amount

1,000

Choose your gift:

Teddy Bear

Street Name

City

10:03 PM 95%

Pig 'E' Bank

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

Enter Credit Card Number

Security Code

Expiration Date

10:04 PM 95%

Pig 'E' Bank

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

Thank you for your order! A confirmation email will be sent to you shortly.

Another deposit

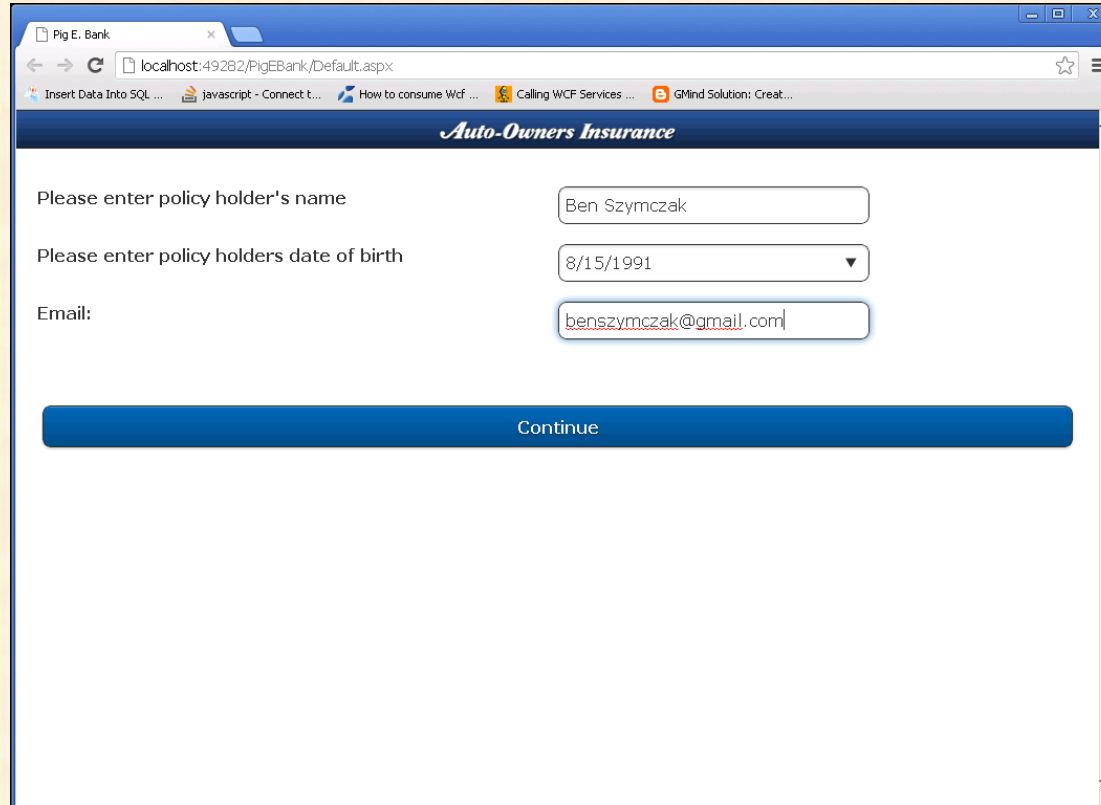
Print



Team Auto-Owners Alpha Presentation

Team Auto-Owners Alpha Presentation

Landing Page



The screenshot shows a web browser window with the title "Pig E. Bank". The address bar displays "localhost:49282/PigEBank/Default.aspx". The browser's taskbar shows several open tabs: "Insert Data Into SQL...", "javascript - Connect t...", "How to consume Wcf...", "Calling WCF Services...", and "GMind Solution: Creat...". The web page has a dark blue header with the text "Auto-Owners Insurance" in a white, italicized serif font. Below the header, the form contains three input fields: "Please enter policy holder's name" with the value "Ben Szymczak", "Please enter policy holders date of birth" with a dropdown menu showing "8/15/1991", and "Email:" with the value "benszymczak@gmail.com". A large blue button labeled "Continue" is positioned below the email field.

Pig E. Bank

localhost:49282/PigEBank/Default.aspx

Insert Data Into SQL ... javascript - Connect t... How to consume Wcf ... Calling WCF Services ... GMind Solution: Creat...

Auto-Owners Insurance

Please enter policy holder's name Ben Szymczak

Please enter policy holders date of birth 8/15/1991 ▼

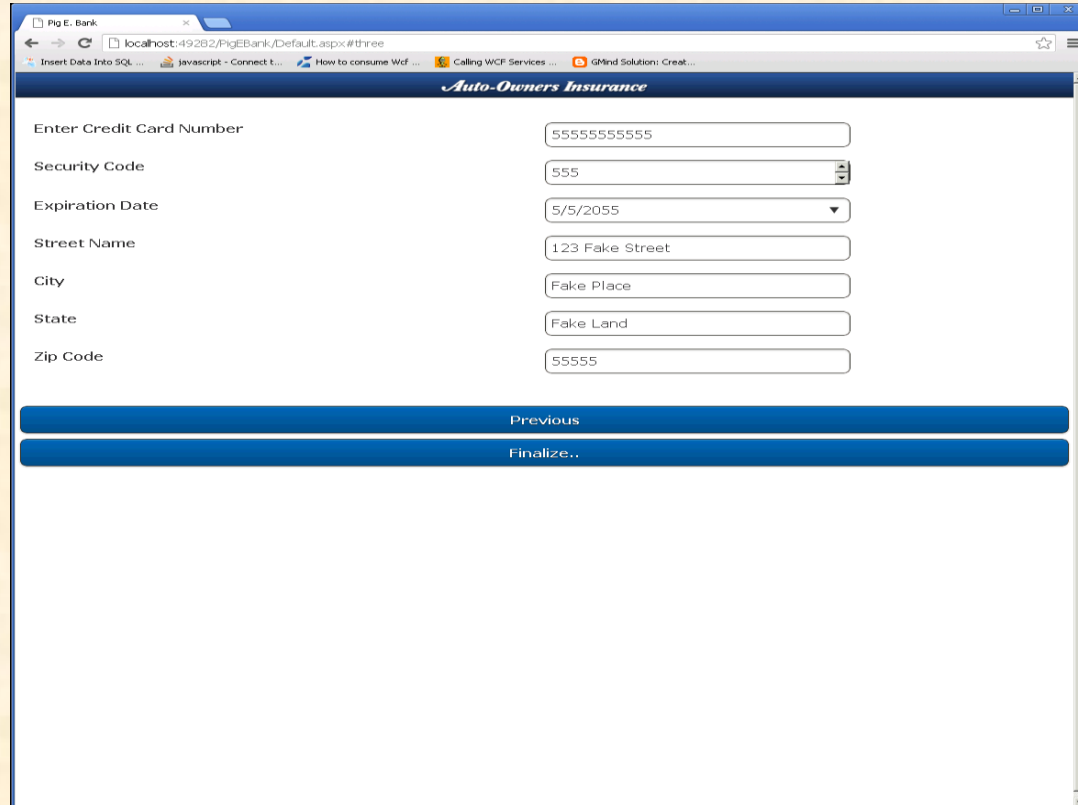
Email: benszymczak@gmail.com

Continue



Team Auto-Owners Alpha Presentation

Payment Page

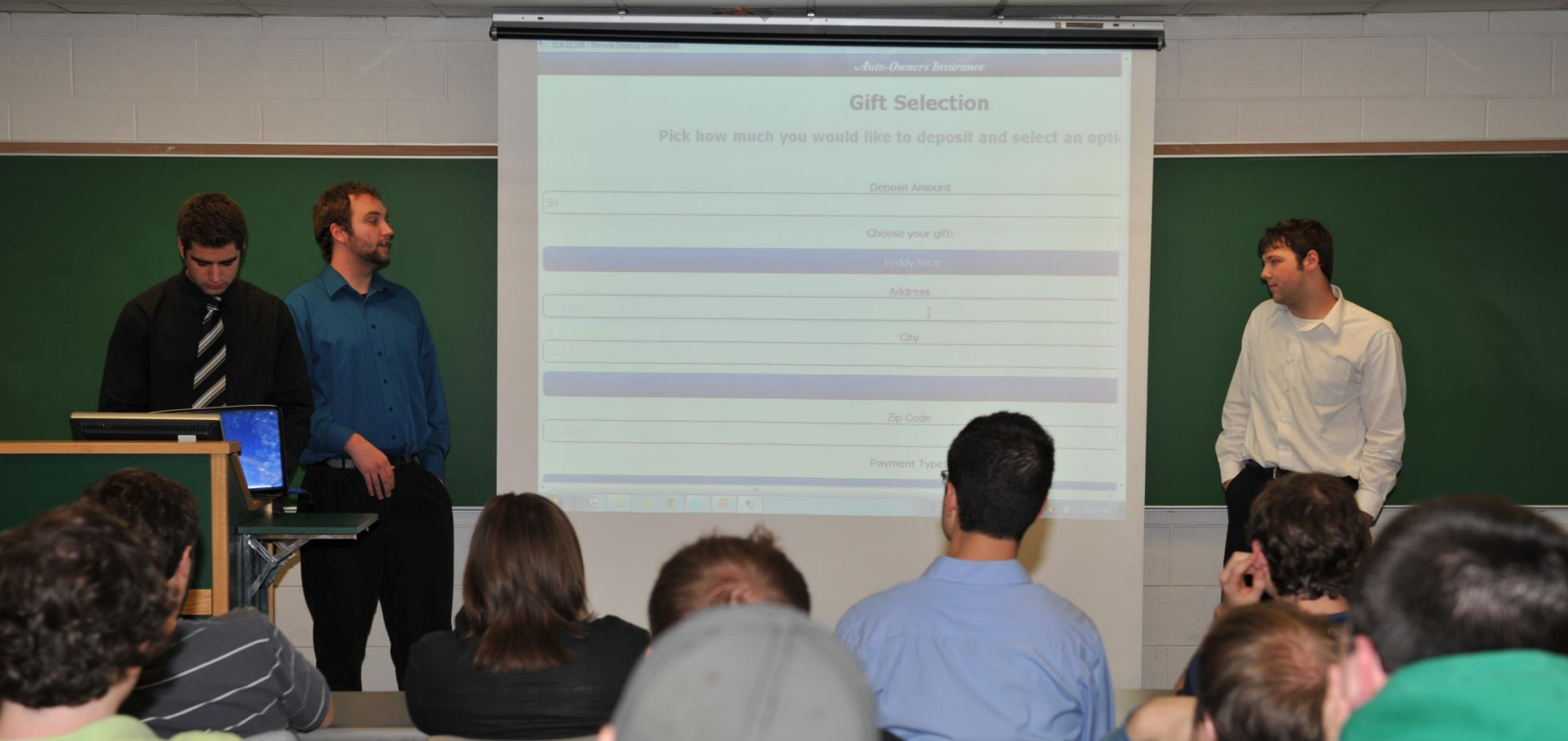


The screenshot shows a web browser window with the title "Pig E. Bank" and the address bar displaying "localhost:49282/PigEBank/Default.aspx#three". The browser's developer tools are open, showing several tabs: "Insert Data Into SQL...", "Javascript - Connect t...", "How to consume Wcf...", "Calling WCF Services...", and "ghMind Solution: Creat...". The main content area of the browser displays the "Auto-Owners Insurance" logo at the top. Below the logo, there is a form with the following fields and values:

Field Label	Value
Enter Credit Card Number	5555555555
Security Code	555
Expiration Date	5/5/2055
Street Name	123 Fake Street
City	Fake Place
State	Fake Land
Zip Code	55555

At the bottom of the form, there are two blue buttons: "Previous" and "Finalize..".

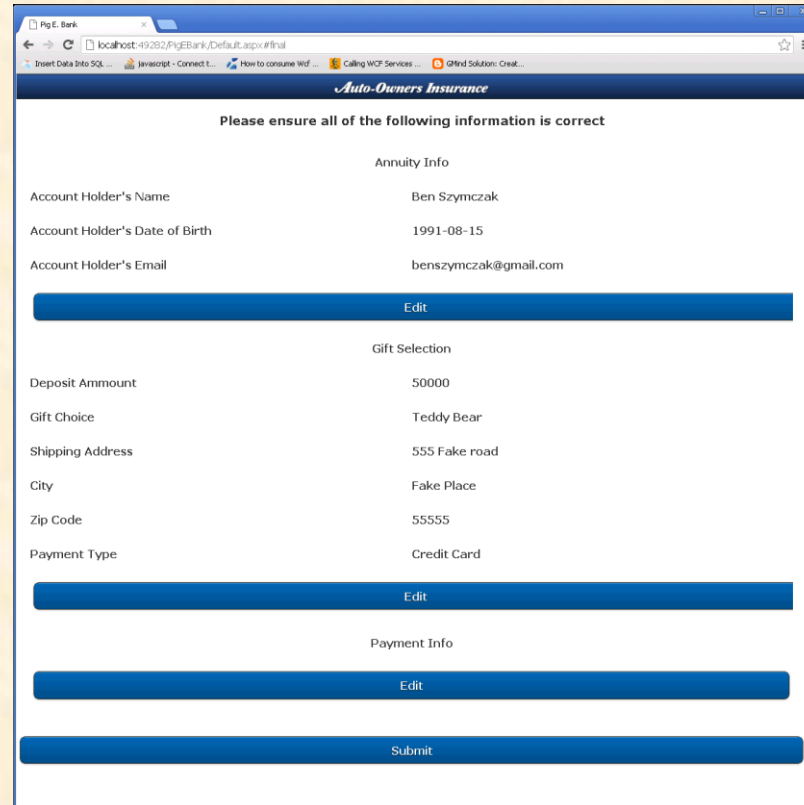




Team Auto-Owners Alpha Presentation

Team Auto-Owners Alpha Presentation

Confirmation Page



The screenshot shows a web browser window with the URL `localhost:49282/PgEBank/Default.aspx#final`. The page header features the *Auto-Owners Insurance* logo. The main heading reads: "Please ensure all of the following information is correct".

Annuity Info

Account Holder's Name	Ben Szymczak
Account Holder's Date of Birth	1991-08-15
Account Holder's Email	benszymczak@gmail.com

[Edit](#)

Gift Selection

Deposit Ammount	50000
Gift Choice	Teddy Bear
Shipping Address	555 Fake road
City	Fake Place
Zip Code	55555
Payment Type	Credit Card

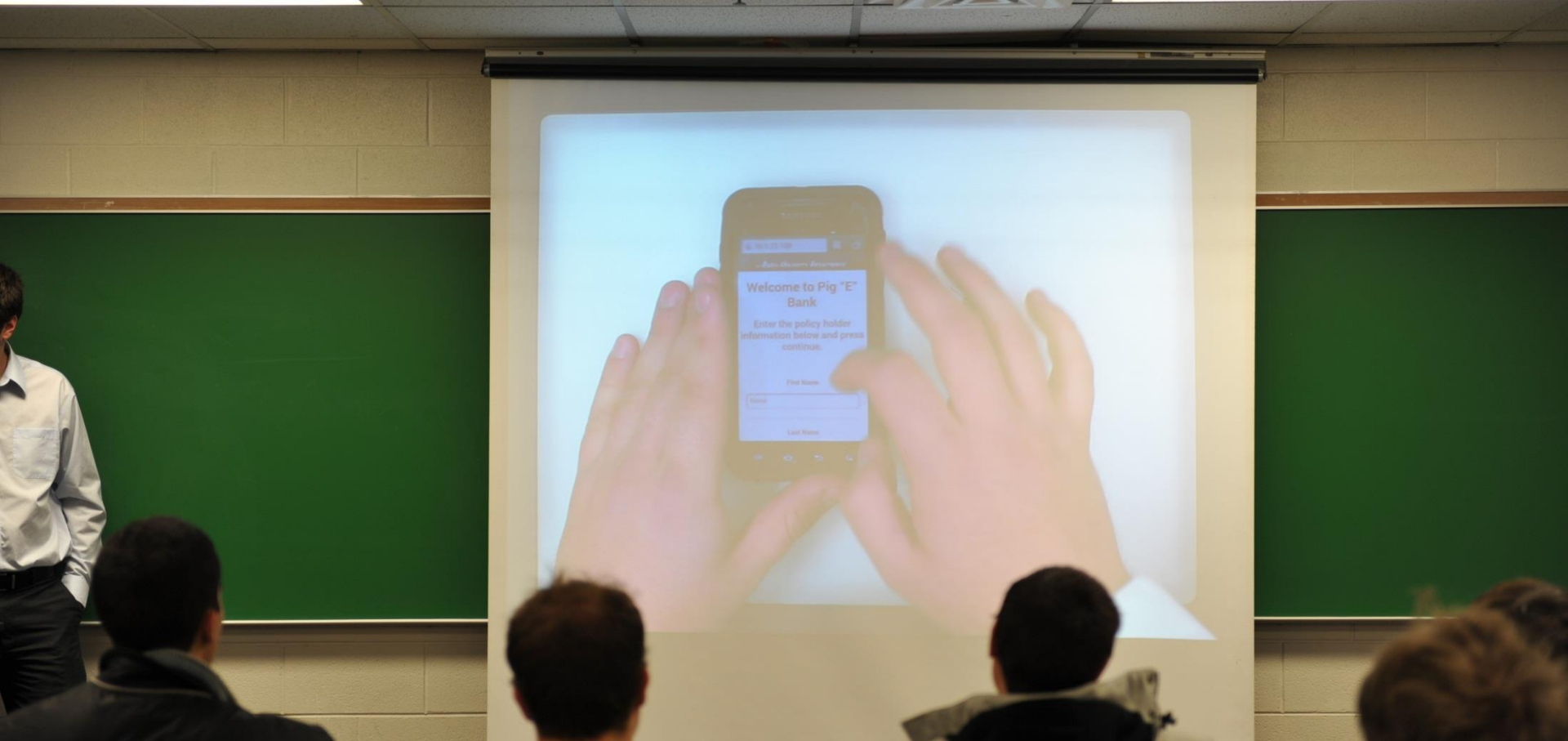
[Edit](#)

Payment Info

[Edit](#)

[Submit](#)

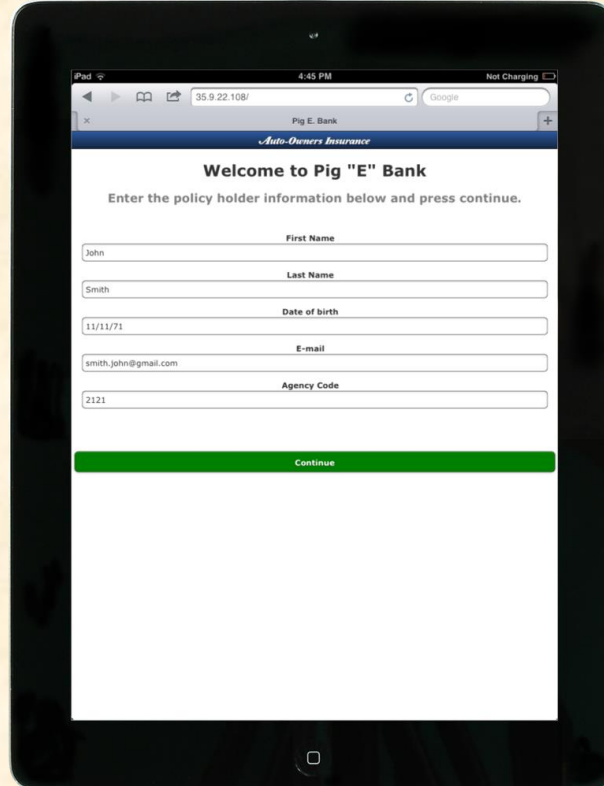




Team Auto-Owners Beta Presentation

Team Auto-Owners Beta Presentation

Landing Page



iPad 4:45 PM Not Charging

35.9.22.108/ Pig E. Bank

Auto-Owners Insurance

Welcome to Pig "E" Bank

Enter the policy holder information below and press continue.

First Name

Last Name

Date of birth

E-mail

Agency Code

[Continue](#)



Team Auto-Owners Beta Presentation

Gift Selection and Confirmation

Gift Selection

Enter the deposit amount and choose an optional gift.

Deposit Amount: 500.48

Choose your gift: Teddy Bear

Address: 1234 Main St., East Lansing, Michigan, 48823

Payment Type: Credit Card

Previous Continue

Please ensure all of the following information is correct

Annuity Info

Account Holder's Name	John Smith
Account Holder's Date of Birth	11/11/71
User Email	smith.john@gmail.com
Edit	

Gift Selection

Deposit Amount	\$500.48
Gift Choice	Teddy Bear
Shipping Address	1234 Main St.
City	East Lansing
State	MI
Zip Code	48823
Edit	

Payment Info

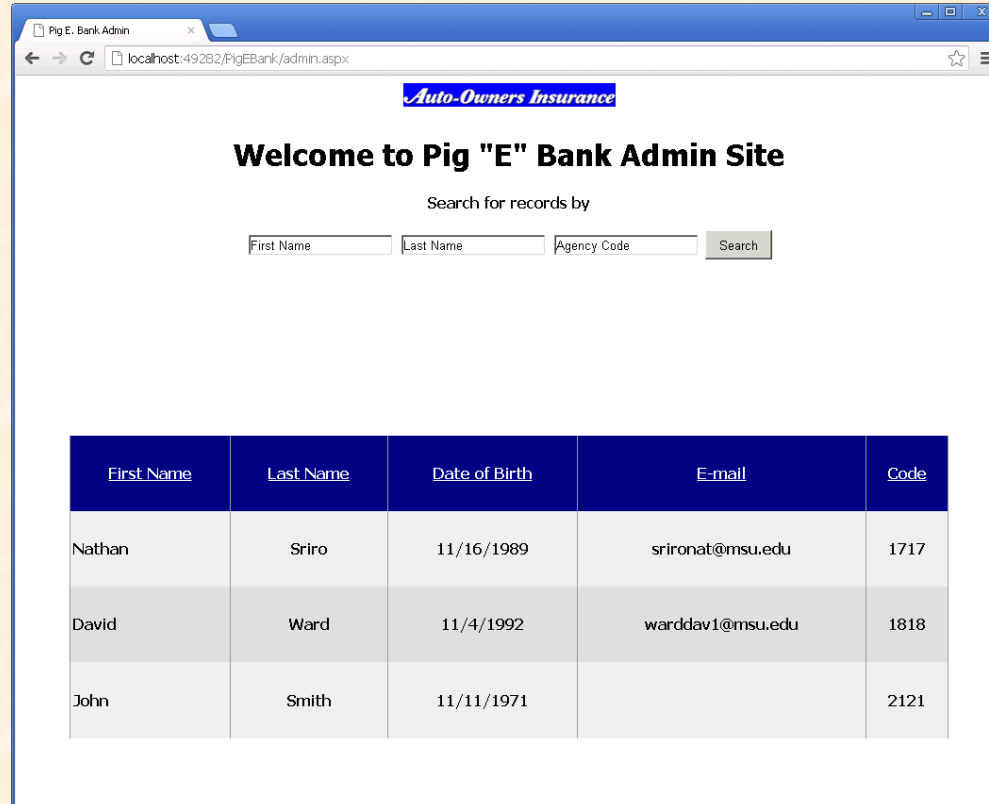
Payee	Thomas Jones
Payment Type	Electronic Fund Transfer
Account Number	3456
Routing Number	0000456
Edit	



Team Auto-Owners Beta Presentation

Team Auto-Owners Beta Presentation

Administrator Website



The screenshot shows a web browser window with the title "Pig 'E' Bank Admin" and the URL "localhost:49282/PigEBank/admin.aspx". The page features the "Auto-Owners Insurance" logo and a welcome message. Below the welcome message is a search section with the text "Search for records by" and four input fields: "First Name", "Last Name", "Agency Code", and a "Search" button. At the bottom of the page is a table with five columns: "First Name", "Last Name", "Date of Birth", "E-mail", and "Code". The table contains three rows of data.

First Name	Last Name	Date of Birth	E-mail	Code
Nathan	Sriro	11/16/1989	srimonat@msu.edu	1717
David	Ward	11/4/1992	warddav1@msu.edu	1818
John	Smith	11/11/1971		2121





Team Auto-Owners
Design Day

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The Capstone Experience

Team Boeing

Department of Computer Science and Engineering
Michigan State University
Fall 2012



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747-8 Intercontinental receives FAA Certification

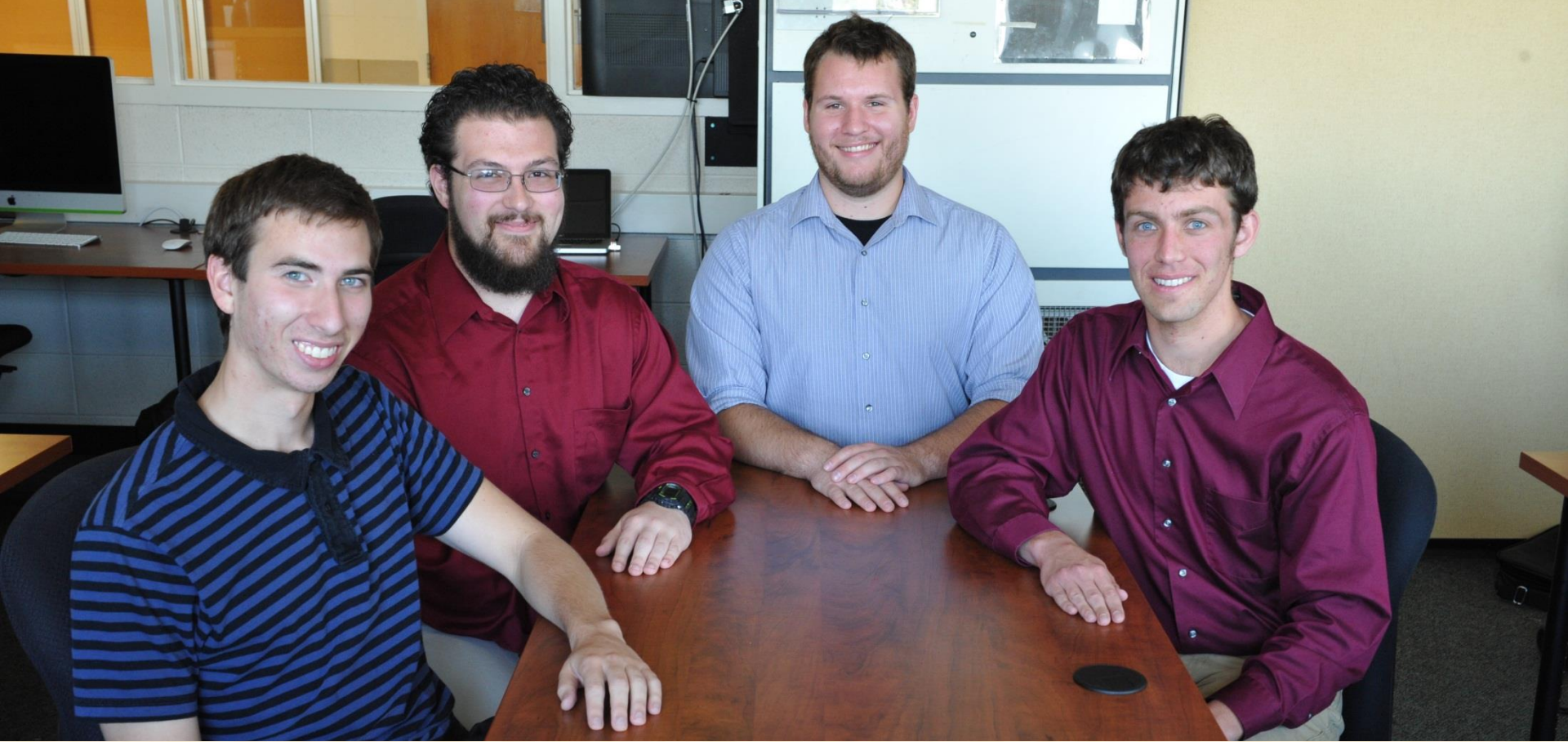
747-8 Intercontinental on track for delivery in early 2012. [More >>](#)

Team Boeing Project Overview

Design, Fly and Compete Sim Suite, V 2.0

- Functionalities
 - Flight Simulation Product Suite
 - Players Compete on Obstacle Courses
 - Five Modes of Play
 - State-of-the-Art Visualization and Networking
 - Accurate Aerodynamic Physics of Flight
- Features
 - Enhancements of Design, Fly and Compete Simulator
 - DIS (Distributed Interactive Simulation)
 - HLA (High Level Architecture) Networking
 - JSON (JavaScript Object Notation)
 - Web Version of Design, Fly and Compete Simulator
 - Compatible with All Modern Browsers
 - Implemented in HTML5, JavaScript, JSON and WebGL
- Technologies
 - HTML5
 - JavaScript and JSON (JavaScript Object Notation)
 - Blender (3D Modeling)
 - OpenGL and WebGL
 - DIS (Distributed Interactive Simulation) and WebSockets
 - [Design, Fly and Compete Simulator](#), Spring 2012





Team Boeing

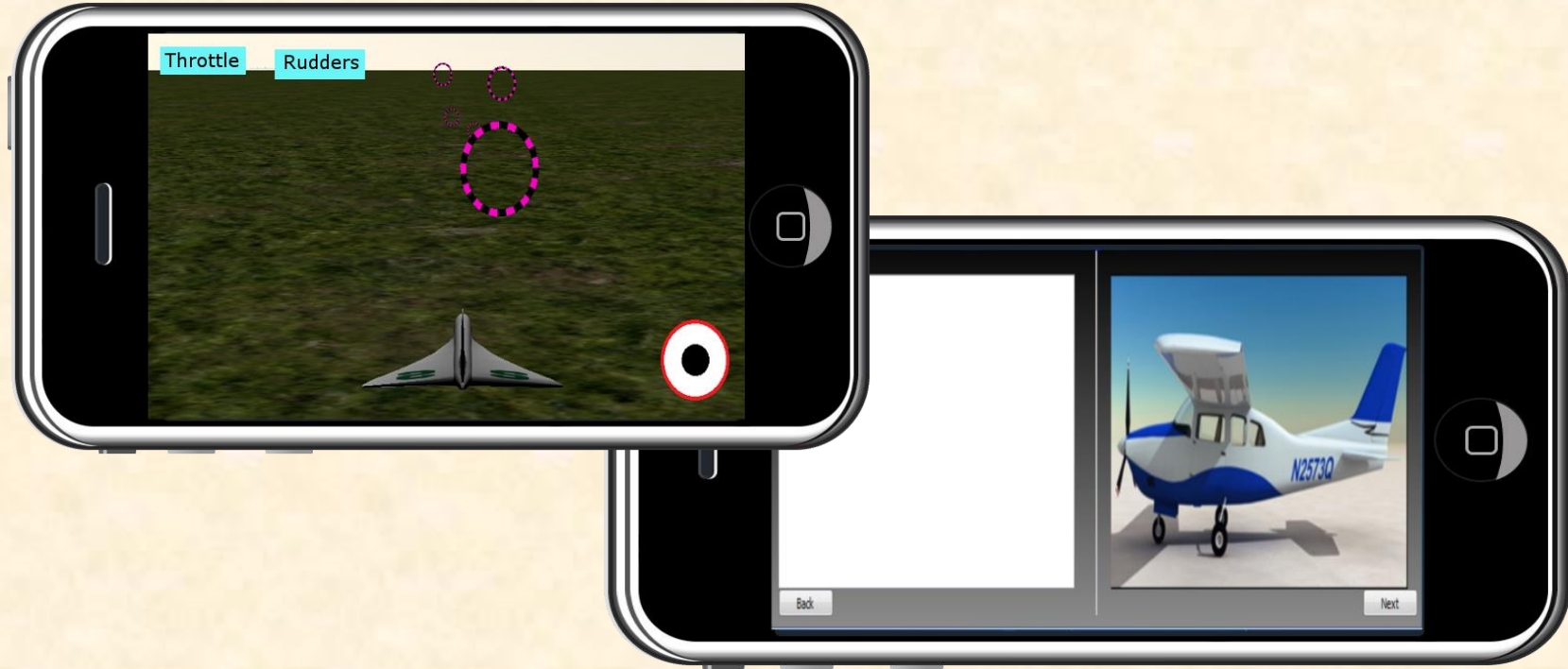
Dan Sosnowski, Kevin Liening, Max Ellison, Jake Newsted



Team Boeing Project Plan Presentation

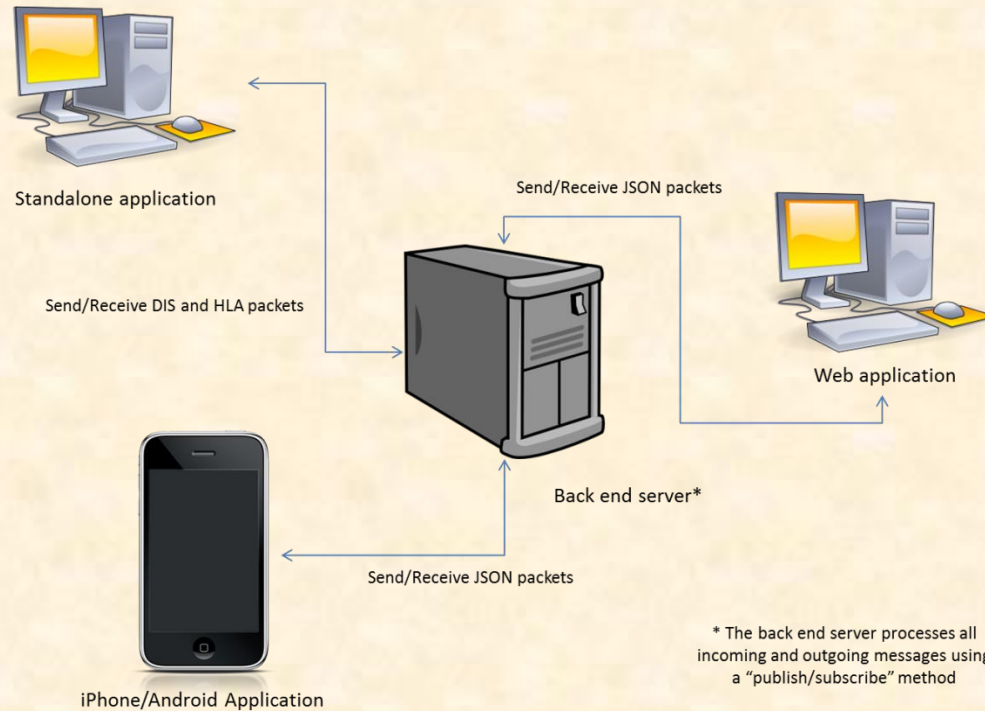
Team Boeing Project Plan Presentation

Screen Mockups



Team Boeing Project Plan Presentation

Architecture Diagram

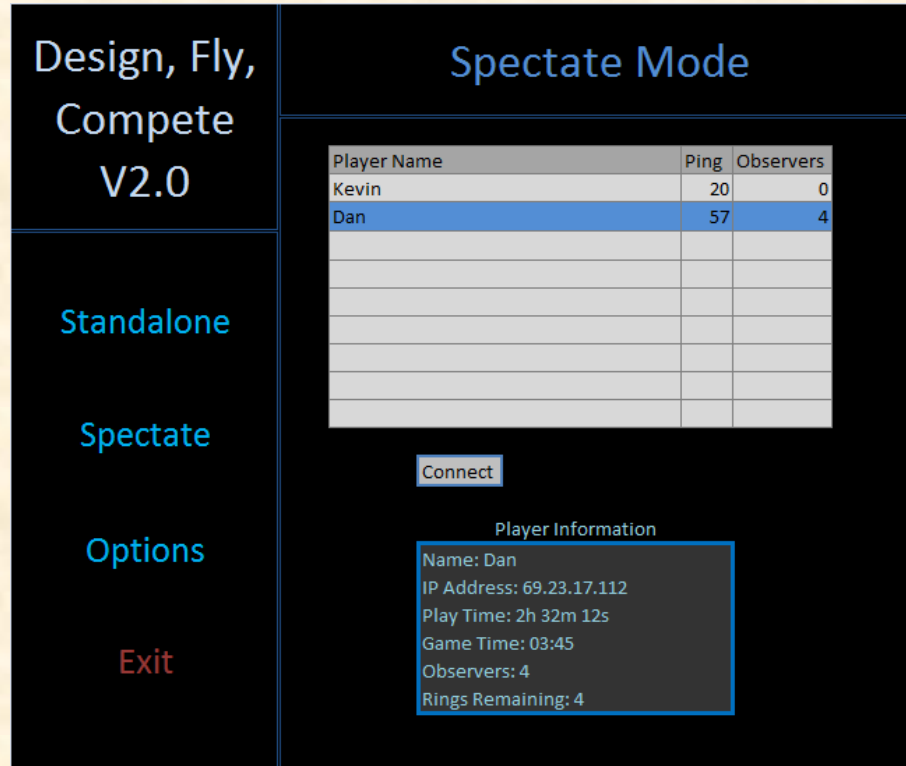




Team Boeing Project Plan Presentation

Team Boeing Project Plan Presentation

Screen Mockup





Team Boeing Alpha Presentation

Team Boeing Alpha Presentation

Multiplayer Concept

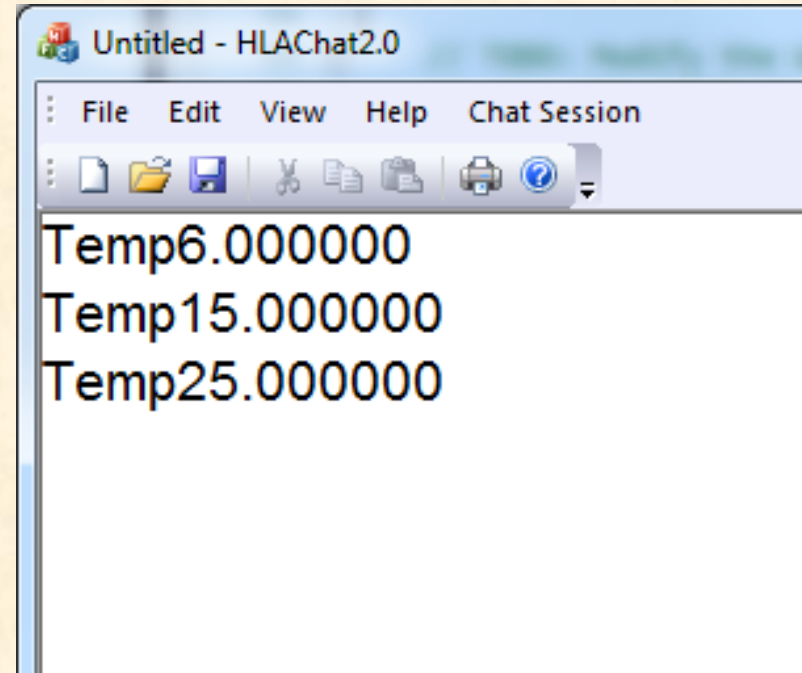
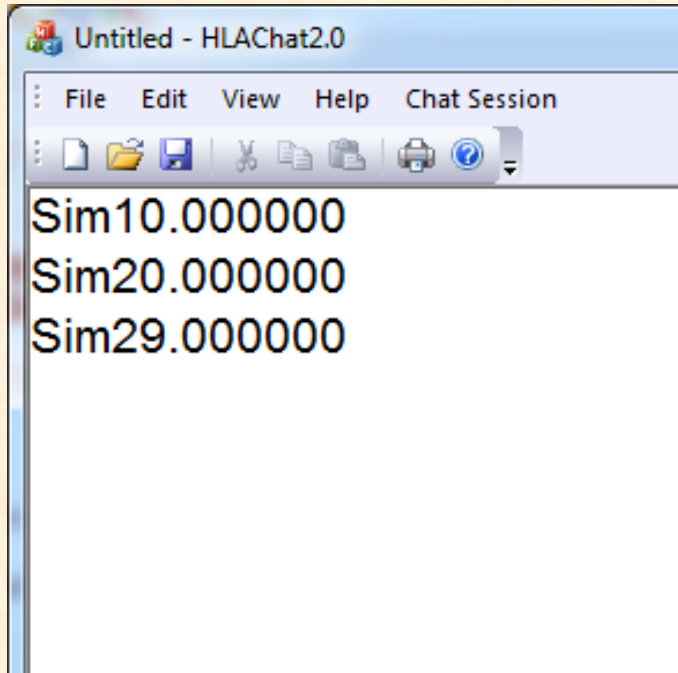


The Capstone Experience



Team Boeing Alpha Presentation

Using HLA





Team Boeing Alpha Presentation

Team Boeing Alpha Presentation

DIS Packet Contents

```
Please input the port you would like to connect to: 8881
-PDU Header-
Protocol Version: 5
Exercise ID:      1
PDU Type:        1
Protocol Family: 1
Time Stamp:      0: 199038404
PDU Length:      144
-Entity State PDU-
Entity ID:
  Site:          1
  Application:   3001
  Object:        3
Force ID:        1
Number Of Articulation Params: 0
Entity Type:     3,1,225,3,0,1,0
Alternative Entity Type: 3,1,225,3,0,1,0
Linear Velocity: X: 0, Y: 0, Z: 0
Entity Location: X: -2.61273e+006, Y: -4.0807e+006, Z: 4.13459e
+006
Entity Orientation: Psi: 1.0013, Theta: -0.861076, Phi: -3.14159
Lifeform Appearance:
  Paint Scheme:  0
  Damage:       0
```

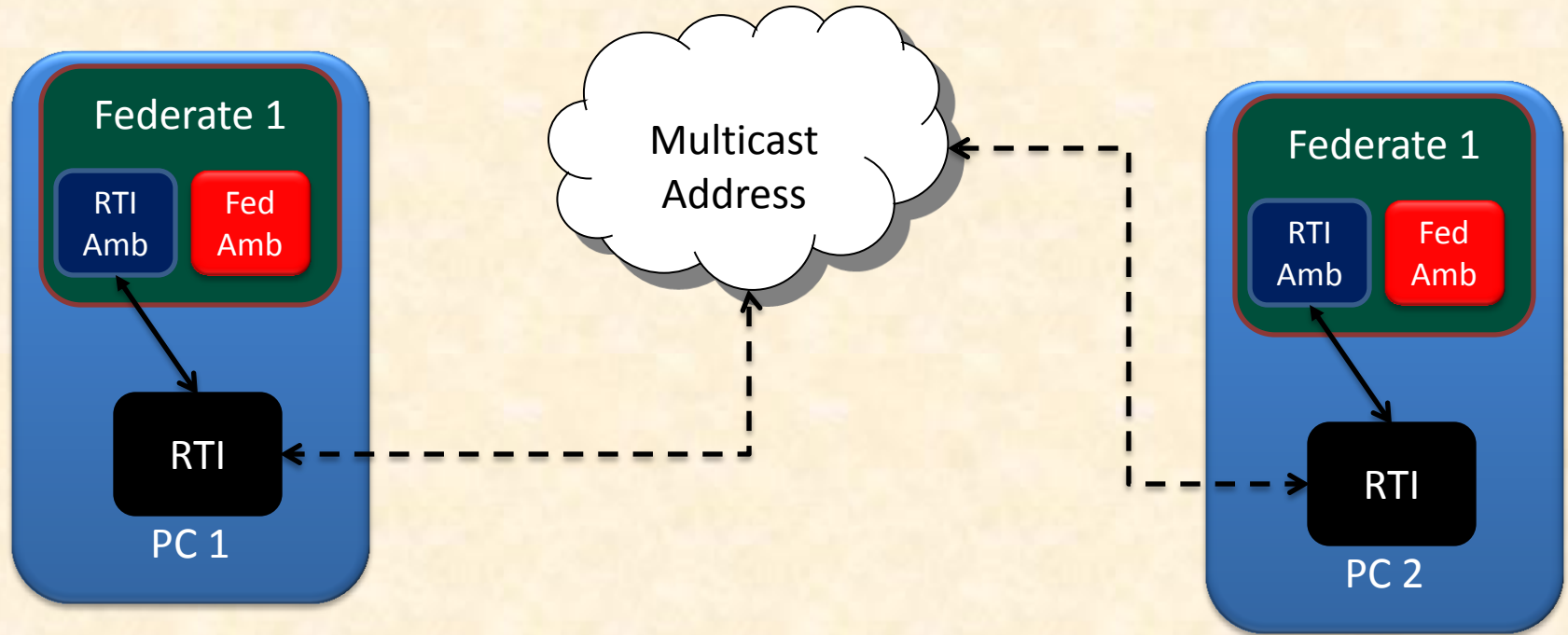




Team Boeing Beta Presentation

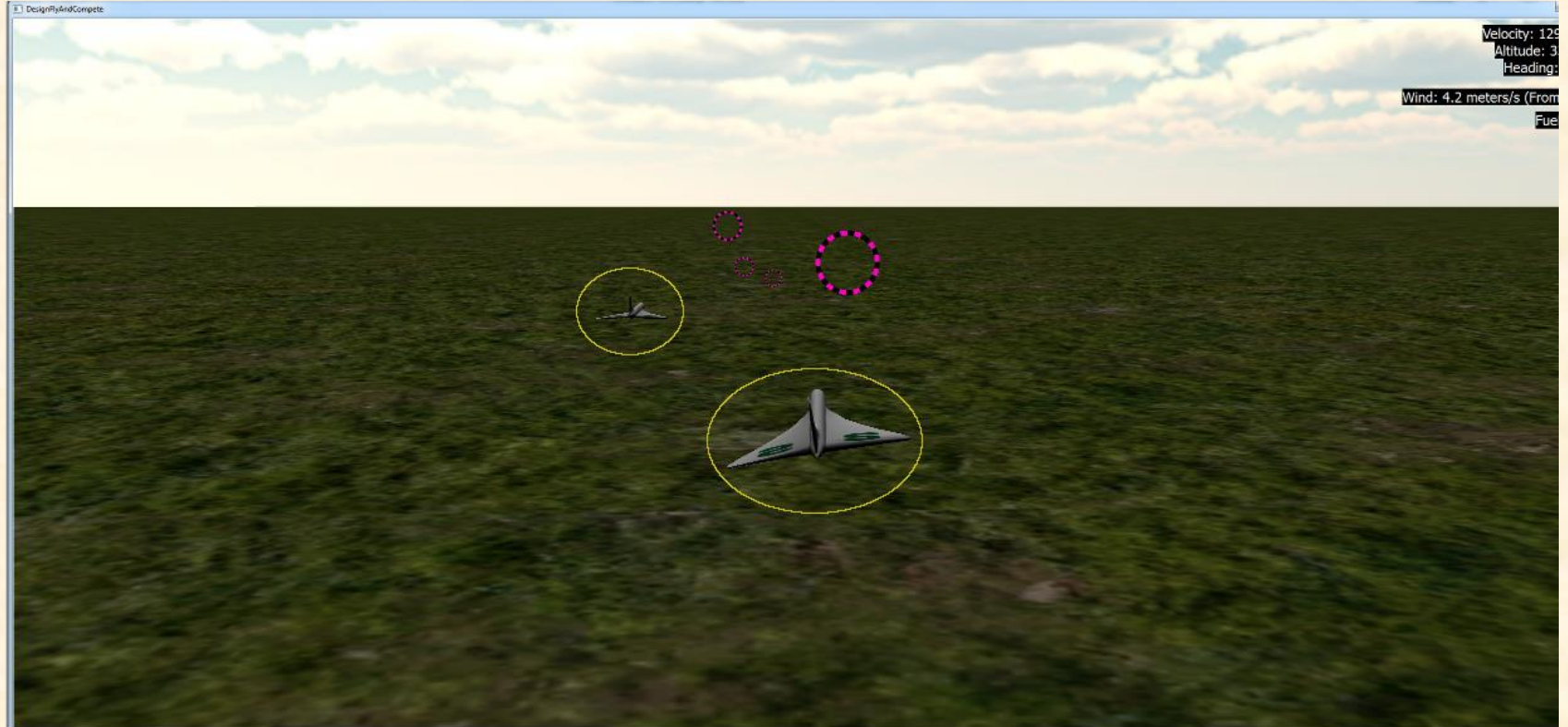
Team Boeing Beta Presentation

HLA System Architecture



Team Boeing Beta Presentation

Multiplayer



The Capstone Experience





Team Boeing Beta Presentation

Team Boeing Beta Presentation

Web Application



The Capstone Experience





The Boeing Company Design, Fly and Compete Sim Suite V2.0

Boeing is the world's leading aerospace company and the largest manufacturer of commercial passenger and military aircraft combined.

Research and development of new products represent significant investments for Boeing. In addition, training manufacturing facilities represents significant investments for Boeing customers. To maximize time and maximize efficiency, Boeing utilizes complex modeling and simulation software systems.

Design, Fly and Compete Sim Suite V2.0 is a flight simulator that features an integrated business with realistic physics of flight. Players can choose from four different planes to navigate through time different obstacle courses. A new feature of V2.0 is a multiplayer mode where players can interact with each other via an internet connection. In addition to a standard Microsoft Windows desktop version, our flight simulator also includes a web version which runs in both Chrome and Safari for use on Desktops, iPhones, and iPads. Our web version is designed with convenience to provide an immersive feature filled user experience.

The Microsoft Windows desktop application utilizes the Qt framework and OpenGL for the application and C# and .NET for networking. The browser version uses HTML5, JavaScript and WebGL for the application and Socket.io for communications.



**Michigan State University
Team Members (left to right)**

Dan Rosenwald
Shady Township, Michigan

Kevin Lanning
Warren, Michigan

Max Ellison
Canton, Michigan

John Rosenwald
Hazel, Michigan

**Boeing
Project Sponsors**

Phil Gier
Saint Louis, Missouri

Matt Dandley
Saint Louis, Missouri

Jason T. Vincent
Saint Louis, Missouri

Steve Yodanis
Saint Louis, Missouri



Team Boeing Design Day

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The Capstone Experience

Team Ford

Department of Computer Science and Engineering
Michigan State University
Fall 2012



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



Introducing the All-New My Saved Items feature. Easy, customized, smart.

[Learn More](#)

[Remind Me Later](#)

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Technology for you.
MPG for all.



2013 FOCUS 
up to **40 MPG** hwy*



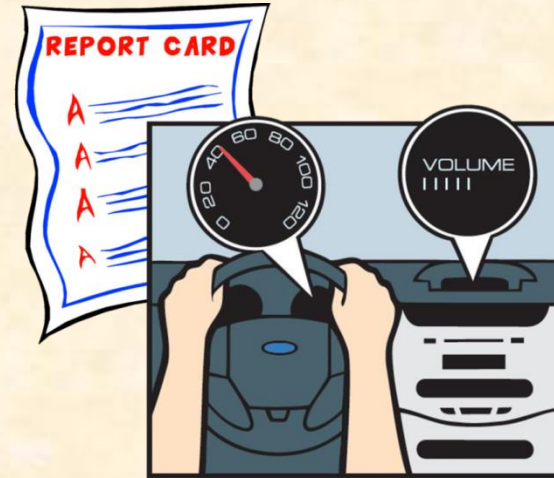
All-new 2013 ESCAPE 
up to **33 MPG** hwy*

Team Ford

Project Overview

MyKey Report Card

- Functionalities
 - Existing Ford MyKey® Technology
 - Customized Car Key
 - Controls and Monitors Vehicle Operation
 - Maximum Speed
 - Maximum Audio Volume
 - Etc.
 - MyKey Report Card
 - Evaluation of Driver's Driving Habits
 - Four Usage Scenarios
 - Real Time Notifications In Case of Emergency
- Features
 - Report Card Templates
 - Methods for Emergency Notifications
 - Set Cadence of Reports
 - Four Usage Scenarios
 - Remote Parental Supervision
 - Monitoring Employee Driving Habits
 - Insurance Company Collaboration
 - Theft Reporting
- Technologies
 - CSS, HTML5, JavaScript, AJAX
 - Android SDK
 - J2EE (Java 2 Platform Enterprise Edition)
 - OpenXC Platform
 - CAN (Controller Area Network) Bus
 - Microsoft SQL Server



Dearborn, Michigan





Team Ford

Kevin Klemmer, Andrew Crouch, Brandon D'Orazio, Alex Conklin



Team Ford Project Plan Presentation

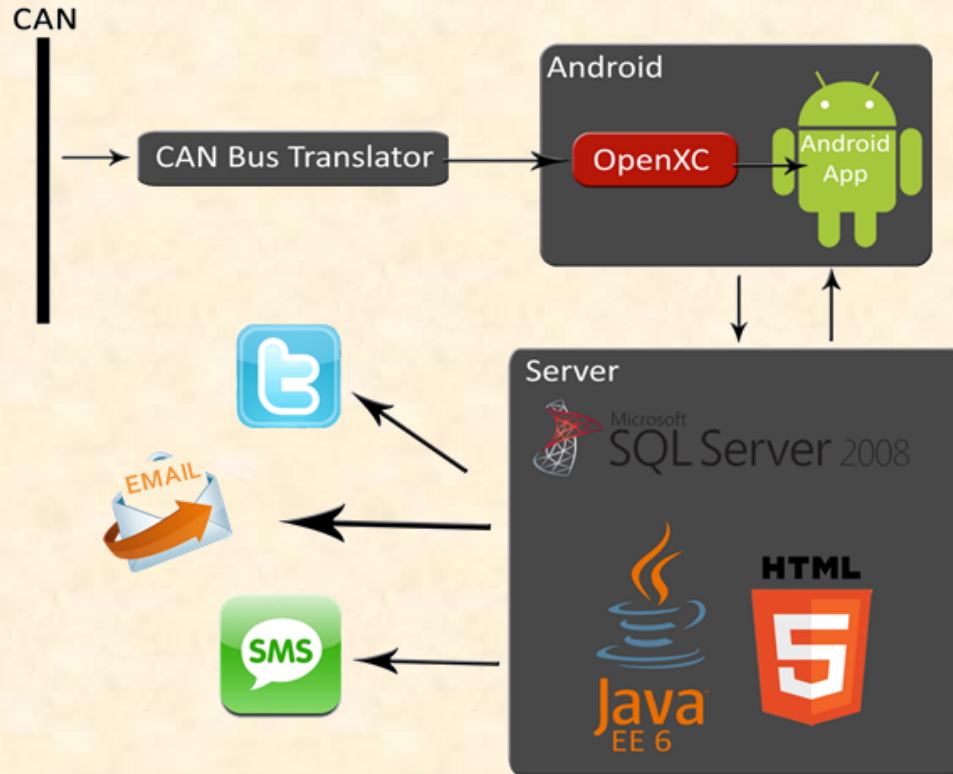
Team Ford Project Plan Presentation

Screen Mockup



Team Ford Project Plan Presentation

Architecture Diagram

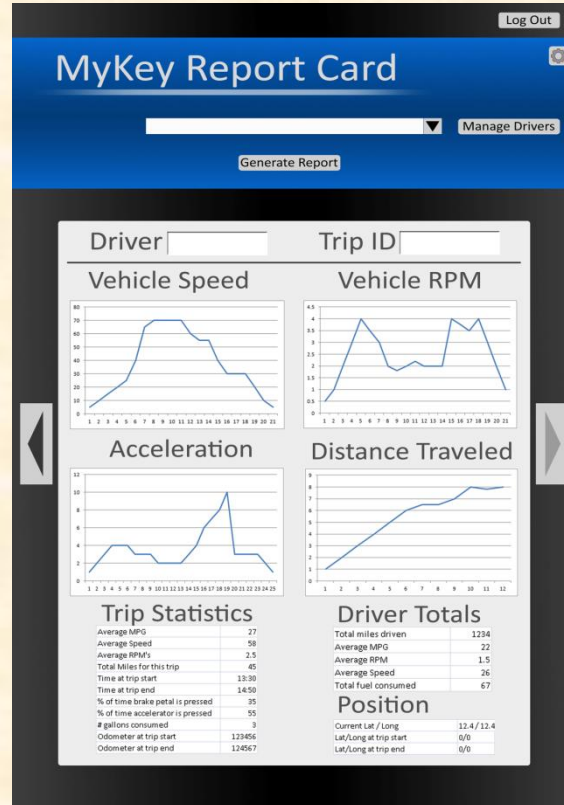




Team Ford Project Plan Presentation

Team Ford Project Plan Presentation

Screen Mockup





Team Ford
Alpha Presentation

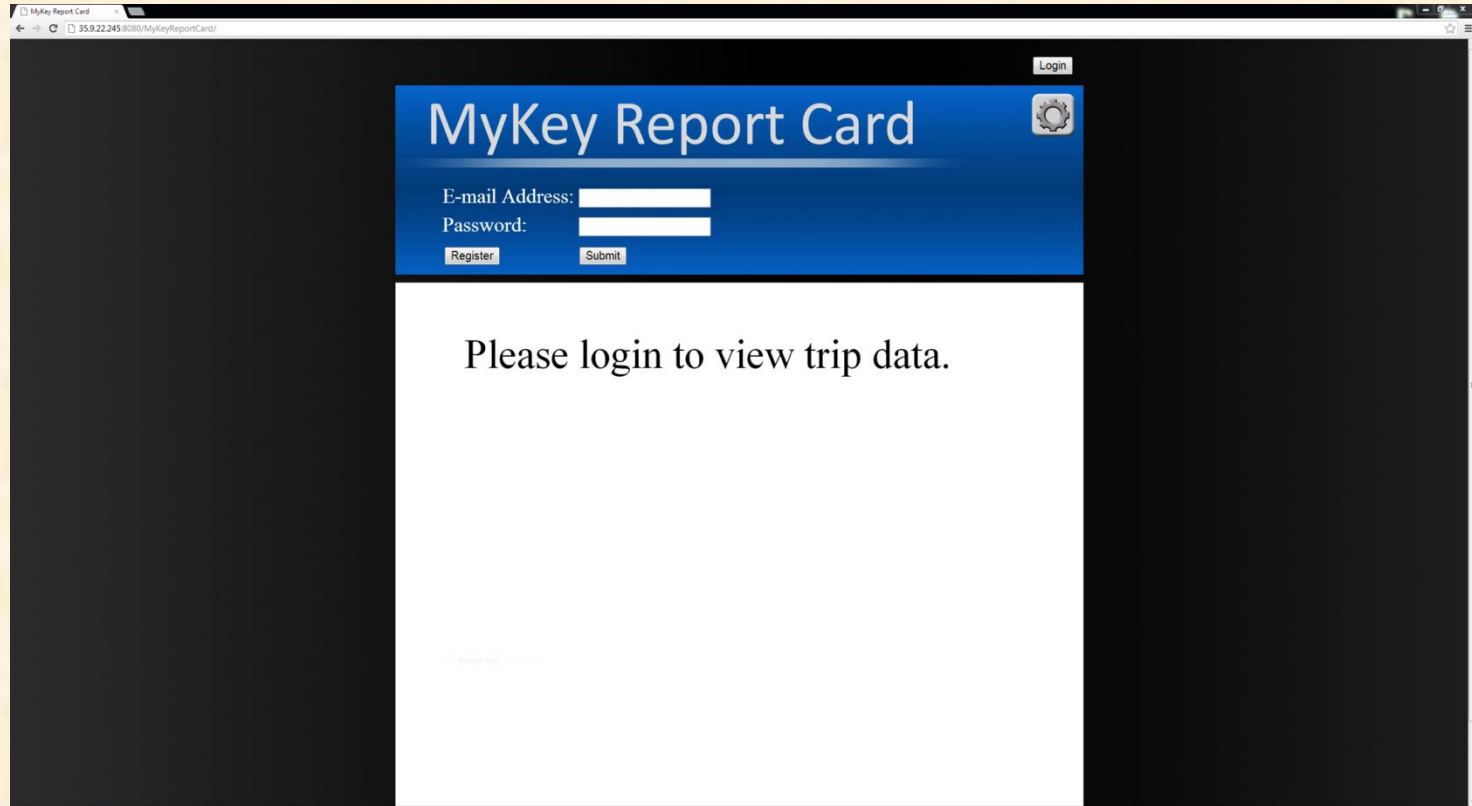
Team Ford Alpha Presentation

Dashboard Main View



Team Ford Alpha Presentation

Login Page



The screenshot shows a web browser window with the address bar displaying "35.9.22.245:8080/MyKeyReportCard/". The page has a dark blue header with the title "MyKey Report Card" and a gear icon. Below the header, there are two input fields for "E-mail Address:" and "Password:", each followed by a "Register" or "Submit" button. A "Login" button is located in the top right corner. The main content area is white and contains the text "Please login to view trip data.".

MyKey Report Card

E-mail Address:

Password:

Please login to view trip data.





Team Ford Alpha Presentation

Team Ford Alpha Presentation

Feed from Android Device

```
Output X
MyKeyReportCard - C:\Users\Administrator\Documents\NetBeansProjects\MyKeyReportCard x Debugger Console x MyKeyReportCard (run) x GlassFish Server 3+ x
INFO: {"records":[{"timestamp":"1350264699.076000","value":"off","name":"ignition_status"}, {"timestamp":"1350264699.077000","va
INFO: {"records":[{"timestamp":"1350264699.295000","value":false,"name":"parking_brake_status"}, {"timestamp":"1350264699.295000
INFO: {"records":[{"timestamp":"1350264700.004000","value":false,"name":"high_beam_status"}, {"timestamp":"1350264700.005000","v
INFO: {"records":[{"timestamp":"1350264700.352000","value":"driver","event":false,"name":"door_status"}, {"timestamp":"1350264700
INFO: {"records":[{"timestamp":"1350264700.637000","value":31.200001,"name":"accelerator_pedal_position"}, {"timestamp":"1350264
INFO: {"records":[{"timestamp":"1350264700.999000","value":false,"name":"parking_brake_status"}, {"timestamp":"1350264701.000000
INFO: {"records":[{"timestamp":"1350264701.513000","value":"driver","event":false,"name":"door_status"}, {"timestamp":"1350264701
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INFO: {"records":[{"timestamp":"1350264702.662000","value":false,"name":"high_beam_status"}, {"timestamp":"1350264702.819000","v
INFO: {"records":[{"timestamp":"1350264703.710000","value":54.200001,"name":"engine_speed"}, {"timestamp":"1350264703.711000","v
INFO: {"records":[{"timestamp":"1350264704.690000","value":"driver","event":false,"name":"door_status"}, {"timestamp":"135026470
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INFO: {"records":[{"timestamp":"1350264707.746000","value":27.9,"name":"longitude"}, {"timestamp":"1350264707.748000","value":fa
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INFO: {"records":[{"timestamp":"1350264714.590000","value":true,"name":"high_beam_status"}, {"timestamp":"1350264714.590000","va
INFO: {"records":[{"timestamp":"1350264715.083000","value":30.6,"name":"odometer"}, {"timestamp":"1350264715.084000","value":tru
INFO: {"records":[{"timestamp":"1350264715.626000","value":false,"name":"headlamp_status"}, {"timestamp":"1350264715.626000","va
INFO: {"records":[{"timestamp":"1350264716.152000","value":47.5,"name":"fine_odometer_since_restart"}, {"timestamp":"1350264716..
```





Team Ford Beta Presentation

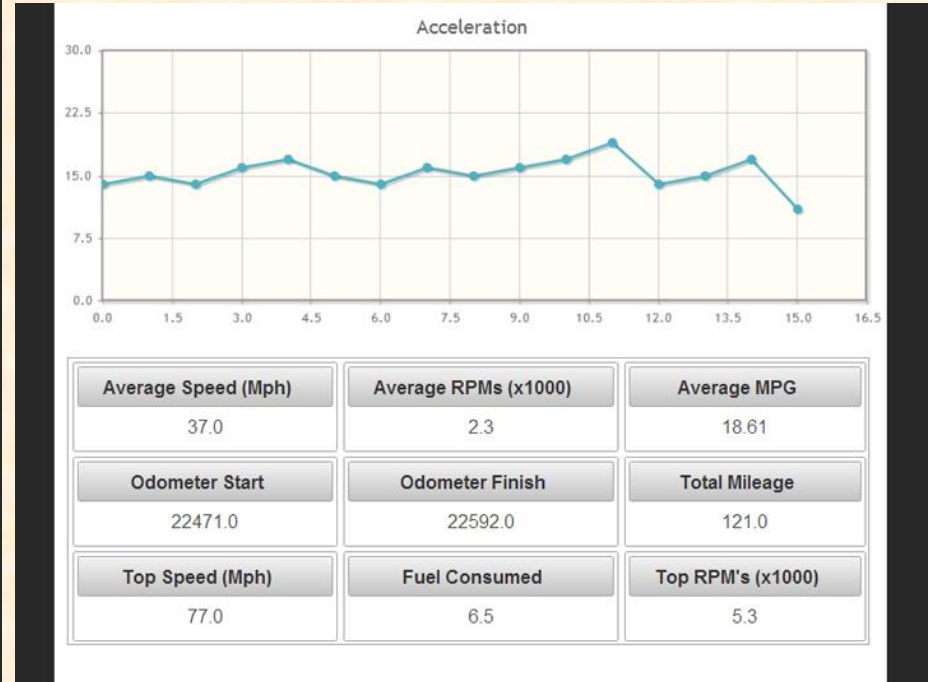
Team Ford Beta Presentation

Dashboard Main View



Team Ford Beta Presentation

Report Card Statistics

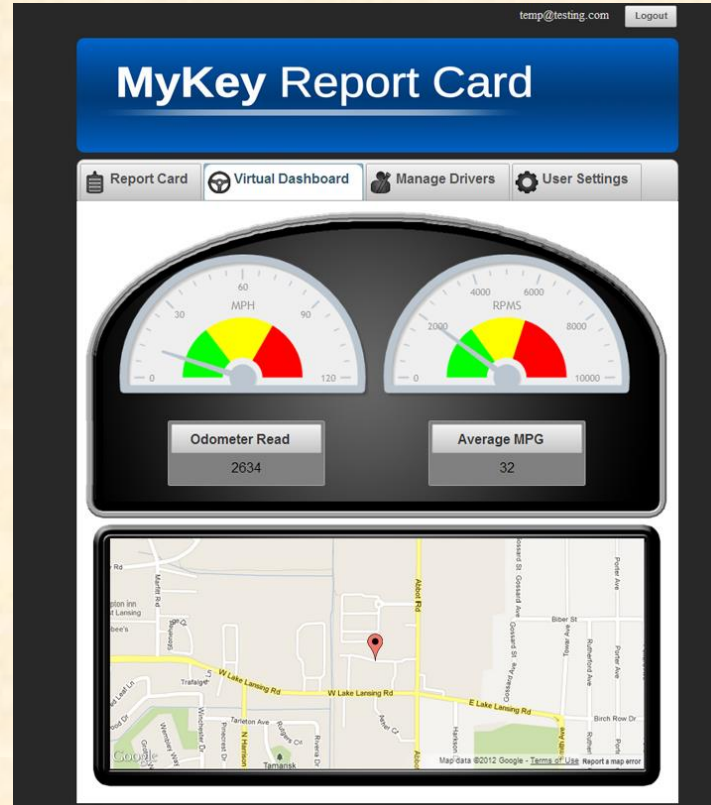


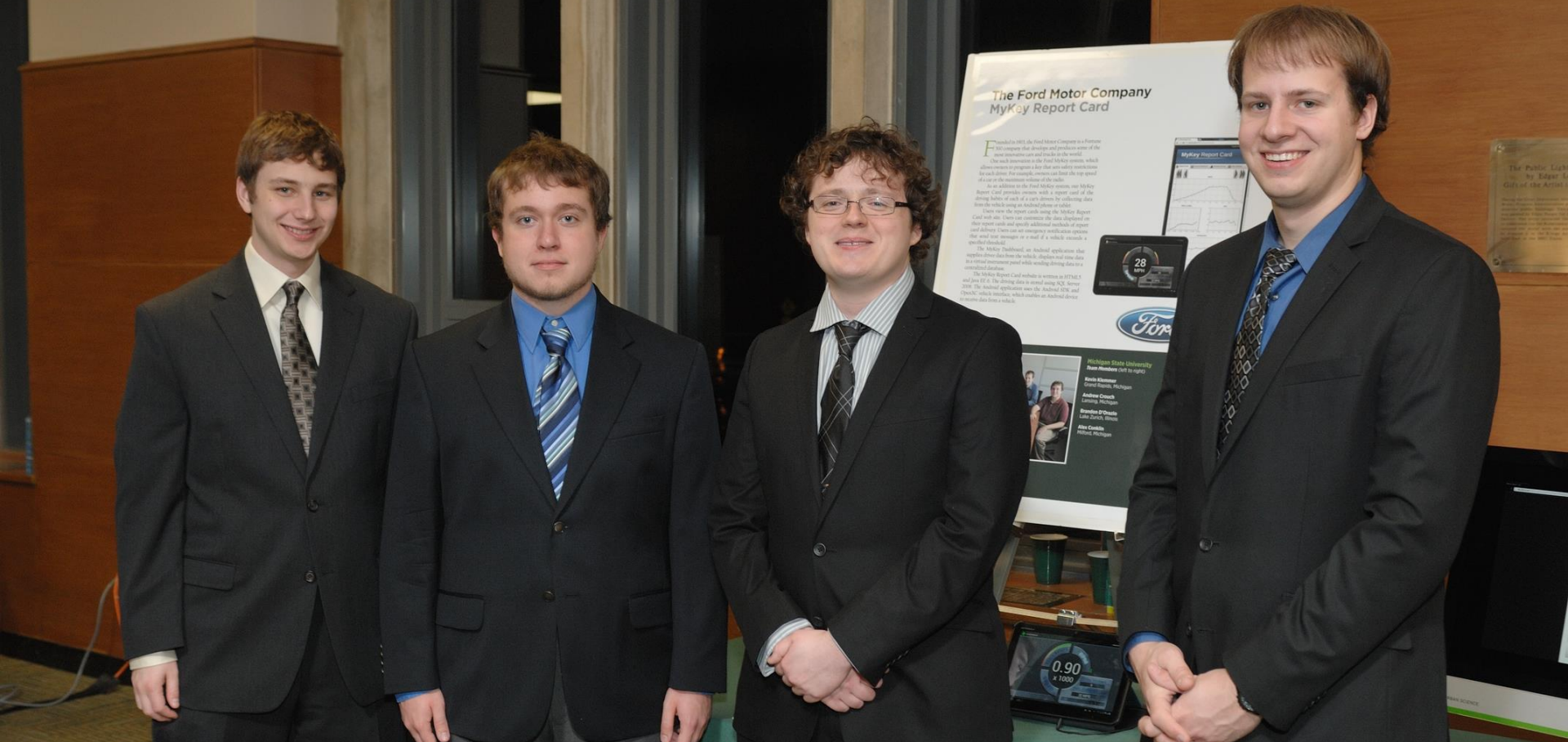


Team Ford Beta Presentation

Team Ford Beta Presentation

Real-Time Virtual Dashboard





Team Ford
Design Day

MICHIGAN STATE
UNIVERSITY

The Capstone Experience

Team GE Aviation

Department of Computer Science and Engineering
Michigan State University
Fall 2012



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





GE Aviation

 → SEARCH

[home](#)


[our engines](#)

[our services](#)

[our systems](#)

[our company](#)

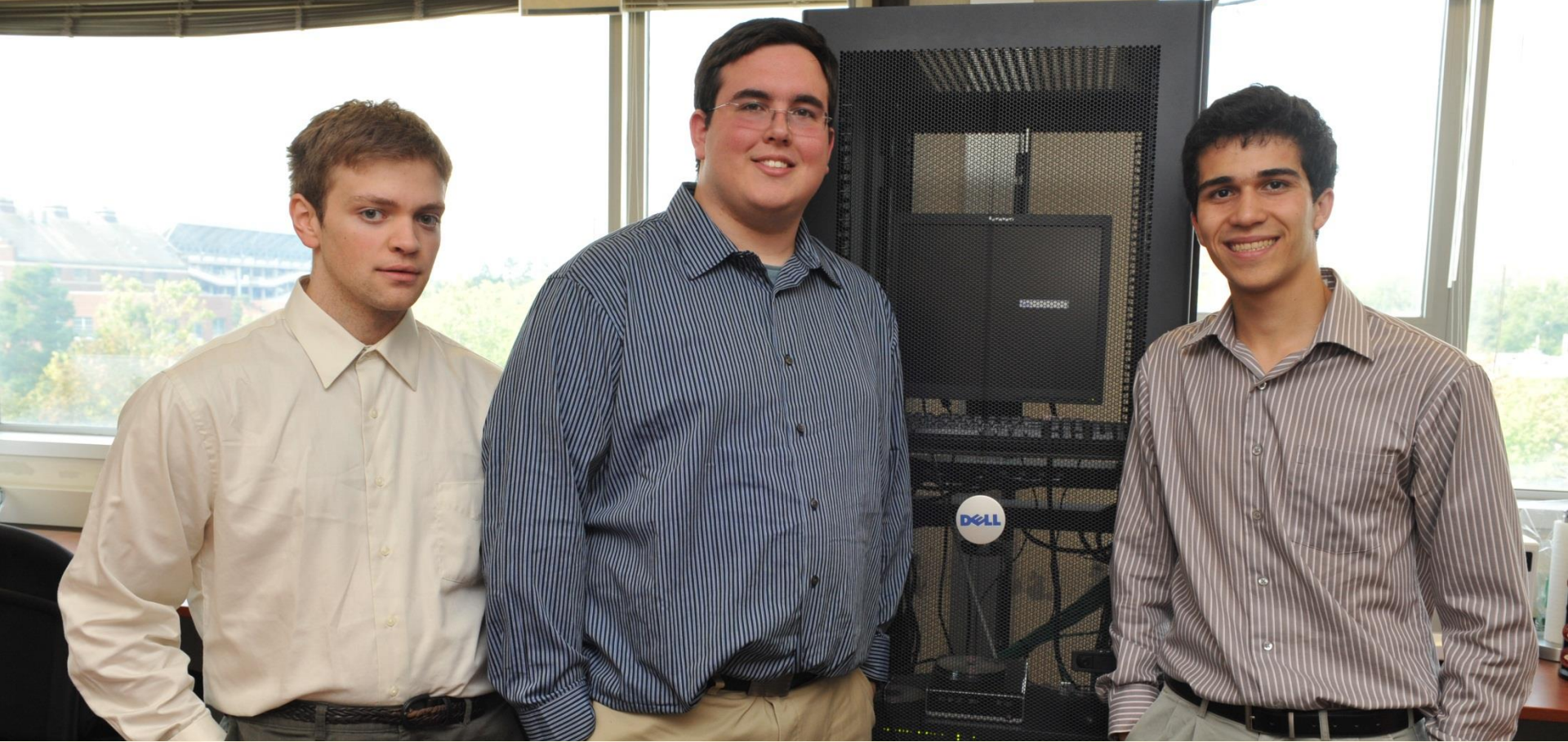
[press center](#)

 [worldwide](#)

GENx-Powered Delivery >

Congratulations to Boeing on its first delivery of the GENx-powered 747-8F to Cargolux





Team GE Aviation

Andy Matteson, Zack Pepin, Mateus Braga



Team GE Aviation Project Plan Presentation

Team GE Aviation Project Plan Presentation

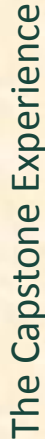
Screen Mockup

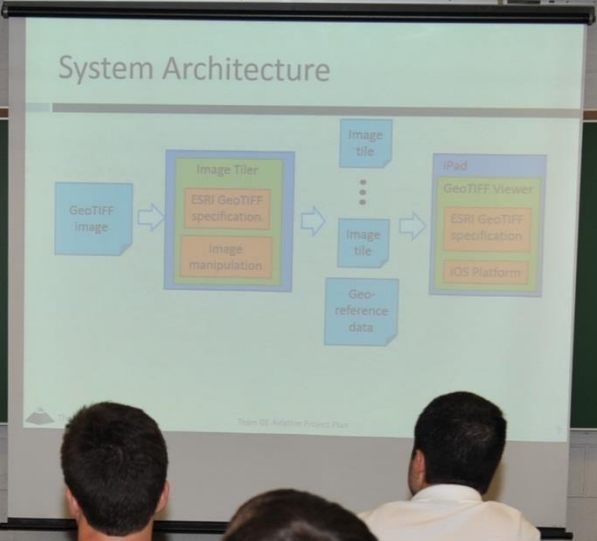


The Capstone Experience



Architecture Diagram





Team GE Aviation
Project Plan Presentation

Team GE Aviation Project Plan Presentation

Screen Mockup



The Capstone Experience

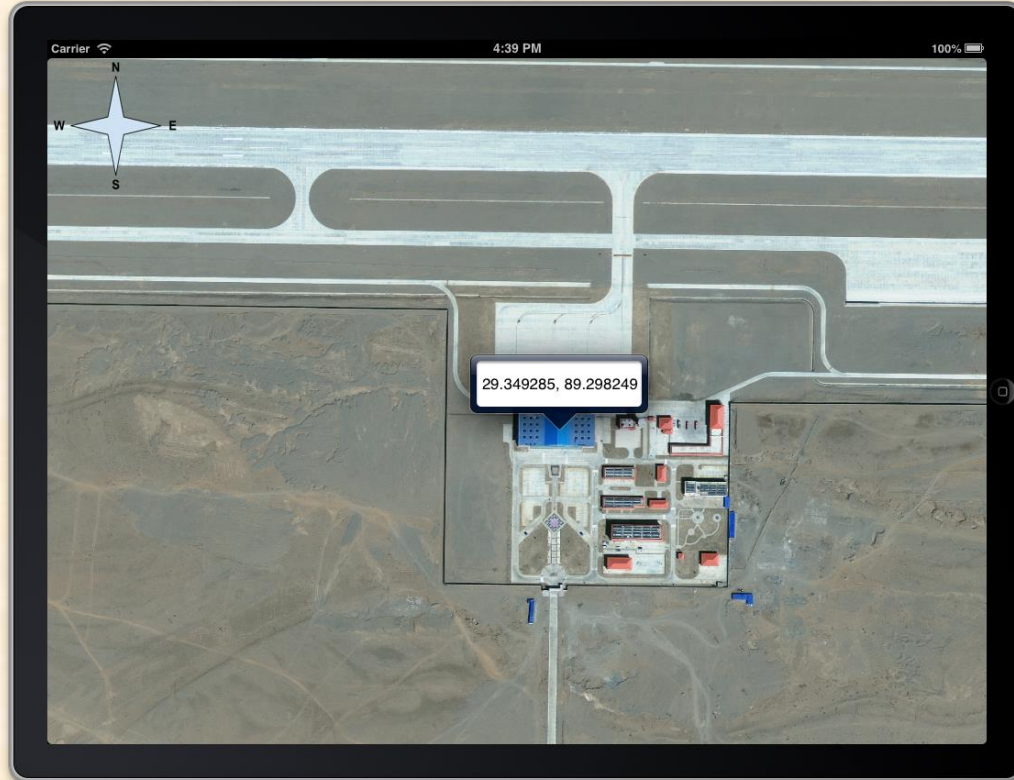




Team GE Aviation Alpha Presentation

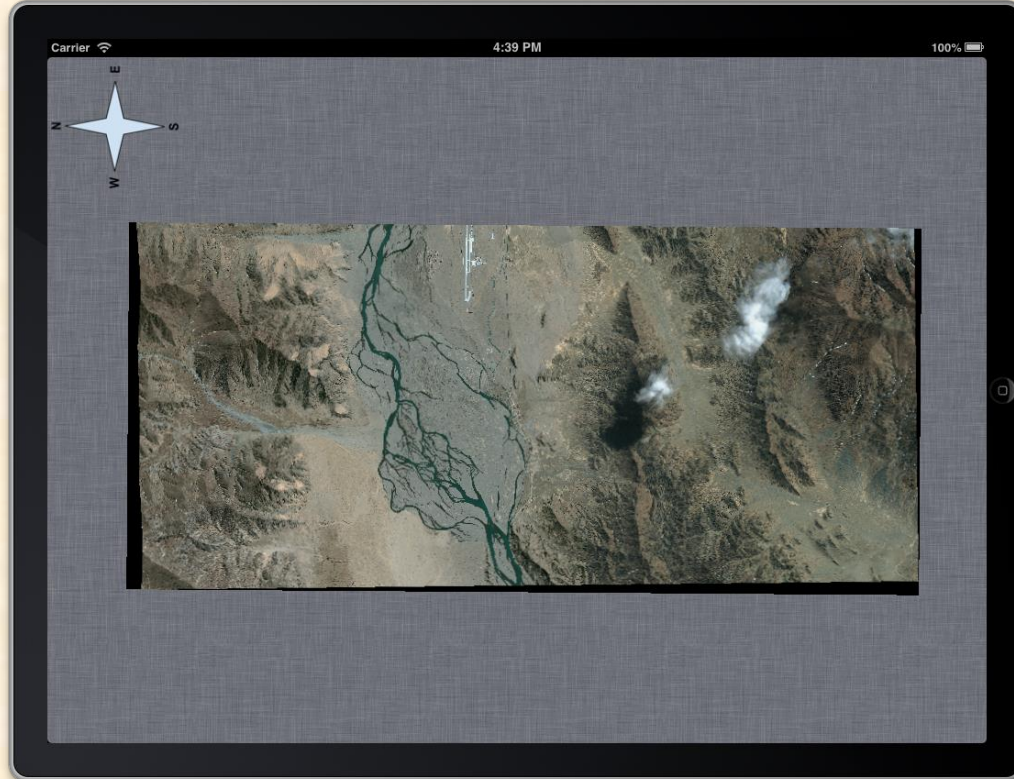
Team GE Aviation Alpha Presentation

Displaying Coordinates



Team GE Aviation Alpha Presentation


Full Image





What's left to do?

- Provide a method for selecting displayed image
- Experiment with increasing performance
- Refine user experience

 The Captains Experience

Team GE Aviation
Alpha Presentation

Team GE Aviation Alpha Presentation

Zoomed In



The Capstone Experience

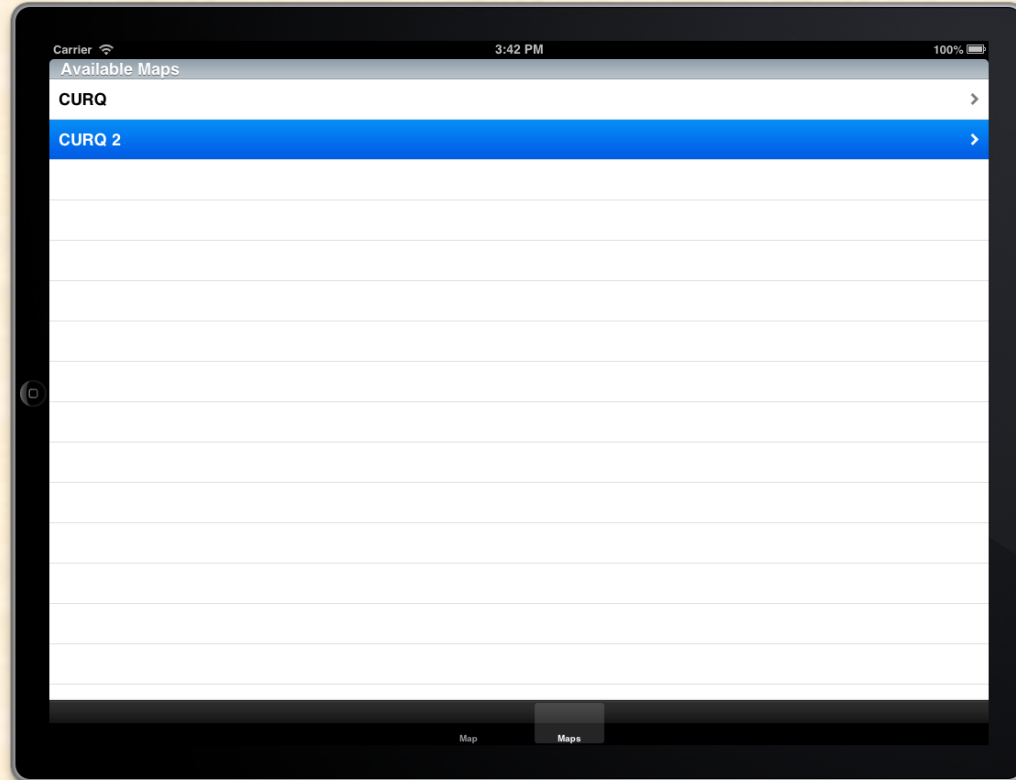




Team GE Aviation Beta Presentation

Team GE Aviation Beta Presentation

Map Selection



Team GE Aviation Beta Presentation

Full Image



The Capstone Experience



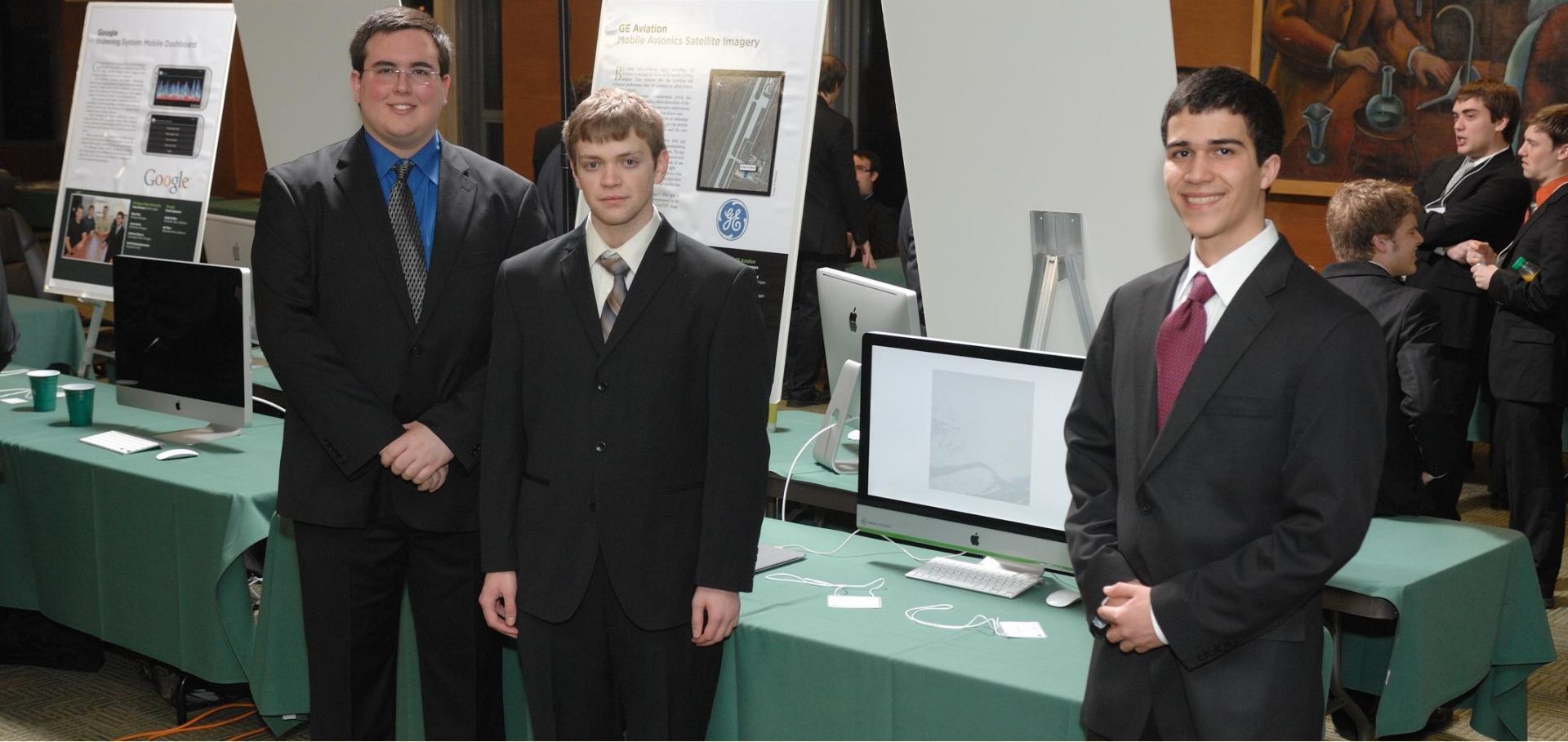


Team GE Aviation
Beta Presentation

Team GE Aviation Beta Presentation

Random Location





Team GE Aviation
Design Day

MICHIGAN STATE
UNIVERSITY

The Capstone Experience

Team Google

Department of Computer Science and Engineering
Michigan State University
Fall 2012



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

Google™

Company overview[Who we are](#)[Our culture](#)[Locations](#)[Management team](#)[What we believe](#)[What we do](#)

Google's mission is to organize the world's information and make it universally accessible and useful.

Our company has packed a lot into a relatively young life. Since Google was founded in 1998, we've grown to serve hundreds of thousands of users and customers around the world.

When Larry met Sergey

Founders Larry Page and Sergey Brin met at Stanford University in 1995. By 1996, they had built a search engine (initially called BackRub) that used links to determine the importance of a individual webpages.

Google facts**Founded**

1998

Founders

[Larry Page](#) and [Sergey Brin](#)

Incorporation

September 4, 1998

Initial public offering (NASDAQ)

Team Google

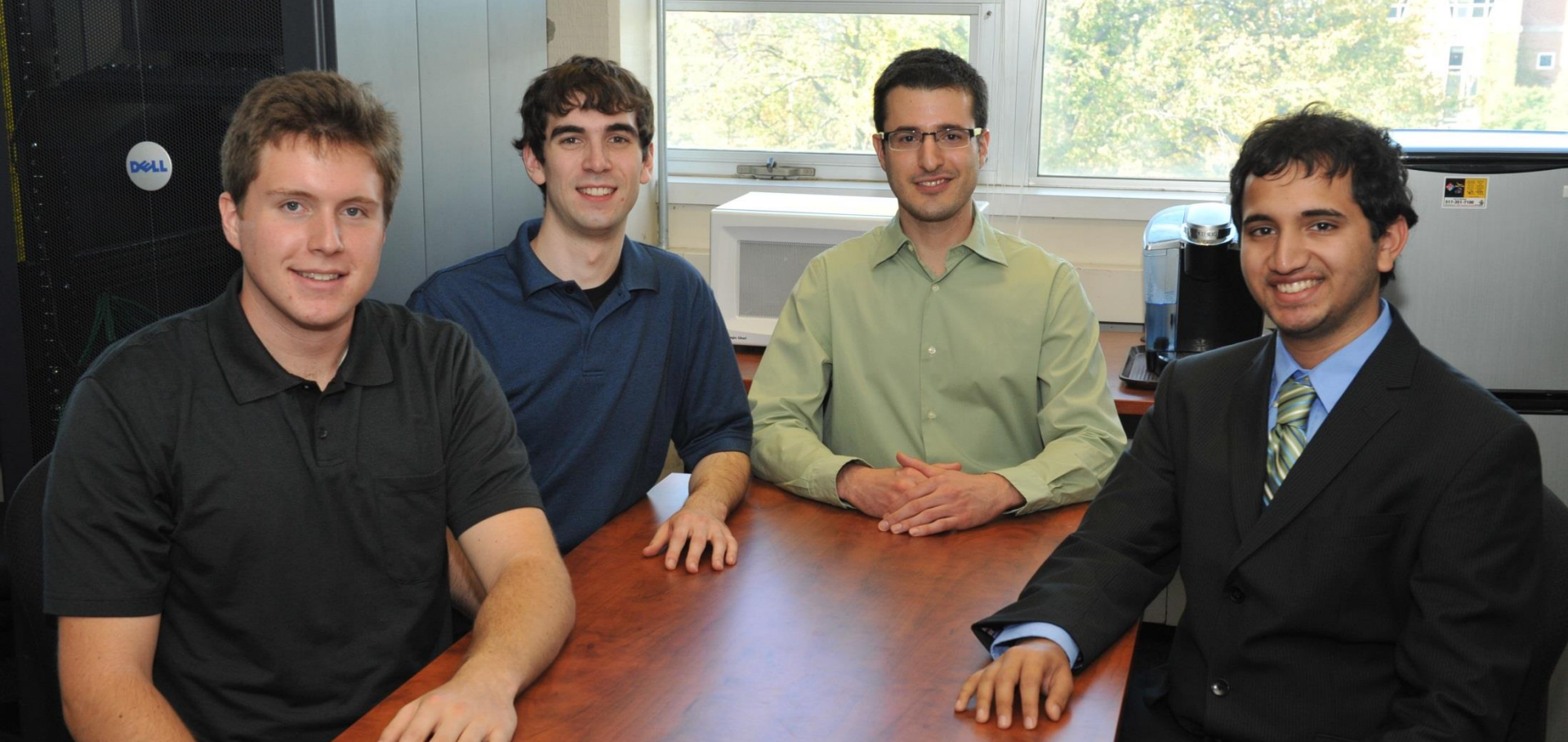
Project Overview

Indexing System Mobile Dashboard

- Functionalities
 - Existing Indexing System Dashboard
 - Displays State of Google's Indexing System
 - Used to Identify, Debug and Solve Problems
 - Limited to Desktops and Laptops
 - Indexing System Mobile Dashboard
 - Mobile Version of the Indexing System Dashboard
 - Android-Based, Version ≥ 4.0
 - Both Phones and Tablets
- Features
 - Google App Engine Back End
 - Stores Indexing Data
 - Pushes Indexing Data to Mobile Devices
 - Tool to Update Back End Indexing Data
 - Mobile Dashboards
 - Pulls Data from the Back End
 - Displays Indexing System Performance Graphs
- Technologies
 - Java
 - Android SDK
 - Google App Engine
 - Google Chart Tools
 - Google Protocol Buffers



Mountain View, California



Team Google

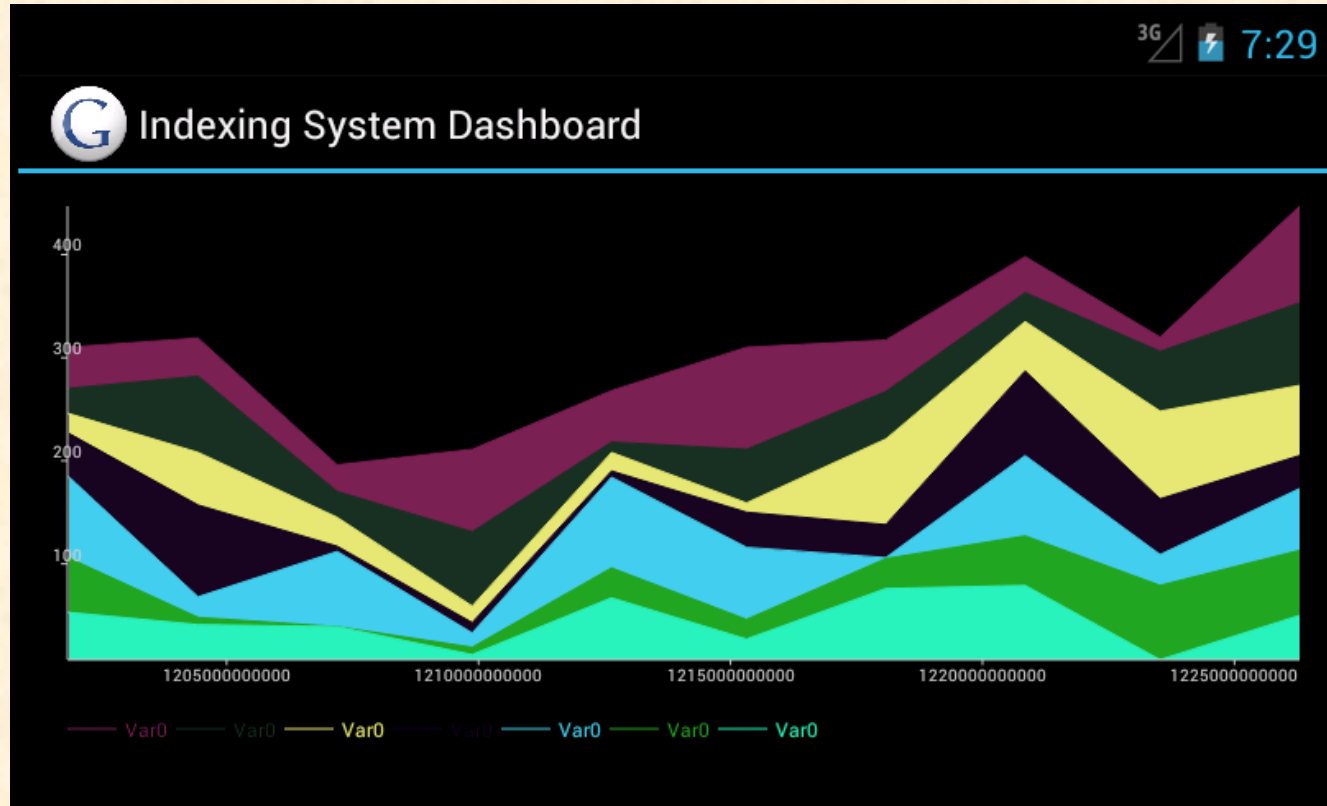
Mike Platt, Jason Harris, Anthony Talerico, Karthik Balasubramanian



Team Google Project Plan Presentation

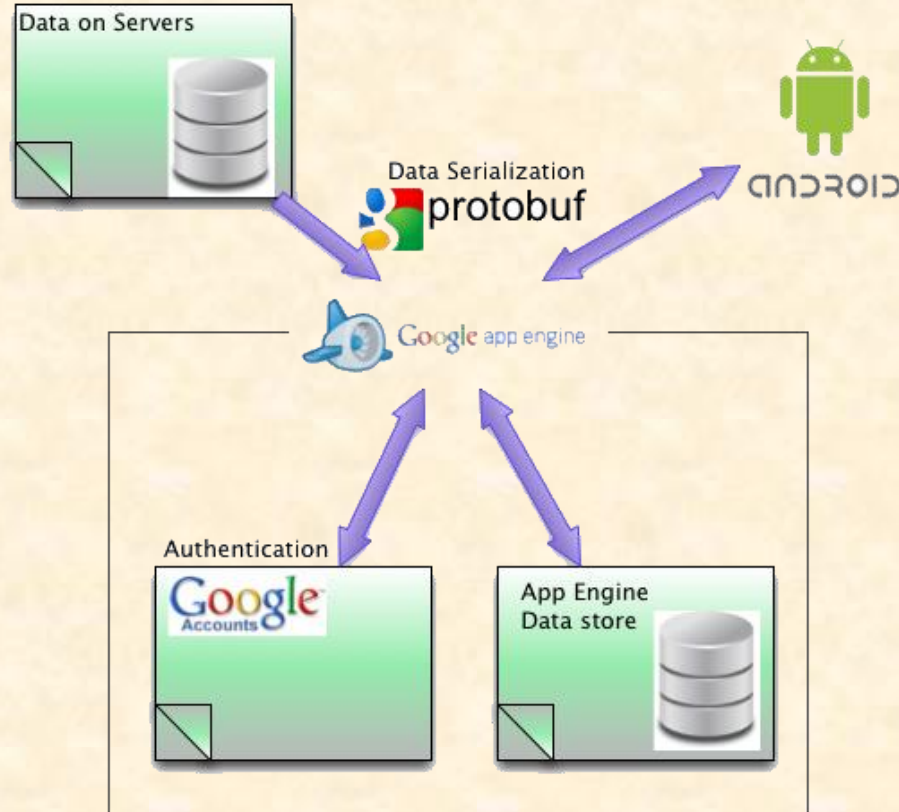
Team Google Project Plan Presentation

Screen Mockup



Team Google Project Plan Presentation

Architecture Diagram

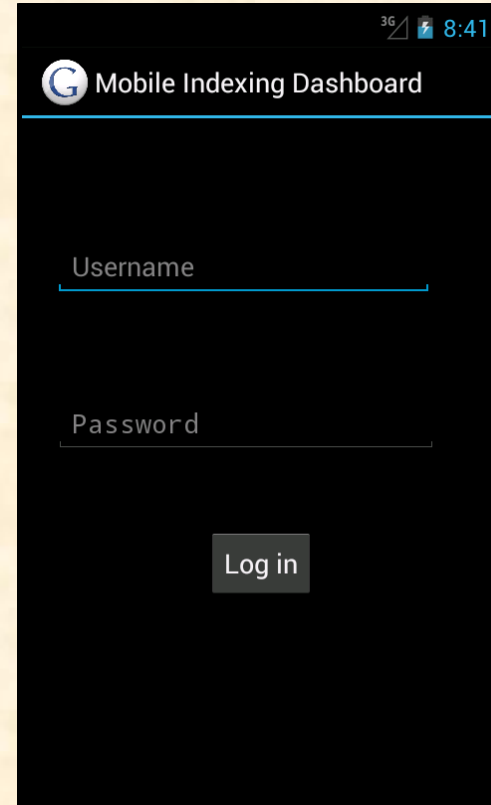
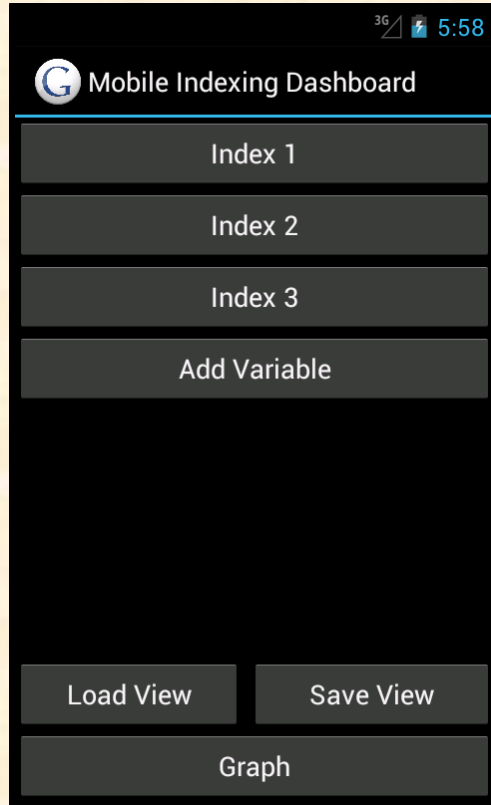




Team Google Project Plan Presentation

Team Google Project Plan Presentation

Screen Mockups

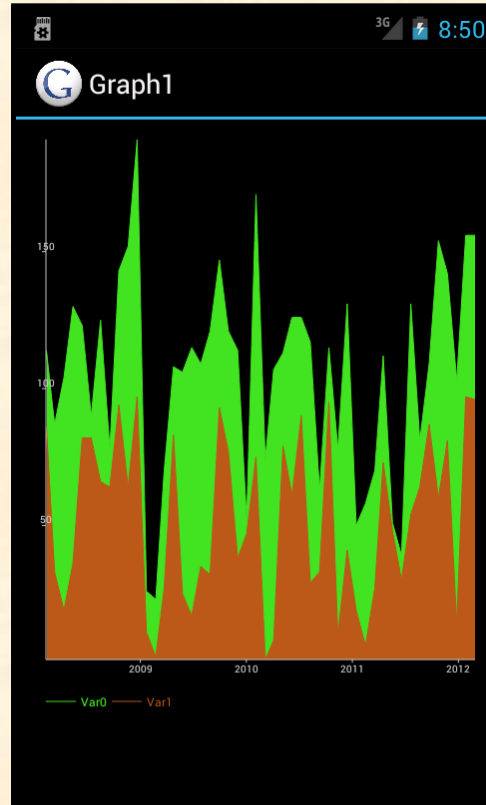




Team Google Alpha Presentation

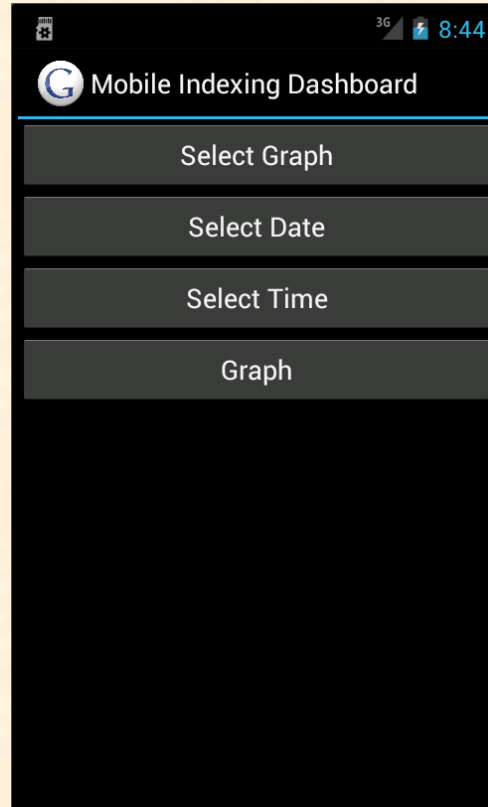
Team Google Alpha Presentation

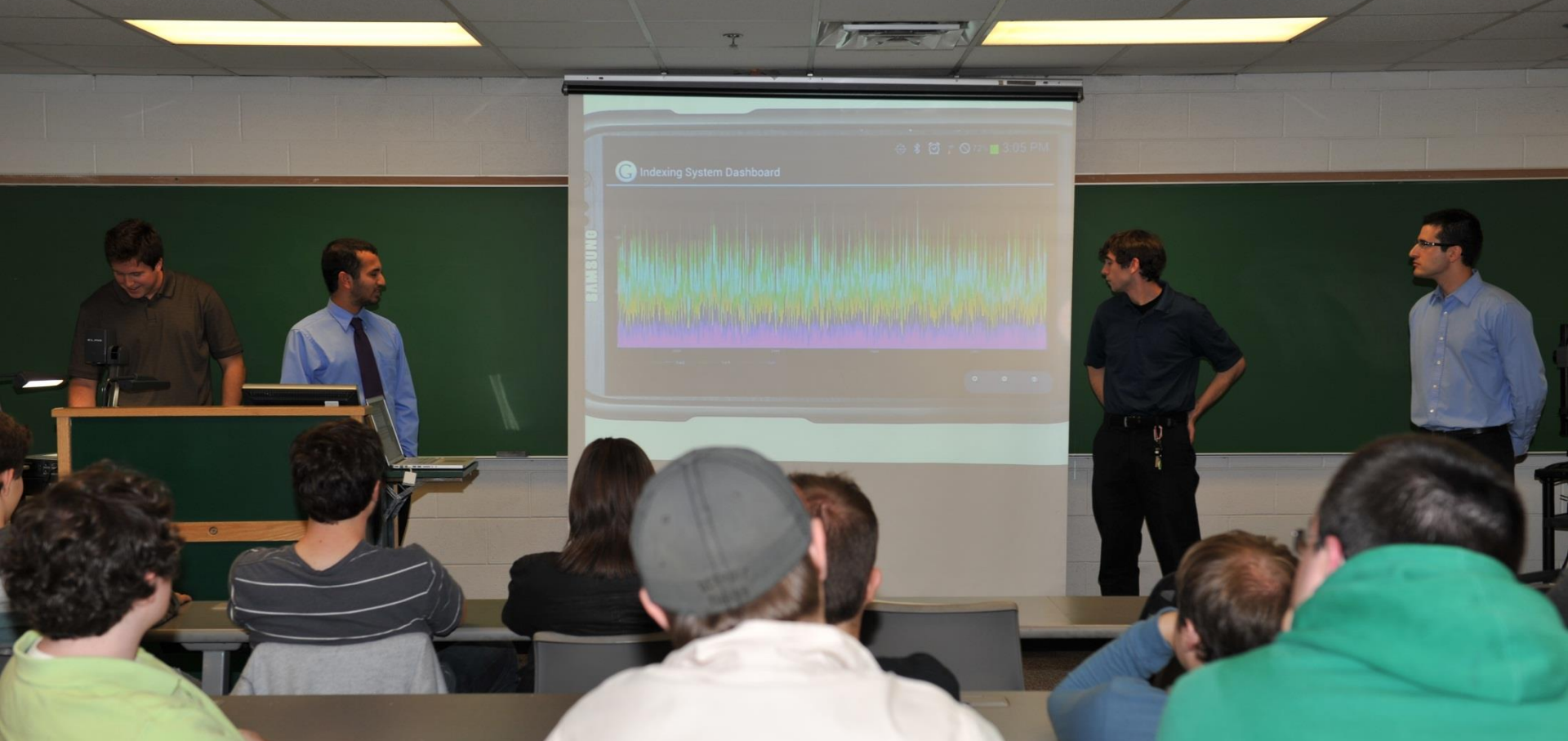
Mobile Chart



Team Google Alpha Presentation

Selection

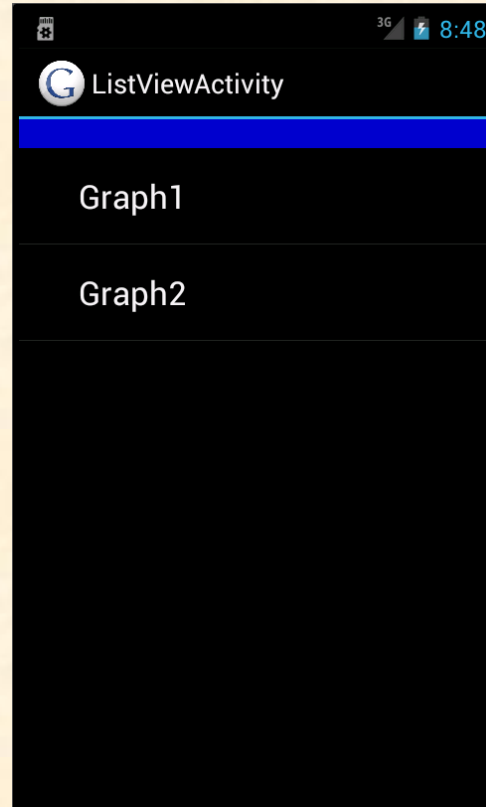




Team Google Alpha Presentation

Team Google Alpha Presentation

Graph Views

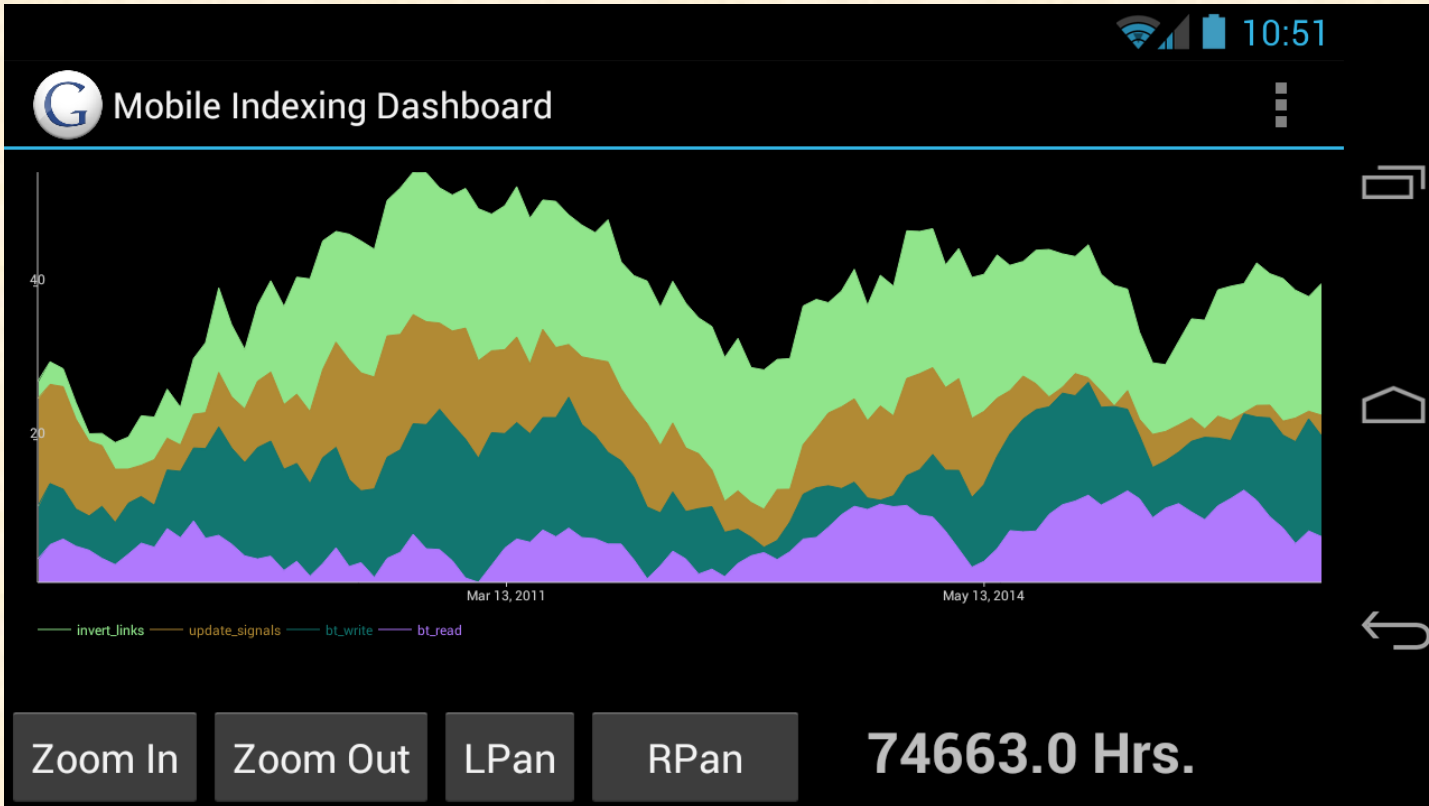




Team Google
Beta Presentation

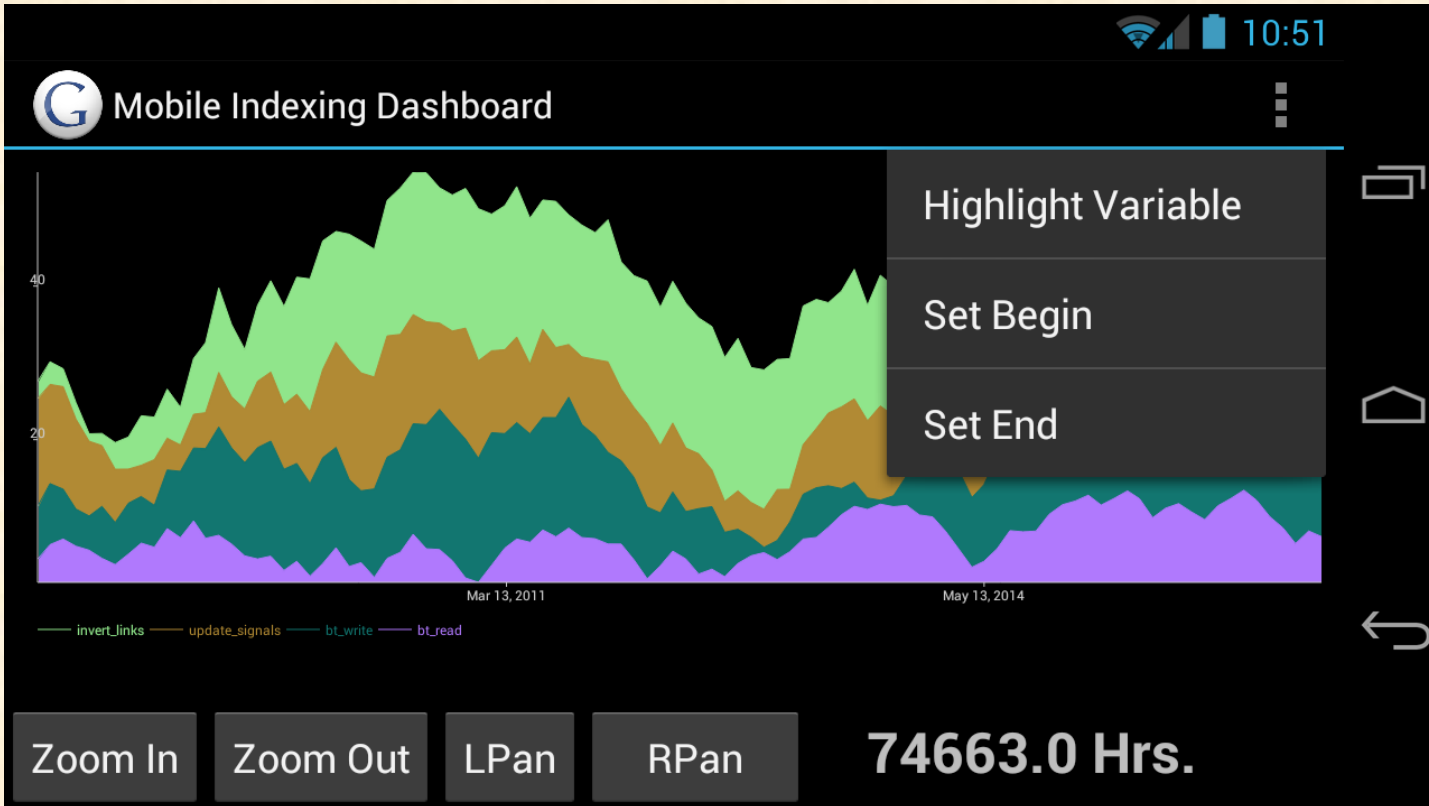
Team Google Beta Presentation

Graph Display



Team Google Beta Presentation

Graph Menu

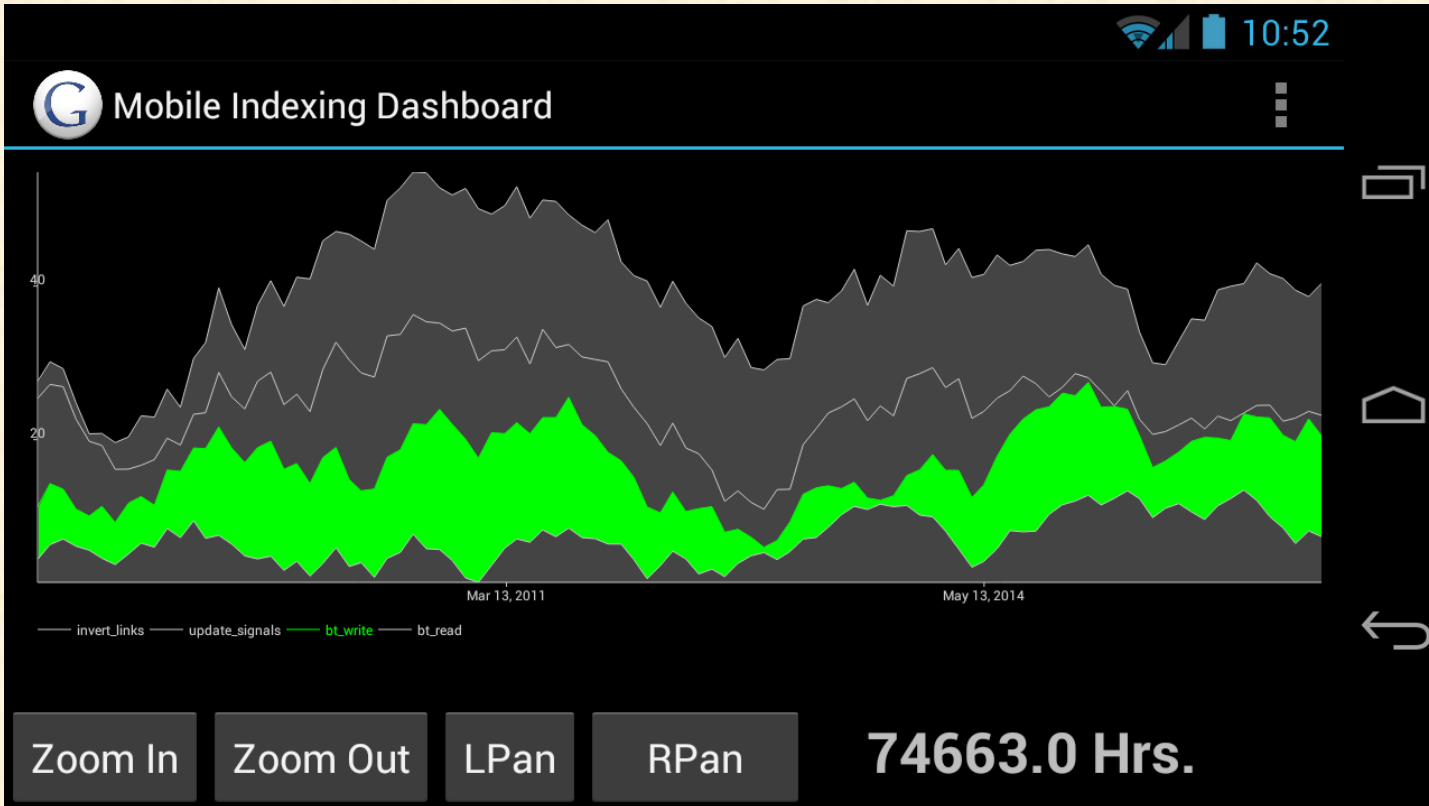




Team Google Beta Presentation

Team Google Beta Presentation

Highlight Variable





Team Google
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The Capstone Experience

Team Meijer

Department of Computer Science and Engineering
Michigan State University
Fall 2012



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meijer[®]

meijer

Weekly Ads

Gift Cards

mPerks

Find a Store

 **free shipping**
orders \$99+

promo code: **freesummer**

*Exclusions apply. See details ▶

search



My Store



My Account



0

Cart

Grocery | Health & Beauty | Clothing & Jewelry | Baby | Furniture & Home | Garden & Patio | Toys | Electronics | Sports | Sale

classic style goes
back to school

less summer means more savings

10-20% off school uniforms ▶

top ways to save



Weekly Ads



mperks

Team Meijer Project Overview

IT ePager System

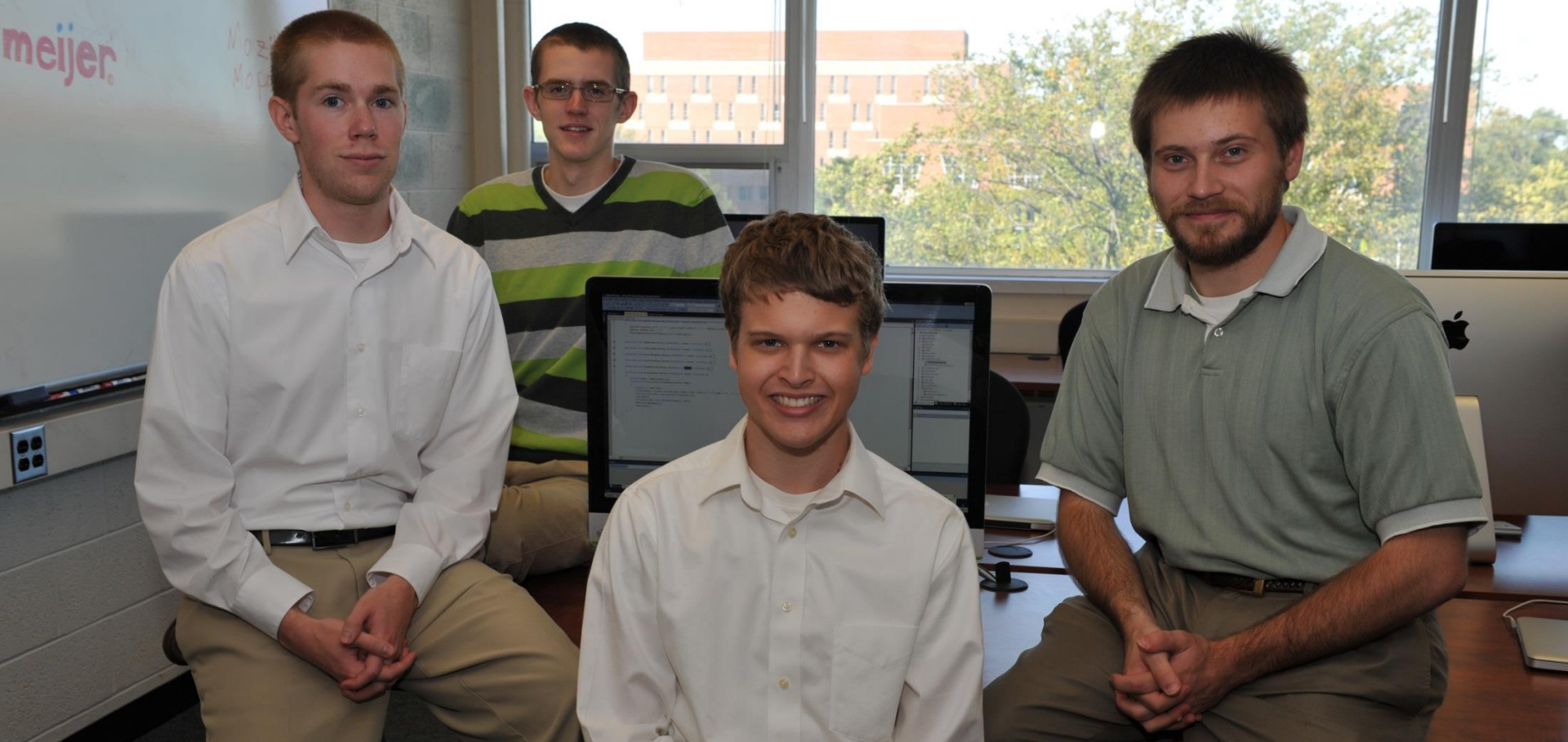
- Functionalities
 - Page IT Team Members
 - Via Web App
 - To Address Computer System Issues
- Features
 - Intuitive, Easy-to-Use User Interface
 - Role-Based/Password-Protected Access
 - Page Individuals or Groups
 - Create and Edit Paging Groups
 - Broad Paging Support
 - Devices
 - Pagers
 - Smart Phones
 - Service Providers
 - Back End Tools
 - Administrative
 - Reporting
- Technologies
 - C#
 - Microsoft .NET, ASP.NET
 - JavaScript, jQuery, jQuery UI
 - Visual Studio 2010
 - Microsoft SQL Server 2008



meijer[®]

Grand Rapids, Michigan





Team Meijer

Mike Sanburn, David Oeffner, Mark Schwerzler, Nick Ovenhouse



Team Meijer Project Plan Presentation

Team Meijer Project Plan Presentation

Screen Mockups

meijer

HomeReportingAdminSendAbout

Group
POS

Template
Power Outage

Message Area:
Store Affected: Okemos

Departments Affected:
☐ Electronics
☐ Produce
☐ Sporting Goods
☐ Pharmacy
☐ Home

Additional Comments:

Send

meijer

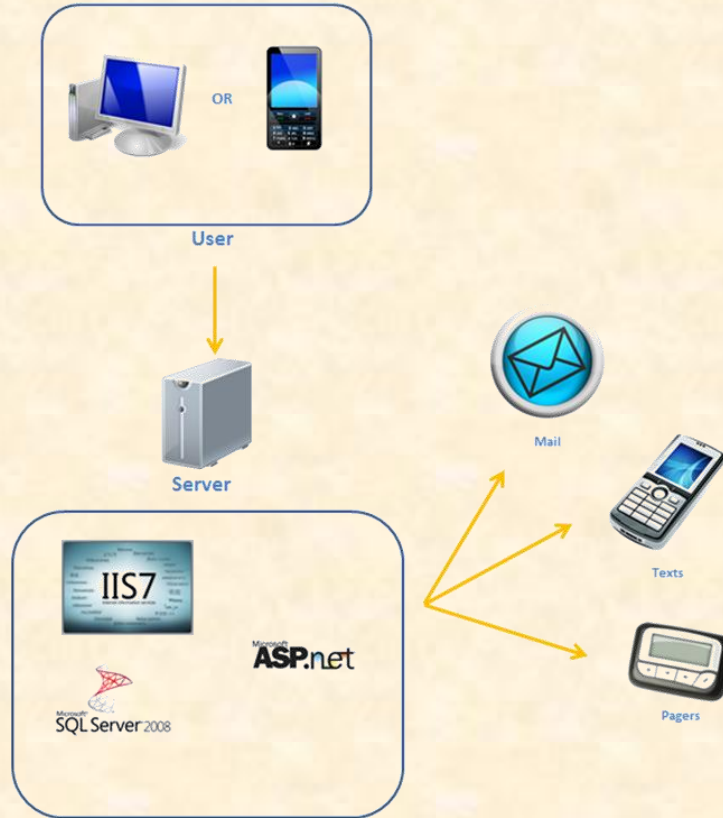
HomeReportingAdminSendAbout

Search for pages by:
Sender John Doe Submit

Person	Page ID	Time	Group	Subject
John Doe 1234	Sep 12, 2012 : 09:35	POS		Power Outage
John Doe 2345	Sep 12, 2012 : 10:45	POS		Power Outage

Team Meijer Project Plan Presentation

Architecture Diagram





Team Meijer Project Plan Presentation

Screen Mockup

Sprint 19:49 81%

35.9.22.104/CreateUser.aspx

TEAM MEIJER - CSE 498

Home Reporting Admin Send About

Create User

First Name

Last Name

Phone Number - -

Pager Number - -

Primary Form of Contact

Email

Account Type

Phone Carrier






Team Meijer Alpha Presentation

Team Meijer Alpha Presentation

Send Page



username: Nick
empl ID: 2

Template
Power Outage - On Generator ▼

Individuals
David
Mark
Mike
Nick

Group
A-Team
Team 1
Team 2

123456 TK# 7890123 - ST 456789 - Power Outage - Emergency services contacted.

Running on generator. POS is Offline ▼ . Affecting single ▼ stores.

Additional Comments:


Send

Home



Team Meijer Alpha Presentation

Template Creation



username: Nick
empl ID: 2

HomeReportingSendAdmin

Template Name:

Team 1
Team 2
A-Team

Default Groups:

Add:

Newline
Make a Selection
Text
TextBox
DropDown
Newline

Add NewlineUndo

Template Preview:

There is a power outage at store location . Emergency services contacted.

Create Template






Team Meijer Alpha Presentation

Team Meijer Alpha Presentation

Reporting

username: Nick
empl ID: 2

HomeReportingSendAdmin

Reporting History

Select Search Field
Select Search Field
PageID
Sender
Subject(Template)
Date

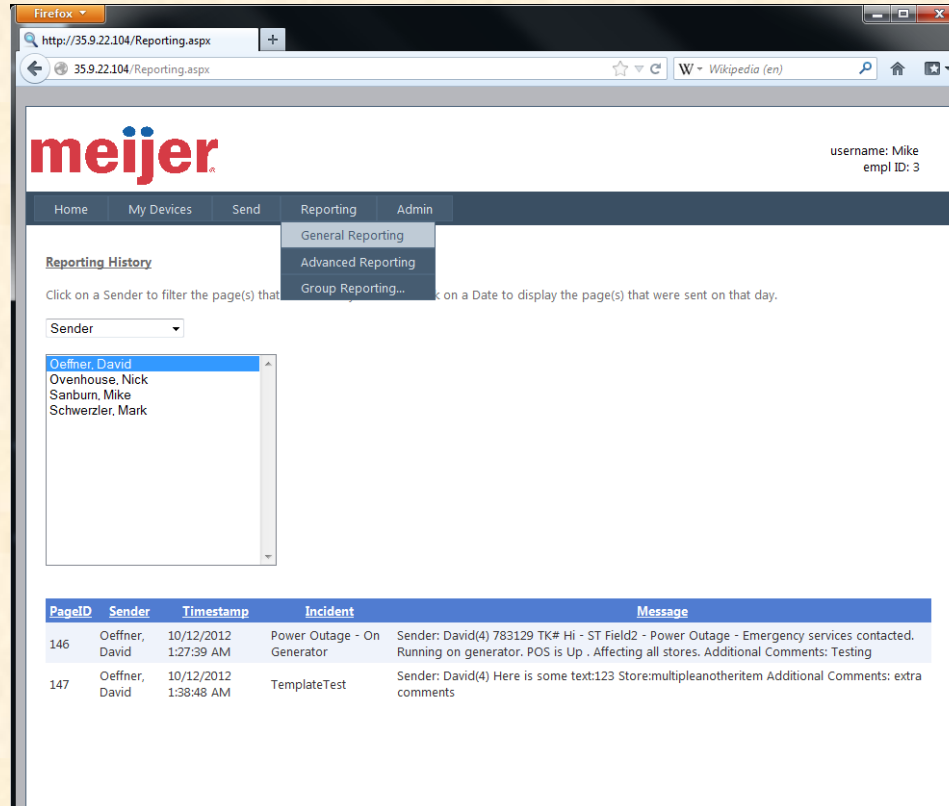
PageID	Sender	Timestamp	Subject	Message
139	Ovenhouse, Nick	10/11/2012 8:07:02 AM	Power Outage - On Generator	Sender: Nick(2) (Store Number) TK# Add default text here... - ST Add default text here... - Power Outage - Emergency services contacted. Running on generator. POS is Up . Affecting all stores. Additional Comments:
140	Schwerzler, Mark	10/11/2012 8:27:33 AM	Power Outage - On Generator	Sender: Mark(1) (Store Number) TK# Add default text here... - ST Add default text here... - Power Outage - Emergency services contacted. Running on generator. POS is Up . Affecting all stores. Additional Comments: Also going
141	Ovenhouse, Nick	10/11/2012 8:27:34 AM	Power Outage - On Generator	Sender: Nick(2) (Store Number) TK# number - ST stuff - Power Outage - Emergency services contacted. Running on generator. POS is Off . Affecting multiple stores. Additional Comments:
142	Ovenhouse, Nick	10/11/2012 9:13:50 AM	Power Outage - On Generator	Sender: Nick(2) (Store Number) TK# Add default text here... - ST Add default text here... - Power Outage - Emergency services contacted. Running on generator. POS is Up . Affecting all stores. Additional Comments:
143	Ovenhouse, Nick	10/11/2012 9:15:05 AM	Power Outage - On Generator	Sender: Nick(2) (Store Number) TK# Add default text here... - ST Add default text here... - Power Outage - Emergency services contacted. Running on generator. POS is Up . Affecting all stores. Additional Comments:
144	Ovenhouse, Nick	10/11/2012 9:47:49 AM	Power Outage - On Generator	Sender: Nick(2) (Store Number) TK# Add default text here... - ST Add default text here... - Power Outage - Emergency services contacted. Running on generator. POS is Up . Affecting all stores. Additional Comments:



Team Meijer Beta Presentation

Team Meijer Beta Presentation

General Reporting Page



Firefox

http://35.9.22.104/Reporting.aspx

35.9.22.104/Reporting.aspx

Wikipedia (en)

meijer

username: Mike
empl ID: 3

Home My Devices Send Reporting Admin

General Reporting
Advanced Reporting
Group Reporting...

Reporting History

Click on a Sender to filter the page(s) that were sent on a Date to display the page(s) that were sent on that day.

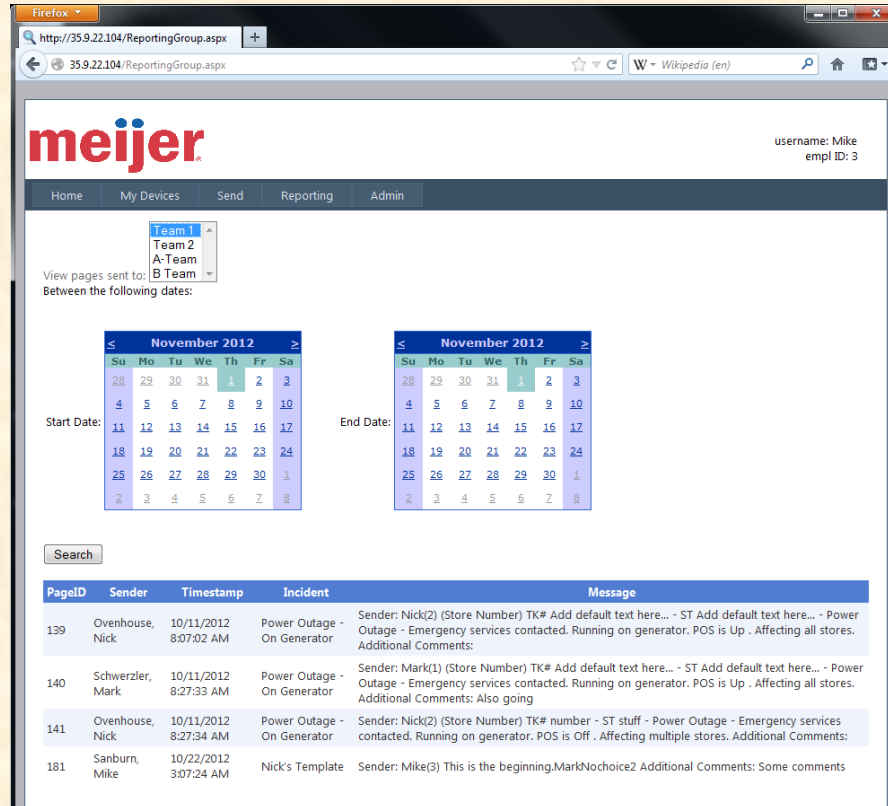
Sender

Offner, David
Ovenhouse, Nick
Sanburn, Mike
Schwerzler, Mark

PageID	Sender	Timestamp	Incident	Message
146	Offner, David	10/12/2012 1:27:39 AM	Power Outage - On Generator	Sender: David(4) 783129 TK# Hi - ST Field2 - Power Outage - Emergency services contacted. Running on generator. POS is Up . Affecting all stores. Additional Comments: Testing
147	Offner, David	10/12/2012 1:38:48 AM	TemplateTest	Sender: David(4) Here is some text:123 Store:multipleanotheritem Additional Comments: extra comments

Team Meijer Beta Presentation

Group Reporting Page



The screenshot shows a web application interface for Meijer. At the top, the Meijer logo is on the left, and the user's login information (username: Mike, empl ID: 3) is on the right. Below the logo is a navigation bar with links: Home, My Devices, Send, Reporting, and Admin. The main content area is titled "View pages sent to:" and includes a dropdown menu with options: Team 1, Team 2, A-Team, and B Team. Below this, it says "Between the following dates:" and displays two calendar widgets for November 2012. The "Start Date" calendar shows the 11th as the selected date, and the "End Date" calendar shows the 17th as the selected date. Below the calendars is a "Search" button. At the bottom, there is a table with incident data.

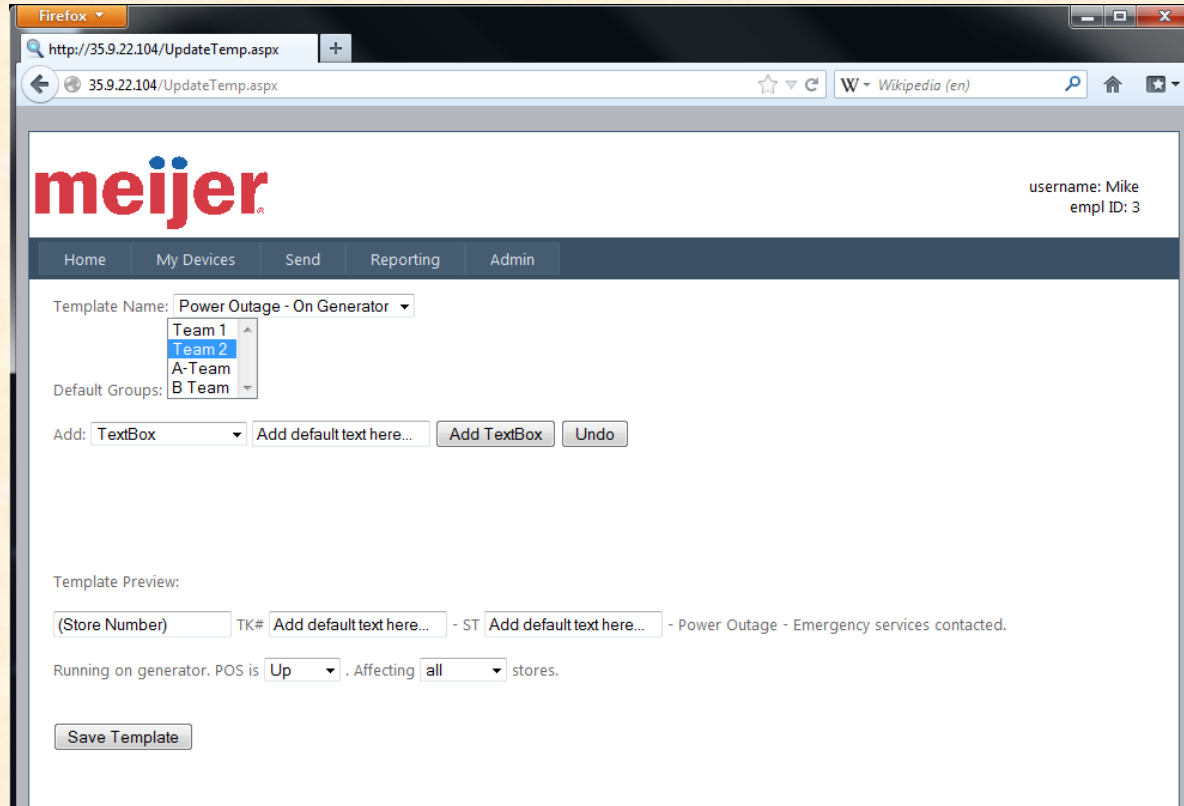
PageID	Sender	Timestamp	Incident	Message
139	Ovenhouse, Nick	10/11/2012 8:07:02 AM	Power Outage - On Generator	Sender: Nick(2) (Store Number) TK# Add default text here... - ST Add default text here... - Power Outage - Emergency services contacted. Running on generator. POS is Up . Affecting all stores. Additional Comments:
140	Schwerzler, Mark	10/11/2012 8:27:33 AM	Power Outage - On Generator	Sender: Mark(1) (Store Number) TK# Add default text here... - ST Add default text here... - Power Outage - Emergency services contacted. Running on generator. POS is Up . Affecting all stores. Additional Comments: Also going
141	Ovenhouse, Nick	10/11/2012 8:27:34 AM	Power Outage - On Generator	Sender: Nick(2) (Store Number) TK# number - ST stuff - Power Outage - Emergency services contacted. Running on generator. POS is Off . Affecting multiple stores. Additional Comments:
181	Sanburn, Mike	10/22/2012 3:07:24 AM	Nick's Template	Sender: Mike(3) This is the beginning.MarkNochoice2 Additional Comments: Some comments



Team Meijer Beta Presentation

Team Meijer Beta Presentation

Edit Template Page



The screenshot shows a web browser window with the address bar displaying `http://35.9.22.104/UpdateTemp.aspx`. The page features the Meijer logo in the top left and user information (username: Mike, empl ID: 3) in the top right. A navigation bar includes links for Home, My Devices, Send, Reporting, and Admin. The main content area is titled 'Template Name: Power Outage - On Generator' and includes a dropdown menu for 'Default Groups' with options: Team 1, Team 2 (selected), A-Team, and B Team. Below this is an 'Add:' section with a 'TextBox' dropdown, a text input field containing 'Add default text here...', and buttons for 'Add TextBox' and 'Undo'. A 'Template Preview:' section shows a rendered view of the template with fields for '(Store Number)', 'TK#', and 'ST', followed by the text '- Power Outage - Emergency services contacted.' and 'Running on generator. POS is Up . Affecting all stores.' A 'Save Template' button is located at the bottom.

Firefox

http://35.9.22.104/UpdateTemp.aspx

35.9.22.104/UpdateTemp.aspx

Wikipedia (en)

meijer

username: Mike
empl ID: 3

Home My Devices Send Reporting Admin

Template Name: Power Outage - On Generator

Team 1
Team 2
A-Team
B Team

Default Groups:

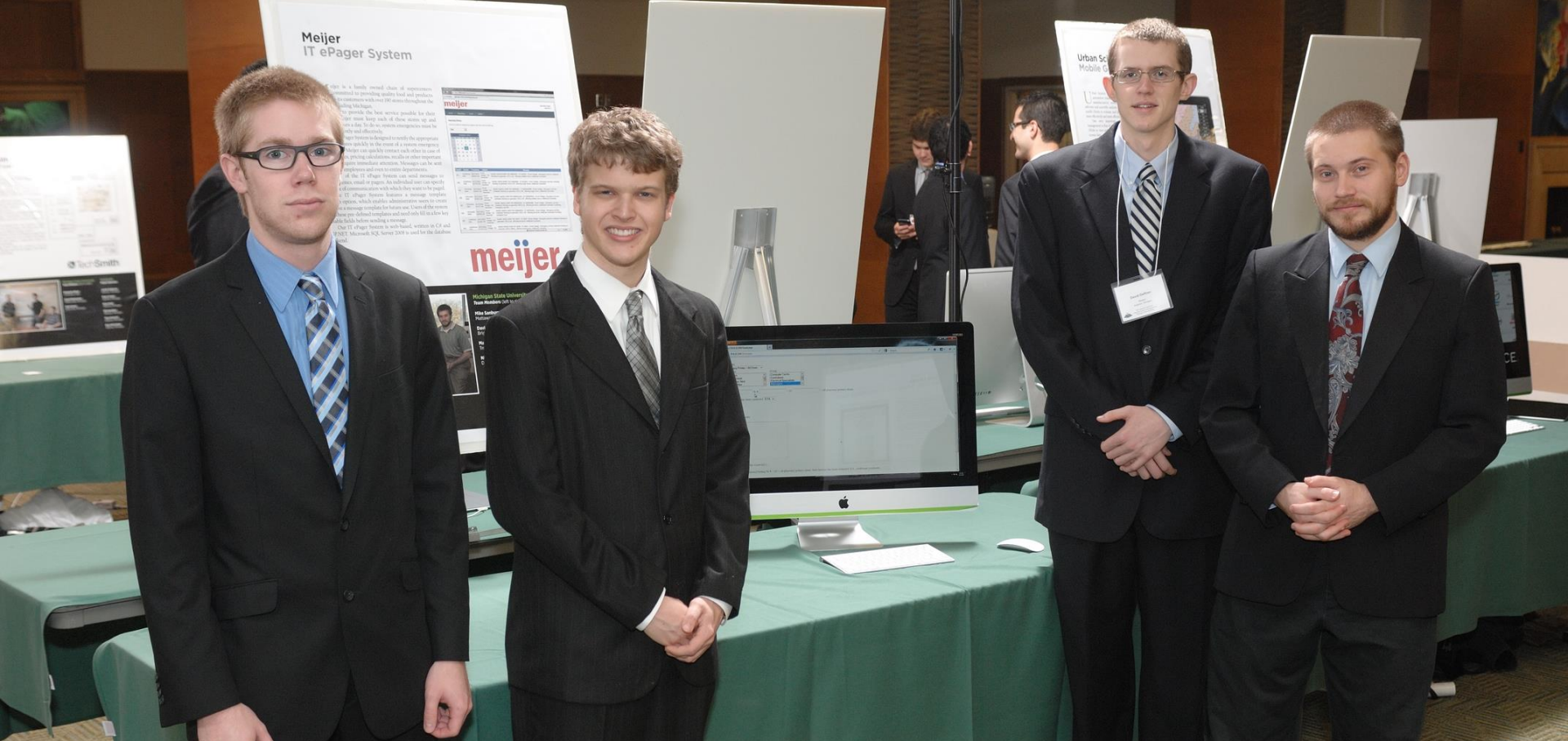
Add: TextBox Add default text here... Add TextBox Undo

Template Preview:

(Store Number) TK# Add default text here... - ST Add default text here... - Power Outage - Emergency services contacted.

Running on generator. POS is Up . Affecting all stores.

Save Template



Team Meijer
Design Day

MICHIGAN STATE
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The Capstone Experience

Team Mozilla

Department of Computer Science and Engineering
Michigan State University
Fall 2012



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mozilla

Firefox[®]



MOBILE

DESKTOP

Firefox for Android

Fast. Smart. Safe.



Get Firefox for
Android

Free from the Google Play Store



Find out if your device is
supported »

Team Mozilla Project Overview

Reader Mode for Desktop Firefox

- Functionalities
 - Firefox Viewing Mode
 - Designed for the Reading Experience
 - Optimized for Long Reading Sessions
- Features
 - Decluttered View
 - Dimmed or Removed Irrelevant Content
 - Styled Reading Content
- Technologies
 - CSS, HTML5
 - XML/XUL (XML User Interface Language)
 - JavaScript
 - Mercurial
 - Bugzilla



mozilla
Firefox

Mountain View, California



Team Mozilla

Michael Anderson, Matt Vorce, Chelsea Carr, Kevin Woodward



Team Mozilla Project Plan Presentation

Team Mozilla Project Plan Presentation

Screen Mockup

Zuckerberg: No Facebook phone in the works, but new products coming - CNN.com



(CNN) -- Facebook has been quiet for the past six months, but only because it's been working on new products. No, one of them is not a Facebook Phone.

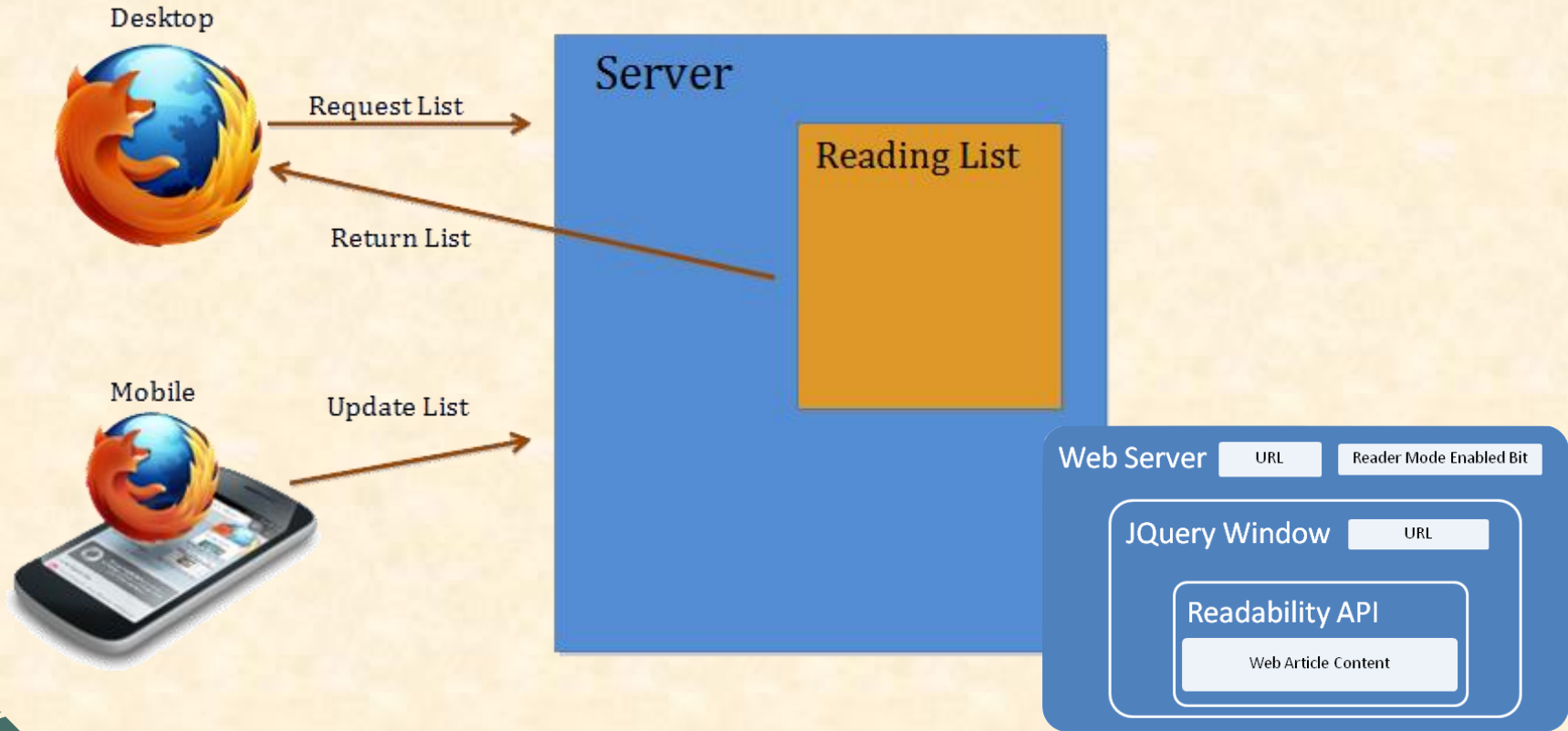
"The phone just doesn't make any sense," said a smiling but adamant Facebook CEO Mark Zuckerberg when asked whether he was working on the mythical Facebook smartphone. The rumor that the social network is working on a physical phone has been bouncing around for years. As recently as July, [Bloomberg reported Facebook was working with HTC](#) on a smartphone for 2013, citing sources with knowledge of the matter. Zuckerberg insisted that the number of users the company could reach with a hardware offering "doesn't move the needle for us."

Zuckerberg made the comments during a rare press appearance on Tuesday at the TechCrunch Disrupt conference in San Francisco. He was interviewed on stage by Silicon Valley blogger and investor Michael Arrington in front of a fully packed auditorium. The Facebook founder and chief executive has stayed out of the spotlight for the past four months since his company went public. In that time, Facebook's stock has plummeted from its opening day price of \$28 a share to around half



Team Mozilla Project Plan Presentation

Architecture Diagram

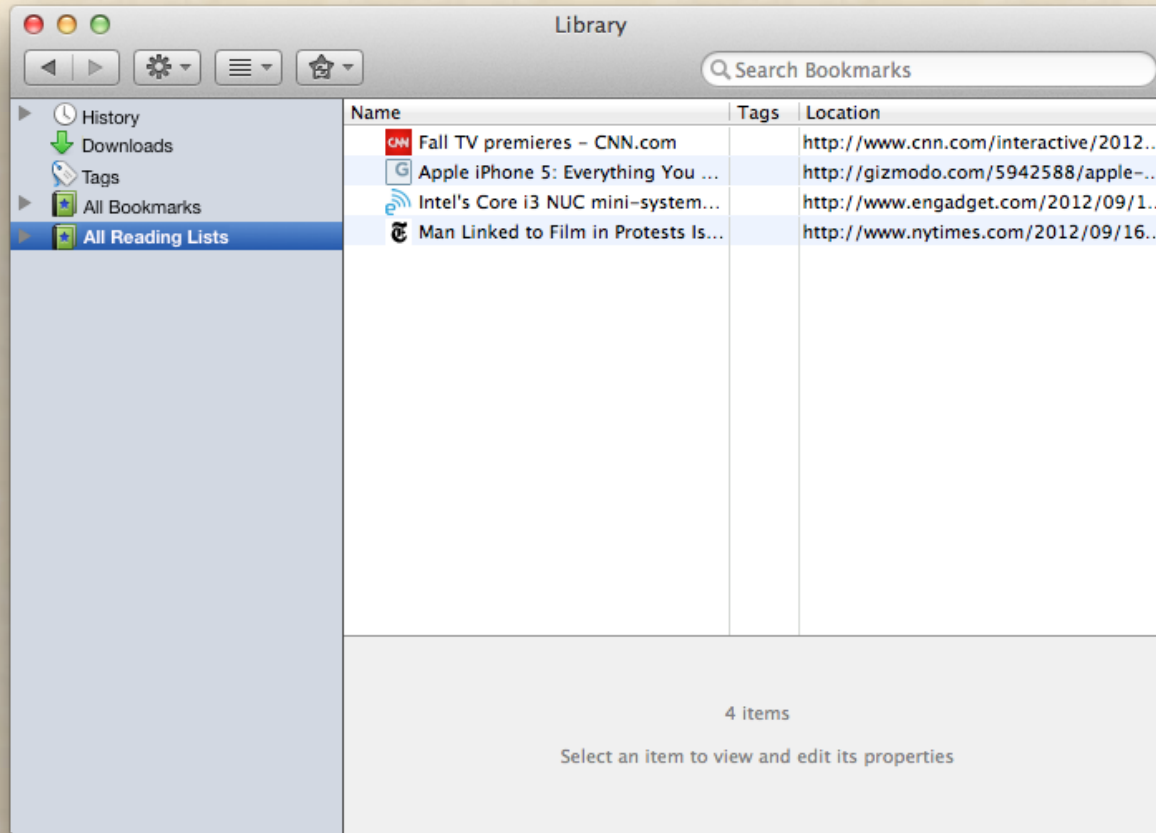




Team Mozilla Project Plan Presentation

Team Mozilla Project Plan Presentation

Screen Mockup

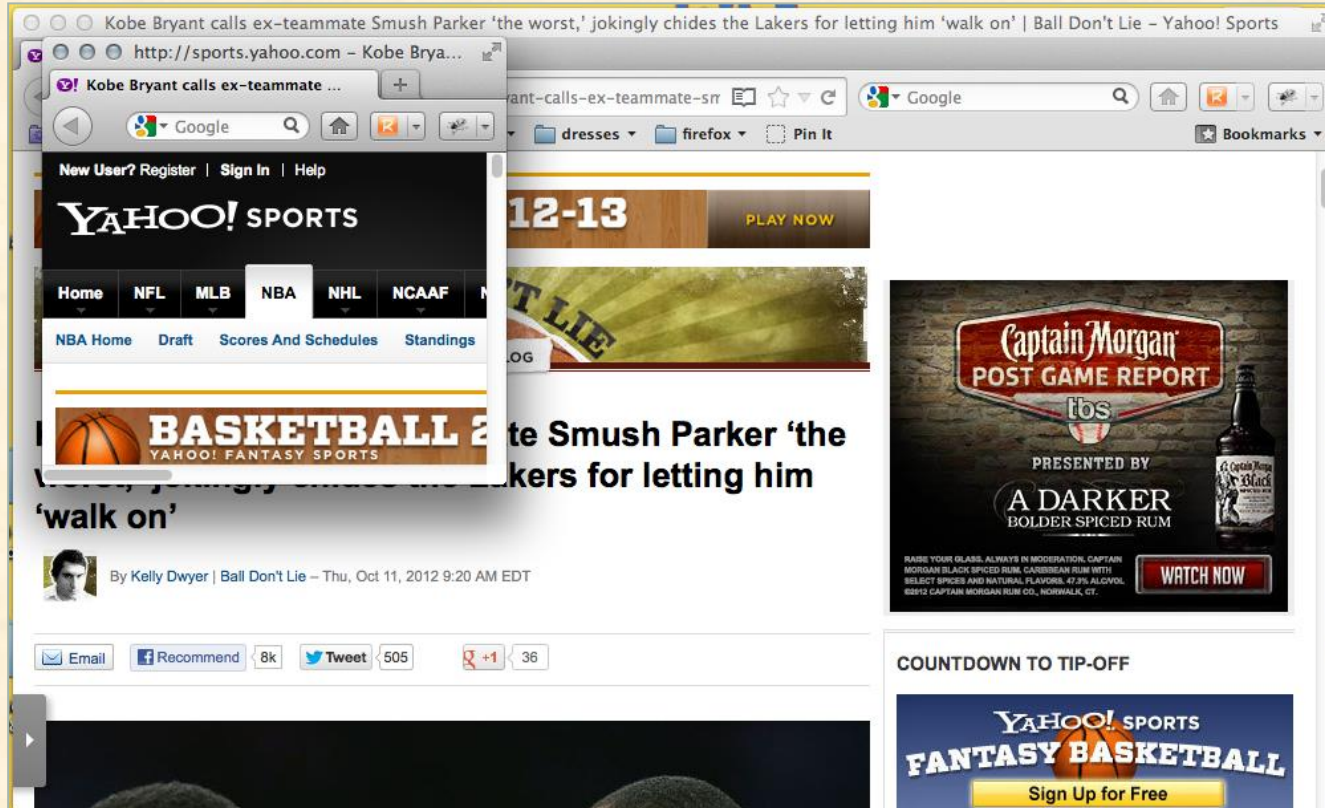




Team Mozilla Alpha Presentation

Team Mozilla Alpha Presentation

Popping Up New Window



Team Mozilla Alpha Presentation

Caching Article Content

Kobe Bryant calls ex-teammate Smush Parker 'the worst,' jokingly chides the Lakers for letting him 'walk on' | Ball Don't Lie - Yahoo! Sports

Kobe Bryant calls ex-teammate ...

sports.yahoo.com/blogs/nba-ball

Most Visited Getting Started

[JavaScript Application]

Article Saved!!!!!! Kobe Bryant calls ex-teammate Smush Parker 'the worst,' jokingly chides the Lakers for letting him 'walk on' | Ball Don't Lie

OK

19:55:11

HOURS MINS SECS

TODAY ON YAHOO! 1 - 8 of 48

Baby's amazing sequential birth numbers

Pop stars' risqué album covers

The man Kelly Clarkson says she'll marry

Smush Parker fires back at Kobe

Kobe Bryant confers with 'The Worst' (Getty Images)

During the 2005-06 season, Lakers superstar Kobe Bryant averaged a career best 35.4 points per game, an astounding number only slightly pumped up by his famous 81-point outburst midway through that very potent season. Though the Lakers were downed in the first round, the campaign

l2.yimg.com/bt/api/res/1.2/HUGBxg4n6cFEaTDT91v0A--/YXBwaWQ9eW5ld3M7cT04NQ--/http://media.zenfs.com/en/blogs/sptusnbaexperts/K8SP101112.jpg



Team Mozilla Alpha Presentation

Team Mozilla Alpha Presentation

Extracted Page Content



Kobe Bryant confers with 'The Worst' (Getty Images)

During the 2005-06 season, Lakers superstar [Kobe Bryant](#) averaged a career best 35.4 points per game, an astounding number only slightly pumped up by [his famous 81-point outburst](#) midway through that very potent season. Though the Lakers were downed in the first round, the campaign should have served at the very least as a personal highlight for Kobe, especially as he was back to working with coach Phil Jackson after the head man was exciled from the team during the 2004-05 campaign.

Instead, Kobe's still a little chippy about the lineups that surrounded him during that 45-win season. Up to and including calling former starting point guard Smush Parker "the worst," just before [Wednesday night's exhibition loss](#) to the Portland Trail Blazers. [From Janis Carr at the Orange County Register](#):

"I almost won an MVP with Smush Parker and [Kwame Brown](#) on my team," Bryant said before Wednesday's 93-75 exhibition loss to Portland. "I was shooting 45 times a game. What was I supposed to do? Pass it to [Chris Mihm](#) or Kwame Brown?"

Bryant was referring to 2005-06 when the Lakers' roster included Brian Cook, Stanislav Medvedenko, [Devean George](#) and Parker, Mihm and Brown.

Bryant continued, taking aim at his favorite whipping boy, Parker, calling him "the worst. He shouldn't have been in the NBA but we were too cheap to pay for a point guard. So we let him walk on."

Damn, dude. Daaaamn. Great players don't usually mind making indirect references to when their lives were tougher while working amongst less-heralded teammates -- "we've come a long way"-sort of nonsense. But rarely do you see players go on record with names like Kobe just did.

[Related: [LeBron James' agent being investigated by NCAA](#)]

About the talent surrounding him, or having to shoot 45 times ([27.2](#), actually) a game, Kobe is spot on. Though Jackson was back to employing the triangle offense, the mismatched parts acquired to run an isolation-heavy attack during Jackson's one year away made it so Bryant had to break away from the offense continually just to keep the Lakers in games. They may have featured the best player in the world that year, though eventual-champion Dwyane Wade might disagree, but 45 wins for that lot was, well, a lot. Bryant was masterful as he led that team back to the postseason.

Calling the guys out, though? Parker, we can understand it! *he's been taking shots at Kobe for years*, now, and any sort of contentious back and forth between the two is entirely Parker's fault. Players like Luke Walton and Devean George may have contributed less and hamstrung Kobe's efforts more than Parker in that season; but when you combine Smush's petulance towards Kobe, [lack of professionalism](#), and play he truly does come off as "the worst."

Kwame? His effort was lacking, per usual, and he turned the ball over on nearly 17 percent of the possessions he used up. Could have played better, had he cared more, so it's probably time for Kobe to call him out. Especially when a still-active Brown, now a Philadelphia 76er, can lay a hard foul on Bryant the next time the Lakers come through Pennsylvania.

(Though he totally won't.)

Chris Mihm? We're not feeling that as much.

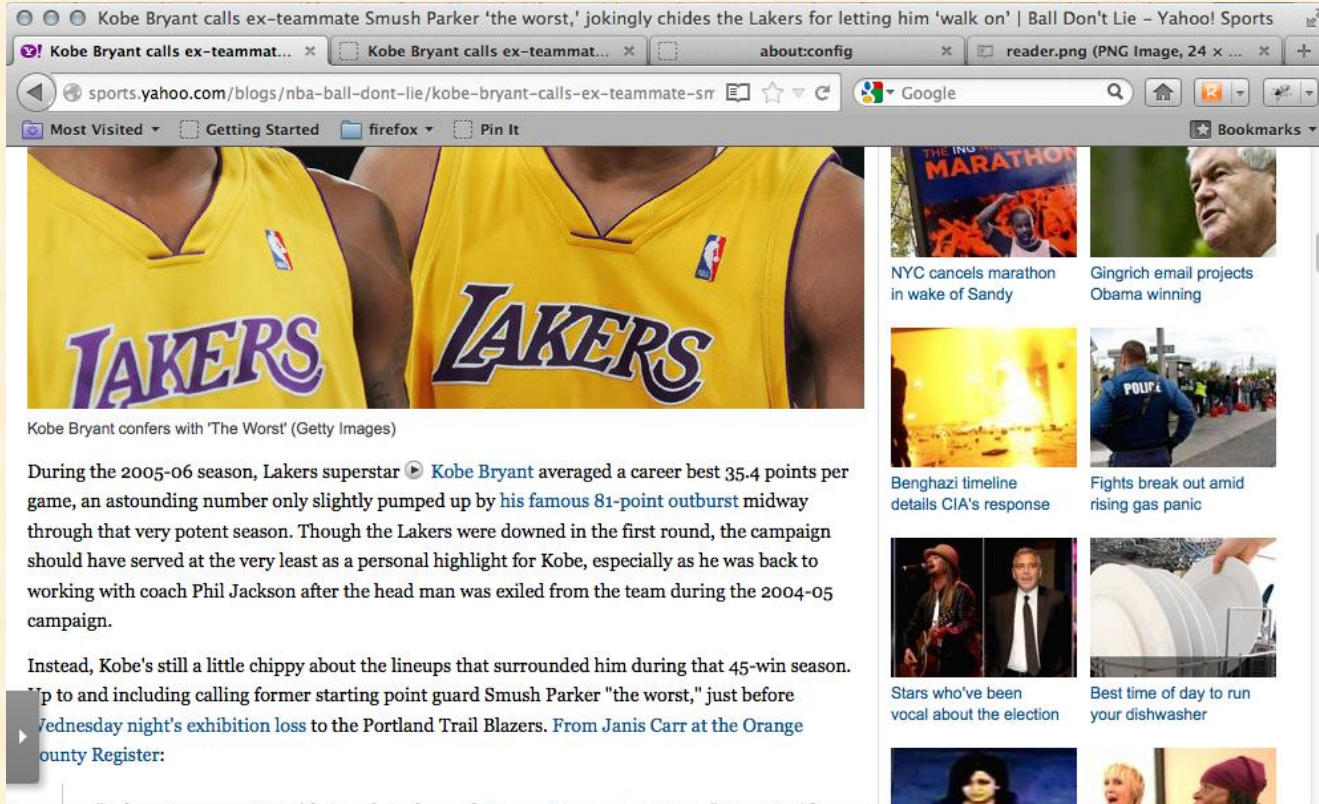




Team Mozilla Beta Presentation

Team Mozilla Beta Presentation

Standard Mode View

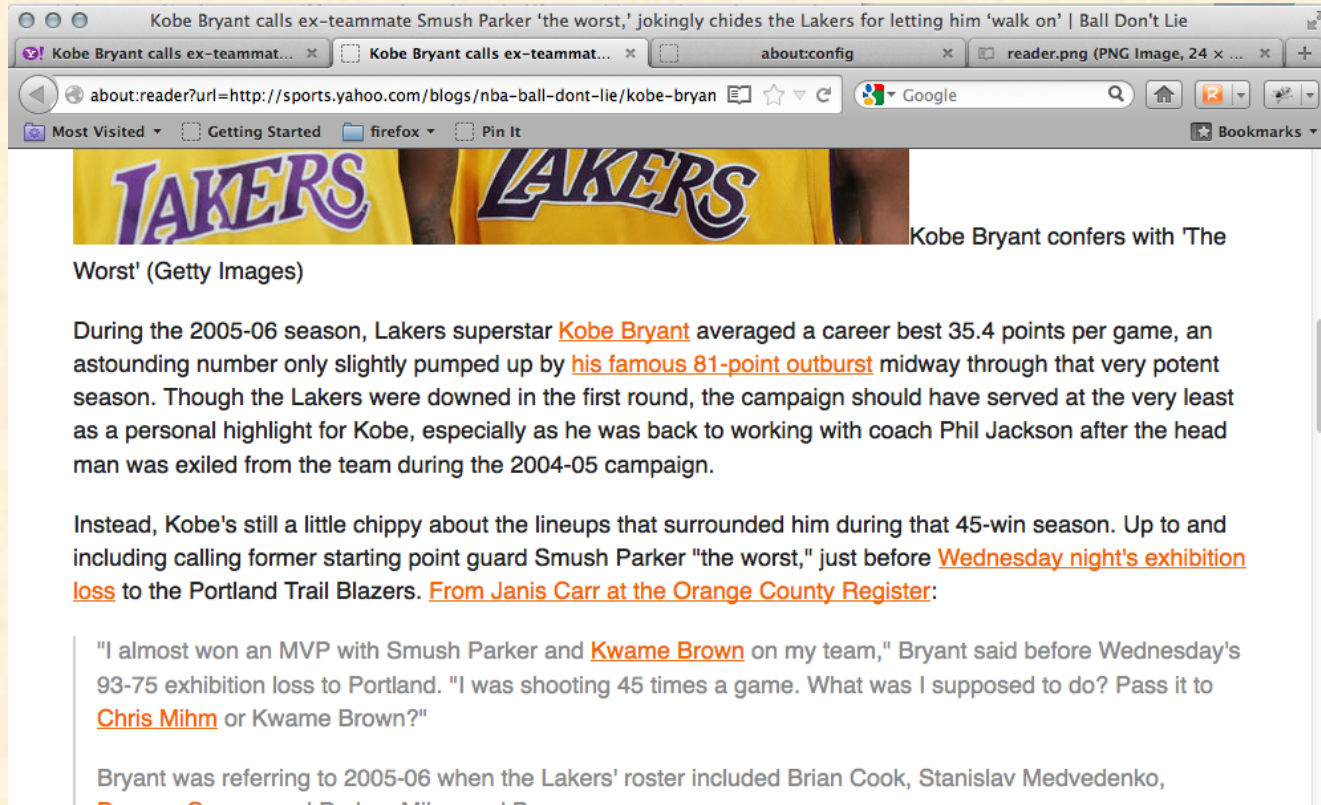


The screenshot shows a Mozilla browser window with the address bar displaying `sports.yahoo.com/blogs/nba-ball-dont-lie/kobe-bryant-calls-ex-teammate-srr`. The page features a large image of two Lakers players in yellow jerseys. Below the image, the text reads: "Kobe Bryant confers with 'The Worst' (Getty Images)". The article body contains the following text: "During the 2005-06 season, Lakers superstar ► [Kobe Bryant](#) averaged a career best 35.4 points per game, an astounding number only slightly pumped up by [his famous 81-point outburst](#) midway through that very potent season. Though the Lakers were downed in the first round, the campaign should have served at the very least as a personal highlight for Kobe, especially as he was back to working with coach Phil Jackson after the head man was exiled from the team during the 2004-05 campaign. Instead, Kobe's still a little chippy about the lineups that surrounded him during that 45-win season. Up to and including calling former starting point guard Smush Parker "the worst," just before [Wednesday night's exhibition loss](#) to the Portland Trail Blazers. From [Janis Carr at the Orange County Register](#):"

The right sidebar contains several news thumbnails with titles: "NYC cancels marathon in wake of Sandy", "Gingrich email projects Obama winning", "Benghazi timeline details CIA's response", "Fights break out amid rising gas panic", "Stars who've been vocal about the election", and "Best time of day to run your dishwasher".

Team Mozilla Beta Presentation

Reader Mode View

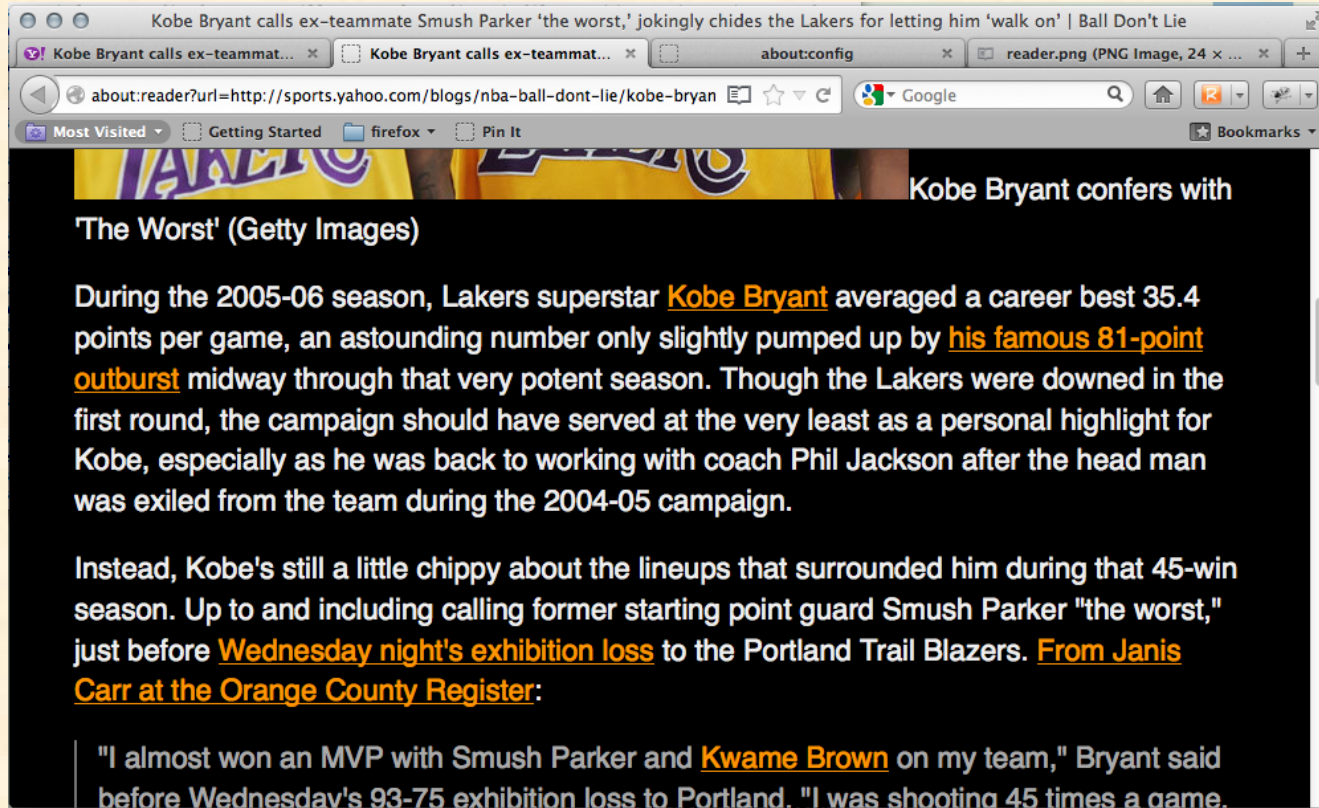




Team Mozilla Beta Presentation

Team Mozilla Beta Presentation

Darkened Reader Mode View





Team Mozilla
Design Day

The Capstone Experience

Team Quicken Loans

Department of Computer Science and Engineering
Michigan State University
Fall 2012



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Rule!?

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Team Quicken Loans Project Overview

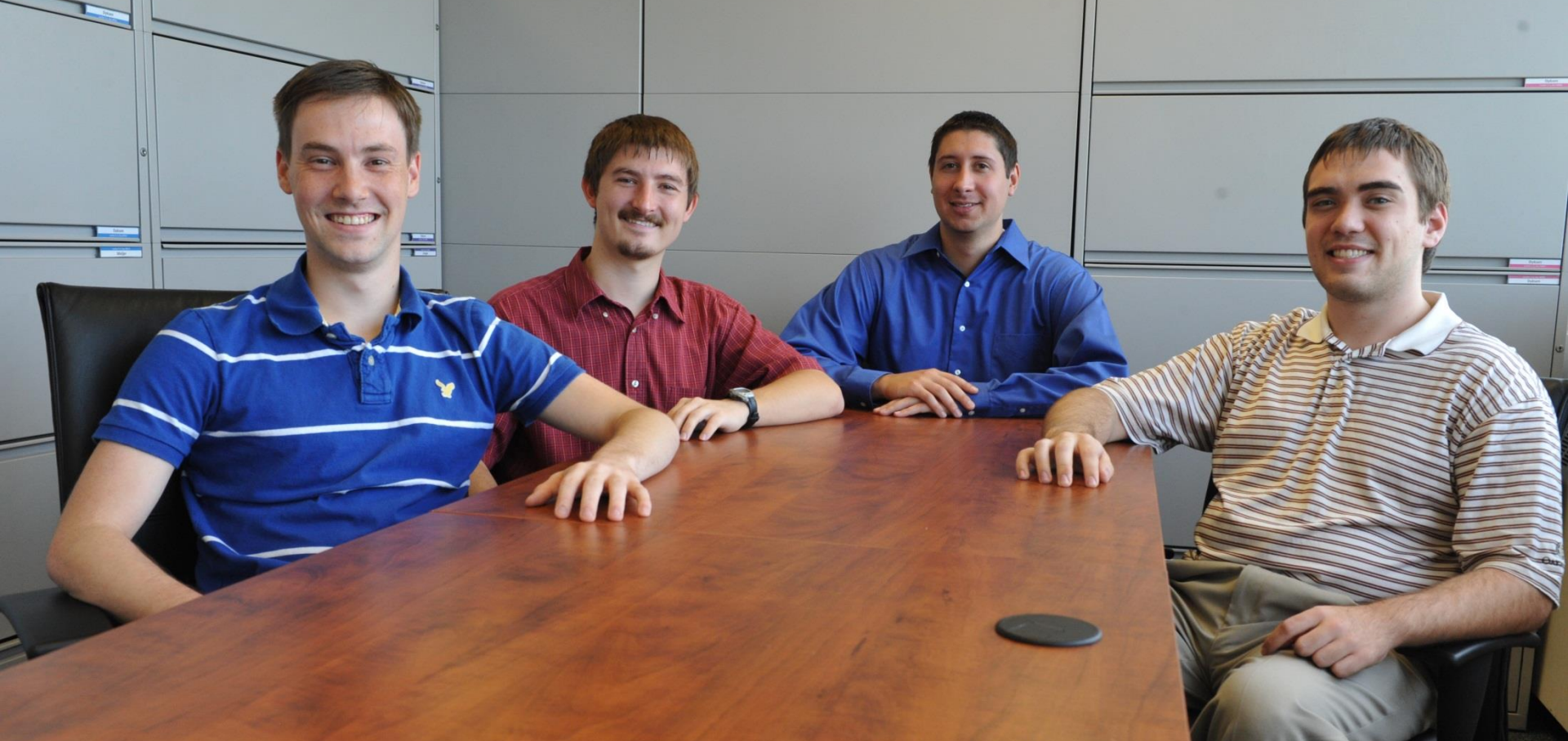
Secure Note Taking and Collaboration Tools

- Functionalities
 - Mobile Note Taking Tool
 - Apple iOS and Google Android Devices
 - Collaborative
 - Internal and Secure
- Features
 - Multimedia Notes
 - Four Primary Inputs
 - On-Screen Keyboard
 - Free Form Drawing
 - Photo and/or Camera
 - Audio
 - Incorporate Metadata
- Technologies
 - CSS, HTML5, JavaScript
 - Apple iOS
 - Google Android
 - Microsoft SQL Server
 - C#, ASP.Net
 - Microsoft Active Directory
 - Encryption Based on QL Standards



Quicken® Loans®
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Detroit, Michigan





Team Quicken Loans

Richard Hofmeister, Nic Speeter, Justin Mrkva, Reed Fielstra



Team Quicken Loans Project Plan Presentation

Team Quicken Loans Project Plan Presentation

Screen Mockups

Quicken®Loans®
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Username:

Password:

Submit

Login Screen

Quicken®Loans®
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Quicken Notes Main Menu

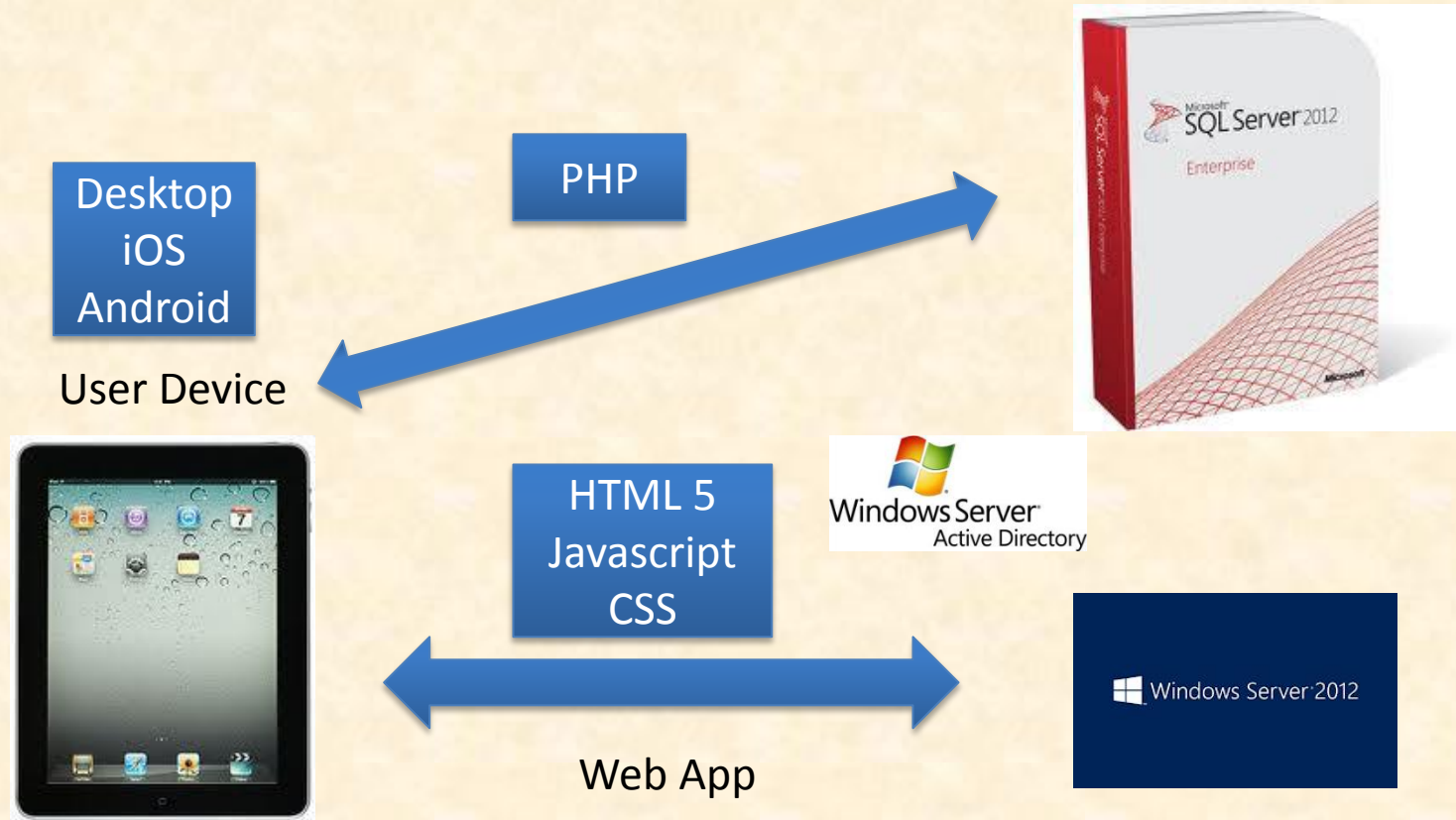
[Type Note](#) [Free Draw Note](#) [View Personal Notes](#) [Search Note Tags](#)

Dashboard



Team Quicken Loans Project Plan Presentation

Architecture Diagram





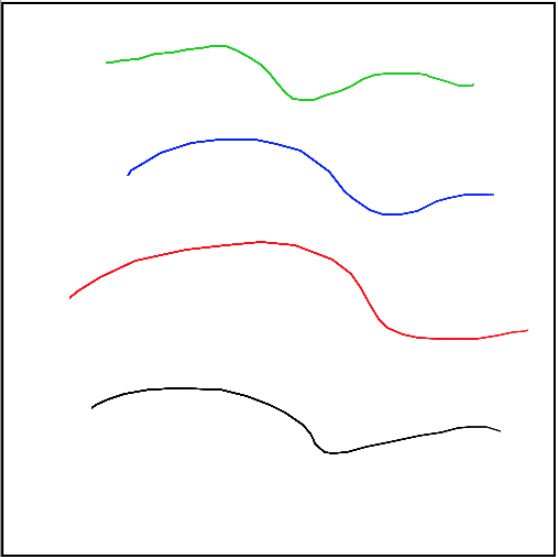
Team Quicken Loans
Project Plan Presentation

Team Quicken Loans Project Plan Presentation

Screen Mockups

Quicken Loans Webapp (trun) FreeDrawScreen.html Preview file:///

Quicken Notes Free Draw



Note Title:
Loan Number:
Other Tags:

Quicken[®]Loans[®]

Engineered to **AmazeSM**

Note Title: Loan Number: Other Tags:

Enter your note here...





Team Quicken Loans Alpha Presentation

Team Quicken Loans Alpha Presentation

Main Dashboard

Quicken Loans®
Engineered to Amaze™

Quicken Notes Main Menu
[Type Note](#) [Free Draw Note](#) [Groups](#) [Search](#) [Logout](#)

Note Title: hello
Group Name: group7
Tags:

View Note Delete

Note Title: Testing
Group Name: group7
Tags:

View Note Delete

Note Title: readOnlyNote1
Group Name: group7
Tags:

View Note

Note Title: Richard
Group Name: group7
Tags: tags345

View Note Delete

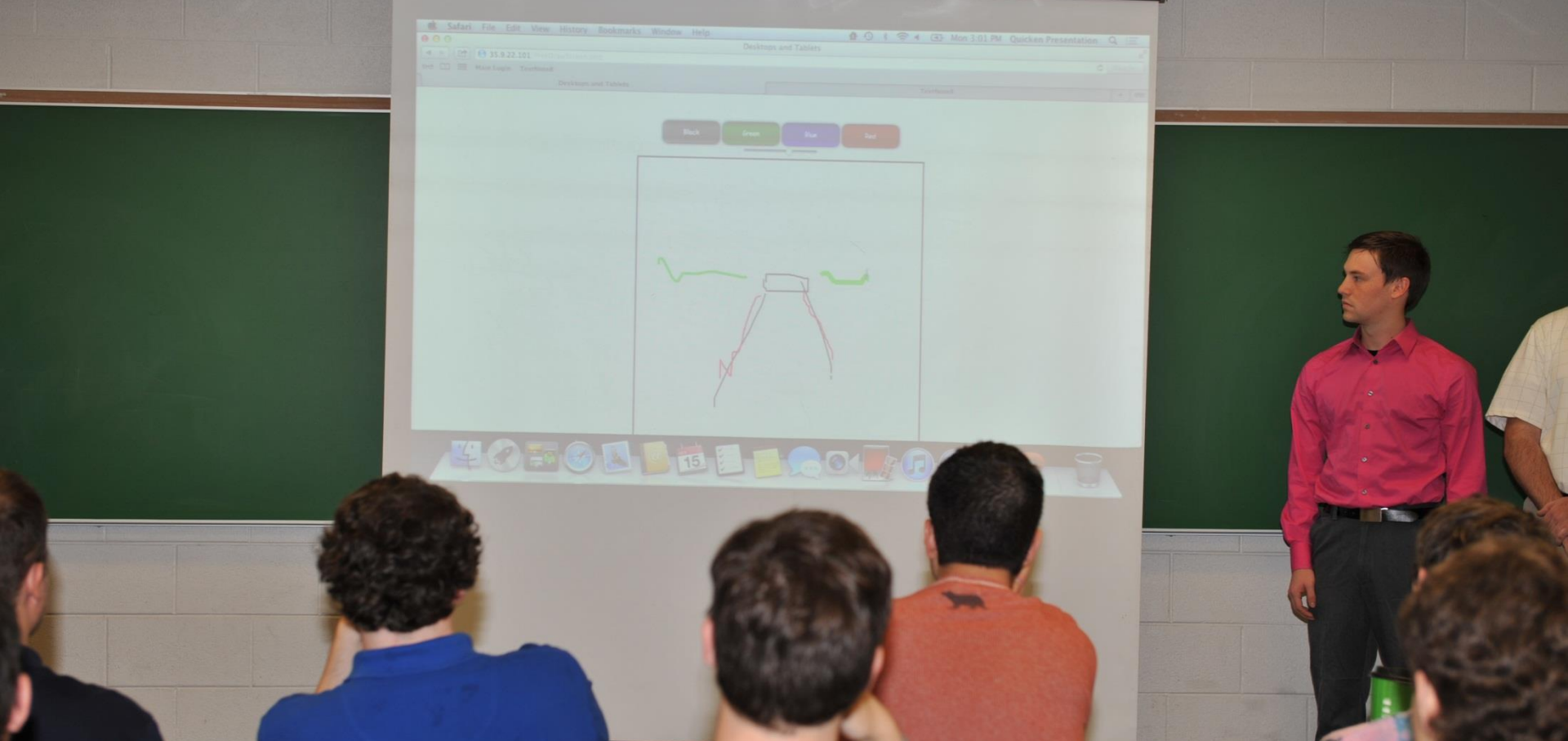
Note Title: groupTest4
Group Name: No Group
Tags: hiTag

View Note Delete



Text Note Screen

The Capstone Experience



Team Quicken Loans Alpha Presentation

Team Quicken Loans Alpha Presentation

Free Draw Screen

Quicken Notes Free Draw

[Load From Server](#) [Save To Server](#)

Choose a file to upload: [Choose File](#) No file chosen

[Upload File](#)

Note Title:

Loan Number:

Other Tags:

Share with:

[Save Note](#) [Clear](#)

[Return to Dashboard](#)

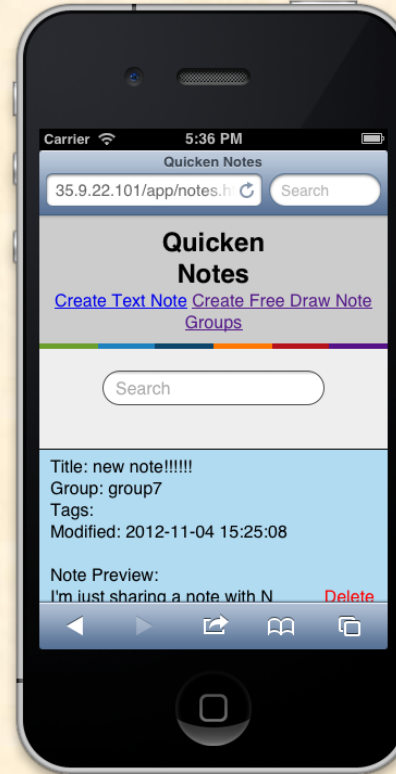
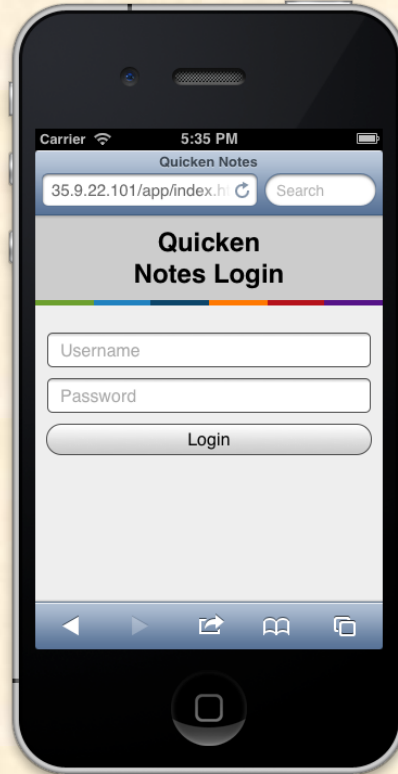




Team Quicken Loans Beta Presentation

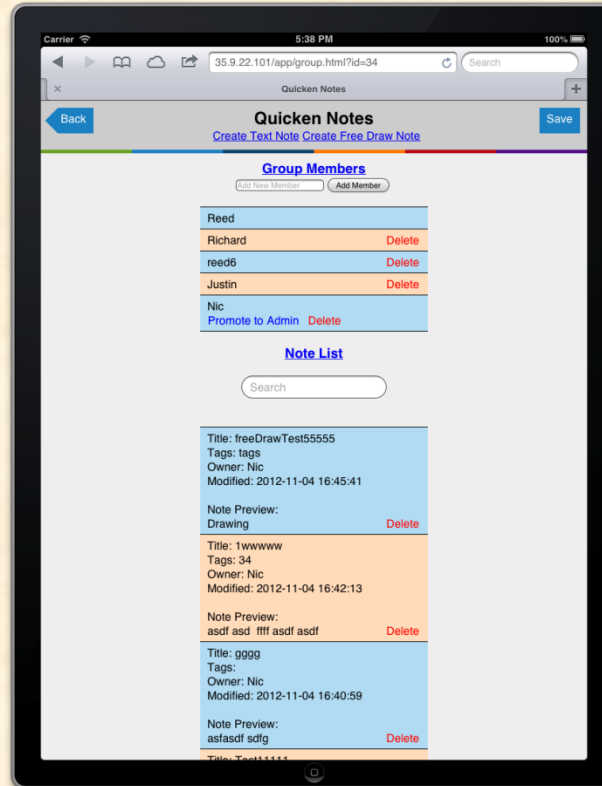
Team Quicken Loans Beta Presentation

Mobile Login and Dashboard



Team Quicken Loans Beta Presentation

Group Screen

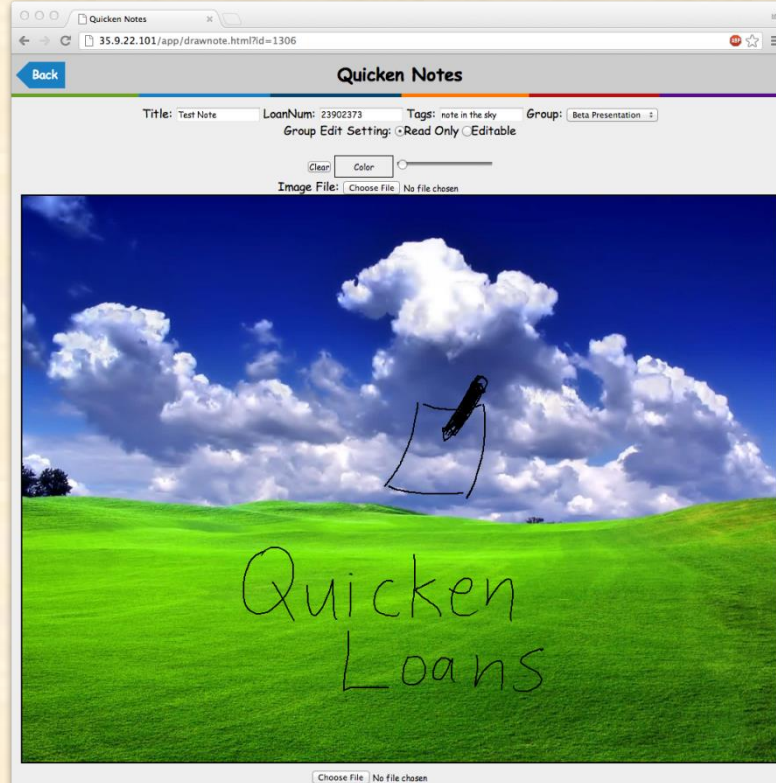




Team Quicken Loans Beta Presentation

Team Quicken Loans Beta Presentation

Drawing Over Images





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Design Day

The Capstone Experience

Team Spectrum Health

Department of Computer Science and Engineering
Michigan State University

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Team Spectrum Health Project Overview

Medication Shortages Dashboard

- Functionalities
 - Manage Shortages of Key Medications
 - Chose Best Course of Action
 - Weather the Shortage
 - Seek Additional Stock from the Grey Market
 - Swap the Medication for an Alternative
- Features
 - Create Comprehensive View of Industry Shortages
 - XML/RSS Feeds
 - American Society of Hospital Pharmacists
 - FDA (Food and Drug Administration)
 - Formulary Information from PharmNET
 - Inventory Levels of Lawson, the Pyxis and Talyst Machines
 - Spectrum Pharmacies and Store Rooms
 - Identify and Handle Specific Shortages
 - Record, Monitor and Track
 - Log Comments, Plans of Action and Status
 - Integrate into Spectrum's InSite System
- Technologies
 - CSS, HTML5
 - JavaScript
 - Web Services
 - RSS (Rich Site Summary) Feeds
 - XML (eXtensible Markup Language)
 - Data Warehousing/Aggregation



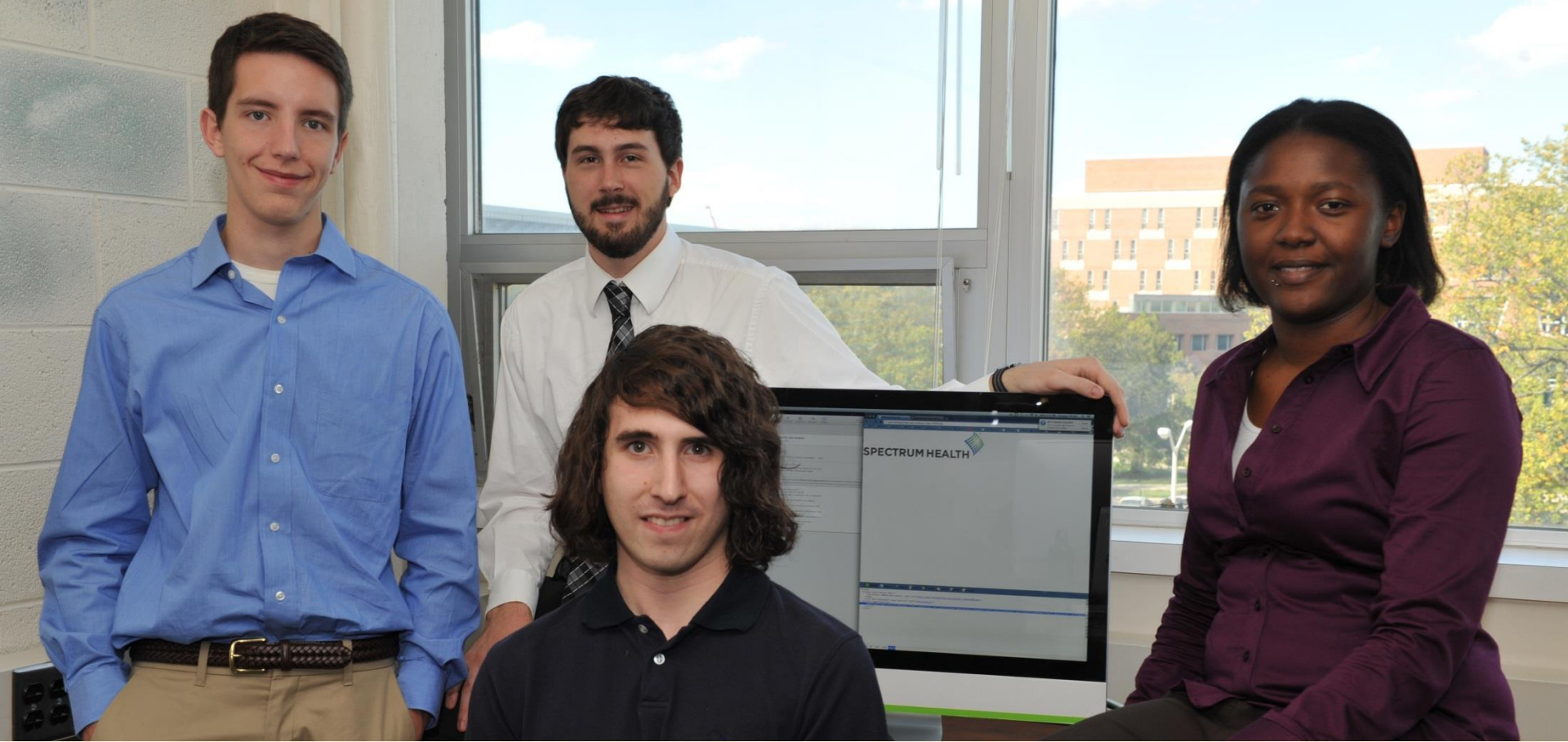
SPECTRUM HEALTH

Grand Rapids, Michigan



The Capstone Experience





Team Spectrum Health

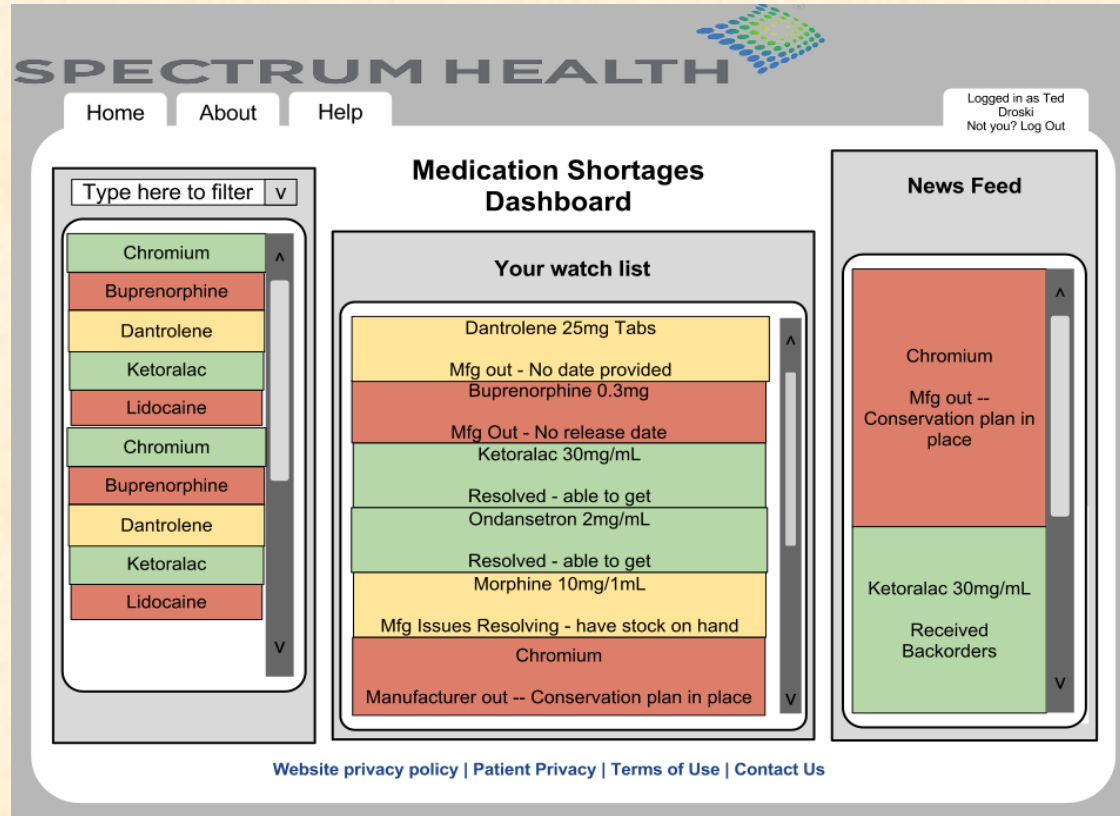
Grayson Wright, Eric Dostie, Aaron Cosentino, Ramata Koumare



Team Spectrum Health Project Plan Presentation

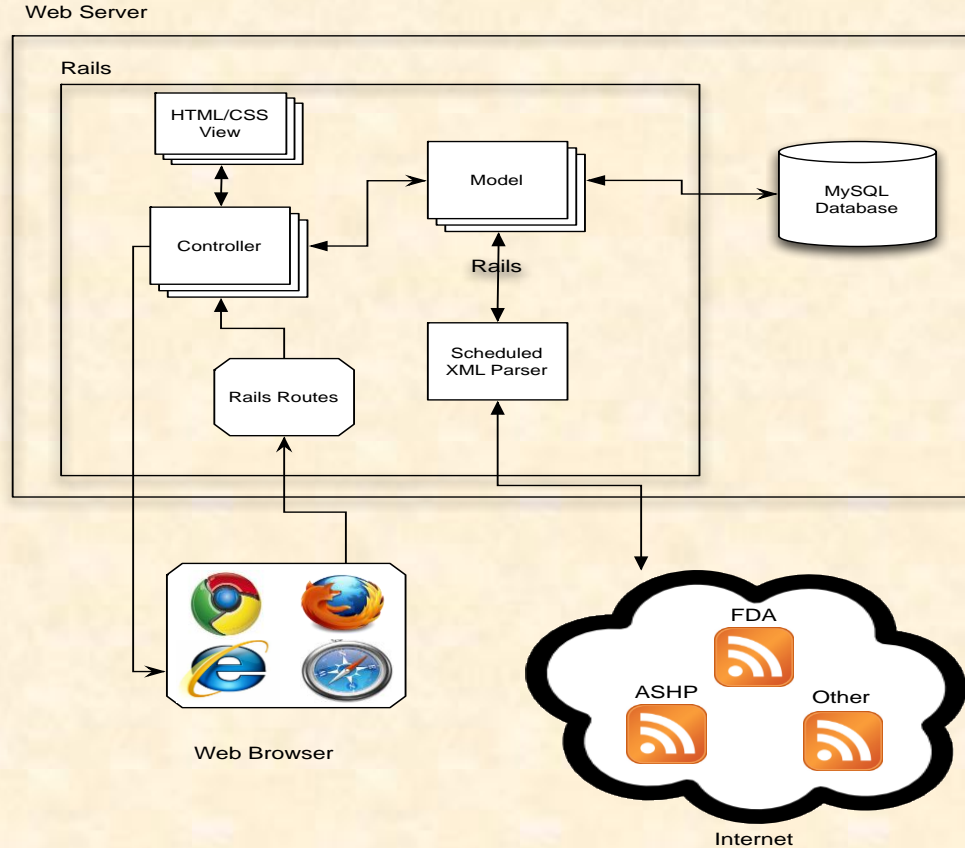
Team Spectrum Health Project Plan Presentation

Screen Mockup



Team Spectrum Health Project Plan Presentation

Architecture Diagram

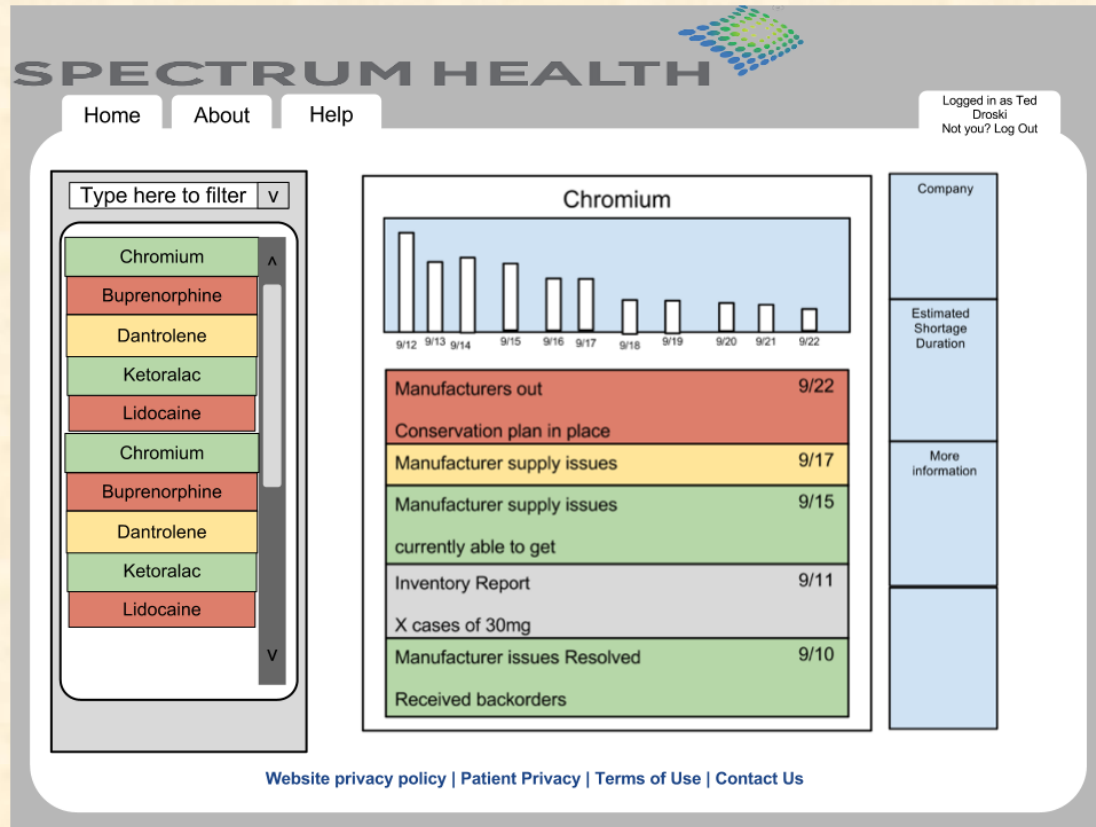




Team Spectrum Health Project Plan Presentation

Team Spectrum Health Project Plan Presentation

Screen Mockup





Team Spectrum Health Alpha Presentation

Single Drug

The screenshot displays a web browser window with the URL `localhost:3000/drugs/41868`. The page is titled "Dashboard" and features the "SPECTRUM HEALTH" logo with navigation links for "Drugs", "Articles", "Sources", and "Moderate".

On the left, there is a "Search Bar" with the placeholder text "Type here to search..." and a "Show all drugs" button.

The main content area is for the drug "ampicillin". It includes a "Dosage: 1 Gm Vial" label and a "Recent Updates" section. This section contains a table with the following data:

Source	Status	URL	Content
ASHP	Satisfactory	http://www.ashp.org/DrugShortages/Current/Bulletin.aspx?Source=Current&Type=Rss&Id=805	
ASHP	Average	http://www.ashp.org/DrugShortages/Current/Bulletin.aspx?Source=Current&Type=Rss&Id=728	
ASHP	Bad	http://www.ashp.org/DrugShortages/Current/Bulletin.aspx?Source=Current&Type=Rss&Id=900	

Below the table is an "All Drugs" button. In the top right corner, the user "koumarar@msu.edu" is logged in, with links for "Edit profile" and "Logout".

A "News Feed" sidebar on the right lists: acetaminophen, ziprasidone, raloxifene, and ketoprofen.

At the bottom, the footer includes "© Spectrum Health 2012" and links for "Website Privacy Policy", "Terms of Use", and "Contact Us".

Team Spectrum Health Alpha Presentation

Drugs and Search Bar

The screenshot displays the Spectrum Health Alpha web application interface. The browser address bar shows 'localhost:3000/drugs'. The page has a header with the 'SPECTRUM HEALTH' logo and navigation links for 'Drugs', 'Articles', 'Sources', and 'Moderate'. A user profile for 'koumarer@msu.edu' is visible in the top right corner.

Search Bar

calcium chlor

Show all drugs

calcium chloride 1 Gm/10 mL Syringe
calcium chloride 1 Gm/10 mL Vial
calcium chloride 13.6 mEq/10 mL Vial
calcium chloride additive 100 mg/mL additive
calcium chloride in NaCl 20 mg/mL in NaCl 0.45%
calcium chloride in NaCl 20 mg/mL in NaCl 0.9% (PDS/Apheresis only)

Listing drugs

Name	Dosage	Actions
ABH(Ativan)	1mg-Benadryl 25mg-Haldol 0.5mg Supp	Show
ACCL	L0431 (sodium thiosulfate)	Show
ALPRAZolam	0.25 mg Tab	Show
ALPRAZolam	1 mg Tab	Show
AMANTadine	100 mg Cap	Show
AMANTadine	50 mg/5 mL Syrup UD (SCH)	Show
AMANTadine Syrup	10 mg/mL Syrup	Show
AMitriptyline	10 mg Tab	Show
AMitriptyline	25 mg Tab	Show
AMitriptyline	5 mg Tab	Show
AMitriptyline	50 mg Tab	Show
AMitriptyline	75 mg Tab	Show
AMitriptyline Oral Susp	1 mg/mL Oral Susp	Show
ARIPiprazole	1 mg/mL Oral Soln	Show
ARIPiprazole	10 mg Tab	Show
ARIPiprazole	15 mg Tab	Show
ARIPiprazole	2 mg Tab	Show
ARIPiprazole	5 mg Tab (CM)	Show
ATENolol	100 mg Tab	Show
ATENolol	25 mg Tab	Show

News Feed

[acetaminophen](#)
[ziprasidone](#)
[raloxifene](#)
[ketoprofen](#)

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Team Spectrum Health Alpha Presentation

Team Spectrum Health Alpha Presentation

Edit Article

localhost:3000/articles/9/edit

SPECTRUM HEALTH

Drugs Articles Sources Moderate

Search Bar

Type here to search...

Show all drugs

Editing article

Suggested Drug Dipyridamole Injection

The name of the drug pulled from the data feed

Drug Select an Option

Status dipyridamole 10 mg/mL Oral Susp

Content dipyridamole 25 mg Tab
dipyridamole 50 mg Tab
dipyridamole 50 mg/10 mL Vial (CM)
dipyridamole 75 mg Tab

Publicly Visible ☐

Update Article

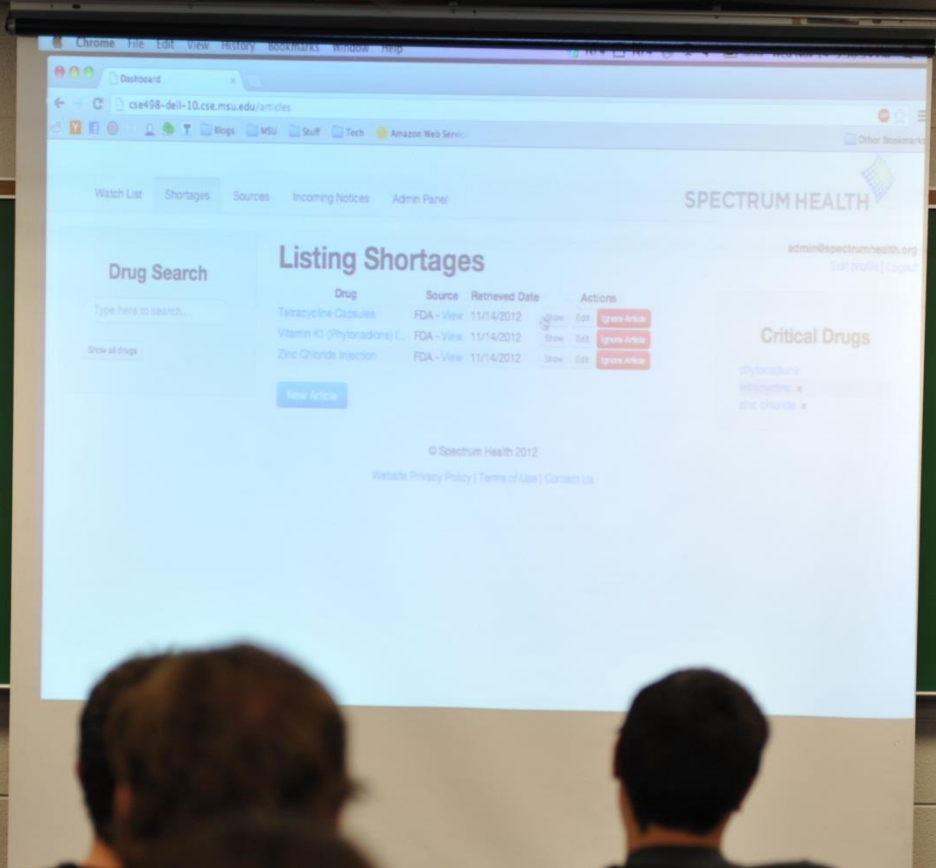
Show Back

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News Feed

acetaminophen
ziprasidone
raloxifene
ketoprofen

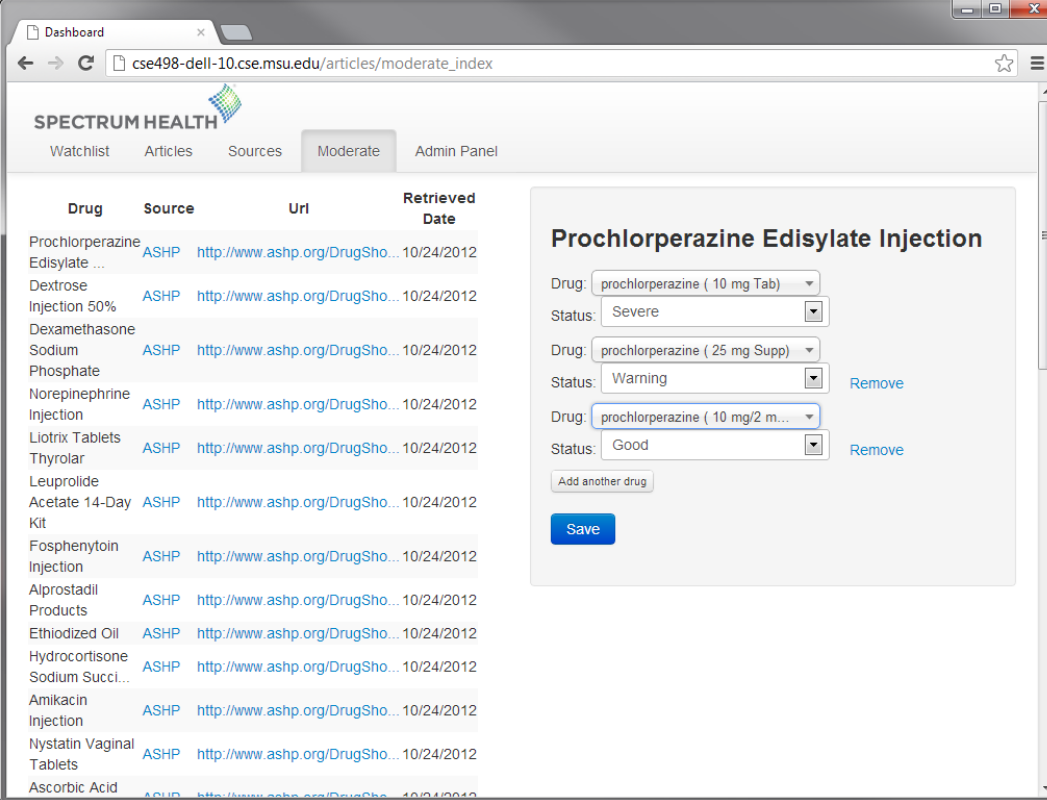
koumarer@msu.edu
Edit profile | Logout



Team Spectrum Health Beta Presentation

Team Spectrum Health Beta Presentation

Moderate Workflow



The screenshot displays the Spectrum Health Moderate Workflow interface. The top navigation bar includes 'Watchlist', 'Articles', 'Sources', 'Moderate', and 'Admin Panel'. The 'Moderate' tab is active, showing a list of drugs with columns for Drug, Source, Url, and Retrieved Date. The list includes various medications such as Prochlorperazine Edisylate, Dextrose Injection, Dexamethasone Sodium Phosphate, Norepinephrine Injection, Liotrix Tablets, Thyrolar, Leuprolide Acetate, Fosphenytoin Injection, Alprostadil Products, Ethiodized Oil, Hydrocortisone Sodium Succinate, Amikacin Injection, Nystatin Vaginal Tablets, and Ascorbic Acid.

On the right side, a detailed view for 'Prochlorperazine Edisylate Injection' is shown. It includes three drug entries with their respective status and a 'Remove' button for each:

- Drug: prochlorperazine (10 mg Tab) | Status: Severe
- Drug: prochlorperazine (25 mg Supp) | Status: Warning | Remove
- Drug: prochlorperazine (10 mg/2 m... | Status: Good | Remove

Below the list, there is an 'Add another drug' button and a 'Save' button.

Team Spectrum Health Beta Presentation

Drug View

The screenshot shows a web browser window with the URL `cse498-dell-10.cse.msu.edu/drugs/3019`. The page header includes the "SPECTRUM HEALTH" logo and navigation links: Watchlist, Articles, Sources, Moderate, and Admin Panel. The user is logged in as `dostieer@msu.edu` with links to "Edit profile" and "Logout".

The main content area is for the drug **prochlorperazine**, with a dosage of **5 mg Tab**. It features a "Recent Updates" section with a table of updates:

Source	Status	URL
ASHP	Good	http://www.ashp.org/DrugShortages/Current/Bulletin.aspx?Source=Current&Type=Rss&id=796

Below the updates is a "Notes" section with an "Add new note" button. To the right is a "News Feed" with links to [acetaminophen](#), [ziprasidone](#), [raloxifene](#), and [ketoprofen](#).

The "Other Dosages" section lists: [10 mg Tab](#), [10 mg/2 mL Vial](#), [25 mg Supp](#), and [5 mg Tab \(current dosage\)](#). At the bottom are "Edit" and "All Drugs" buttons.

The footer includes the copyright notice: © Spectrum Health 2012.





Team Spectrum Health Beta Presentation

Team Spectrum Health Beta Presentation

Drug Watchlist

The screenshot shows a web browser window with the URL `cse498-dell-10.cse.msu.edu/watches`. The page features a navigation bar with the 'SPECTRUM HEALTH' logo and links to Watchlist, Articles, Sources, Moderate, and Admin Panel. On the left, a 'Search Bar' includes a text input field and a 'Show all drugs' button. The central 'Watchlist' section displays a table of drugs with red 'X' icons in the right column:

Drug Name	Action
EPINEPHrine (1 mg/ml Amp)	X
acetaminophen (120 mg Supp)	X
prochlorperazine (10 mg/2 mL Vial)	X
zafirlukast (20 mg Tab (*NF*))	X

On the right, a 'News Feed' section lists several drugs: acetaminophen, ziprasidone, raloxifene, and ketoprofen. The footer contains the copyright notice '© Spectrum Health 2012' and links to 'Website Privacy Policy', 'Terms of Use', and 'Contact Us'.

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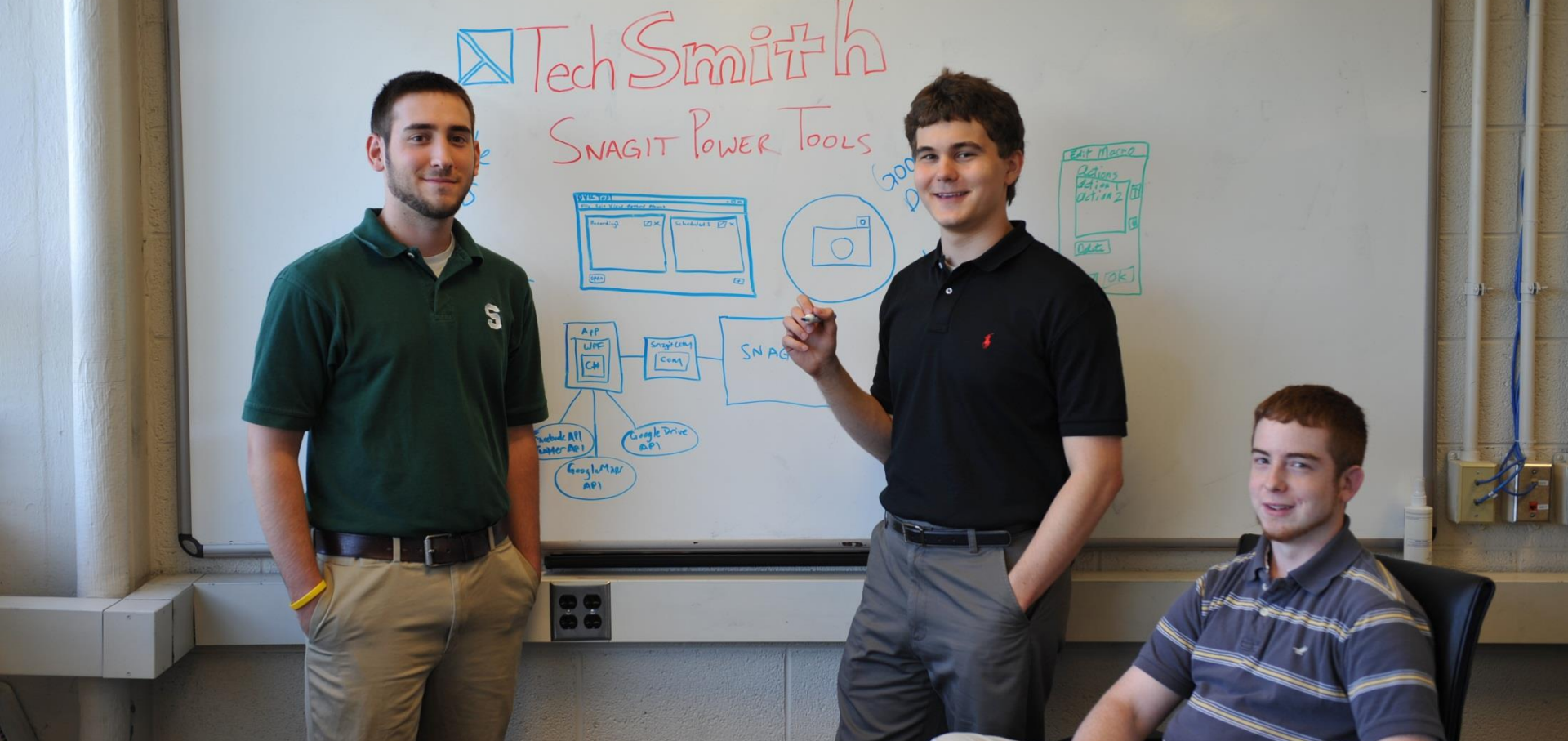


Team TechSmith Project Overview

Snagit Power Tools

- Functionalities
 - Existing Snagit Software
 - Screen Capture
 - Customizable and Extensible
 - Snagit Power Tools
 - Suite of Snagit Apps
 - Demonstrate the Extensibility of Snagit
- Features
 - Easy and Fun to Use
 - Publishable Code
 - Well Designed and Commented
 - Easy to Understand
 - Possible Power Tools
 - Scheduled Image Capture
 - Screen Recording DVR
 - Social Network Image Stream
 - Map Maker
- Technologies
 - Windows COM (Component Object Model)
 - Snagit SDK, Snagit COM Server
 - COM Languages Like C#, .NET and WPF
 - Web Services
 - Google Maps
 - Google Docs
 - Facebook
 - Twitter/Twitpic
 - RESTful API





Team TechSmith

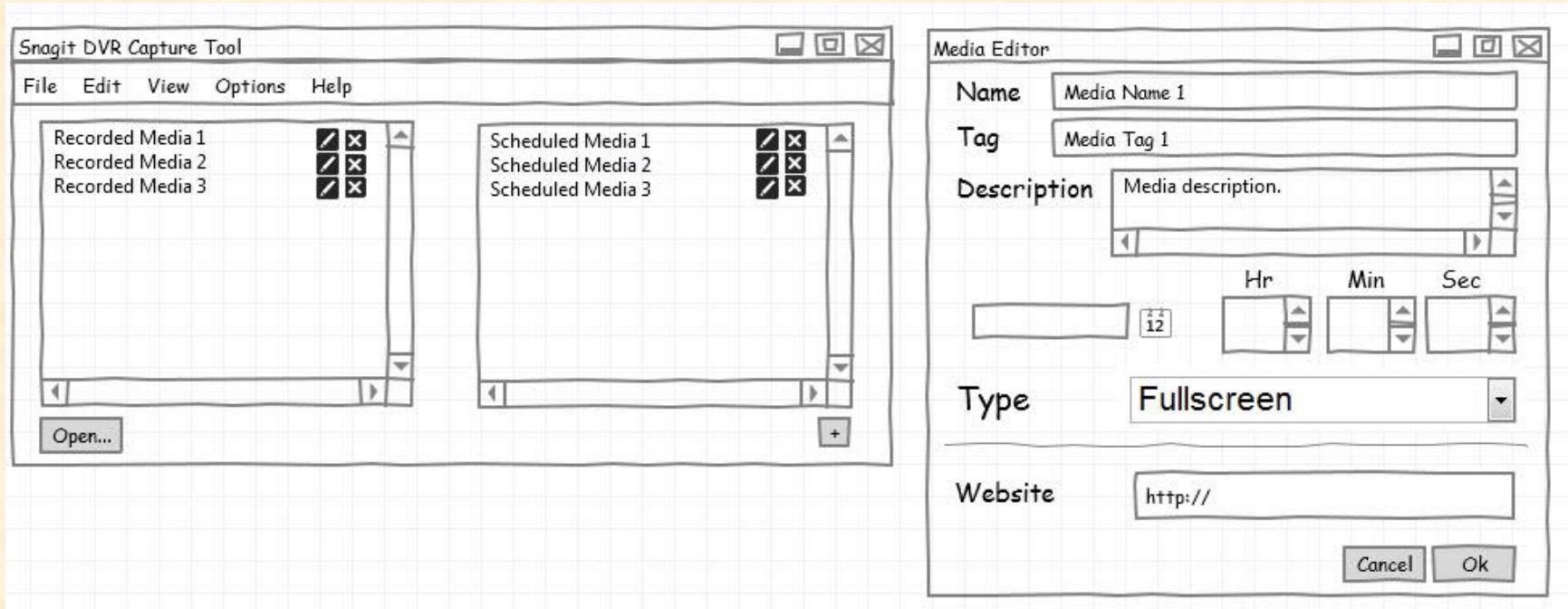
Benjamin Blaut, David Markachev, Kyle Gosen



Team TechSmith Project Plan Presentation

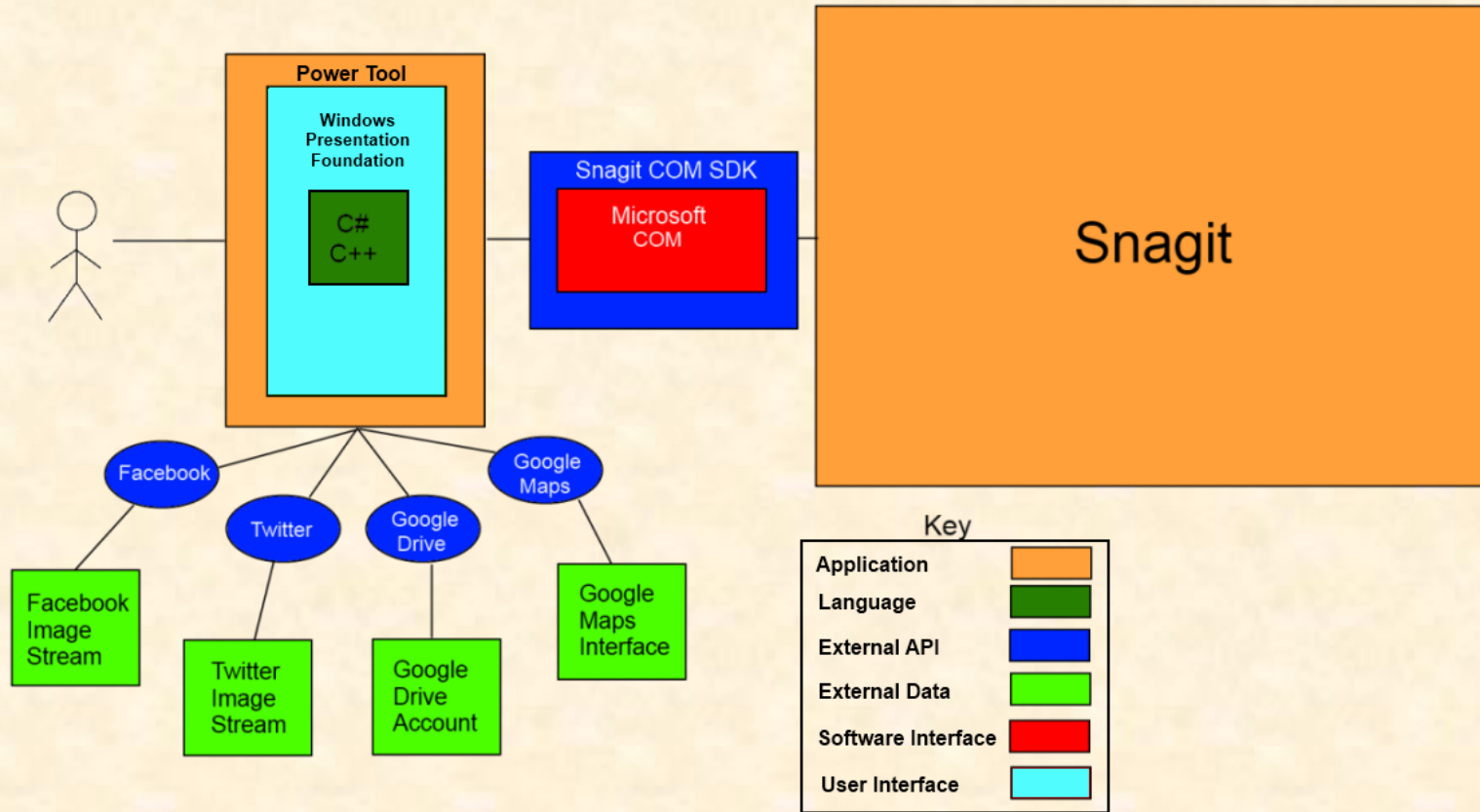
Team TechSmith Project Plan Presentation

Screen Mockup



Team TechSmith Project Plan Presentation

Architecture Diagram

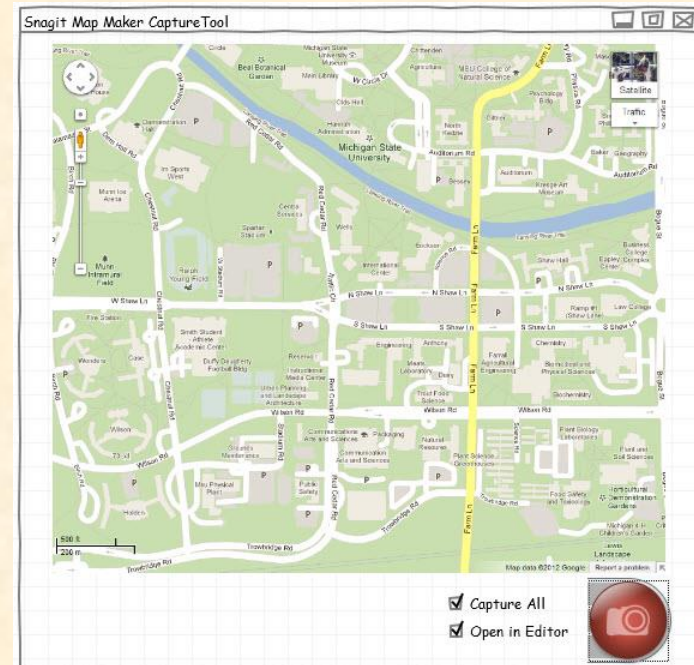
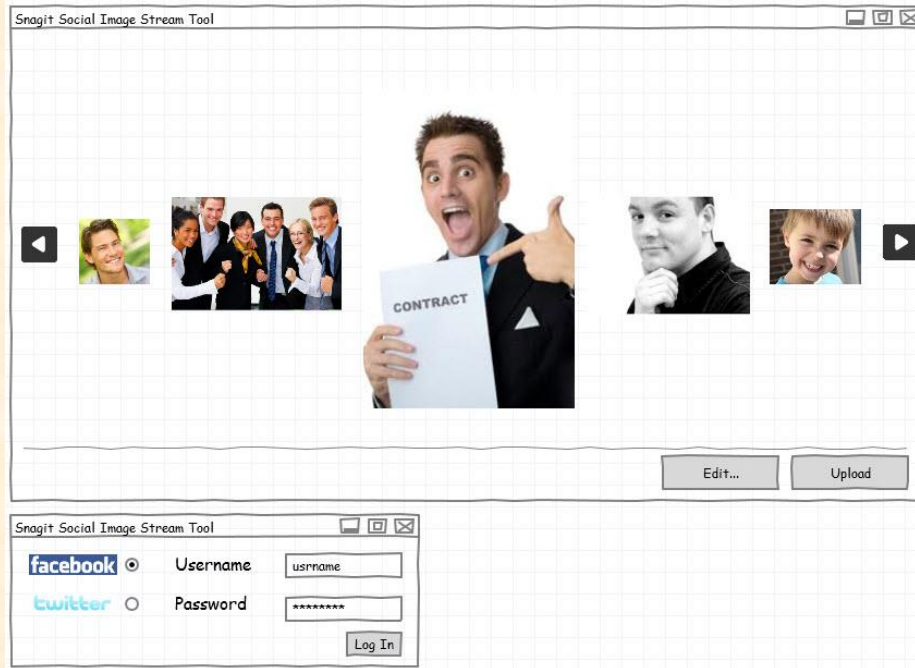




Team TechSmith Project Plan Presentation

Team TechSmith Project Plan Presentation

Screen Mockups

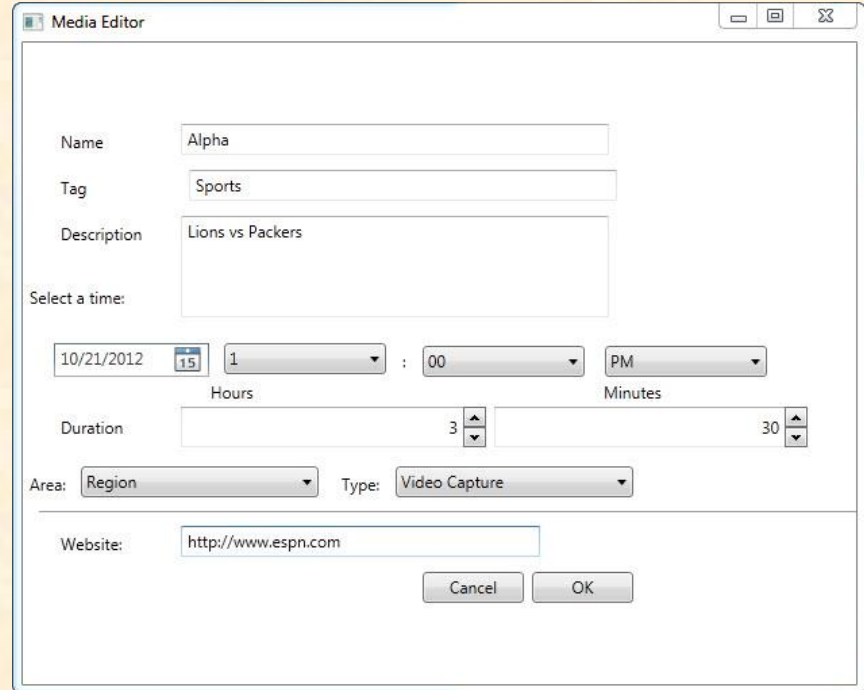
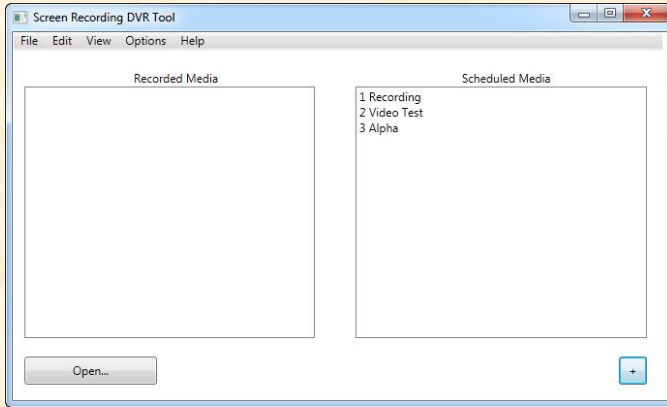




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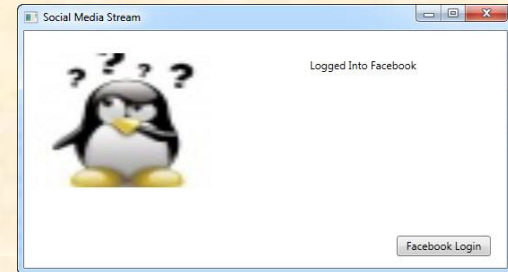
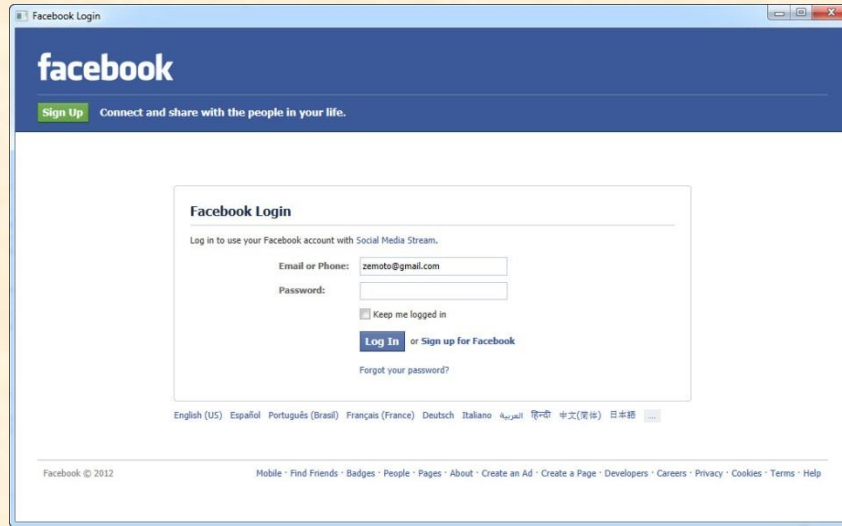
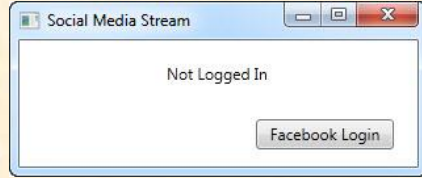
Team TechSmith Alpha Presentation

Screen Recording DVR Tool



Team TechSmith Alpha Presentation

Social Image Stream

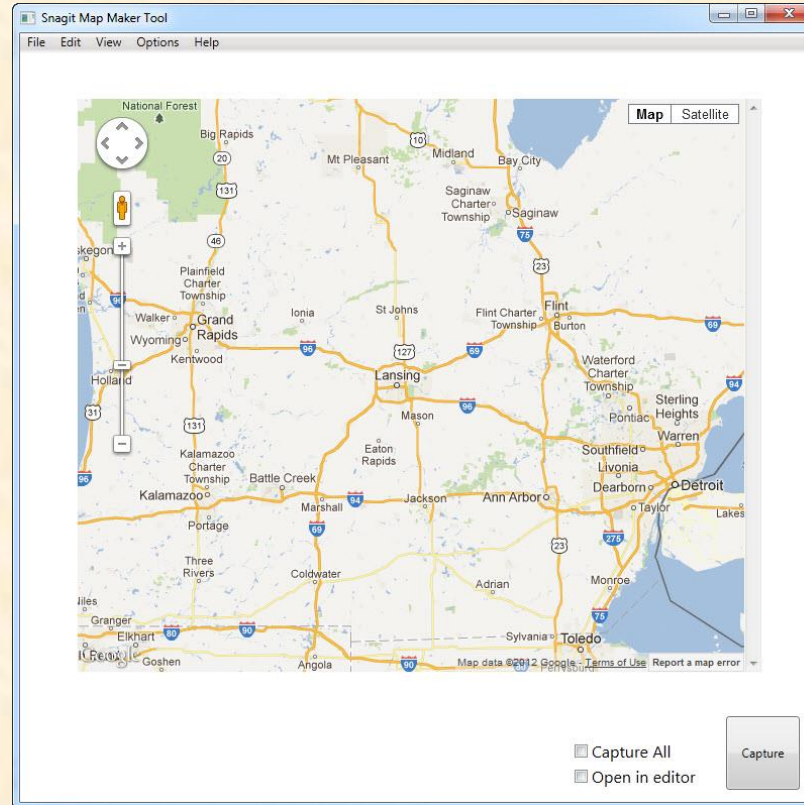




Team TechSmith Alpha Presentation

Team TechSmith Alpha Presentation

Map Maker

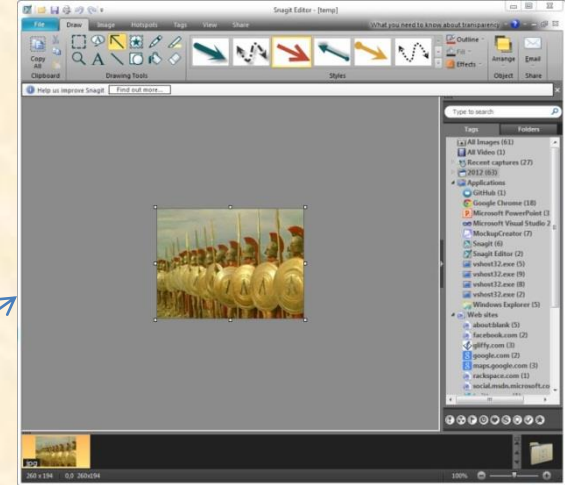
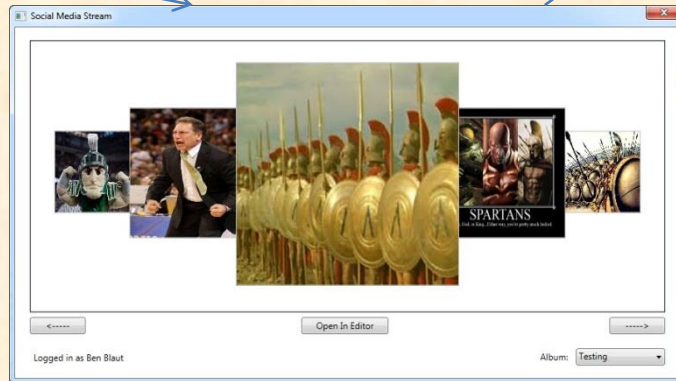
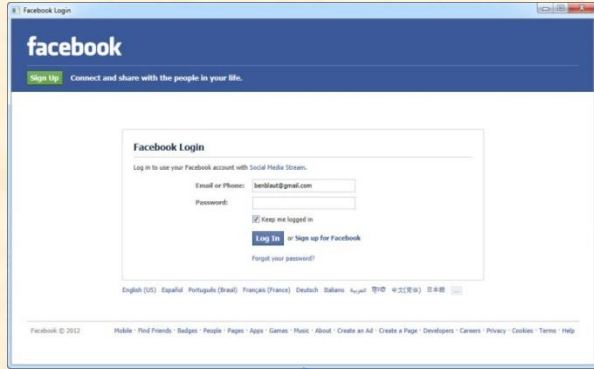




Team TechSmith Beta Presentation

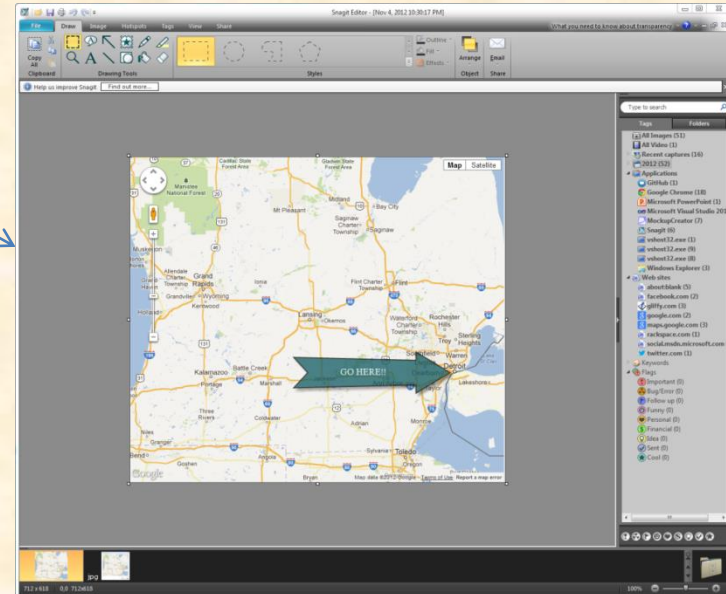
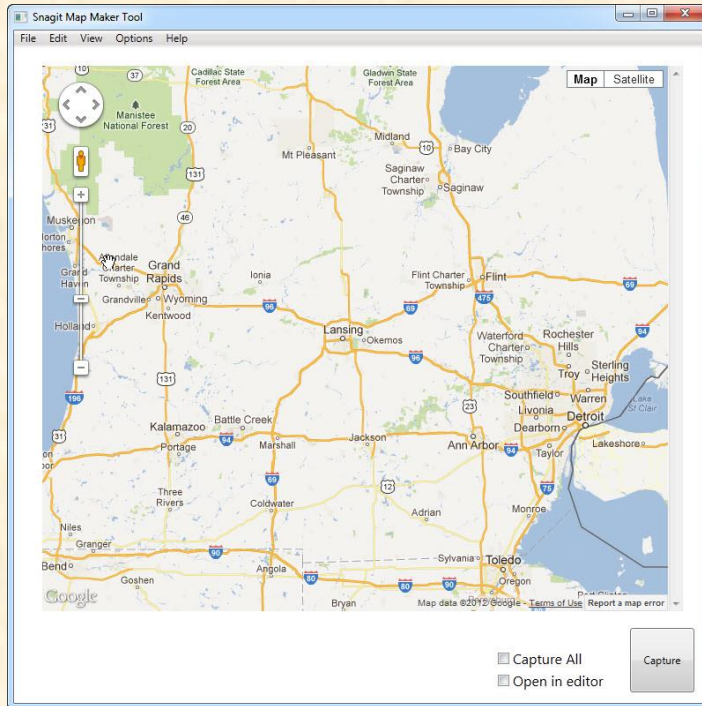
Team TechSmith Beta Presentation

Social Image Stream Tool



Team TechSmith Beta Presentation

Map Maker Tool

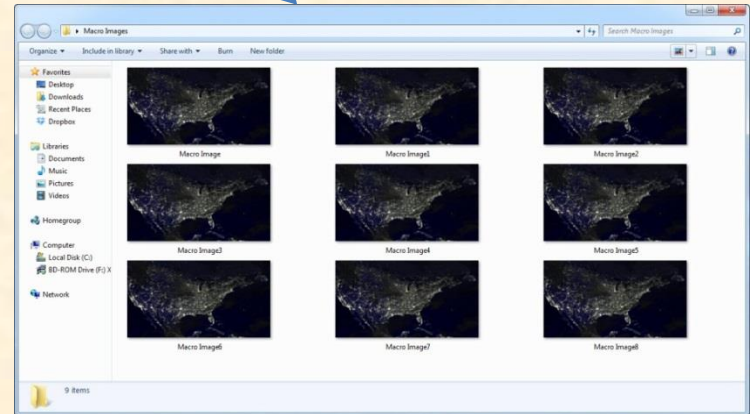
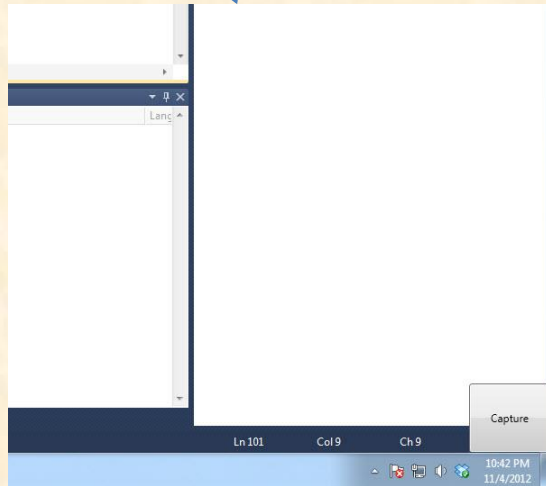
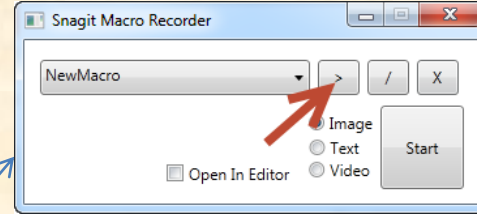
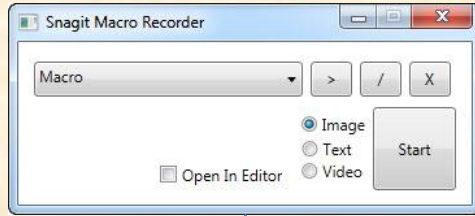




Team TechSmith
Beta Presentation

Team TechSmith Beta Presentation

Macro Recorder Capture Tool





TechSmith Snagit Power Tools

TechSmith is a software development company based in Okemos, Michigan that focuses primarily on the creation of screen-casting tools that allow users to capture or record their computer screen. Their products, such as Camtasia, Snagit, and Jing, are used all over the world by large corporations, small businesses, educators and individuals.

Snagit, TechSmith's most popular and best-selling product, is an application that allows users to quickly and conveniently capture their computer screen and annotate the results in a variety of ways.

Our Snagit Power Tools are a suite of four applications that extend Snagit's functionality, allowing users to perform more complex and time-consuming tasks with ease.

Recording DVR Tool schedules Snagit captures over time and date. The Macro Recorder automates repetitive tasks ending in a Snagit capture.

Media Streamer Tool displays images from a live stream that can be edited with Snagit.

Webcam Recorder Tool captures Google maps, which can be annotated with Snagit.

Snagit Power Tools are written in C# and use the Snagit COM SDK to integrate with Snagit.



Michigan State University
Team Members (left to right)

Benjamin Blum
Cincinnati, Ohio

David Markaverich
White Lake, Michigan

Ryan Gorman
South Haven, Michigan

TechSmith
Project Sponsors

Josh Anderson
Okemos, Michigan

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Okemos, Michigan

Ryan East
Okemos, Michigan

Bill Hamilton
Okemos, Michigan

Tony Hamrick
Okemos, Michigan

Dave MacLennan
Okemos, Michigan



Team TechSmith Design Day

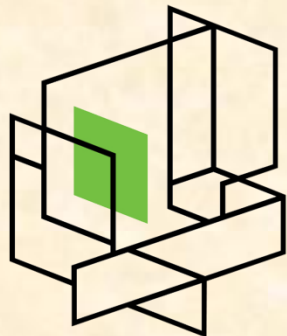
The Capstone Experience

Team Urban Science

Department of Computer Science and Engineering
Michigan State University
Fall 2012



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



URBAN SCIENCE™

[Develop Dealer Network](#)[Improve Dealer Performance](#)[Manage Leads](#)[Optimize Marketing](#)

We are Urban Science

We are automotive retail performance experts - thought leaders and doers - who increase market share and improve profitability for clients in more than 60 countries. There's no better partner on the road to success.

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Client Showcase

We partner with performance-focused clients, and this

News

Auto Dealers Rely on Phones to

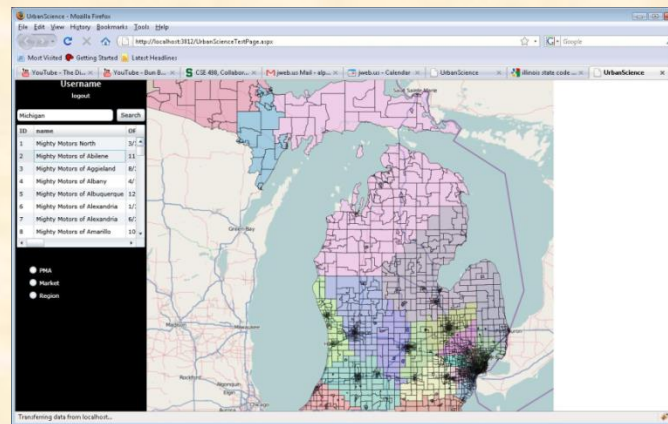
Careers

How far can you go at Urban

Team Urban Science Project Overview

Web-Based Geography Management

- Functionalities
 - Display and Edit Detailed Maps
 - Based on Census Tracts or Zip Codes
 - Via Any Modern Brower
- Features
 - Handle Very High Resolution Maps
 - Political Boundaries, Cities, Etc.
 - Water, Roads, Etc.
 - Census Tracts or Zip Codes
 - Edit Geographic Structures
 - Aggregate Into Regions or PMAs (Primary Market Areas)
 - Add, Remove, Edit, Combine, Split, Etc.
- Technologies
 - CSS, HTML5
 - Microsoft Bing Maps
 - ASP.net
 - JavaScript, AJAX (Asynchronous JavaScript and XML)
 - WMS (Web Map Service)
 - US Census Bureau TIGER (Topologically Integrated Geographic Encoding and Referencing)
 - [Web-Based Geography Management](#), Spring 2009



URBAN SCIENCE.
Detroit, Michigan



Team Urban Science

Forrest Young, Domas Siaudvytis, Brandon Kienle, Jake Wesorick



Team Urban Science Project Plan Presentation

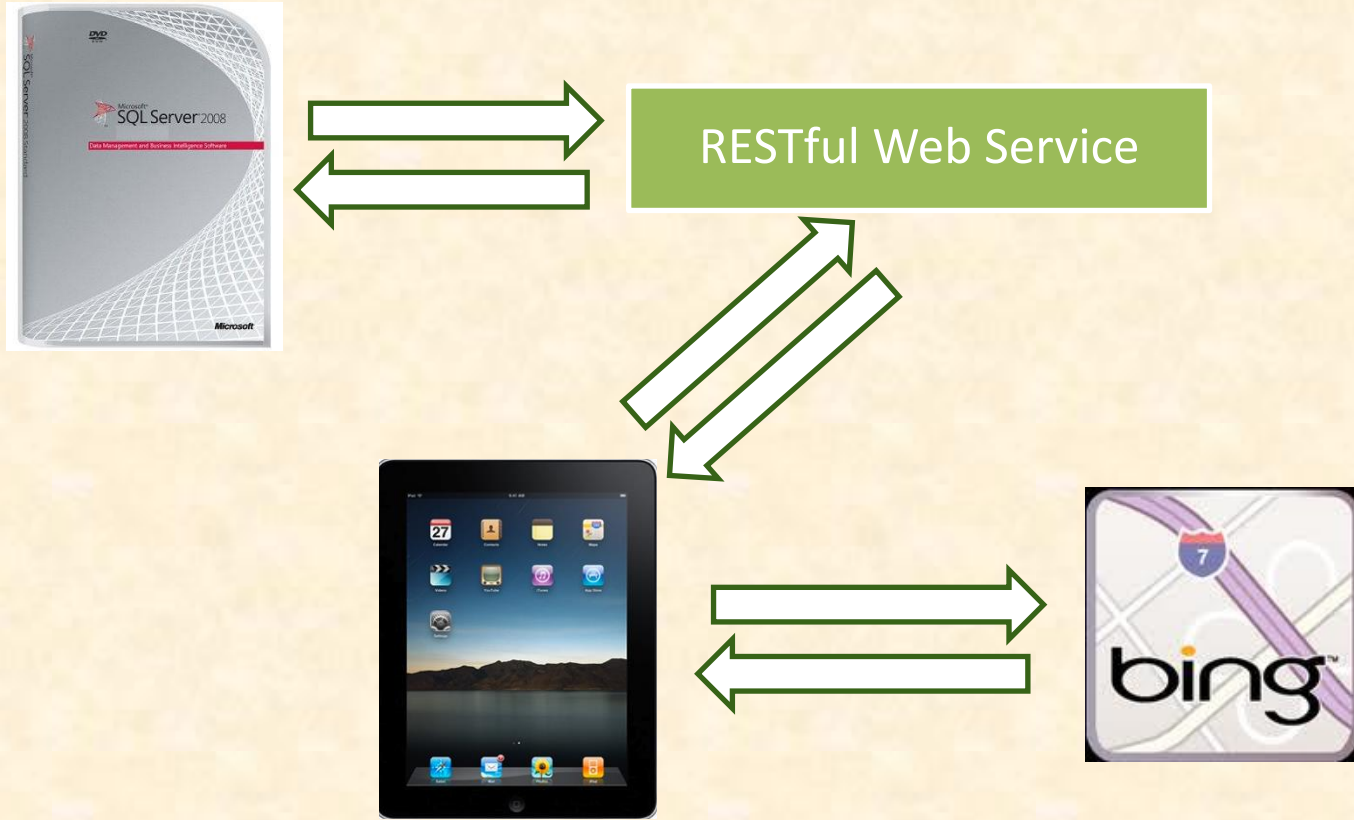
Team Urban Science Project Plan Presentation

Screen Mockups



Team Urban Science Project Plan Presentation

Architecture Diagram



System Architecture



Team Urban Science
Project Plan Presentation

Team Urban Science Project Plan Presentation

Screen Mockups

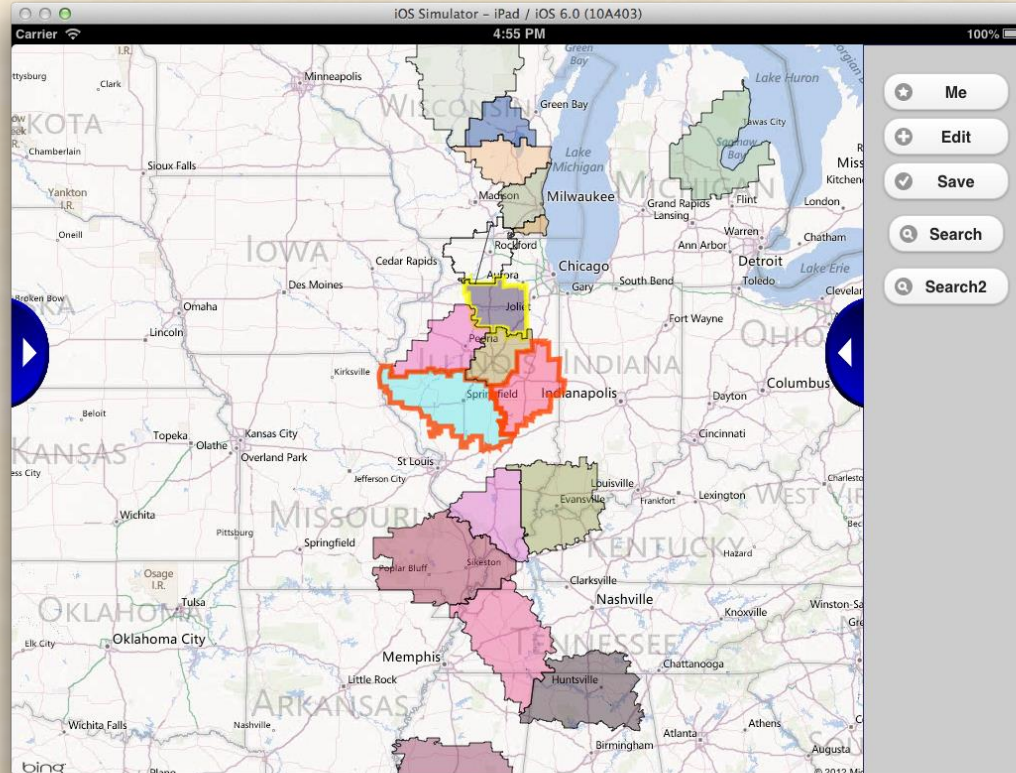




Team Urban Science Alpha Presentation

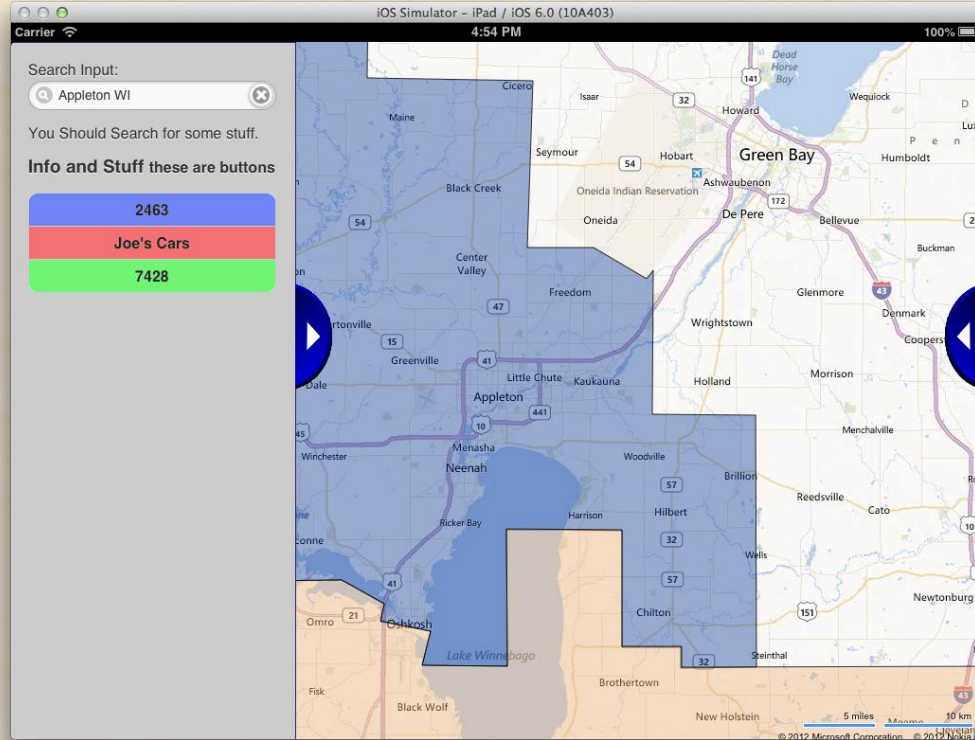
Team Urban Science Alpha Presentation

Editing Polygons and Right Tab



Team Urban Science Alpha Presentation

Relevant Date and Left Tab

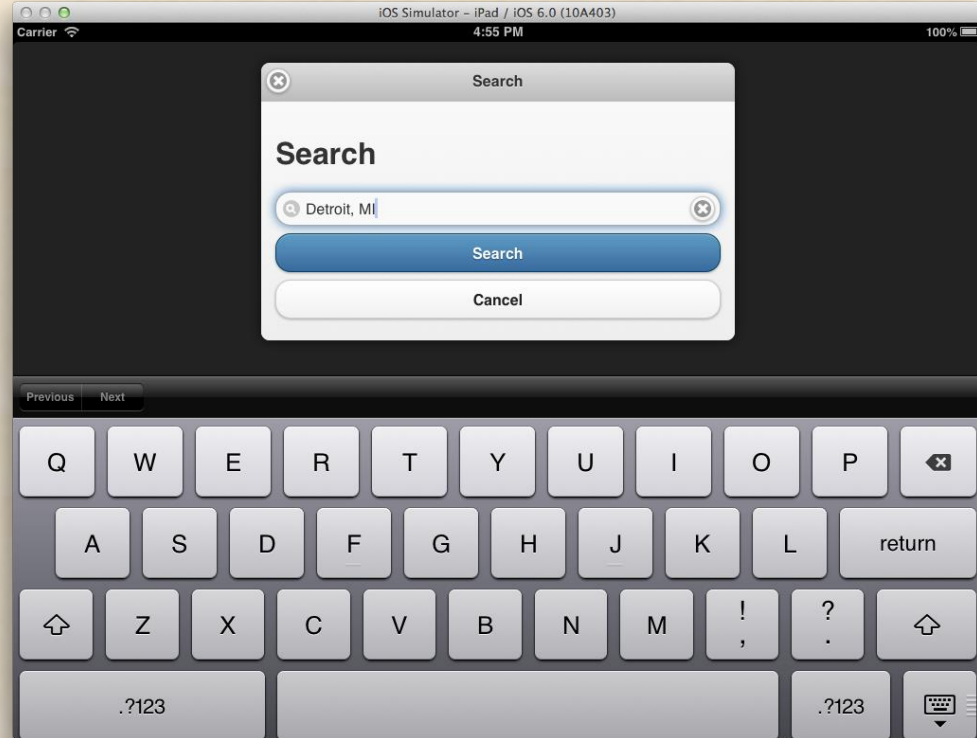




Team Urban Science Alpha Presentation

Team Urban Science Alpha Presentation

Search

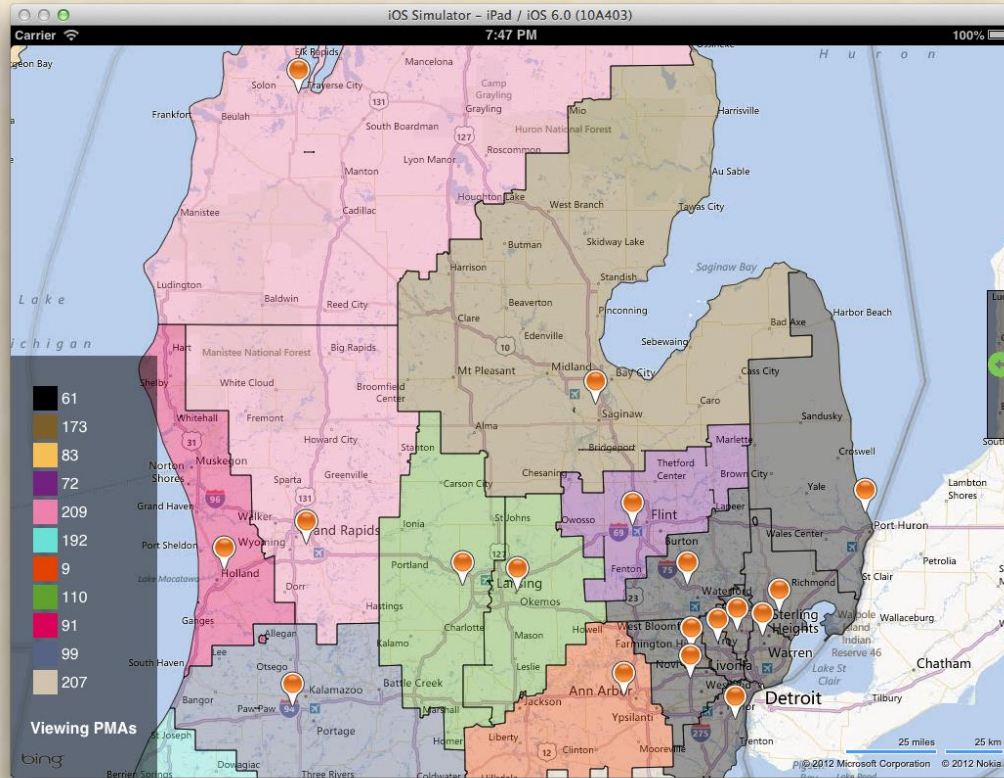




Team Urban Science Beta Presentation

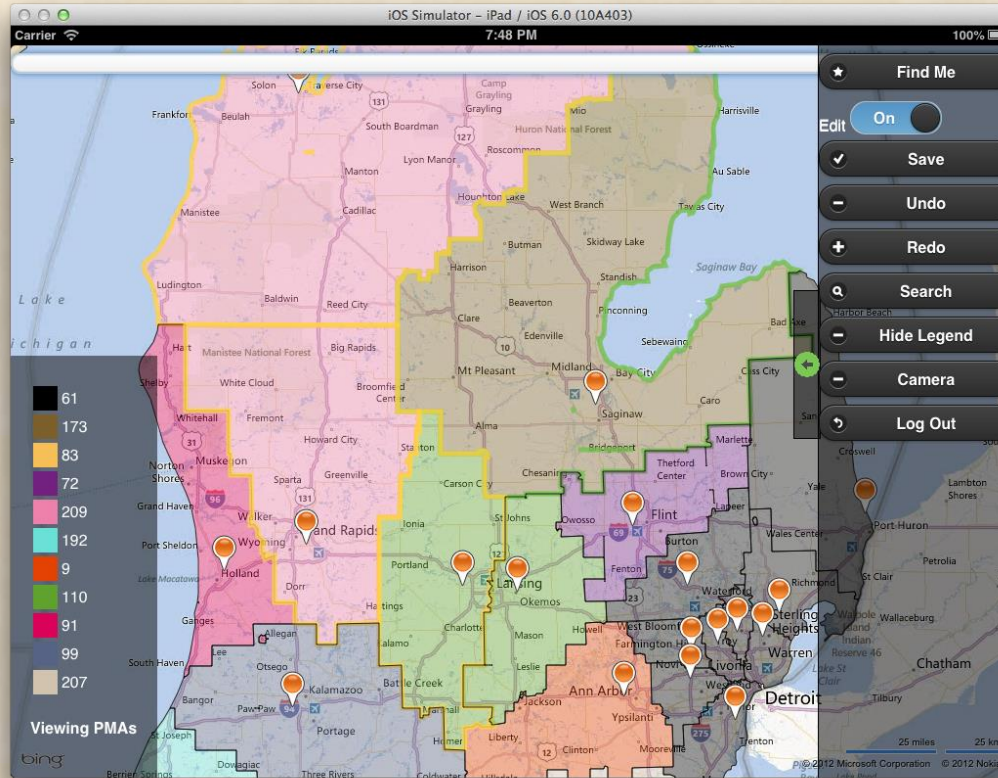
Team Urban Science Beta Presentation

PMAs of Michigan



Team Urban Science Beta Presentation

Editing Census Tracts





Team Urban Science Beta Presentation

Team Urban Science Beta Presentation

Search



Urban Science Mobile Geography Management

Urban Science delivers maximum results in the transportation industry by using intelligent, computer-aided, worldwide through optimization software and scientific analysis. Their products and services enable clients to evaluate and manage their driver networks more effectively and more efficiently.

The very important aspect of driver network management is that of geographic management, which allows clients to view and modify geographic territories defined by street data.

Our Mobile Geography Management application extends this concept to mobile devices, specifically the iPad, allowing truck drivers for an optimized and well-balanced driver network. This driver network and driver geographic assignment change constantly, we provide several tools and services to manage driver network and analysis of data.

After launching the application, the user can view and view geographic territories and assignment data within the United States in one continuous motion. The user can select and edit any geographic territory with the touch of a finger.

Our application provides a multi-to solution for managing geographic territories and routes in achieving optimal results for CRM driver network evaluation and management. The Mobile Geography Management application is written using Java/JSP, HTML5, and PHP. Geographic data is stored using an RDBMS, Server 2008, Oracle.



URBAN SCIENCE



Michigan State University

Project Summary

Project Summary

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Project Summary

Team Urban Science Design Day

MICHIGAN STATE
UNIVERSITY

The Capstone Experience

Team Whirlpool

Department of Computer Science and Engineering
Michigan State University
Fall 2012



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



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CORPORATION



LAUNDRY

KITCHEN

HOME SOLUTIONS

FILTERS & ACCESSORIES

SERVICE & SUPPORT



To simplify life, we design around it.

The new Whirlpool Refrigerator® has the most fresh food capacity available ***

See Details

Team Whirlpool Project Overview

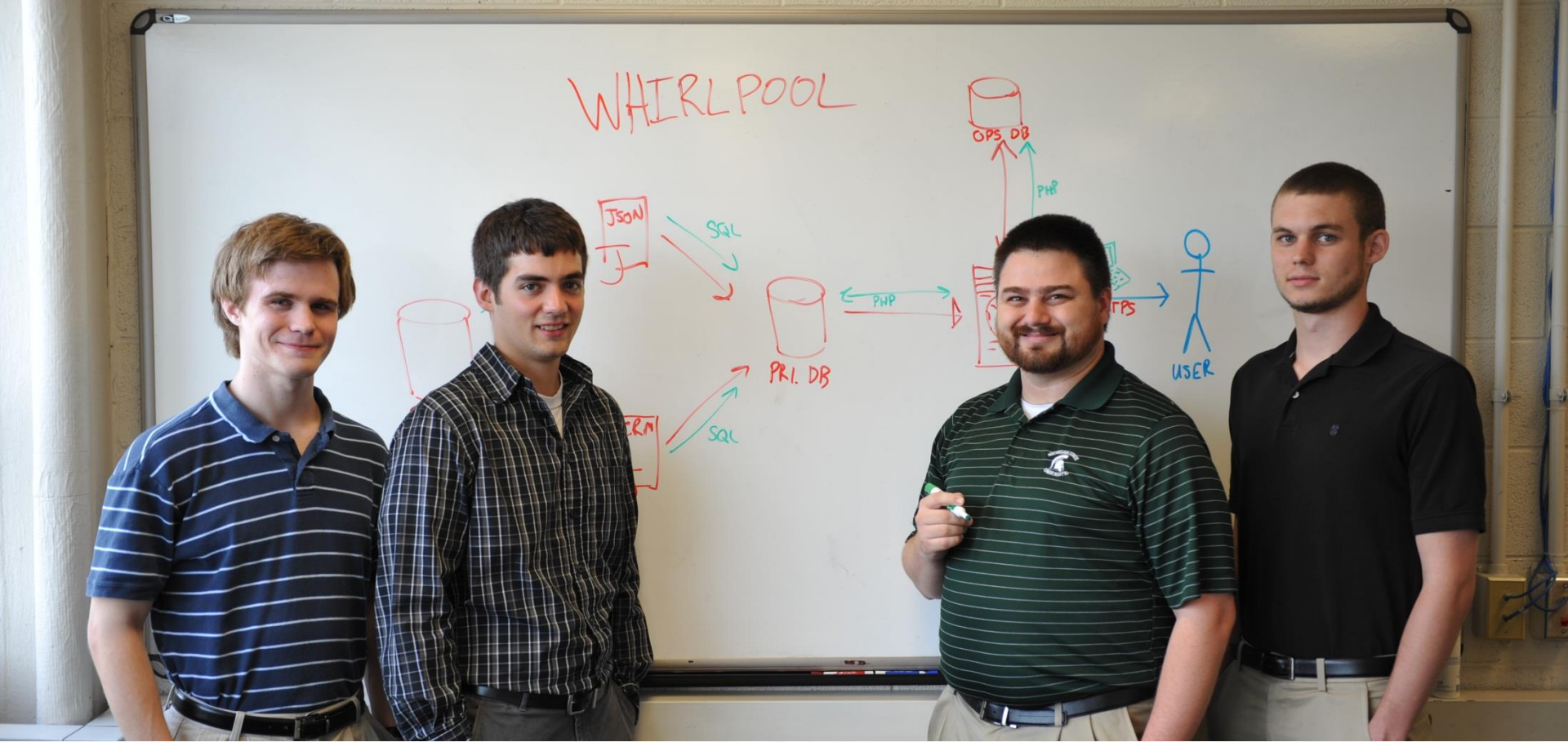
Connected Appliances Analytics Dashboard

- Functionalities
 - Analytics Dashboard
 - “Connected Appliances” Information
 - Consumer Data
 - Used For
 - Predictive Analytics
 - Customer Service
 - Marketing and Sales
- Features
 - Cloud-Based Database Backend
 - Generated from Daily Log Files
 - Via JSON (JavaScript Object Notation)
 - Role-Based Security
 - Anonymized Customer Data
 - Report Generator
- Technologies
 - CSS, HTML
 - PHP or .NET
 - JavaScript, JSON
 - Java
 - Microsoft SQL Server
 - RESTful Web Services



Benton Harbor, Michigan





Team Whirlpool

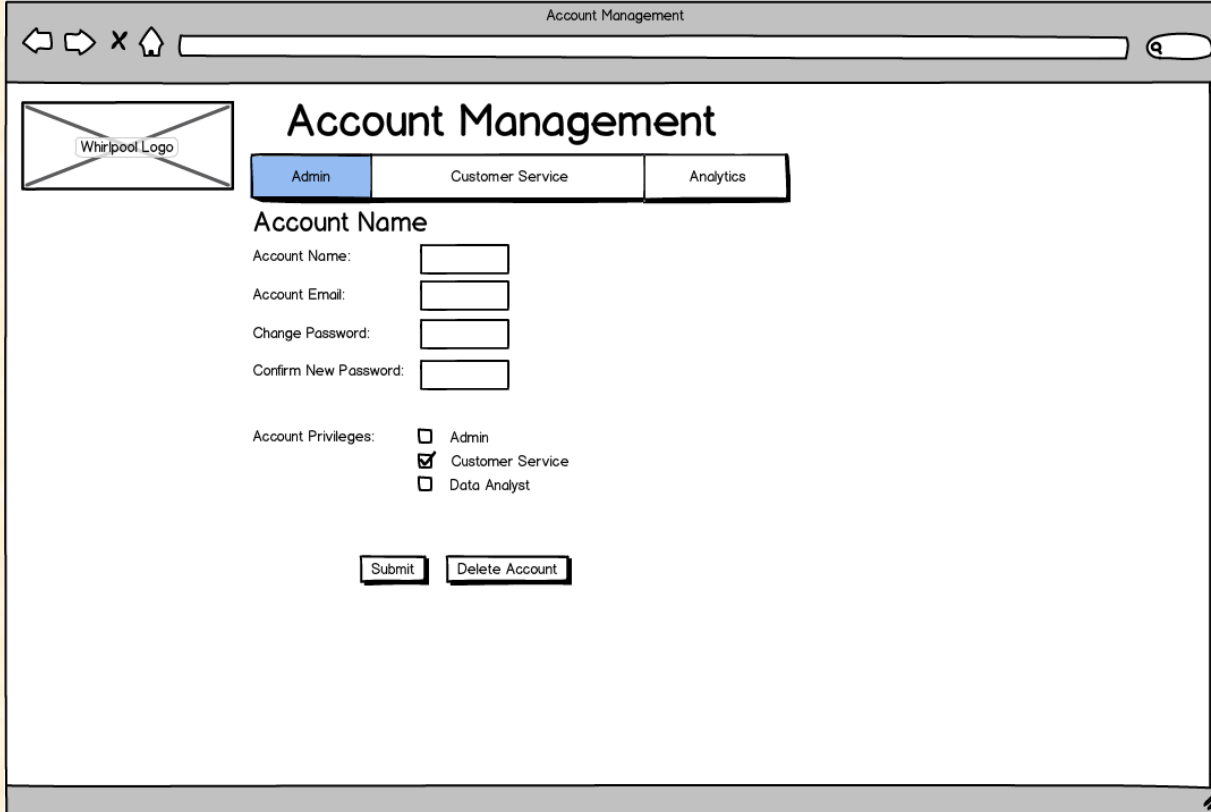
Zack Taylor, Joe Tuohey, Jim Solce, Derrick Neier



Team Whirlpool Project Plan Presentation

Team Whirlpool Project Plan Presentation

Screen Mockup



The mockup shows a web browser window titled "Account Management". The browser's address bar is empty. The page features a "Whirlpool Logo" in the top left corner. Below the logo is a navigation bar with three tabs: "Admin" (highlighted in blue), "Customer Service", and "Analytics". The main content area is titled "Account Name" and contains four input fields for "Account Name", "Account Email", "Change Password", and "Confirm New Password". Below these fields is a section for "Account Privileges" with three checkboxes: "Admin", "Customer Service" (checked), and "Data Analyst". At the bottom of the form are two buttons: "Submit" and "Delete Account".

Account Management

Whirlpool Logo

Admin Customer Service Analytics

Account Name

Account Name:

Account Email:

Change Password:

Confirm New Password:

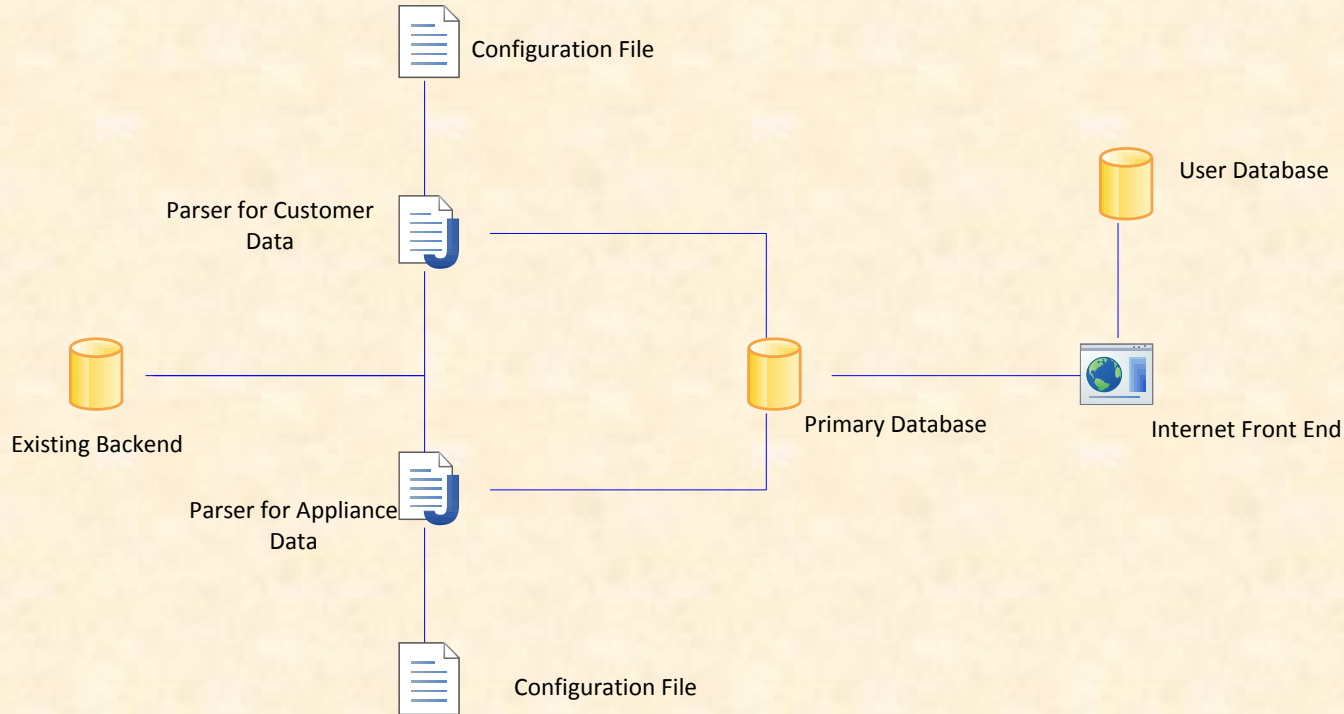
Account Privileges:

- ☐ Admin
- ☒ Customer Service
- ☐ Data Analyst

Submit Delete Account

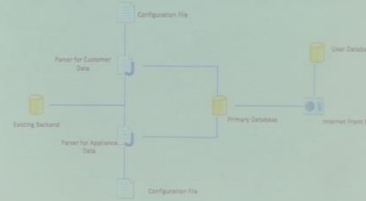
Team Whirlpool Project Plan Presentation

Architecture Diagram





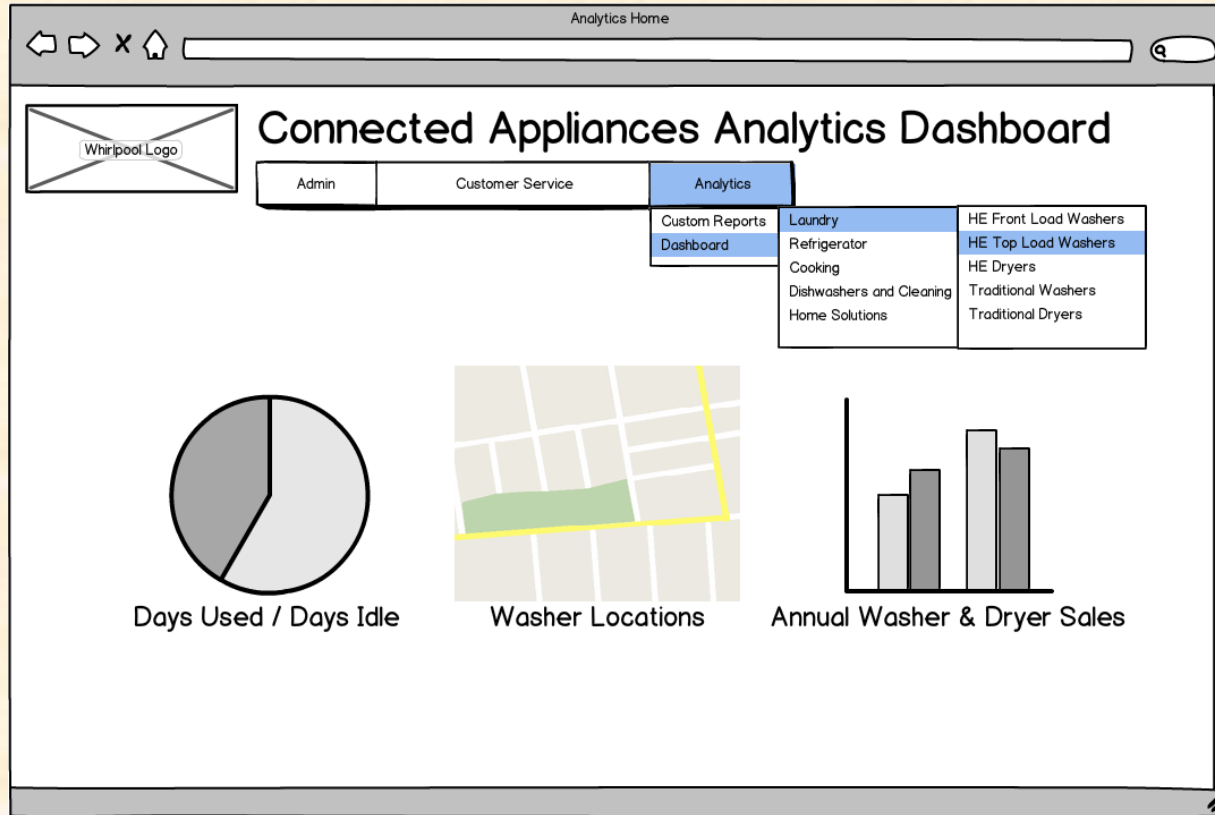
System Architecture



Team Whirlpool
Project Plan Presentation

Team Whirlpool Project Plan Presentation

Screen Mockup





Team Whirlpool Alpha Presentation

Team Whirlpool Alpha Presentation

Dryer Static Dashboard



ADMIN

Account Management

CUSTOMER SERVICE

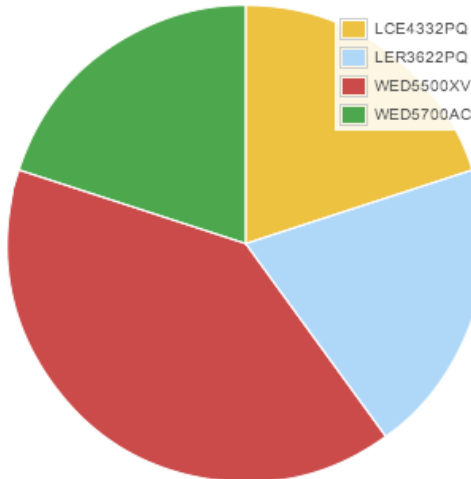
Account Lookup

DATA ANALYSTS

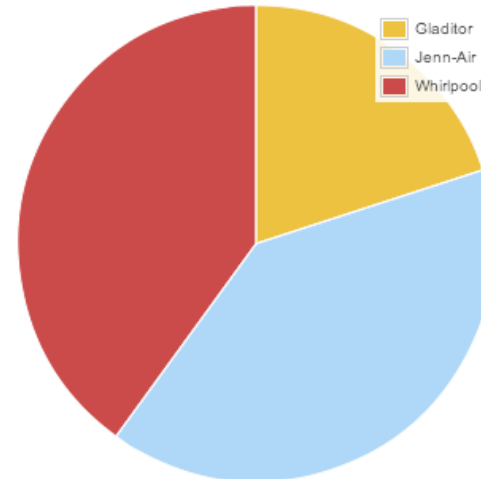
Data

PROFILE

Dryer Models



Dryer Brands



Team Whirlpool Alpha Presentation

Custom Report Generation



Connected Appliances Analytics Dashboard

ADMINISTRATOR

Account Management

CUSTOMER SERVICE

Account Lookup

DATA ANALYSTS

Dashboards & Custom Reporting

PROFILE

Edit Your Information

LOGOUT

<< Back

General Options

Model ☐
Serial ☐
In Service ☐
SAID ☐
Brand ☐

Washer Options

Real Time Power Reading ☐
Cycle Name ☐
Cycle Name Code ☐
End of Cycle ☐
Estimated Time Remaining ☐
Odometer ☐
Percent Complete ☐
Cycle Energy Consumption ☐
Fan Fresh Status ☐
Remote Control Status ☐

Dryer Options:

Real Time Power Reading ☐
Cycle Name ☐
Cycle Name Code ☐
End of Cycle ☐
Estimated Time Remaining ☐
Odometer ☐
Percent Complete ☐
Cycle Energy Consumption ☐
Wrinkle Shield ☐
Air Flow Status ☐

Fridge Options:

Real Time Power Reading ☐
Current Temperature Setting Freezer ☐
Current Temperature Setting Refrigerator ☐

Dishwasher Options:


Real Time Power Reading ☐
Cycle Name ☐
Cycle Name Code ☐
End of Cycle ☐
Estimated Time Remaining ☐
Odometer ☐
Percent Complete ☐
Cycle Energy Consumption ☐
Control Lock ☐



Team Whirlpool Alpha Presentation

Team Whirlpool Alpha Presentation

Customer Lookup



ADMIN
Account Management

CUSTOMER SERVICE
Account Lookup

DATA ANALYSTS
Data

PROFILE

Customer Lookup

First Name:

Last Name:

Phone Number:

Email Address:

Address Line 1:

Address Line 2:

City:

State:

ZIP Code:

Device ID:





Team Whirlpool Beta Presentation

Team Whirlpool Beta Presentation

General Dashboard

Dashboards



[Refrigerators](#)



[Dishwashers](#)



[Dryers](#)



[Washers](#)

General Statistics

Total Number of Devices in the System

43

Total Number of Cycles Completed

5315

Number of Active Devices in the Past Day

18

Number of New Devices in the Past Day

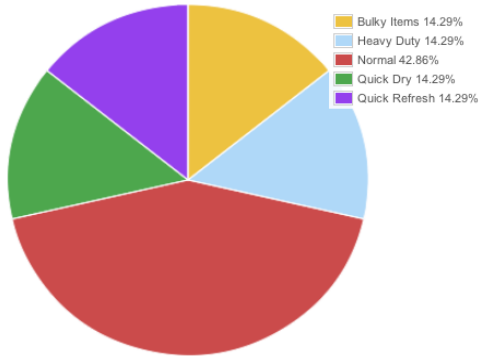
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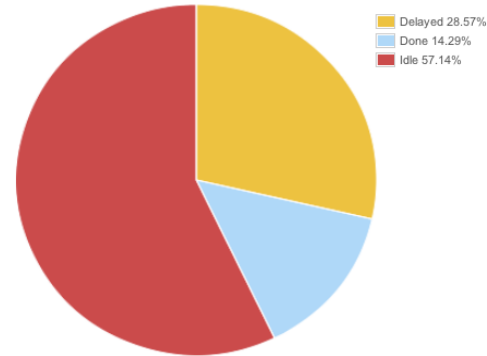
Team Whirlpool Beta Presentation

Dashboard Items

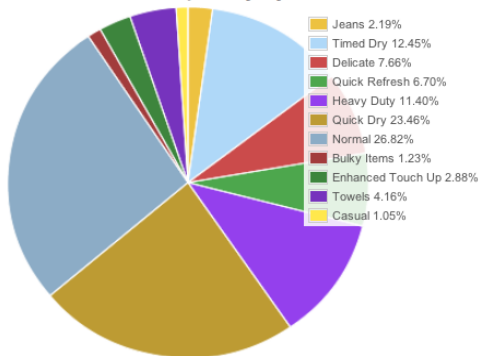
Current Cycle By Percent



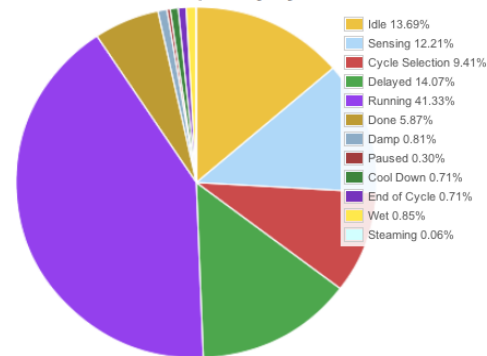
Current State By Percent



Time Spent by Cycle Name



Time Spent by Cycle State





Team Whirlpool Beta Presentation

Team Whirlpool Beta Presentation

Custom Query Results



Connected Appliances Analytics Dashboard

ADMINISTRATOR
Account Management

CUSTOMER SERVICE
Account Lookup

DATA ANALYSTS
Dashboards & Custom Reporting

PROFILE
Edit Your Information

LOGOUT

Query Results

[Start Over](#)

Search Results

Query: SELECT Model, Brand, Category, Odometer FROM Appliance, Dashboard where Appliance.Device_ID=Dashboard.Device_ID AND Appliance.Brand='Whirlpool' AND Dashboard.Odometer>'100';

Model	Brand	Category	Odometer
WFL98HEBU	Whirlpool	Clothes Washer	130
WEL98HEBU	Whirlpool	Clothes Dryer	178
WEL98HEBU	Whirlpool	Clothes Dryer	133
WEL98HEBU	Whirlpool	Clothes Dryer	344
WEL98HEBU	Whirlpool	Clothes Dryer	325
WEL98HEBU	Whirlpool	Clothes Dryer	196
WEL98HEBU	Whirlpool	Clothes Dryer	417
WEL98HEBU	Whirlpool	Clothes Dryer	400
WFL98HEBU	Whirlpool	Clothes Washer	118
WEDSG01	Whirlpool		605
WEL98HEBU	Whirlpool		220
WDL785SAAM0	Whirlpool	Dishwasher	330





Team Whirlpool
Design Day

MICHIGAN STATE
UNIVERSITY

The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University
Fall 2012



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



Capstone Lab
View of Spartan Stadium



Capstone Lab
View of Spartan Stadium sans Smokestack



Capstone Lab
Winter View of Spartan Stadium

The Capstone Experience

Design Day Award Winners

December 7, 2012



*From Students...
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All-Hands
Design Day, December 7, 2012



Auto-Owners Exhibition Award Team Mozilla, Fall 2012

[Reader Mode for Desktop Firefox](#)

Kevin Woodward, Michael Anderson, Matt Vorce, Chelsea Carr
Presented by Bob Buchanan and Scott Lake of [Auto-Owners Insurance](#)




Chrysler Praxis Award

Team Boeing, Fall 2012

Design, Fly and Compete Sim Suite V2.0

Jake Newsted, Kevin Lining, Dan Sosnowski, Max Ellison

Presented by Karen Wrobel of Chrysler



TechSmith Screencast Award

Team Ford, Fall 2012

[MyKey Report Card](#)

Alex Conklin, Kevin Klemmer, Andrew Crouch, Brandon D'Orazio

Presented by Dean Craven of [TechSmith](#)



Urban Science Sigma Award

Team Spectrum Health, Fall 2012

Medication Shortages Dashboard

Ramata Koumare, Aaron Cosentino, Grayson Wright, Eric Dostie
Presented by Greg Davidson and Matt Bejin of Urban Science

The Capstone Experience

Design Day Award Winners

April 27, 2012



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...to Professionals*

MSU
UNION



All-Hands
Design Day, April 27, 2012



Auto-Owners Exhibition Award

Team Mozilla, Spring 2012

[In-Content Preferences for Firefox](#)

Joe Chen, Jon Rietveld, Owen Carpenter, Devan Sayles

Presented by Scott Lake of [Auto-Owners Insurance](#)



Chrysler Praxis Award

Team Boeing, Spring 2012

Design, Fly and Compete Flight Simulator

Brandon Overall, Jon Moore, David Cornelius

Presented by Karen Wrobel of [Chrysler](#)



TechSmith Screencast Award

Team Plex Systems, Spring 2012

[HTML5-Based WYSIWYG Label Designer](#)

Matt Duffy, Michele Winsky, Andrew Melfi

Presented by Dean Craven of [TechSmith](#)



Urban Science Sigma Award

Team GE Aviation, Spring 2012

Mobile Avionics Weather

Mike Dunn, Eric Cook, Drew Space

Presented by Matt Bejin and Greg Davidson of Urban Science

The Capstone Experience

Design Day Award Winners

December 9, 2011



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All-Hands
Design Day, December 9, 2011



Auto-Owners Exhibition Award

Team Spectrum Health, Fall 2011

[Log Monitoring Compliance](#)

William D. Seeger, Wayne Stiles, Collin Lotus, Kathryn Bonnen
Presented by Jim Schumacher and Bob Buchanan of [Auto-Owners Insurance](#)



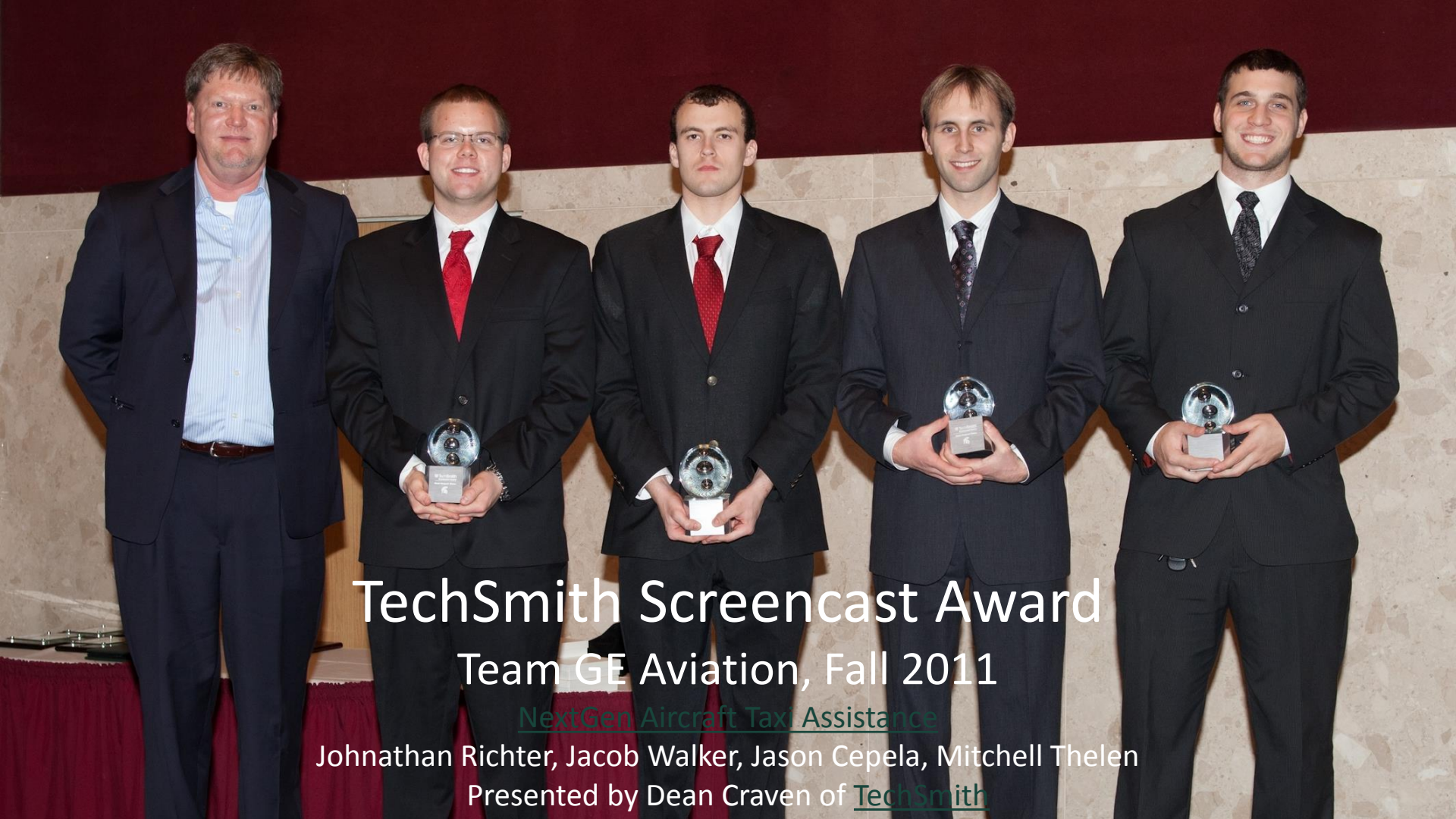
Chrysler Praxis Award

Team Motorola Mobility, Fall 2011

Synchronized Program Content Delivery

Paul J. Detkowski, Tareq Musleh, Timothy Belcher

Presented by Karen Wrobel of Chrysler




TechSmith Screencast Award

Team GE Aviation, Fall 2011

[NextGen Aircraft Taxi Assistance](#)

Johnathan Richter, Jacob Walker, Jason Cépela, Mitchell Thelen

Presented by Dean Craven of [TechSmith](#)



Urban Science Sigma Award

Team Ford, Fall 2011

[Ford Qwikboard](#)

William S. White Jr., Danh Tran, Jin Hou, Luke Davis

Presented by Greg Davidson and Matt Bejin of [Urban Science](#)

The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University
Spring 2012



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Auto-Owners Insurance

Life Home Car Business

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Google™

meijer[®]



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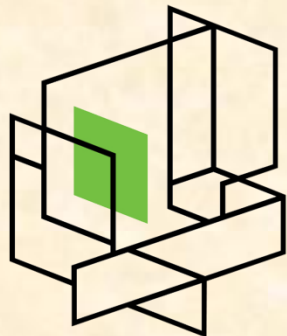
Engineered to **AmazeSM**

SPECTRUM HEALTH





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