

MICHIGAN STATE

UNIVERSITY

The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University
Spring 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, 1225 Engineering Building
- Presentations By
 - Professor
 - Teams
 - Status Reports
 - Formal Presentations
 - Project Plan
 - Alpha
 - Beta
 - Project Videos
 - Guest Speakers



All-Hands Meetings

- 01/09: Course Overview
- 01/11: Project Plan
- 01/16: (Martin Luther King Day, No Meeting)
- 01/18: Risks and Prototypes
- 01/23: Team [Status Reports](#)
- 01/25: Schedule and Team Work
- 01/30: Team [Project Plan Presentations](#)
- 02/01: Team [Project Plan Presentations](#)
- 02/06: Team [Project Plan Presentations](#)
- 02/08: Team [Project Plan Presentations](#)
- 02/13: Resume Writing and Interviewing
- 02/15: Creating and Giving Presentations
- 02/20: Team [Alpha Presentations](#)
- 02/22: Team [Alpha Presentations](#)
- 02/27: Team [Alpha Presentations](#)
- 02/29: Team [Alpha Presentations](#)
- 03/05: (Spring Break, No Meeting)
- 03/07: (Spring Break, No Meeting)
- 03/12: [Design Day](#) and the [Project Videos](#)
- 03/14: Camtasia Demo
- 03/19: Team Status Reports
- 03/21: Team Status Reports
- 03/26: Team Status Reports
- 03/28: Team Status Reports
- 04/02: Team Beta Presentations
- 04/04: Team Beta Presentations
- 04/09: Team Beta Presentations
- 04/11: Team Beta Presentations
- 04/16: Ethics and Professionalism
- 04/18: Intellectual Property and Copyright
- 04/23: Team [Project Videos](#)
- 04/25: Team [Project Videos](#) and All Deliverables
- 04/26: [Design Day](#) Setup
- 04/27: [Design Day](#)
- 05/01: Team [Project Videos](#)



MICHIGAN STATE
UNIVERSITY

The Capstone Experience

Team Auto-Owners

Department of Computer Science and Engineering
Michigan State University
Spring 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

Find

Find a Local Agency

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

Enterprise Learning Management System

- Functionalities
 - Manage Continuing Education and Certification
 - For Auto-Owners Associates Throughout the Enterprise
 - Customize and Extend Moodle LMS
- Features
 - Show Complete Catalog of Courses
 - View Transcripts by Associate
 - Support Registration with Waiting Lists
 - Suggest Courses and Certifications
 - Support Various User Roles
 - Track Resources Checked Out to Associates
 - Integrate with External Vendors (Kaplan, AICPCU)
- Technologies
 - Moodle Learning Management System
 - PHP 5, JavaScript
 - Microsoft SQL Server or MySQL
 - Microsoft Access



Lansing, Michigan



Team Auto-Owners
Chris Marsh, Preston Skupinski, Fi Wu



Screen Mockup: Associate Front Page

Moodle LMS

You are logged in as [Name] [Logout]

Home

Main Menu

- Register for Courses
- Certificate Tracking

Navigation

- My courses

Settings

- My profile settings

Auto-Owners Insurance
Life Home Car Business
Welcome [Name]

COUSES

Test Course One
This is a course you are signed up for. This test can be set within a course's settings by an administrator, or otherwise with course editing privileges.

Test Course Two
Course summary description for another course.

Notifications

- "The Insurance Profes..."
3 Days Over Due
- "Risk Management" due in 2 weeks, February 6, 2012

Calendar

January 2012

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Previous Course

Next Course

Options...

Team Auto-Owners Project Plan Presentation

Team Auto-Owners Project Plan Presentation

Screen Mockup

Moodle LMS You are logged in as Associate (Logout)

Home

Main Menu

- Register for Courses
- Certificate Tracking

Navigation

Home

- My home
- Site pages
- My profile
- My courses

Settings

- My profile settings



My courses

Test Course One This is a course you are signed up for, this text can be set within a course's settings by an administrator, or someone with course-editing privileges.

Test Course Two Course summary/description for another course.

Notifications

"The Insurance Profess..."
3 Days Overdue

"Risk Management" due in:
2 weeks, February 9, 2012

Calendar

January 2012

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Account Balance

\$34.07
Payment Options...



Team Auto-Owners Project Plan Presentation

Screen Mockup

Main Menu

- Register for Courses
- Certificate Tracking

Course Registration

Recommended Courses (hide)

Institute 1	Code	Test Number	Cost

Course Information

Full Name: Test Course2 1 **Course recommended by:** Manager_1 (contact)
Code: TEST2 1
Institute: Institute 2

Available Exam Windows:
Jan. 15 - Mar. 15
Apr. 15 - Jun. 15

Course Description:
Full information about the course taken from the course page or database is displayed here.

Institute Registration Information:
Any information specific to the registration process for the given institute can be displayed here.

Specific Course Registration Information:
Information regarding specific registration for this course are displayed here. This will include disclaimers, notices about the responsibility to pay before being signed up for the course with the institute, and other legal notices or required actions.

Register:

Window: On Site Prometric Paper

Adjusted Cost: \$0.00 (0 previous attempts)

Notifications

- "The Insurance Profess..."
3 Days Overdue
- "Risk Management" due in:
2 weeks, February 9, 2012

Calendar

January 2012

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Account balance

34.07
[Payment Options...](#)

Online users

(last 5 minutes)

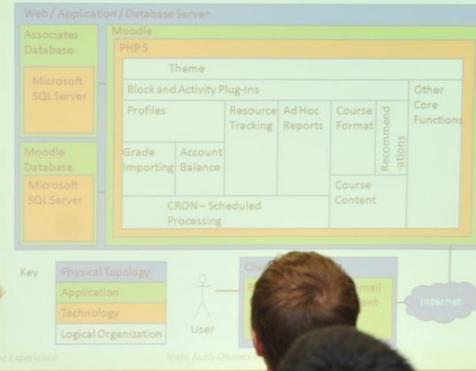
- Administrator
- Associate





System Architecture

Auto-Owners Insurance Enterprise Learning Management System Architecture Diagram

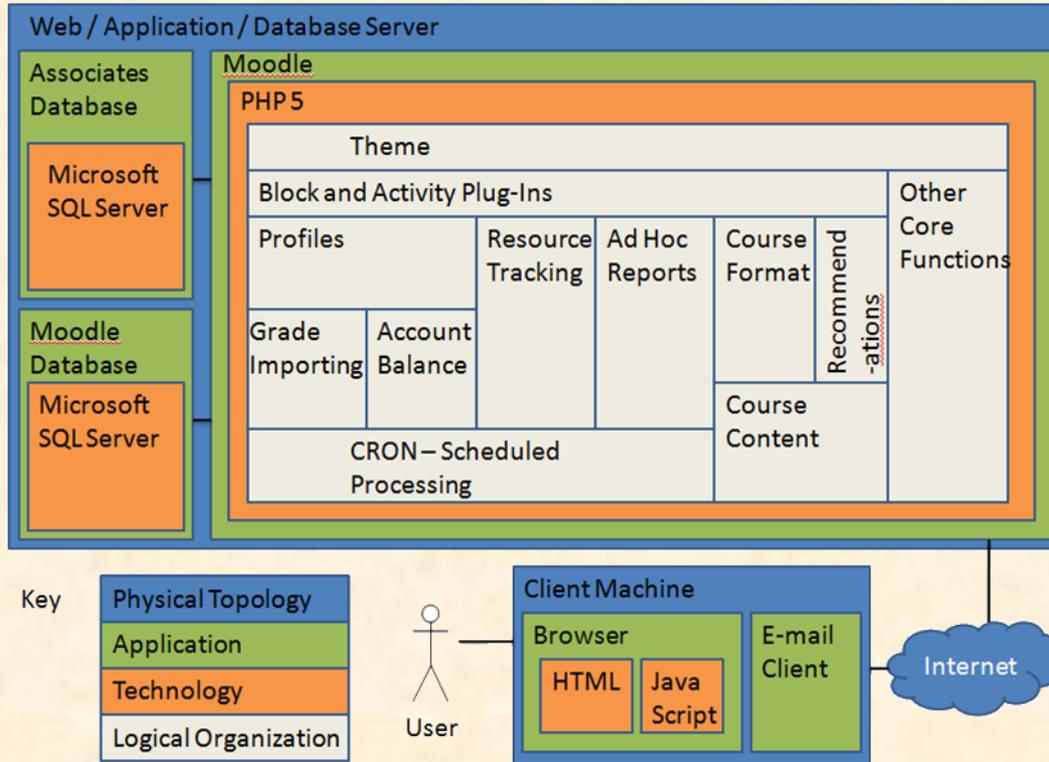


Team Auto-Owners Project Plan Presentation

Team Auto-Owners Project Plan Presentation

Architecture Diagram

Auto-Owners Insurance Enterprise Learning Management System Architecture Diagram





Team Auto-Owners Alpha Presentation

Team Auto-Owners Alpha Presentation

User Home Page

Auto-Owners ELMS

You are logged in as Ben Mosley (Logout)

Home

Main menu

- Ad-Hoc Reports
- Grade Importing
- Designation Tracking
- Course Registration
- Site news

Navigation

Home

- My home
- Site pages
- My profile
- Courses

Settings

- Front page settings
 - Turn editing on
 - Edit settings
- Users
 - Backup
 - Restore
 - Question bank
- My profile settings
- Site administration

Site news

Subscribe to this forum

Add a new topic

Welcome to the Auto-Owners [Insurance](#) ELMS!
by Admin User - Sunday, 19 February 2012, 04:04 PM



Discuss this topic (0 replies so far) Edit | Delete

Account Balance

\$155
Payment Options...

Calendar

February 2012

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29			

Library Notifications

You have no materials due

Management Tools

Recommended Course:
Course:
Assoc. ID:
[Add](#) [Remove](#)

Courses

Browse 745 courses.

Search courses: [Go](#)





Team Auto-Owners Alpha Presentation

Team Auto-Owners Alpha Presentation

Importing Grades from Excel

The screenshot shows the 'Auto-Owners ELMS' web application interface. The top navigation bar includes the title 'Auto-Owners ELMS' and the user status 'You are logged in as Admin User (Logout)'. The breadcrumb trail is 'Home > Site pages > Grade Importing'. On the left, a 'Navigation' sidebar lists various site pages, with 'Grade Importing' highlighted. The main content area is titled 'Grade Importing' and contains the instruction 'Select a spreadsheet to import grades from'. Below this instruction are two buttons: 'Choose File' (which is active) and 'Upload'. A file explorer window is overlaid on the page, showing the 'CAPSTONE > GradeHistory' directory. The file explorer displays two Excel files: 'April15-June15.xls' and 'January15-March15.xls', both created on 2/19/2012 at 2:35 PM and 180 KB in size. The file explorer also shows a 'File name' field and 'Open' and 'Cancel' buttons.

Auto-Owners ELMS You are logged in as Admin User (Logout)

Home > Site pages > Grade Importing

Navigation

- Home
 - My home
- Site pages
 - Participants
 - Blogs
 - Notes
 - Tags
 - Calendar
 - Reports
 - Ad-Hoc Reports
 - Grade Importing**
 - Designation Tracking
 - Course Registration
 - Site news
- My profile
- Courses
- Users

Settings

Grade Importing

Select a spreadsheet to import grades from

No file chosen

Open

CAPSTONE > GradeHistory

Search GradeHistory

Name	Date modified	Type	Size
April15-June15.xls	2/19/2012 2:35 PM	Microsoft Office E...	180 KB
January15-March15.xls	2/19/2012 2:35 PM	Microsoft Office E...	180 KB

File name: All Files



Team Auto-Owners Beta Presentation

Team Auto-Owners Beta Presentation

Recommended Courses

Auto-Owners ELMS

You are logged in as Ben Mosley (Logout)

Home ▶ Site pages ▶ Course Registration

Main menu

- Ad-Hoc Reports
- Grade Importing
- Designation Tracking
- Course Registration
- Site news
- Course Recommendation

Navigation

- Home
- My home
- Site pages
 - Participants
 - Blogs
 - Notes
 - Tags
 - Calendar

Course Registration

Recommended Courses(hide)

American College

Code	Test Number	Cost
HS 352 Financial Decisions for Retirement	531 N/A	\$0.00

CMA

Code	Test Number	Cost
CMA 4 - Decision Analy & Info Systems	261 N/A	\$0.00

IIA

Code	Test Number	Cost
API 29	N/A	\$64.50

Team Auto-Owners Beta Presentation

Registration Confirmation

Course Registration

35.9.22.108/moodle/mod/courseregistration/view.php?cid=94418&id=9

Course Information

Full Name:
AEI Law of [Automobile](#) Claims & Coverage Program

Code:
AEI Law of Automobile Claims & Coverage Program340

Institute:
AEI

Register:
Window:

Adjusted Cost \$0.00

ALU





Team Auto-Owners Beta Presentation

Team Auto-Owners Beta Presentation

Designation Tracking

Auto-Owners ELMS

You are logged in as John Doe (Logout)

Home ▶ Site pages ▶ Designation Tracking

Main menu

- Ad-Hoc Reports
- Grade Importing
- Designation Tracking
- Course Registration
- Site news

Navigation

- Home
 - My home
- Site pages
- My profile
- Courses
- Users

Designation Tracking

Top Designation Progress

Associate in Risk Management	100%
Associate in Underwriting	100%
Associate in Insurance Accounting & Finance	75%
Chartered Financial Consultant	50%
Associate, Customer Service	50%
Completion of all four Intro Courses	25%

Individual Designation Progress

Associate in Insurance Accounting & Finance ▼

IIA

Code	Test Number	Status
AIAF 111	111	✓
AIAF 111	111	✓
AIAF 112	112	✓
AIAF 113	113	✗



Team Auto-Owners
Design Day

MICHIGAN STATE

U N I V E R S I T Y

The Capstone Experience

Team Boeing

Department of Computer Science and Engineering
Michigan State University
Spring 2012



*From Students...
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BOEING



[BA 71.01 \(+0.40\)](#)

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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 Battle Flight Simulator

- Functionalities
 - Flight Simulator Game
 - Players Compete on Obstacle Courses
 - With Airplanes Designed by Players
- Features
 - Allow 2 to 5 Players Per Team
 - Ability to Trade Off Various Airplane Features
 - Support Joystick, Keyboard and Mouse
 - Accurate Aerodynamic Physics of Flight
 - Ability to Shoot Paintballs and See Damage
 - Secure with Encrypted Networking
- Technologies
 - C++, Python
 - Jenkins, QT Creator
 - Open Scene Graph (OSG)
 - Blender (3D Modeling)
 - Secure Internetworking, Encryption





Team Boeing

Brandon Overall, Jon Moore, David Cornelius



Screen Mockup: Server Browser

Design, Battle, Fly.

Single Player

Multi Player

Options

EXIT

MULTIPLAYER

Server Name	Ping	Players	Parasent
Server 1	42	3/6	Yes
Server 2	67	6/6	No

Connect Connect by IP

Server Info

Name: Server 2
IP Address: 192.22.2.112:85432
Uptime: 45:22m:15s
World Time: 22:30
Date: 6-4-11 8:00:23

Player List

- Player 1
- Player 2
- Player 3
- Player 4
- Player 5
- Player 6

Team Boeing Project Plan Presentation

Team Boeing Project Plan Presentation

Screen Mockup

Design, Battle, Fly.

Observer Mode

Browse
Options

EXIT

BROWSE

Path

replay12302011-01-23-45.rp
replay12312011-02-45-12.rp
replay12302011-01-23-45.rp

Replay Info

Name: replay12302011-01-23-45.rp
Date Played: 12/30/11
Length: 1h 23m 45s
Server: 124.56.23.121:12345

Score
Red: 12 Blue: 7

GO

Team Boeing Project Plan Presentation

Screen Mockup

Design, Battle, Fly.

Single Player

Multi Player

Options

GO

EXIT

OBSTACLE COURSE

Choose a Level



Level 1
Level 2
Level 3
Level 4
Level 5
Level 6
Level 7
Level 8

Choose an Aircraft

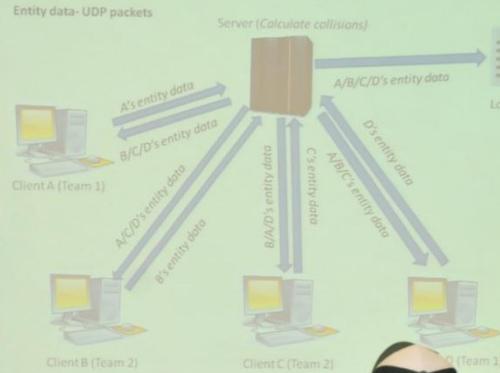


Speed:
Handling:
Acceleration:
Firepower:
Fuel:

Aircraft 1
Aircraft 2
Aircraft 3
Aircraft 4
Aircraft 5



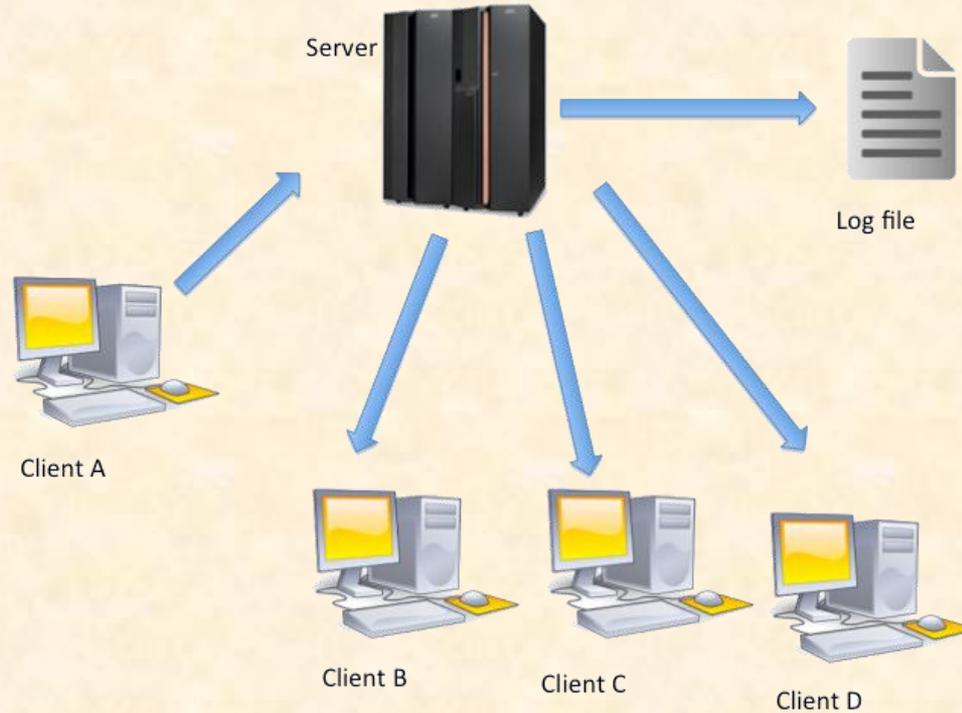
System Architecture



Team Boeing
Project Plan Presentation

Team Boeing Project Plan Presentation

Architecture Diagram





Team Boeing
Alpha Presentation

Team Boeing Alpha Presentation

Single Player Menu

Design, Fly, Battle.

Single Player

Options

Play

Quit

OBSTACLE COURSE

Choose a Level



Course 1

Course 2

Course 3

Course 4

Choose an Aircraft



Acceleration:
Length:
Weight:

Top Speed:
Maneuverability:
Wingspan:

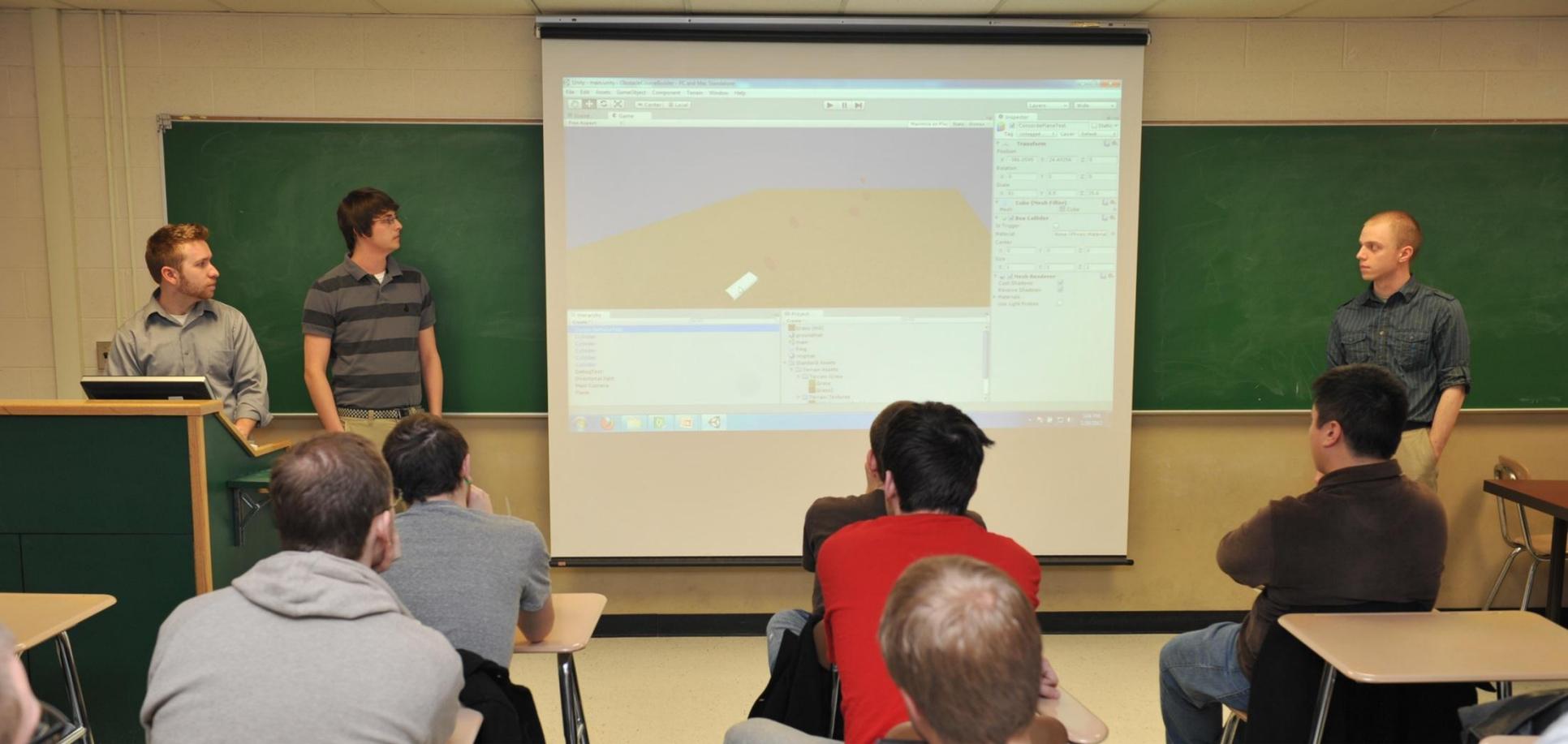
Aircraft 1

Aircraft 2

Aircraft 3

Aircraft 4

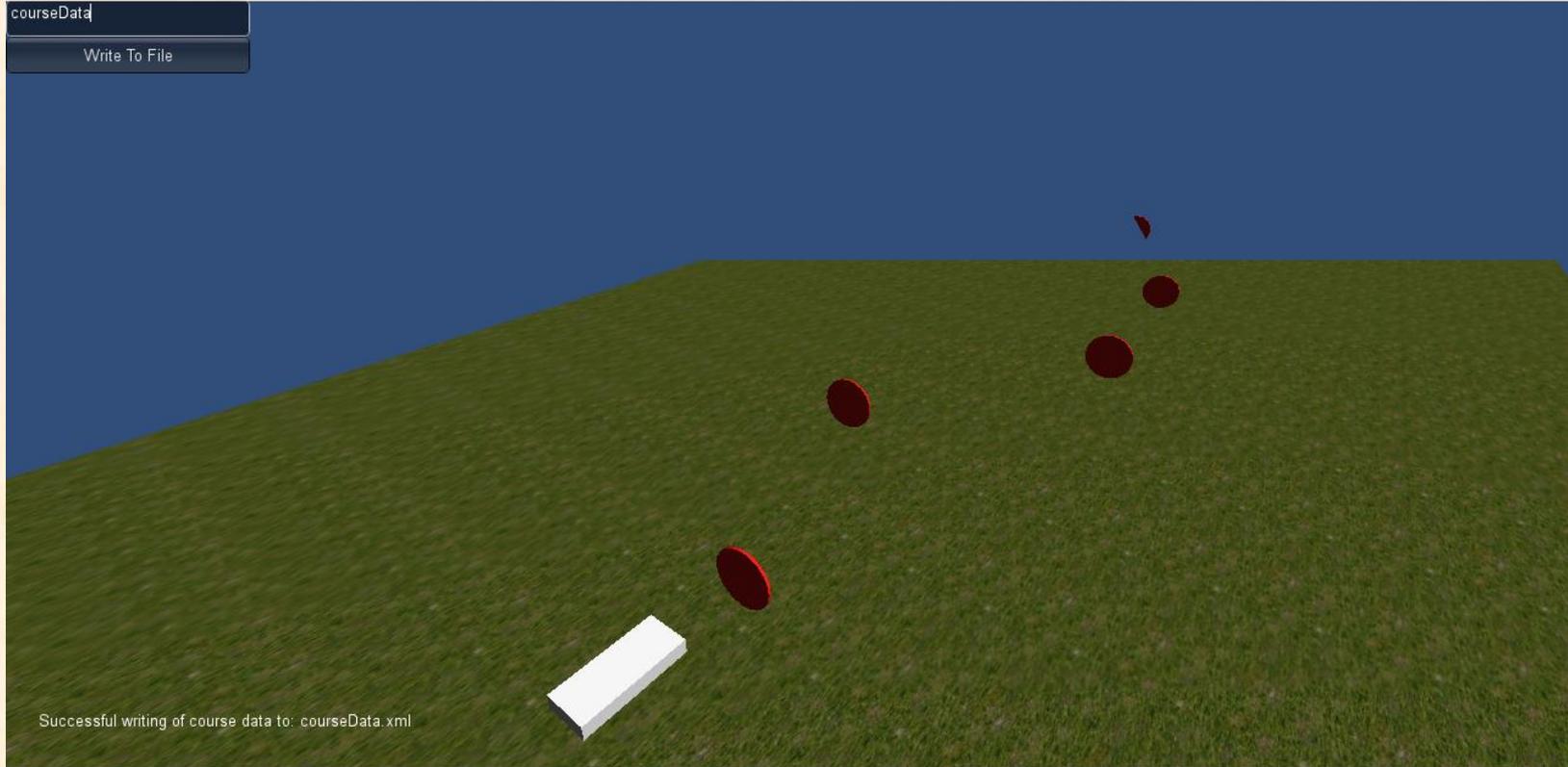




Team Boeing Alpha Presentation

Team Boeing Alpha Presentation

Course Editor (Unity 3D)





Team Boeing Beta Presentation

Team Boeing Beta Presentation

Main Menu

Design, Fly and Compete

Single Player

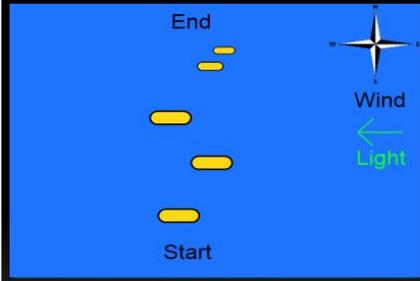
Options

Play

Quit

OBSTACLE COURSE

Choose a Level



End

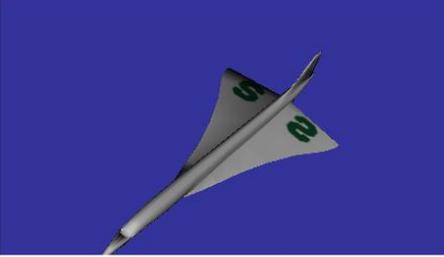
Start

Wind

Light

- Course 1
- Course 2
- Course 3
- Course 4
- Course 5
- Course 6
- Course 7

Choose an Aircraft



Acceleration: 15.0 m/s²
Length: 61.66m
Weight: 92,080 k

Top Speed: 500 m/s
Maneuverability: C+
Wingspan: 25.6 m

- Aircraft 1
- Aircraft 2
- Aircraft 3
- Aircraft 4



Team Boeing Beta Presentation

Flying in-Game

Velocity: 111 meters/s
Altitude: 362 meters
Heading: 358 (North)

Wind: 4.2 meters/s (From the East)

Fuel: 492 liters



Rings Remaining: 5
Time: 17.3323





Team Boeing Design Day

Team Boeing Beta Presentation

Crash Result

Velocity: 408 meters/s
Altitude: 16 meters
Heading: 14 (North)

Wind: 4.2 meters/s (From the East)

Fuel: 476 liters

Score
22.5052 seconds!

Rings Remaining: 4
Time: 34.7591

The image shows a blurred screenshot of a game interface. The background is a landscape with a bright orange and yellow sun or light source on the right side. The interface elements are overlaid on the top and bottom of the screen. There are two pink circular markers in the upper part of the screen. The text is displayed in white and red on black rectangular backgrounds.





Team Boeing
Design Day

MICHIGAN STATE

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The Capstone Experience

Team Dow

Department of Computer Science and Engineering
Michigan State University
Spring 2012



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

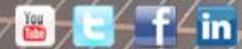


DOW

®



Innovation



INNOVATION

INNOVATION IN ACTION

RESEARCH & DEVELOPMENT

INNOVATION RESOURCES

STRATEGIC UNIVERSITY PARTNERSHIPS



At Dow, "to passionately innovate" is more than a mission statement. It's the bedrock of our culture and an integral part of our strategy for growth. It's the commitment to continually create today's and tomorrow's solutions for making the world safer, healthier, cleaner and more sustainable for all of us.

Our journey to transform invention into real innovation integrates world-class R&D resources and scientists with market intelligence and cross-functional efforts with key stakeholders around the globe. That's how Dow harnesses the power of chemistry to provide the solutions that improve our lives.

Did You Know?



Dow Energy Materials helps cell manufacturers make longer lasting, better performing & safer batteries.

Featured Video

Design to Zero

Team Dow

Project Overview

Global Emissions Inventory Water Dashboard

- Functionalities
 - Visualize Global Emissions Inventory Water Data
 - Interactive World Map
 - Dual Display
 - Tabular Data
 - Graphical Mapping
- Features
 - Web-Based Dashboard
 - Display Water Data, Basin Names and Stressed Areas
 - View by Sites or Geographical Regions
 - Filter by Water Stressed Basins
 - Drill Down by Water Intake Type
- Technologies
 - Microsoft Visual Studio 2010
 - Microsoft SharePoint 2010
 - SQL Server Reporting Services



Midland, Michigan





Team Dow

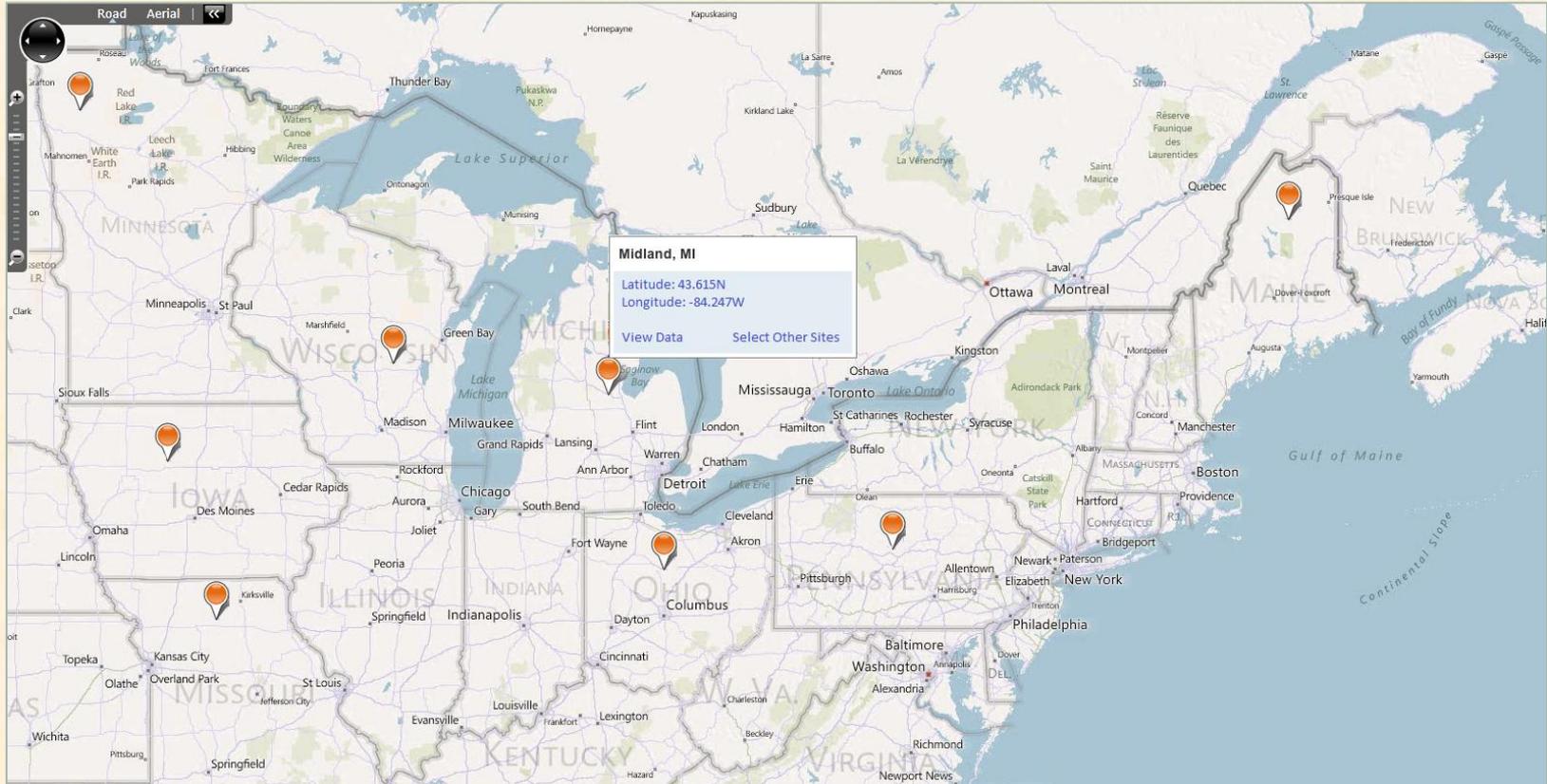
Nate Henry, James Solomon, Tony Curley



Team Dow Project Plan Presentation

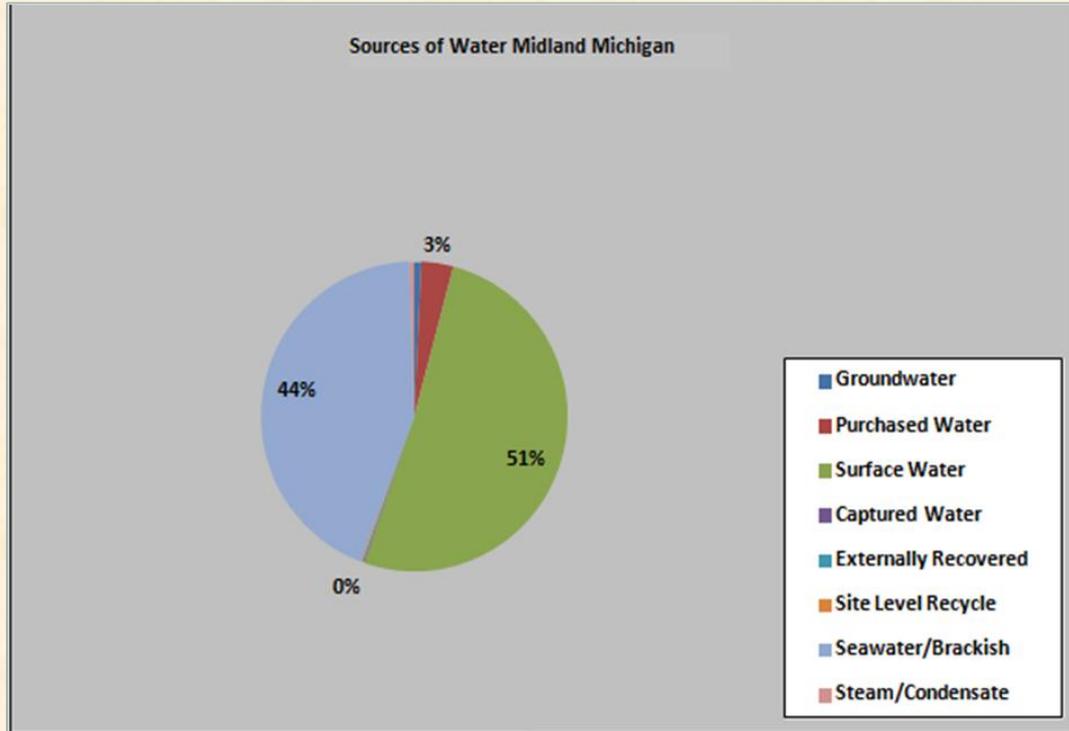
Team Dow Project Plan Presentation

Screen Mockup



Team Dow Project Plan Presentation

Screen Mockup



Orientation

Production/Intake Type
Water Intake

Year
2005 2010

Chart Type
Bar Graph

Add New Site Remove Site

Sites
QUERETARO, MEX
TLAXCALA, MEX
TOLUCA, MEX

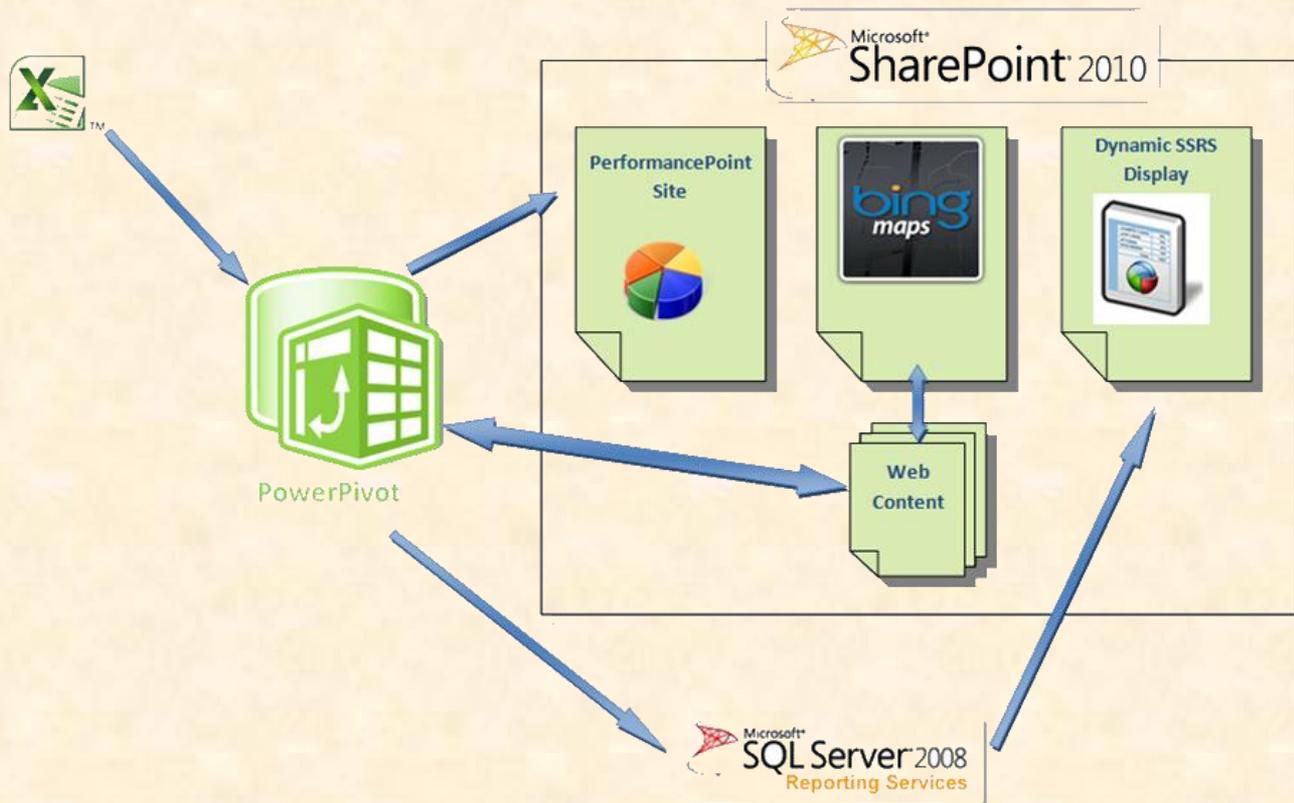




Team Dow Project Plan Presentation

Team Dow Project Plan Presentation

Architecture Diagram

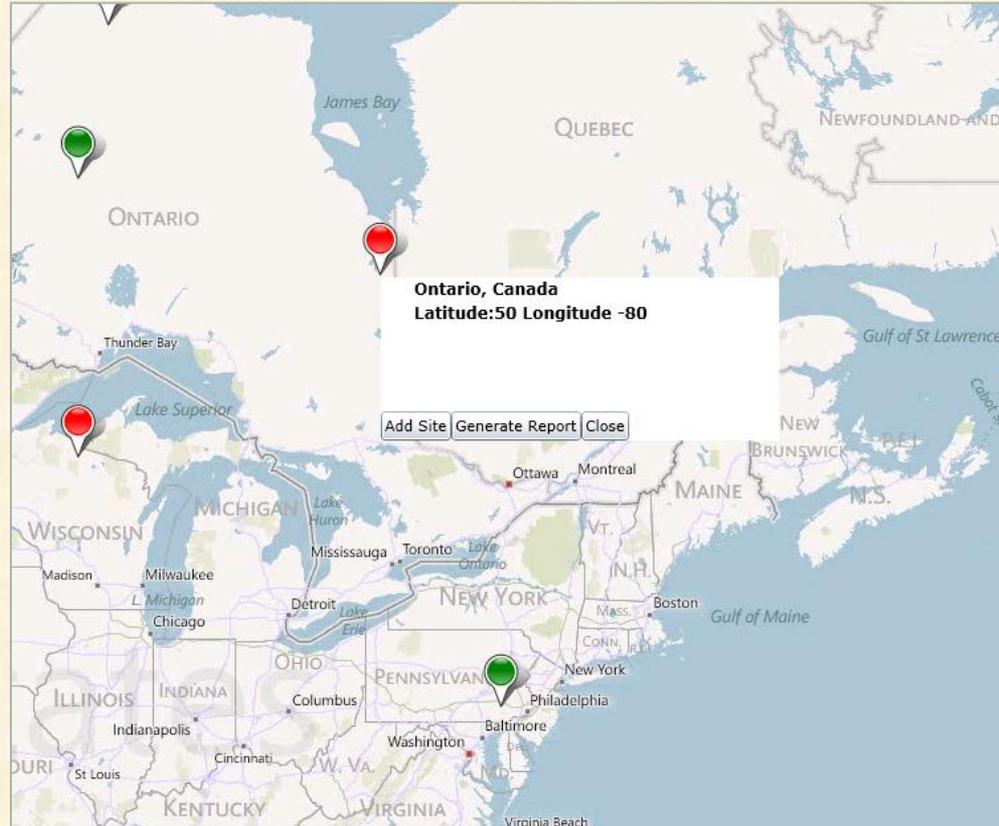




Team Dow Alpha Presentation

Team Dow Alpha Presentation

Map with Selection

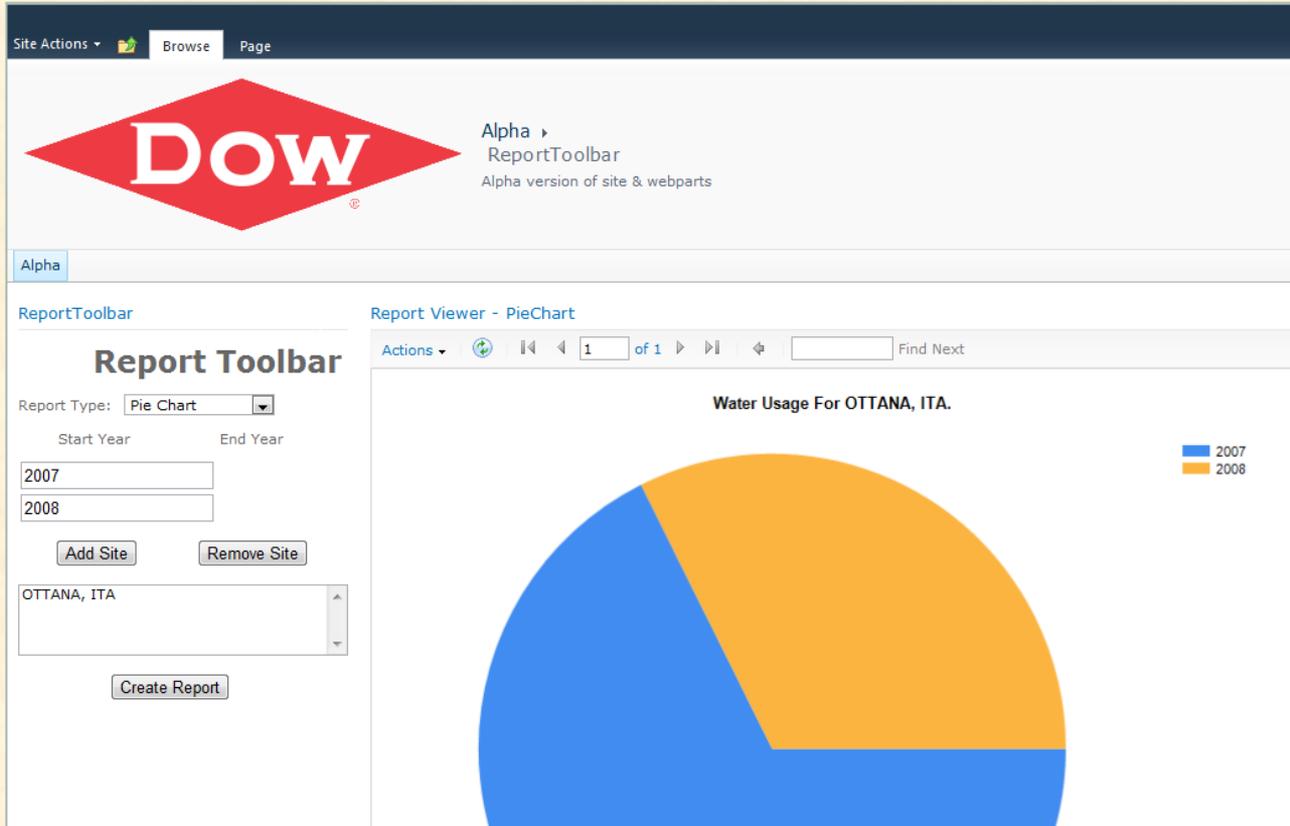




Team Dow
Alpha Presentation

Team Dow Alpha Presentation

Generated Report

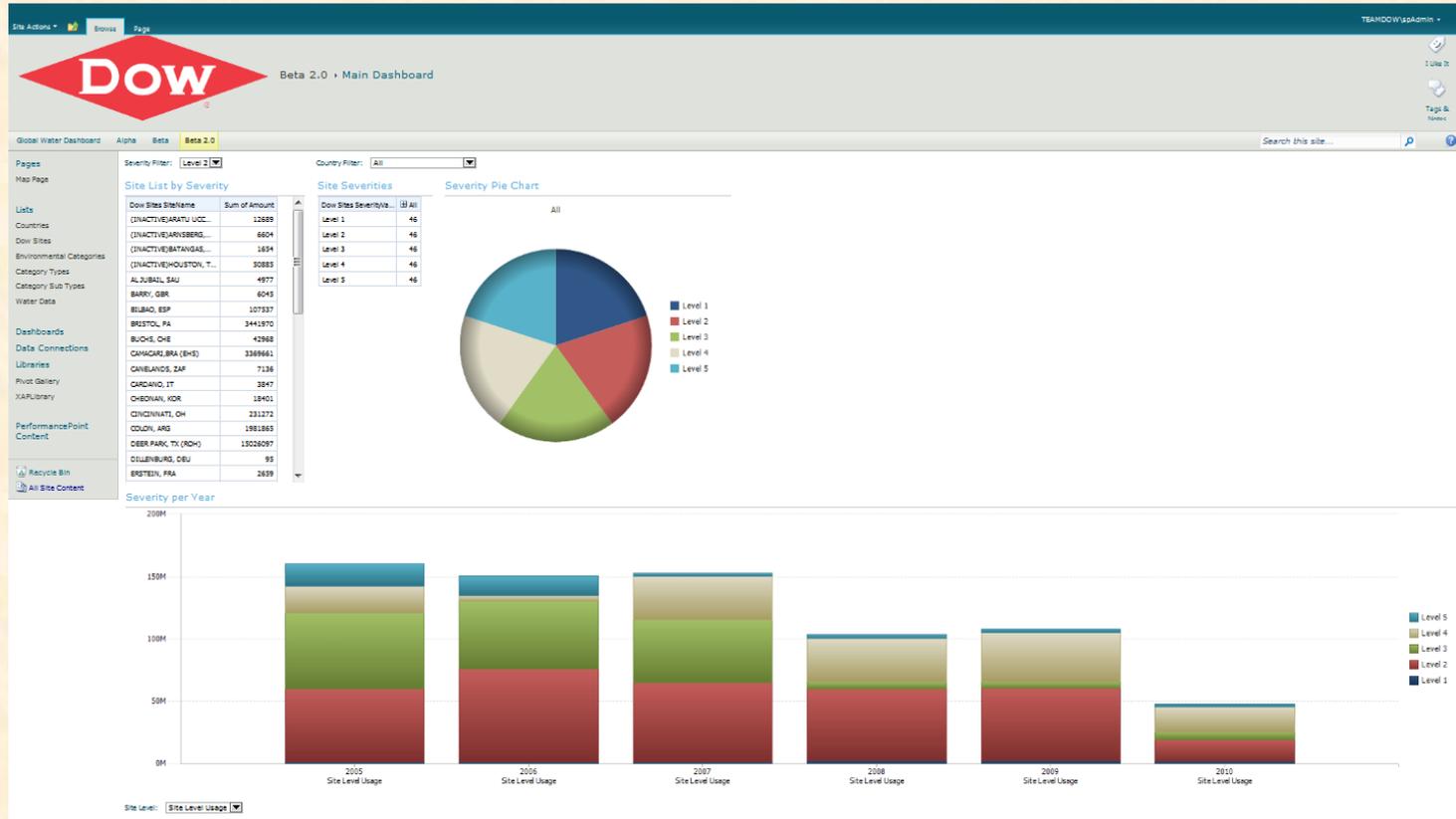




Team Dow Beta Presentation

Team Dow Beta Presentation

Main Dashboard



Team Dow Beta Presentation

Map With Dow Sites

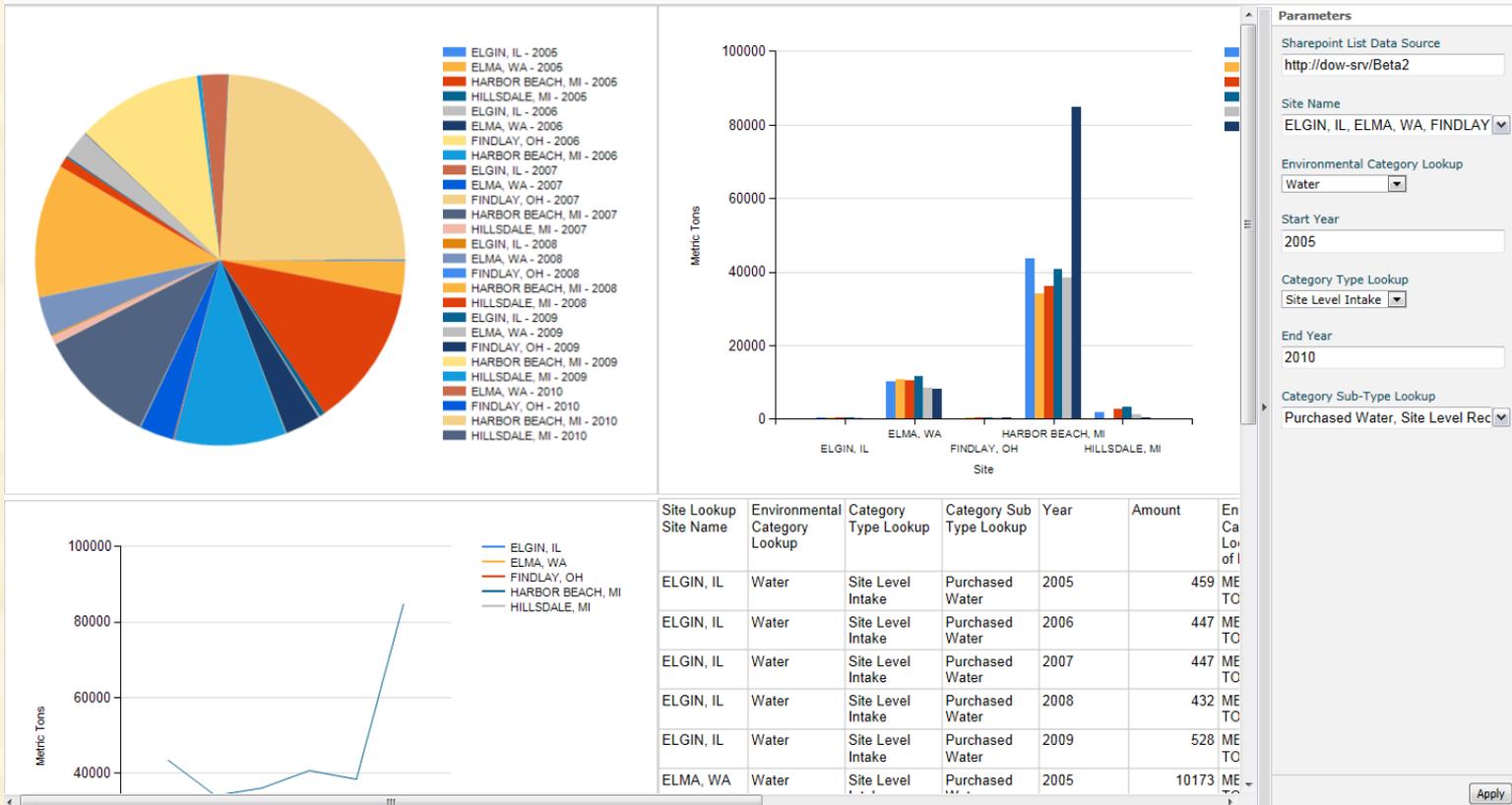




Team Dow Beta Presentation

Team Dow Beta Presentation

Map With Dow Sites





Team Dow
Design Day

MICHIGAN STATE
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The Capstone Experience

Team GE Aviation

Department of Computer Science and Engineering
Michigan State University
Spring 2012



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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 Project Overview

Mobile Avionics Weather

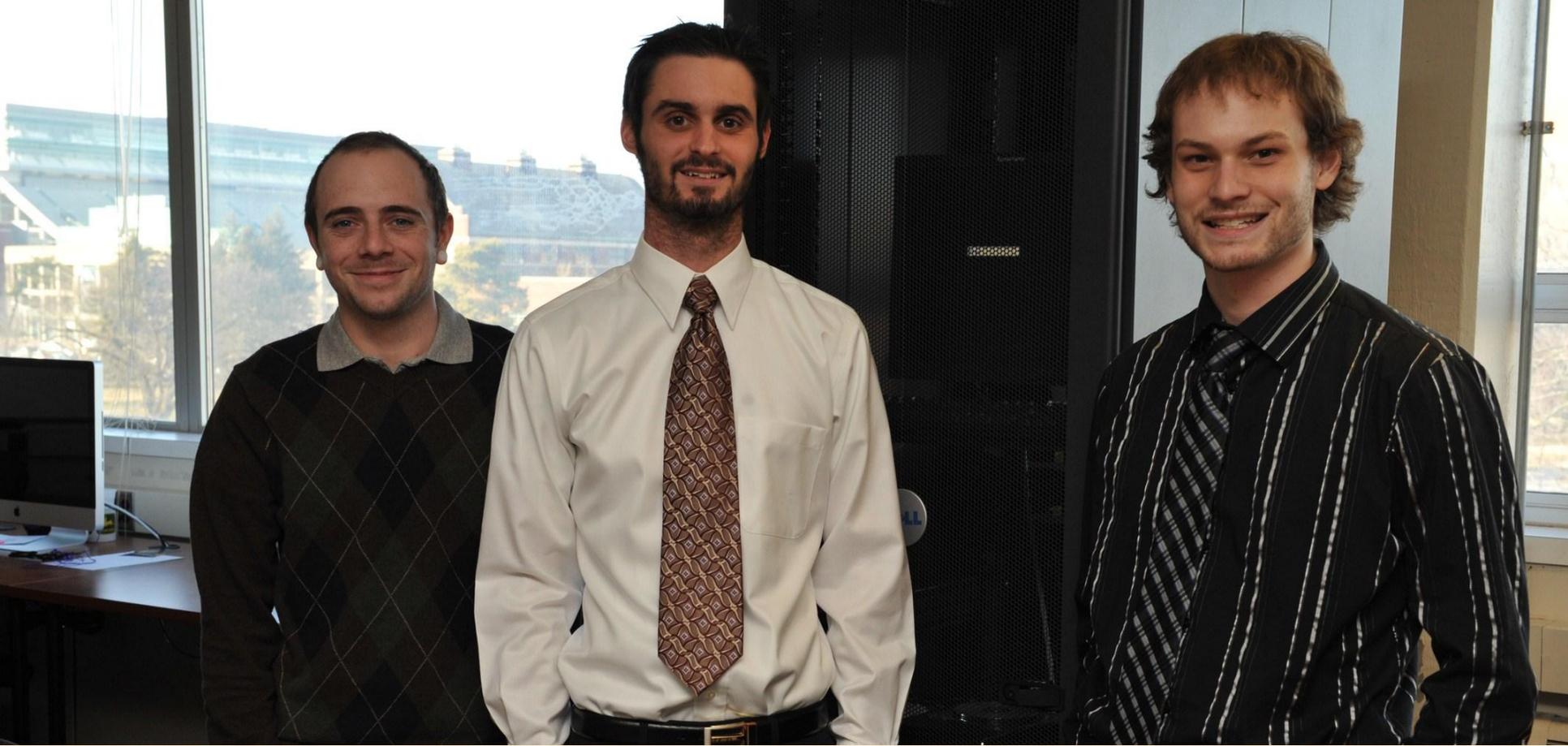
- Functionalities
 - Display Weather Maps
 - For Aviation Industry
 - On Mobile Devices
 - Apple iPad
 - Google Android Tablets
- Features
 - Intuitive, Easy to Use Interface
 - Visualize Complex Weather Data
 - Support Multiple Users
 - Pilots
 - Air Traffic Controllers
 - Ground Controllers
- Technologies
 - Apple iOS iPhone/iPad SDK, C, Objective-C
 - Google Android SDK, Java



Grand Rapids, Michigan

The Capstone Experience





Team GE Aviation

Mike Dunn, , Eric Cook, Drew Space



Team GE Aviation Project Plan Presentation

Team GE Aviation Project Plan Presentation

Screen Mockup

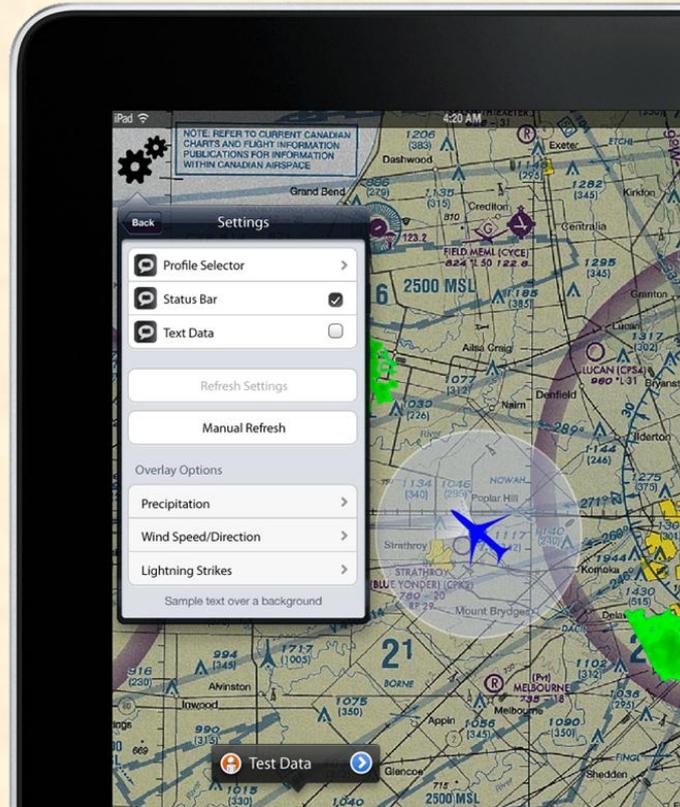


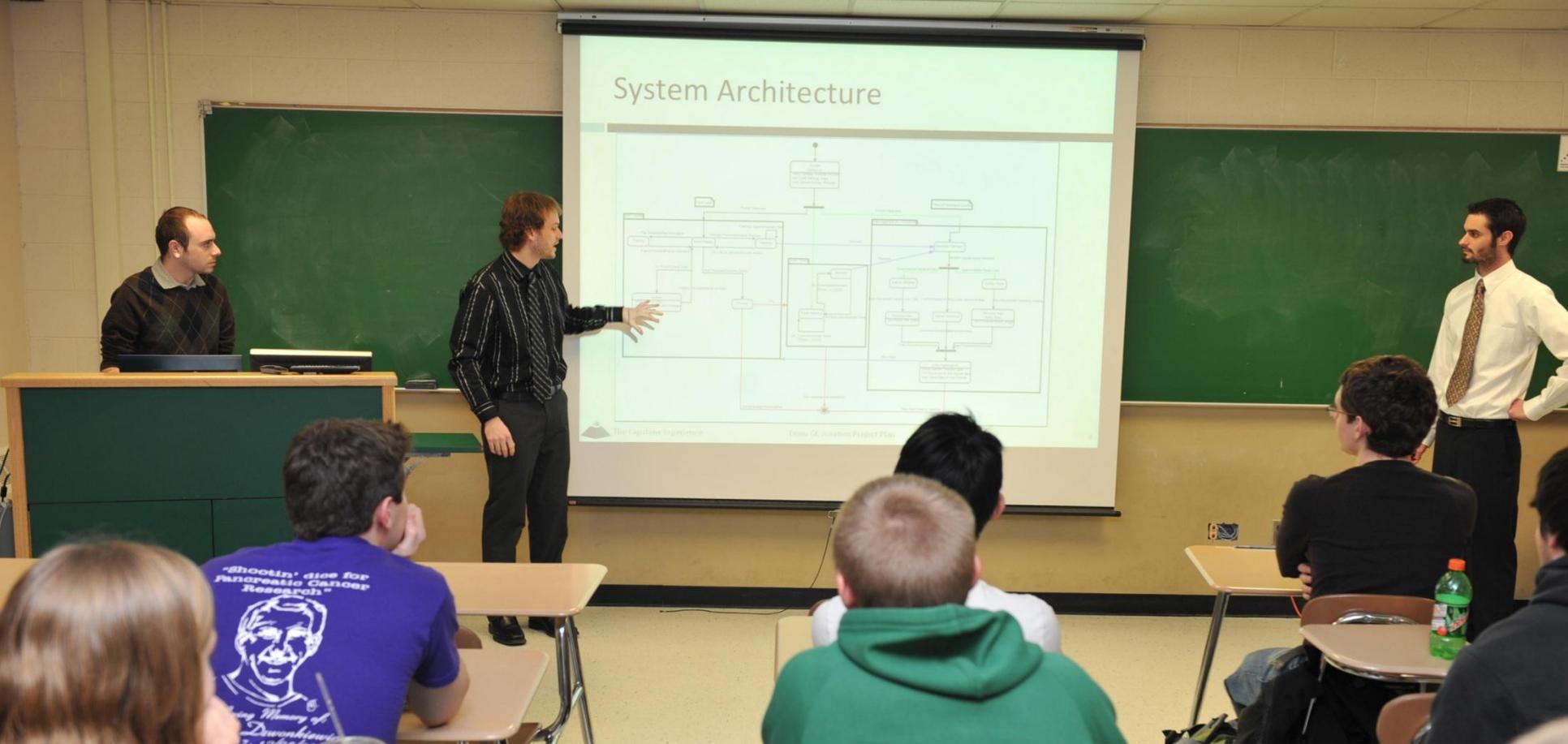
The Capstone Experience



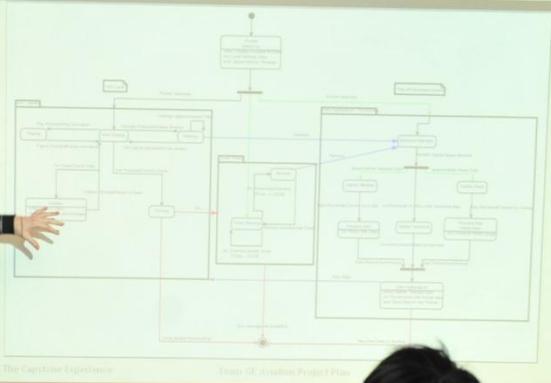
Team GE Aviation Project Plan Presentation

Screen Mockup





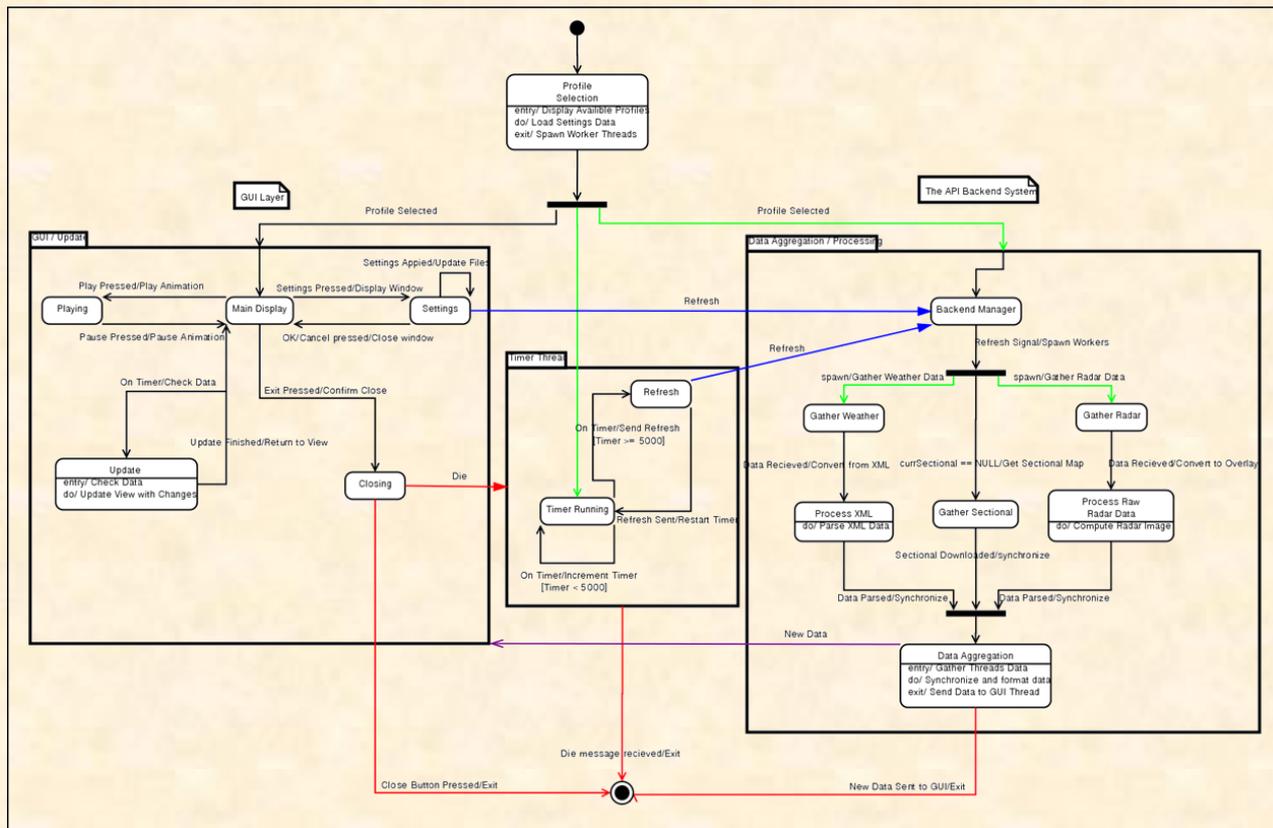
System Architecture



Team GE Aviation
Project Plan Presentation

Team GE Aviation Project Plan Presentation

Architecture Diagram



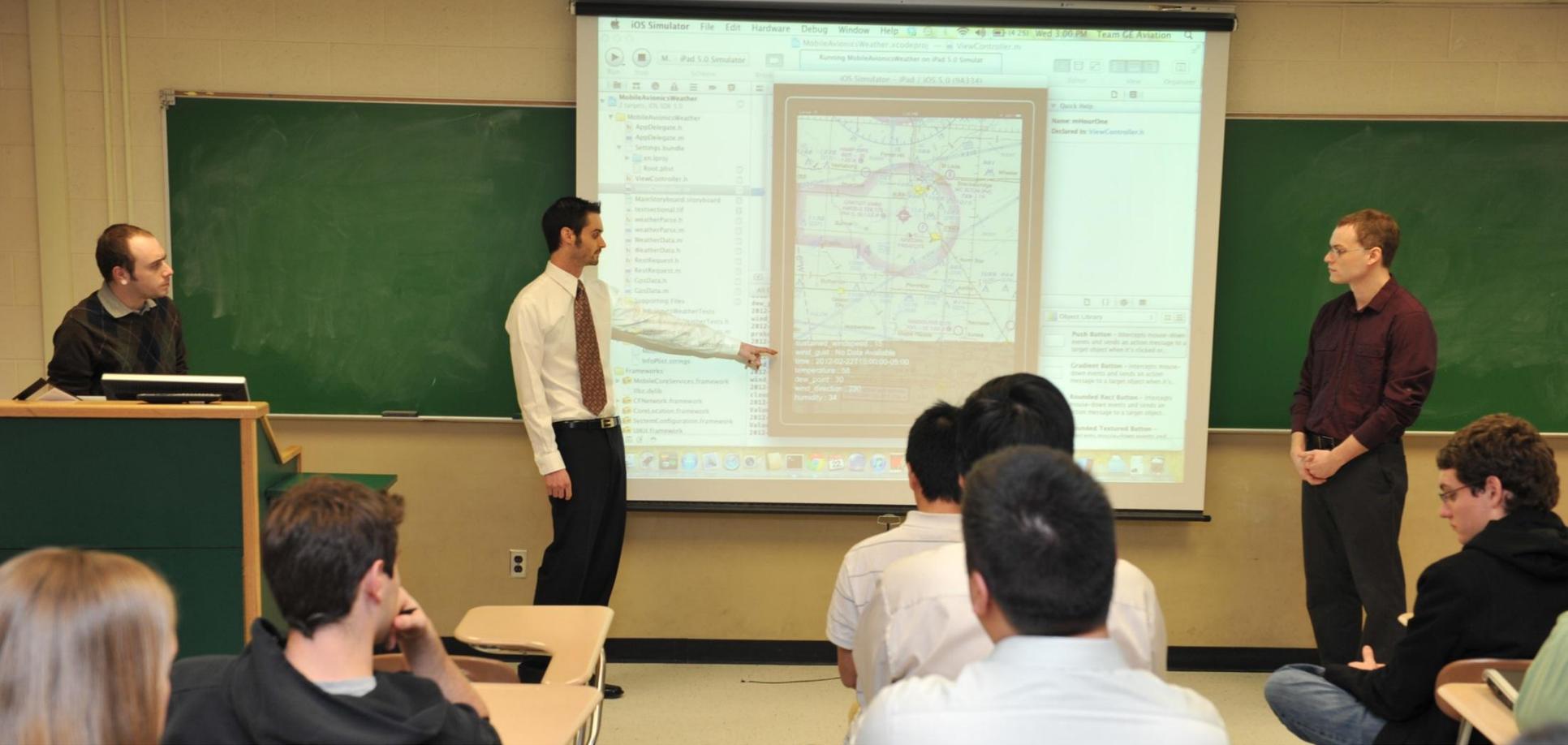


Team GE Aviation Alpha Presentation

Team GE Aviation Alpha Presentation

Main View

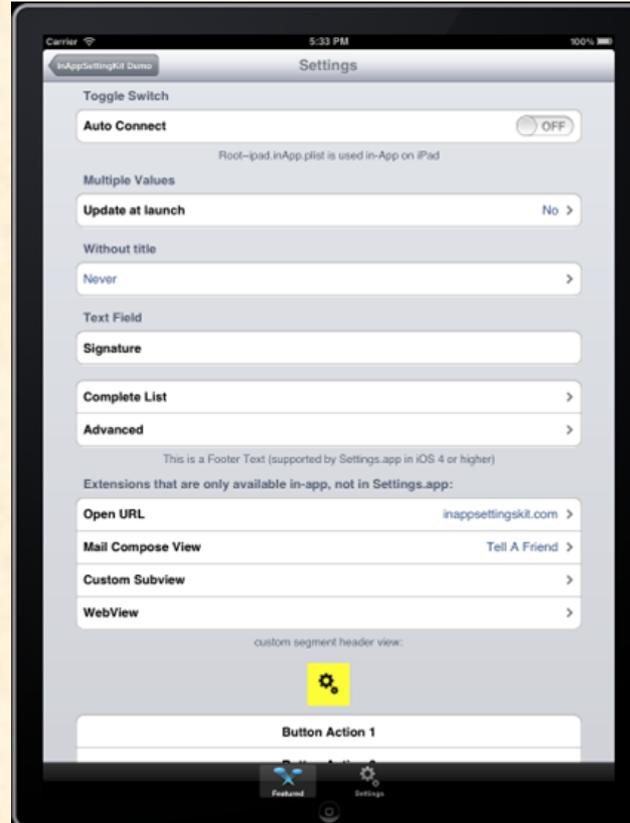




Team GE Aviation Alpha Presentation

Team GE Aviation Alpha Presentation

Main View

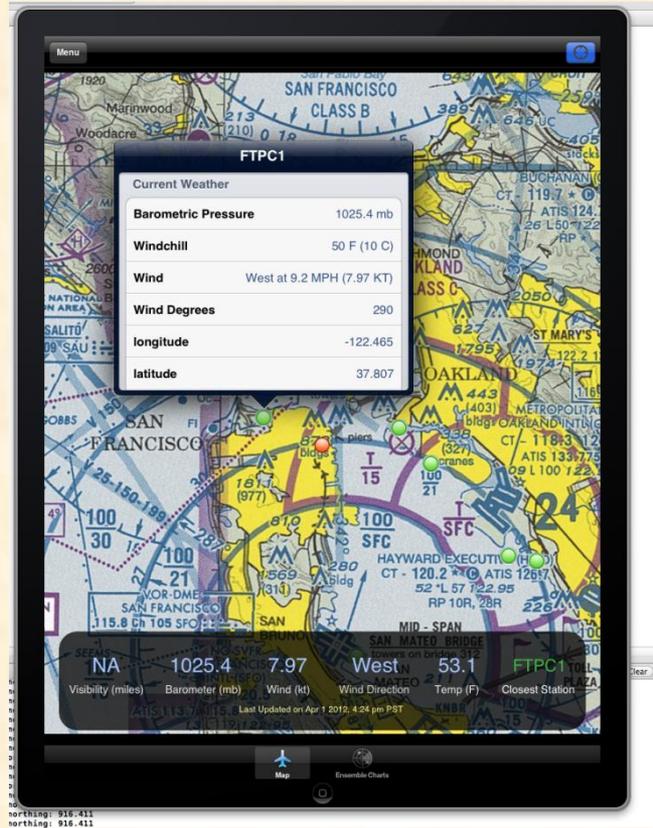




Team GE Aviation Beta Presentation

Team GE Aviation Beta Presentation

Map View

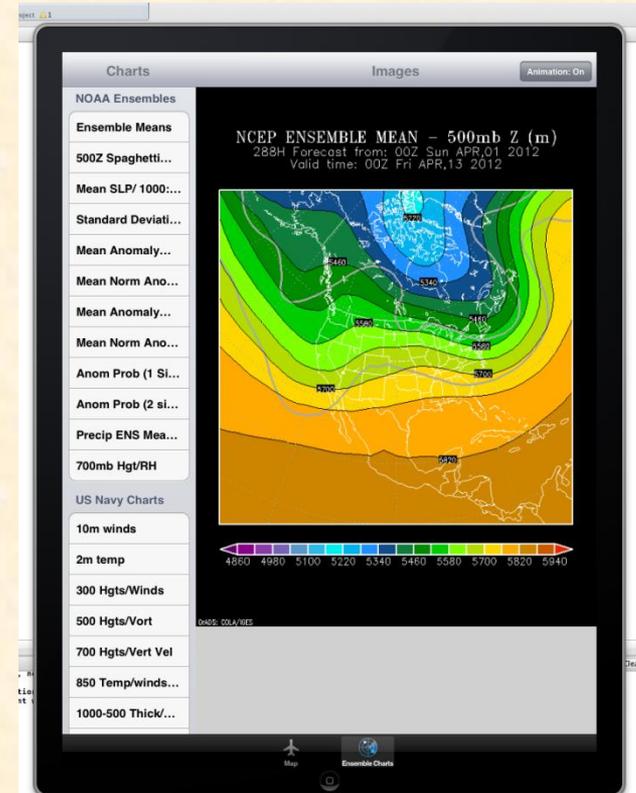
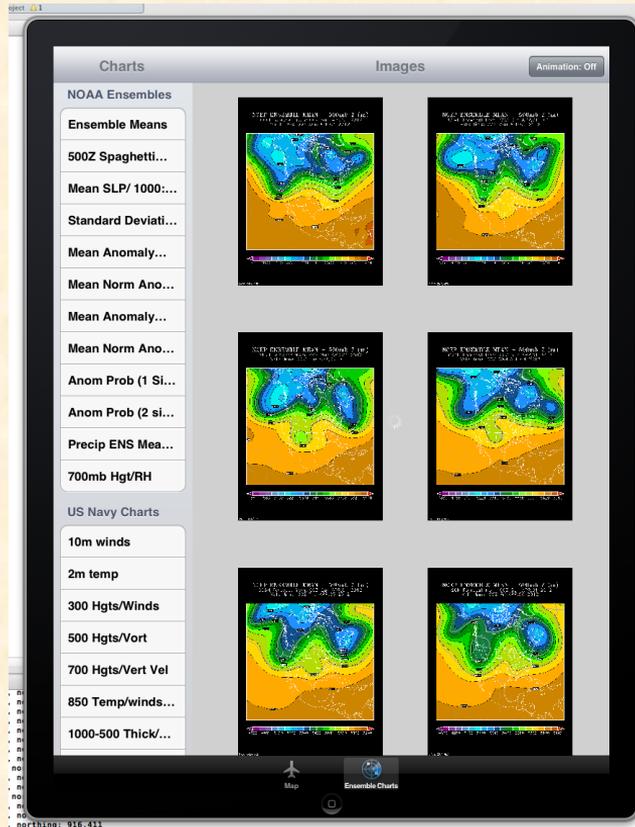


The Capstone Experience



Team GE Aviation Beta Presentation

Main Ensemble View

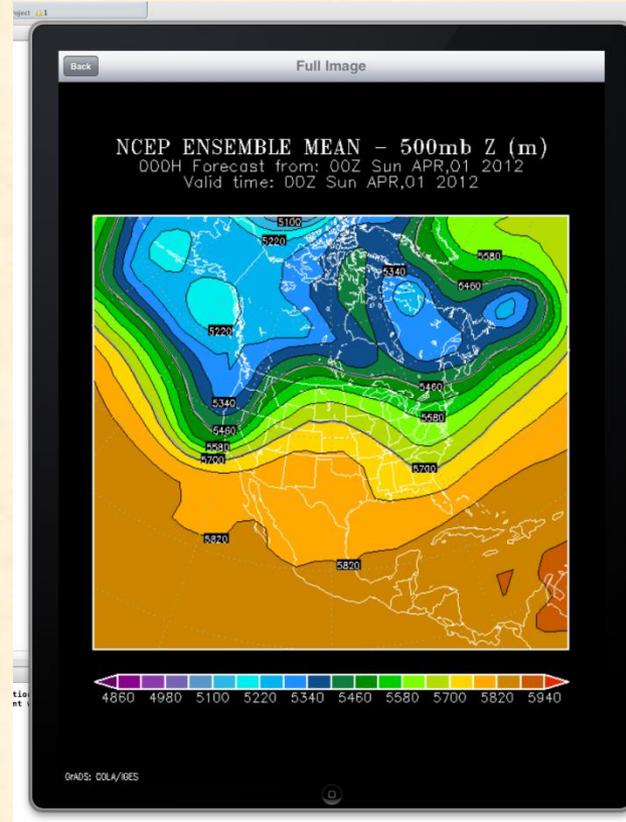


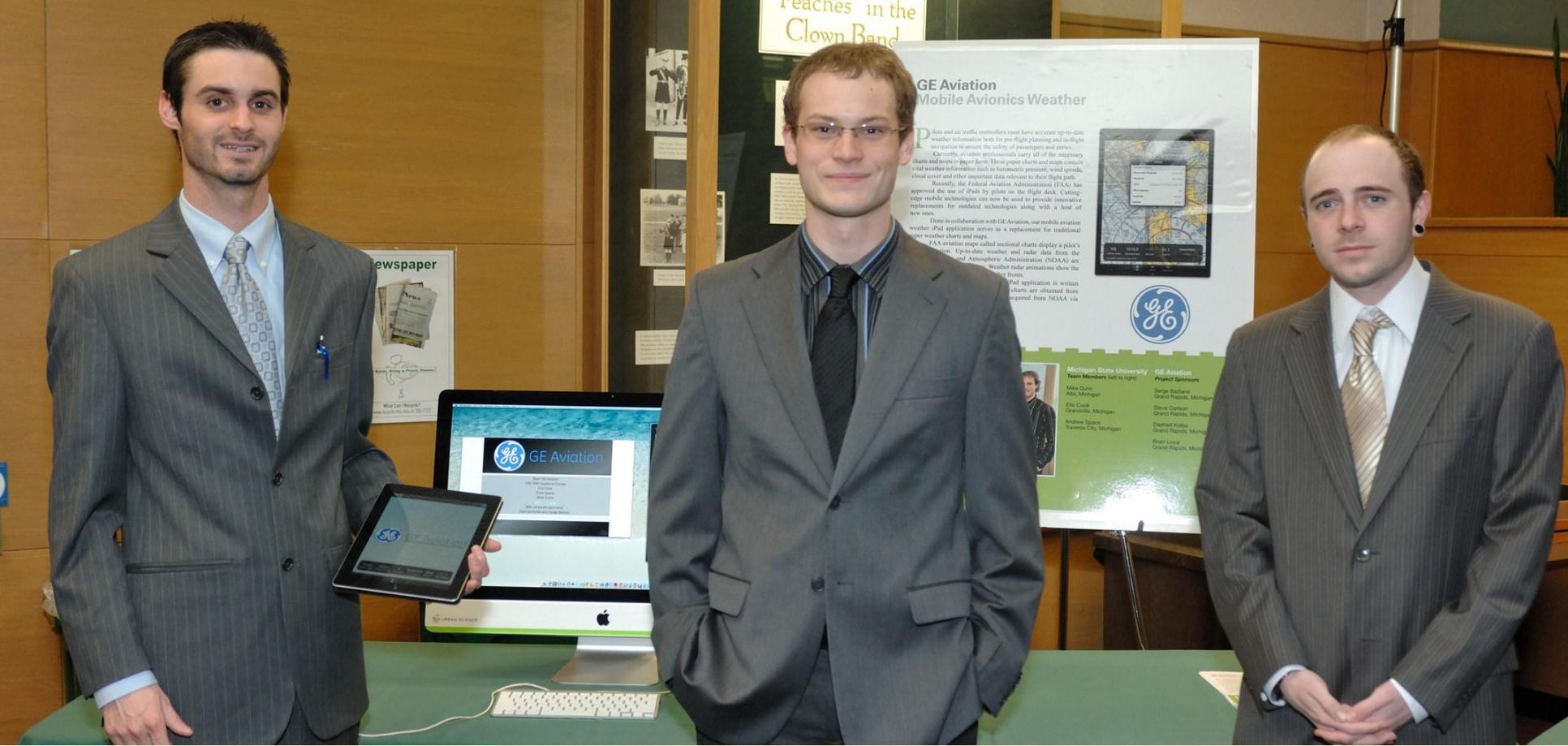


Team GE Aviation Beta Presentation

Team GE Aviation Beta Presentation

Full Screen Ensemble View





Team GE Aviation
Design Day

MICHIGAN STATE

U N I V E R S I T Y

The Capstone Experience

Team Meijer

Department of Computer Science and Engineering
Michigan State University
Spring 2012



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...to Professionals*

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Order Status
Your Account

Pharmacy
Photo
Wish List
More... ▾

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You Can Still Order Select Items
to Arrive by Christmas! Shop Now ▶



ALL DEPARTMENTS

The Holiday Shop ▶

Baby & Toddler ▶

Clothing & Accessories ▶

Crafts & Art Supplies ▶

Electronics & Computers ▶

Furniture & Home ▶

Garden & Outdoor ▶

Gift Cards ▶

Grocery ▶

Health & Beauty ▶

Home Improvement ▶

Jewelry & Watches ▶

Kitchen & Dining ▶

Pet Supplies ▶

Sporting Goods ▶

Team Fan Shop ▶

SEARCH



View Cart/Checkout

0 items

\$0.00

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Team Meijer Project Overview

Food Safety Audits and Reports

- Functionalities
 - Food Safety Inspection System
 - Used by Meijer Team Members
 - For Meijer Stores
- Features
 - HTML5-Based Web App
 - Support Touchscreen Tablets
 - iPad
 - Android
 - Various User Levels
 - Store Director Audit
 - Store Assessment
 - Store Audit
- Technologies
 - Microsoft SQL Server 2008 R2, SQL Server Reporting Services
 - Microsoft C#/.NET
 - CSS, HTML 5
 - XML (Extensible Markup Language)
 - SOAP (Simple Object Access Protocol)



meijer[®]

Grand Rapids, Michigan





Team Meijer

Kyle Hine, WooSeok Chung, Patrick Bruening



Screen Mockup: Inspection Screen

PERSONNEL INFORMATION

Request No.	Requester Name	Requester Title	Requester Email
Request Date	Requester Agency	Requester Phone	Requester Fax
Case #	Requester Address	Requester City	Requester State
Requester Code	Requester Zip	Requester Country	Requester Filing Office

OTHER INFORMATION

Request Type	Request Category	Request Subcategory	Request Status
Request Priority	Request Urgency	Request Complexity	Request Difficulty
Request Impact	Request Scope	Request Duration	Request Budget
Request Risk	Request Compliance	Request Security	Request Privacy

PROJECT INFORMATION

Item	Start Date	End Date	Status
Item 1	2010-01-01	2010-01-31	Completed
Item 2	2010-02-01	2010-02-28	In Progress
Item 3	2010-03-01	2010-03-31	Not Started
Item 4	2010-04-01	2010-04-30	On Hold
Item 5	2010-05-01	2010-05-31	Cancelled

Team Meijer
Project Plan Presentation

Team Meijer Project Plan Presentation

Screen Mockup

REGULATORY INSPECTIONS

Region Title Inspection Agency Total Violations

Market Title Inspection Agency Other Desc. Critical Violations

Unit # Area of Inspection Non-Critical Violations

Inspection Date Inspection Type Complaints

Seizure

Sample

Critical Voilations/Complaints

Temperature Control

Cleaning/Sanitizing

Pest Control

Ingredient Labeling

Food Safety Date/Rotation

Hygiene

Cross Contamination

Plumbing

	Deli	Food Service	Meat	Produce	Bakery	Seafood	Grocery	Gas Station	Vendor	Descriptions
<input type="checkbox"/>										
<input type="checkbox"/>										
<input type="checkbox"/>										
<input type="checkbox"/>										
<input type="checkbox"/>										
<input type="checkbox"/>										
<input type="checkbox"/>										
<input type="checkbox"/>										
<input type="checkbox"/>										

Cool Inspection

Fruits

Nuts

Vegetables

Fish & Starfish

Beef & Veal

Pork

Chicken

Lamb & Goat

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Descriptions
<input type="checkbox"/>																	
<input type="checkbox"/>																	
<input type="checkbox"/>																	
<input type="checkbox"/>																	
<input type="checkbox"/>																	
<input type="checkbox"/>																	
<input type="checkbox"/>																	
<input type="checkbox"/>																	
<input type="checkbox"/>																	



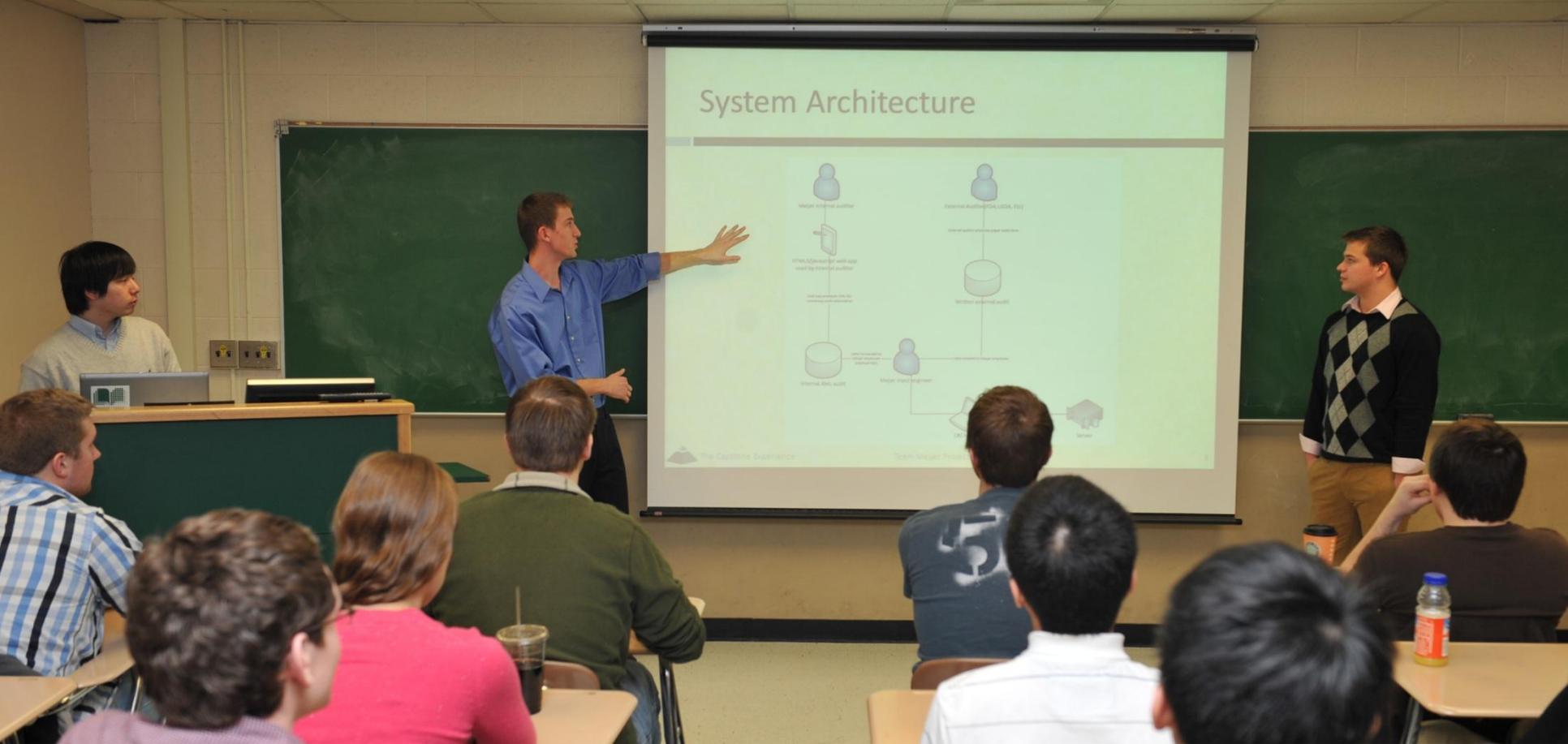
Team Meijer Project Plan Presentation

Screen Mockup

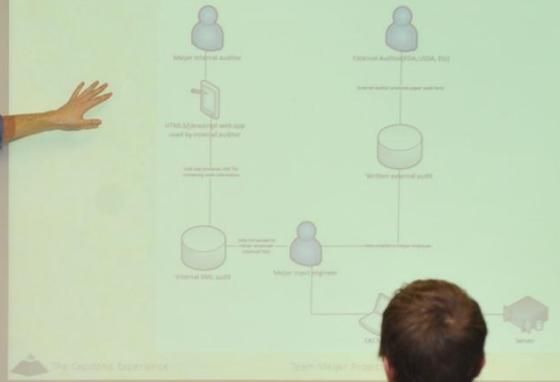
Non Critical Descriptions	<input type="text"/>					
Seizure Descriptions	<input type="text"/>					
Sample Descriptions	<input type="text"/>					
Other Descriptions	<input type="text"/>					

Dropdown Values	Agency	InspectionType	Temp Control	Cleaning/Sanitizing	Pest	Hygiene	Cross Contamination
State Department of Agriculture	30-Day	Hot holding	Cleaning of food surfaces	Birds	Hand washing	Food handling	
County Health Department	Complaint	Cold holding	Cleaning of equipment	Flies	Glove use	Food equipment	
City Health Department	Consultation	Cooling procedures	Storage of chemicals	Fruitflies/Gnats	Uniform	Food storage	
Weights And Measures	Follow-Up	Reheating procedures	Sanitizing techniques	Moths	Hair restraints	Allergens	
USDA	Foodborne	Out of temperature foods	Chemicals misuse	Roaches	Eating/Drinking w/	Food prep techniques	
Meijer	Garden Center	Out of temperature equipment	Mislabeling of sanitizer/chemical	Rodents	Other	Mislabeling	
Other	Opening	Out of temp deli	Meat Grinder	Ants		Bare hand Contact	
	Pre-Licensing	Prepackaged	Timely Cleaning	Other		Drain Lines	
	Pricing/Weights	Other	Other			Other	
	Standard						
	Temporary						
	Cool						
	Egg Board						
	Seizure						
	Vendor						
	Internal Audit						
	Sample						
	Other						





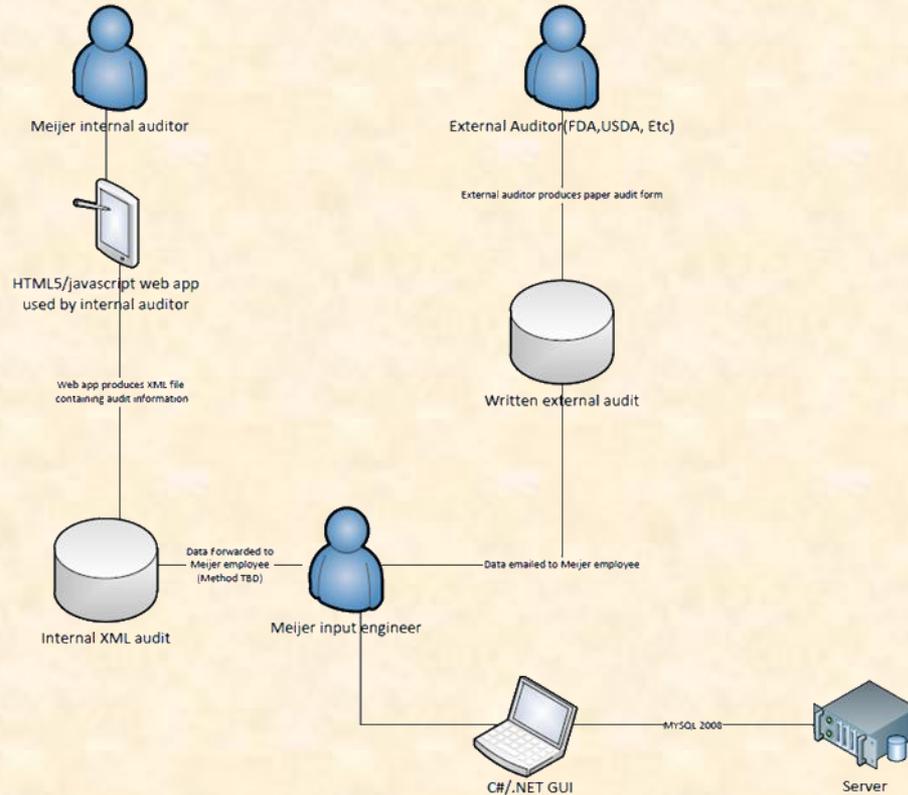
System Architecture



Team Meijer
Project Plan Presentation

Team Meijer Project Plan Presentation

Architecture Diagram





Team Meijer Alpha Presentation

Team Meijer Alpha Presentation

Temperature Controls

Meijer Internal Audit Form

Produce	
Cut Fruit	41
Fresh Room	41
Solid Wall	37
Other	43

 Audit Info	 Produce	 Deli	 Meat	Seafood	Score
--	---	--	--	---------	-------





What's left to do?

- Visualize Reports
- Finalize Tablet Interface
- Full XML Loading Support
- Client Feedback

The Customer Experience

Team Meijer Alpha Presentation

Team Meijer
Alpha Presentation

Team Meijer Alpha Presentation

Web Dashboard

Cool Inspection

Type	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Descriptions
<input type="checkbox"/> Fruits	<input type="text"/>															1	<input type="text"/>
<input type="checkbox"/> Vegetables	<input type="text"/>															1	<input type="text"/>
<input type="checkbox"/> Nuts	<input type="text"/>															1	<input type="text"/>
<input type="checkbox"/> Fish and Shelfish	<input type="text"/>															1	<input type="text"/>
<input type="checkbox"/> Beef and Veal	<input type="text"/>															1	<input type="text"/>
<input type="checkbox"/> Hygiene	<input type="text"/>															1	<input type="text"/>
<input type="checkbox"/> Pork	<input type="text"/>															1	<input type="text"/>
<input type="checkbox"/> Chicken	<input type="text"/>															1	<input type="text"/>
<input type="checkbox"/> Lamb and Goat	<input type="text"/>															1	<input type="text"/>

NonCritical Descriptions

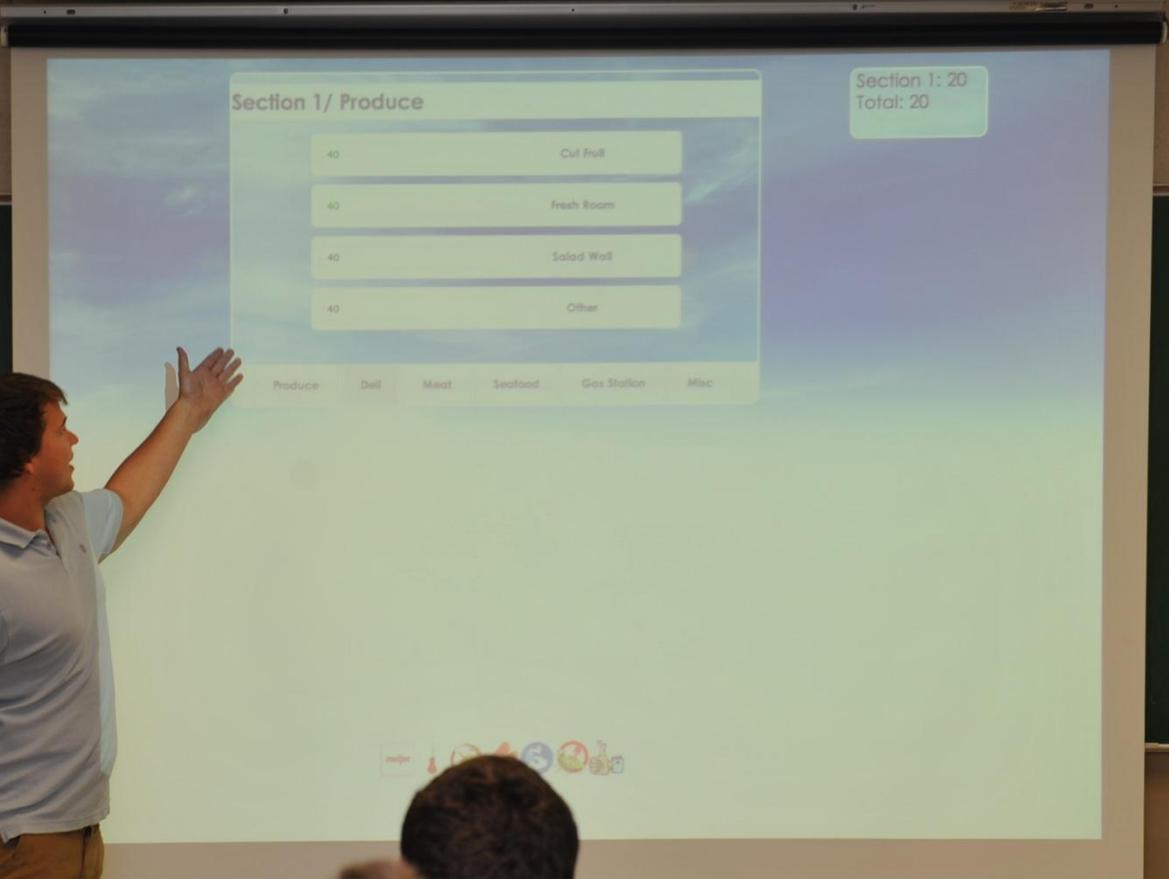
Seizure Descriptions

Sample Descriptions

Other Descriptions

Submit





Team Meijer
Beta Presentation

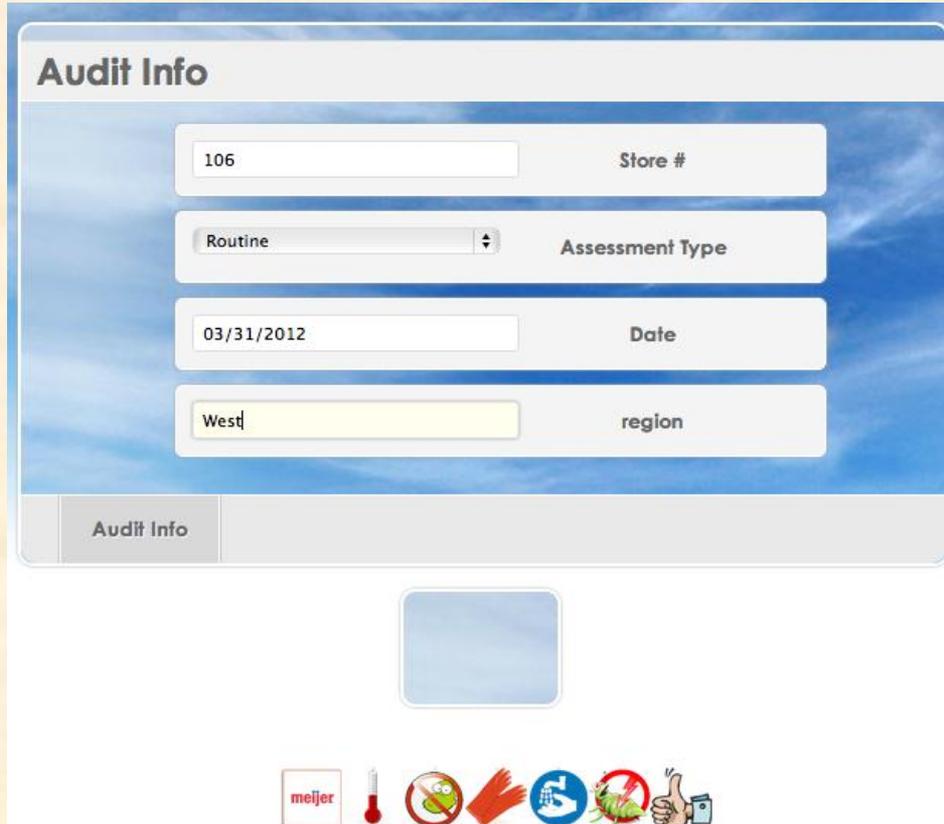
Team Meijer Beta Presentation

Splash Screen

Audit Info

<input type="text" value="106"/>	Store #
<input type="text" value="Routine"/>	Assessment Type
<input type="text" value="03/31/2012"/>	Date
<input type="text" value="West"/>	region

Audit Info



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Team Meijer Beta Presentation

Temperature Controls

Cold Chain Management

Section 1/ Deli

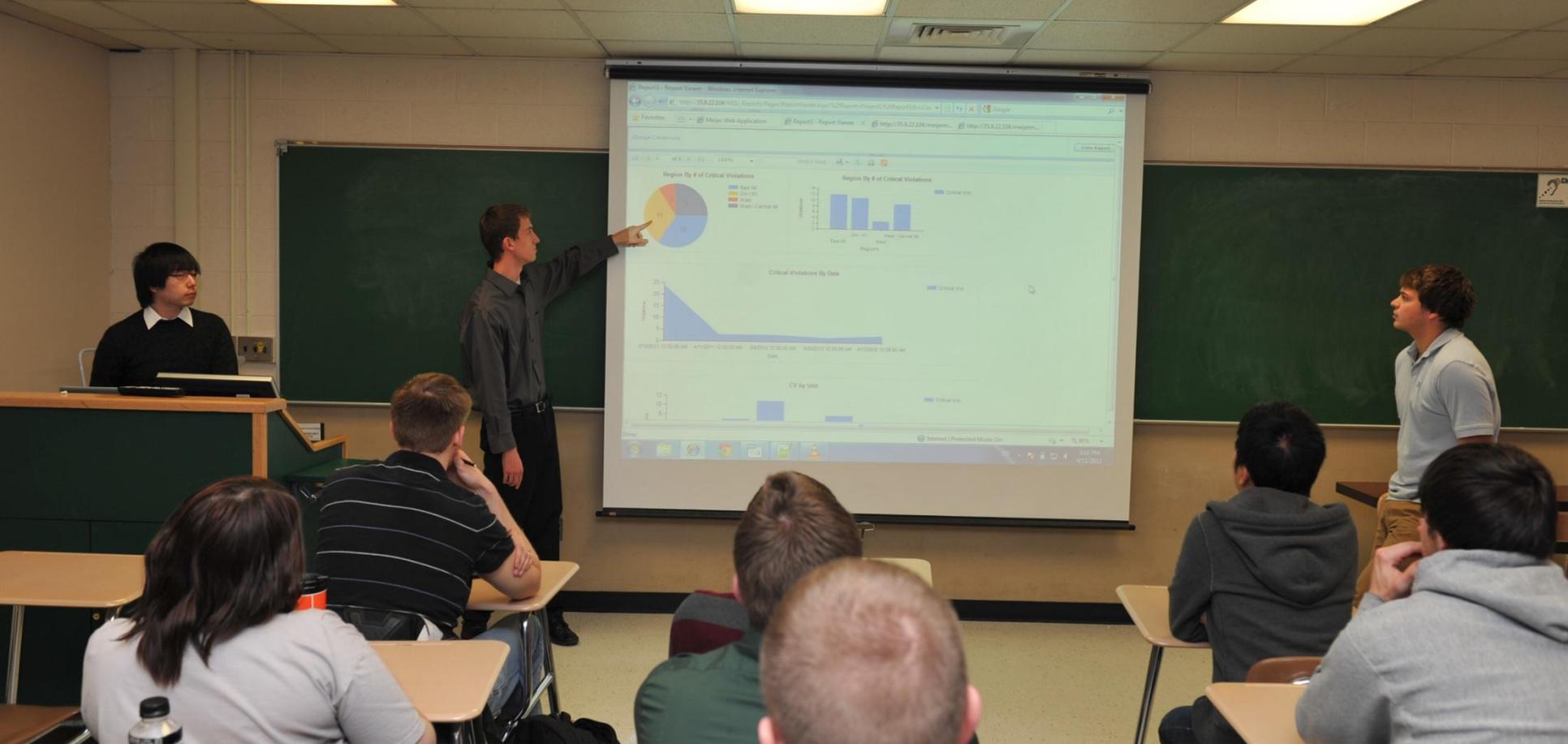
<input type="text" value="40"/>	Service Case 1
<input type="text" value="29"/>	Service Case 2
<input type="text" value="Temp F"/>	Cheese Wall
<input type="text" value="Temp F"/>	Other

Produce **Deli** Meat Seafood Gas Station Misc

10





Team Meijer Beta Presentation

Team Meijer Beta Presentation

Web Dashboard



Main Menu

Load

REGULATORY INSPECTION

Region Title	<input type="text" value="Northern"/>	Inspection Agency	<input type="text" value="City HD"/>	Total Violations	2
Market Title	<input type="text" value="Indiana"/>	Inspection Agency Other Desc.	<input type="text"/>	Critical Violations	2
Unit #	<input type="text" value="246"/>	Area of Inspection	<input type="text"/>	Non-Critical Violations	0
Inspection Date	<input type="text" value="3/31/2012 12:00:00 AM"/>	Inspection Type	<input type="text" value="Complaint"/>	Complaints	<input type="text"/>

Critical Violations

	Deli	Food Service	Meat	Produce	Bakery	Seafood	Grocery	Gas Station	Vendor	Descriptions
<input type="checkbox"/> Cold Chain Temperature Management	✗	✗	✗	✗	✗	✗	✗	✗	✗	<input type="text"/>
<input type="checkbox"/> Cleaning/Sanitizing	✗	✗	✗	✗	✗	✗	✗	✗	✗	<input type="text"/>
<input type="checkbox"/> Pest Control	✗	✗	✗	✗	✗	✗	✗	✗	✗	<input type="text"/>
<input type="checkbox"/> Food Safety	✗	✗	✗	✗	✗	✓	✗	✗	✗	<input type="text"/>
<input type="checkbox"/> Hygiene	✗	✗	✗	✗	✗	✗	✗	✗	✗	<input type="text"/>
<input type="checkbox"/> Contamination Control	✗	✗	✗	✗	✓	✗	✗	✗	✗	<input type="text"/>
<input type="checkbox"/> Plumbing	✗	✗	✗	✗	✗	✗	✗	✗	✗	<input type="text"/>

Food Safety / Seafood

- Date Marking
- Dented Cans
- Expired Formula
- Expired Product
- Recall
- Rotation
- Other

OK Check All Uncheck All





Meijer Food Safety Audits and Reports

Meijer is a family-owned chain of supermarkets committed to providing quality food and products to its customers. All across the Midwestern United States, health and food safety standards are an important part of the culture at Meijer.

Meijer has two types of health and food safety inspections, internal and external. Meijer employees complete internal audits with each department being graded with an effectiveness score. External audits are conducted by local, state, and food safety agencies like the USDA.

Currently, internal audits are done by paper and pencil. The resulting audits must be entered subsequently into a computer database. Safety violations are counted manually.

Our Food Safety Audits and Reports system replaces the pencil and paper system with a web-based system.

A tablet-based web application is used by internal inspectors within each store. Upon completion, the results of the inspections are automatically uploaded into Meijer's central health and food safety database.

A second web application is used by Meijer managers to view and print reports. The reports are generated by store, based on a specified date range. The reports can be viewed and printed.

Our web applications are written using HTML 5, Java Script, ASP.NET, and C#. Microsoft SQL Server 2008 is the database engine. Reports are generated using SQL Server Reporting Services.

er Standards
meijer
Lower Prices

Team Meijer Design Day

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The Capstone Experience

Team Motorola Mobility

Department of Computer Science and Engineering
Michigan State University
Spring 2012



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...to Professionals*



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Droid



ATRIX 2



Team Motorola Mobility Project Overview

Context Driven Content Delivery

- Functionalities
 - Provide Enhanced Television Program Information
 - Actor Biographies
 - Upcoming Actor Appearances on Talk Shows
 - Merchandise Seen on Show
 - Pushed to Mobile Devices
 - While Consumer Watches Content
 - Presented in Non-Intrusive Manner
- Features
 - End-to-End Framework
 - Extend Existing Sync Framework
 - Collect and Persist Contextual Data
 - Collect and Resolve Location Context and Content
 - Present Secondary Content to End User
 - Permit Authoring of Rules
 - Collect and Persist Application Usage
- Technologies
 - Android Development (Java)
 - Java (Servlets, JEE, JSE)
 - Web Development (RESTful, XML, JSON, JavaScript, jQuery)
 - Database (iBatis, Hibernate, MySQL)
 - Messaging using Active MQ
 - Hbase, Hadoop
 - Synchronized Program Content Delivery, Fall 2011



MOTOROLA

Libertyville, Illinois





Team Motorola Mobility
Jason Yi, Cory Harter, Linwei Zhu



Screen Mockups

Synchronized CompleteTV: Content Page



Capstone Experience Team Motorola Mobility Project Plan

Team Motorola Mobility Project Plan Presentation

Team Motorola Mobility Project Plan Presentation

Screen Mockup

Select Episode Watching: "MythBusters" My Account Favorites

Kari Byron

@bonniegrl @robogames Wish I could have gone. :)

@grantmahara Did you make it?

@jvnoon Couldn't have done it without the amazing Vex team!! Thank you.

@kentkb Love my dog but be prepared. Generally they are impossible to fully housebreak.

@VEXRobotics It was an amazing event. Proud to be a part of it.

@henrylewis77 Where?

Grant Imahara

@bonniegrl @501stlegion @elmotk Awesome, thanks!

@501stLegion BTW @KimEvey is a friend of mine and @theguild is an excellent series.

@501stLegion RT @KimEvey: Anybody know 501st members in LA/OC area? Pls email watchtheguild at gmail dot com; I have a favor to ask... :)

MythBusters Wikipedia Article	MythBusters IMDb Page	Jamie Hyneman Wikipedia Article	Science Channel Home Page	IMDb - Grant Imahara
Mythbusters: Big Blasts Collection DVD	IMDb - Adam Savage	MythBusters Video - Surfing With Dynamite	Science Channel's Wonders of the Solar System Videos	Amazon - MythBusters Book on Urban Legends
MythBusters - Crash and Burn	MythBusters Video - Exploding Water Heater	MythBusters Experiment Kit	Monster Bug Wars Video: Assassin Bug	MythBusters Video - Fun With Gas
IMDb - Jamie Hyneman	MythBusters Video - Jump Start a Car	MythBusters Video - Diet Coke & Mentos	Science Channel's How It's Made Main Page	Mythbusters - Walking on Water

Show: AI

Logged in as: hoolrory

Logout

- Mythbusters: Big Blasts Collection DVD
- MythBusters Video - Surfing With Dynamite
- Science Channel's Wonders of the Solar System
- IMDb - Adam Savage

Living Room

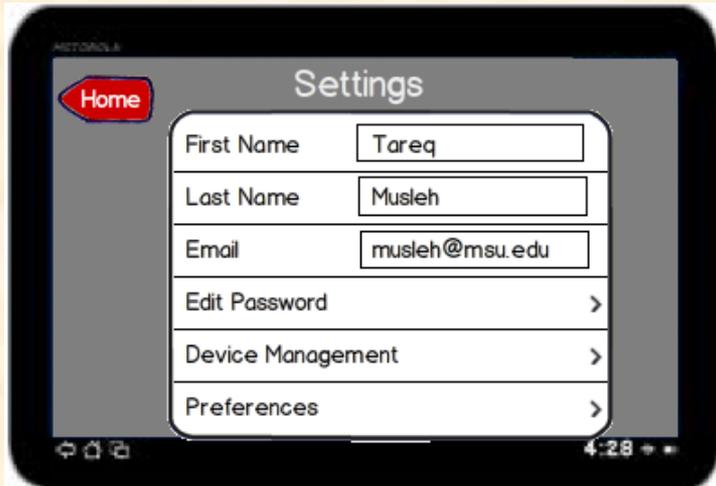
Bedroom

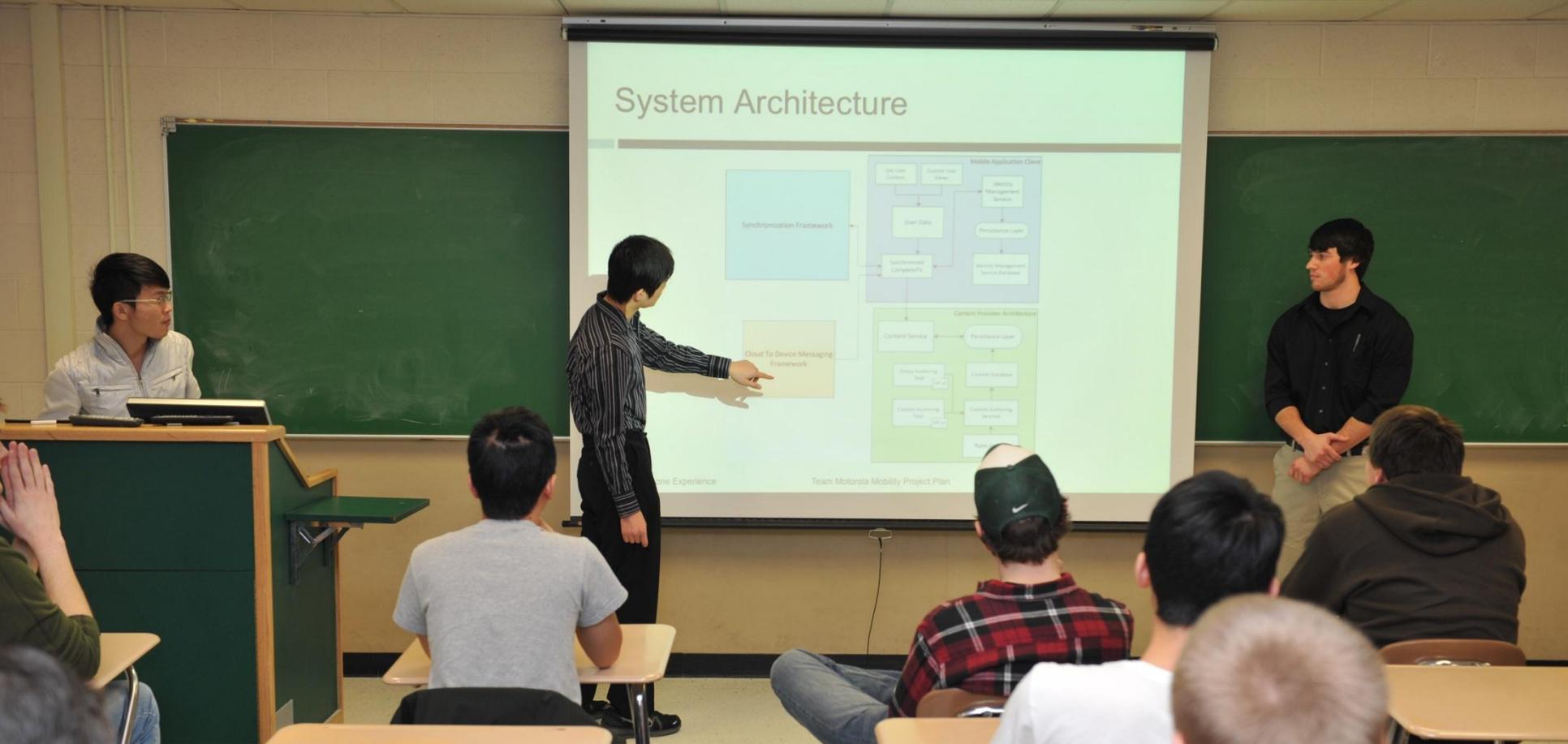
Basement

Audio Sync

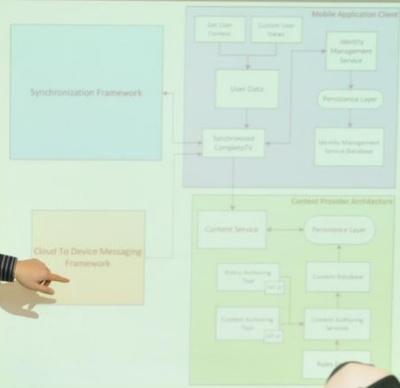
Team Motorola Mobility Project Plan Presentation

Screen Mockup





System Architecture

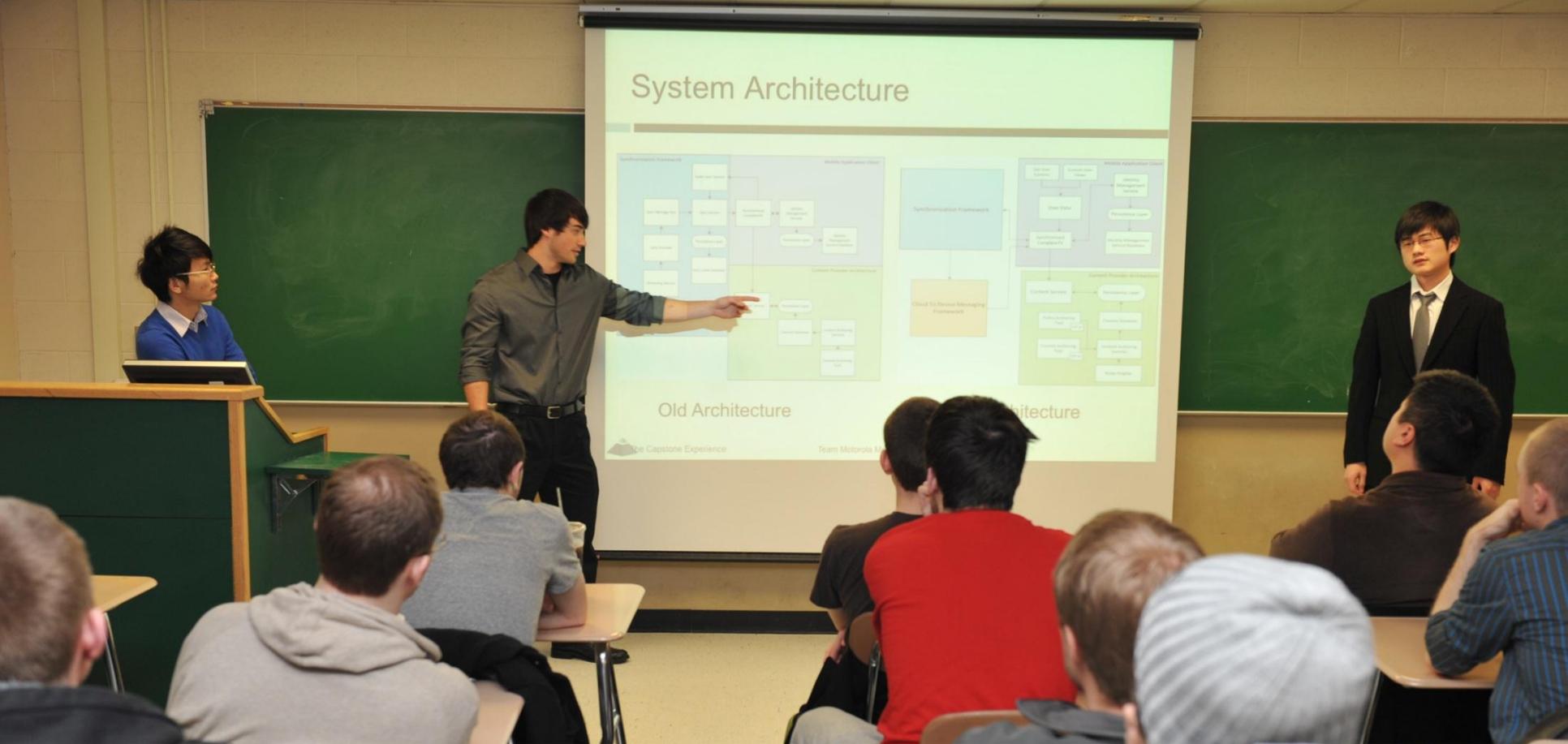


Team Motorola Mobility Project Plan Presentation

Team Motorola Mobility Project Plan Presentation

Architecture Diagram

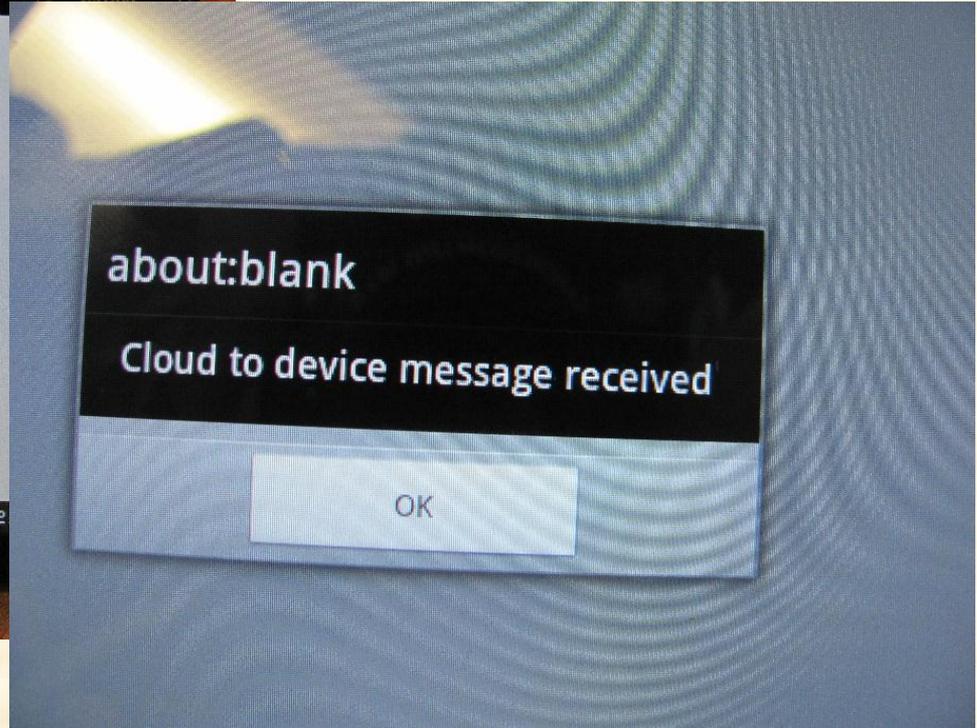
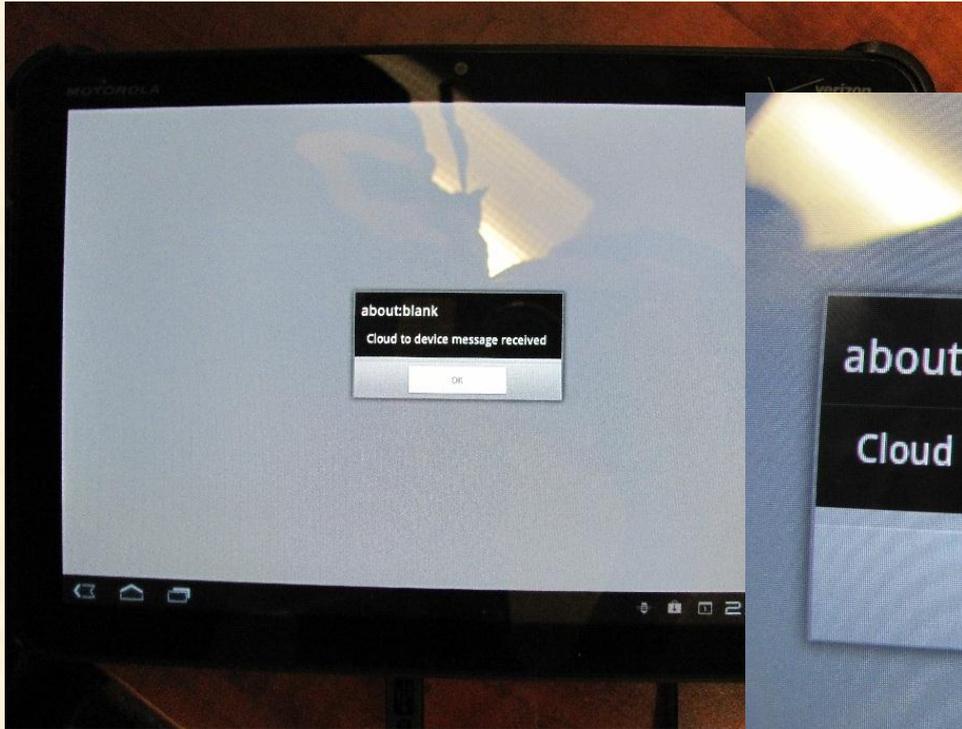




Team Motorola Mobility
Alpha Presentation

Team Motorola Mobility Alpha Presentation

Cloud to Device Messaging



What's left to do?

- Cloud 2 Device Messaging
 - Testing
 - Finishing touches
- Content Authoring Tool v2
 - Testing
 - Finishing touches
- Rules Engine
 - Not yet begun
 - Research DROOLS
 - Business Rules Management System
 - Implementation

Capstone Experience

Team Motorola Mobility

Team Motorola Mobility
Alpha Presentation

Team Motorola Mobility Alpha Presentation

Content Authoring Tool V2

The screenshot displays the Motorola Mobility Content Authoring Tool V2 interface. The browser address bar shows the URL `localhost:8080/content-authoring-tool`. The page header includes the Motorola Mobility logo, the title "Content Authoring Tool", a "Logout" link, and the text "Currently Logged in as:". Below the header is a navigation menu with tabs for "Home", "Secondary Content Management", "Feed Management", and "Association Management".

The main content area is divided into three sections:

- Feeds:** Contains a "Create" button, "Edit" and "Delete" buttons, and a search icon. A single feed entry is visible: "Mythbusters: Big Blasts Collection DVD".
- Content associated with Mythbusters: Big Blasts Collection DVD:** A list of associated content items, each with an orange square icon:
 - MythBusters Book - Don't try this at home
 - Mythbusters - Walking on Water
 - MythBusters - Crash and Burn
- Search for Secondary Content:** A search bar with a search icon and a settings gear icon. Below it is a scrollable list of content items, each with a green plus icon:
 - Drop Box
 - Mythbusters: Big Blasts Collection DVD
 - Jamie Hyneman Wikipedia Article
 - Adam Savage Wikipedia Article
 - Grant Imahara's Twitter Feed
 - Mythbusters - Walking on Water
 - Mythbusters' Official Twitter Feed
 - Red Wings vs Colorado Fight
 - Adam Savage's Twitter Feed
 - Test 3
 - Angry Birds
 - Jamie Hyneman Wikipedia Article
 - Kari Byron's Twitter
 - MythBusters - Crash and Burn
 - MythBusters Book - Don't try this at home
 - Science Channel Home Page
 - MythBusters Schedule on Science Channel
 - Monster Bug Wars Video: Assassin Bug
 - Science Channel's Wonders of the Solar System Videos
 - Science Channel's How It's Made Main Page





Team Motorola Mobility Beta Presentation

Team Motorola Mobility Beta Presentation

CompleteTV App



The Capstone Experience



Team Motorola Mobility Beta Presentation

Updated Feed Management

The screenshot displays the Motorola Mobility Content Authoring Tool interface. At the top, the Motorola logo and 'MOTOROLA MOBILITY' are on the left, and 'Content Authoring Tool' is in the center. On the right, there is a 'Logout' link and 'Currently Logged in as:'. Below the header is a navigation bar with tabs: 'Home', 'Secondary Content Management', 'Feed Management', and 'Association Management'. The 'Feed Management' tab is active.

Below the navigation bar, there are three buttons: 'Create', 'Edit', and 'Delete'. A search box labeled 'Search for Feed Content' is positioned below these buttons. To the right of the search box is a section titled 'Associated Secondary Content For Selected Feed'. This section contains a table with two columns: the first column lists feed names, and the second column lists associated secondary content items, each with a red 'X' icon for removal.

Feed Name	Associated Secondary Content
Everybody Loves Raymond - General Feed	IMDB - James Lipton
The Simpsons - General Feed	IMDB - The Simpsons - Homer The Father
Home Improvement - General Feed	Homer Simpson Facebook Page
Looney Toons - General Feed	Amazon - Simpsons - Season 22
Everybody Loves Raymond - The Shower Feed	Hulu - Homer the Father Clip
Everybody Loves Raymond - The Last Laugh Feed	
Home Improvement - Haunting of Taylor House Feed	
Home Improvement - Sisters and Brothers Feed	
The Simpsons - Homer The Father Feed	
The Simpsons - Boy Meets Curl Feed	

Below the 'Associated Secondary Content' table is a search box labeled 'Search for Secondary Content'. To the right of this search box is a list of search results, each with a small icon representing the content source and a text description of the content.

- Amazon - The Simpsons: Complete First Season
- Hulu - Simpsons Curling Clip
- Amazon - Sure Shot Curling Stick
- YouTube - Space Jam Trailer
- IMDB - James Lipton
- YouTube - Everybody Loves Raymond - Funny Moments
- YouTube - The Simpsons - Movie Trailer
- YouTube - Everybody Loves Raymond - Shower Clip
- YouTube - Everybody Loves Raymond - Last Laugh Clip
- YouTube - Home Improvement - Sisters and Brothers Clip
- Amazon - Everybody Loves Raymond - Complete Series
- Amazon - Everybody Loves Raymond: Complete 9th Season
- Amazon - Home Improvement - Complete Second Season
- Wikipedia - Patricia Heaton Wikipedia Article
- Wikipedia - Ray Romano Wikipedia Article



Team Motorola Mobility Beta Presentation

Team Motorola Mobility Beta Presentation Updated Association Management

MOTOROLA MOBILITY Content Authoring Tool Logout Currently Logged in as:

Home Secondary Content Management Feed Management Association Management

Currently Selected Primary Content Change Primary Content

The Last Laugh
Interviews with the cast and producers, highlights from past seasons, and the last week of production.

Timeline View Feeds Secondary Content

Zoomed in on: 00:00:00 - 00:20:00

00:00:00 00:15:00

Search for Feed Content

- Everybody Loves Raymond - General Feed
- The Simpsons - General Feed
- Home Improvement - General Feed
- Looney Toons - General Feed
- Everybody Loves Raymond - The Shower Feed
- Everybody Loves Raymond - The Last Laugh Feed
- Home Improvement - Haunting of Taylor House Feed
- Home Improvement - Sisters and Brothers Feed
- The Simpsons - Homer The Father Feed
- The Simpsons - Boy Meets Curl Feed

The screenshot displays the Motorola Mobility Content Authoring Tool interface. At the top, there is a navigation bar with the Motorola logo and the text 'MOTOROLA MOBILITY Content Authoring Tool'. On the right side of the navigation bar, there is a 'Logout' link and a 'Currently Logged in as:' label. Below the navigation bar, there are several tabs: 'Home', 'Secondary Content Management', 'Feed Management', and 'Association Management'. The 'Association Management' tab is currently selected. The main content area shows 'Currently Selected Primary Content' with the title 'The Last Laugh' and a description: 'Interviews with the cast and producers, highlights from past seasons, and the last week of production.' There is a 'Change Primary Content' button on the right. Below this, there is a 'Timeline View' section. The timeline is a horizontal axis with a scale from 00:00:00 to 00:20:00. A blue bar indicates the current zoomed-in range. Several content items are placed on the timeline, each with a small icon and a red 'x' in the top right corner. The icons include a YouTube logo, an Amazon logo, a Facebook logo, and a green arrow pointing down. To the right of the timeline, there is a 'Feeds' section with a search bar and a list of feed items. The list includes various feeds such as 'Everybody Loves Raymond - General Feed', 'The Simpsons - General Feed', 'Home Improvement - General Feed', 'Looney Toons - General Feed', 'Everybody Loves Raymond - The Shower Feed', 'Everybody Loves Raymond - The Last Laugh Feed', 'Home Improvement - Haunting of Taylor House Feed', 'Home Improvement - Sisters and Brothers Feed', 'The Simpsons - Homer The Father Feed', and 'The Simpsons - Boy Meets Curl Feed'. Each item in the list has a small orange square icon to its left.





Motorola Mobility Context-Driven Content Delivery

As the mobile device market continues to grow, consumers are using smart phones and tablets more and more in everyday situations. Compared to the rapid innovations of most technology, the television viewing experience has hardly changed.

The Context-Driven Content Delivery system provides an interactive television experience. As the viewer is watching a television show, the CompleteTV Android application can display other forms of content relevant to what is currently playing on the television.

Content providers have the ability to market their products to targeted audiences by utilizing the system. For example, a content provider could set an advertisement for Walmart as soon as a character on television walks into a Walmart store.

The viewers can synchronize their mobile devices through their cable box at home or, if they are out of range of their cable box, through recording an audio sample from the program that is being viewed. The user also has the option to manually select the program from the Android application.

The Context-Driven Content Delivery system is created using Java along with the RESTful web framework and MySQL. Our mobile applications are written in Android for optimal user experience. These applications run on a Glassfish server and are optimized for the Android tablet device.



Michigan State University Team Members (left to right)

- Yudong Yi
Shenzhen, Guangdong, China
- Cory Harter
Holland, Michigan
- Limei Zhu
Hefe, China

Motorola Mobility Project Sponsors

- Kunal Shah
Libertyville, Illinois
- Kabe Vanderhaar
Libertyville, Illinois

Team Motorola Mobility Design Day

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The Capstone Experience

Team Mozilla

Department of Computer Science and Engineering
Michigan State University
Spring 2012



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...to Professionals*



mozilla

Firefox[®]

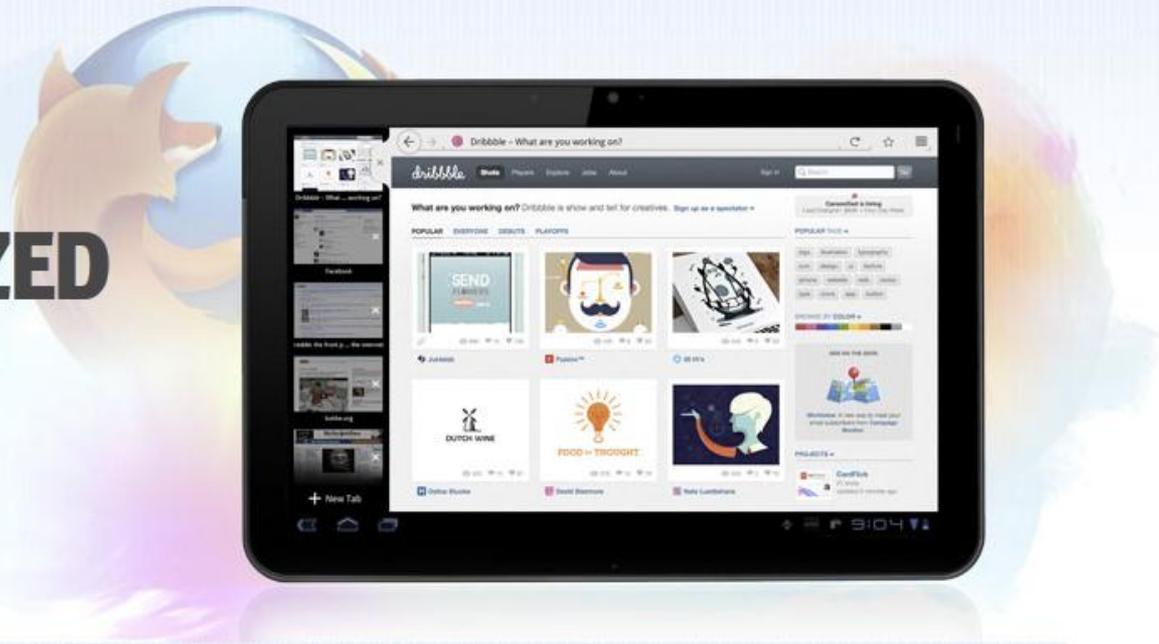


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Get Firefox

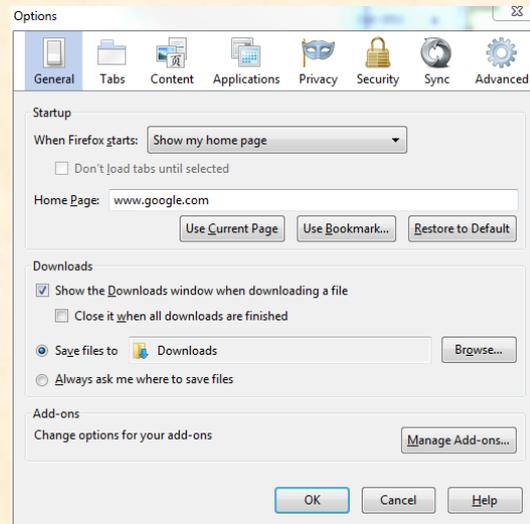
Share
FIREFOX

More Features. More Info.
MORE FIREFOX

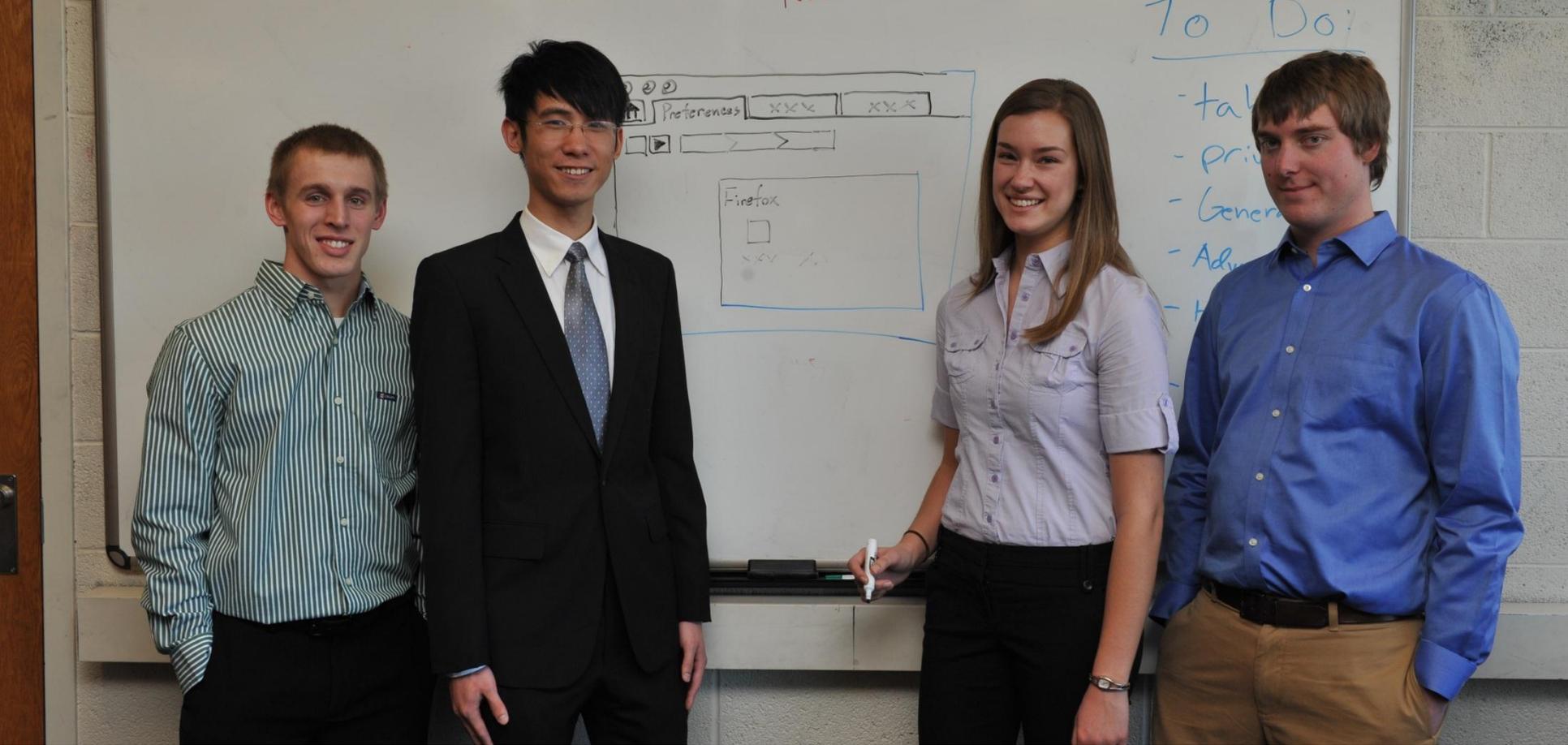
Team Mozilla Project Overview

In-Content Preferences for Firefox

- Functionalities
 - Set Firefox Preferences
 - Within Firefox Tab
 - Eliminate Popup Window
 - Use Content Area
- Features
 - Seamless User Experience Across Devices
 - Improve User Interface
 - Integration of all Customizations into Preferences
 - Add-On Manager
 - Toolbar Layout
- Technologies
 - CSS, HTML
 - XML User Interface Language (XUL)
 - JavaScript (Including New Language Features)
 - Mercurial
 - Bugzilla



Mountain View, California

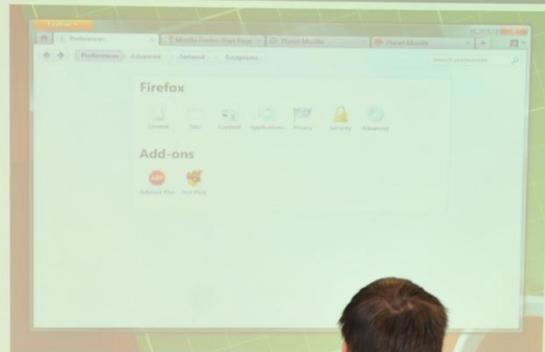


Team Mozilla

Jon Rietveld, Joe Chen, Devan Sayles, Owen Carpenter



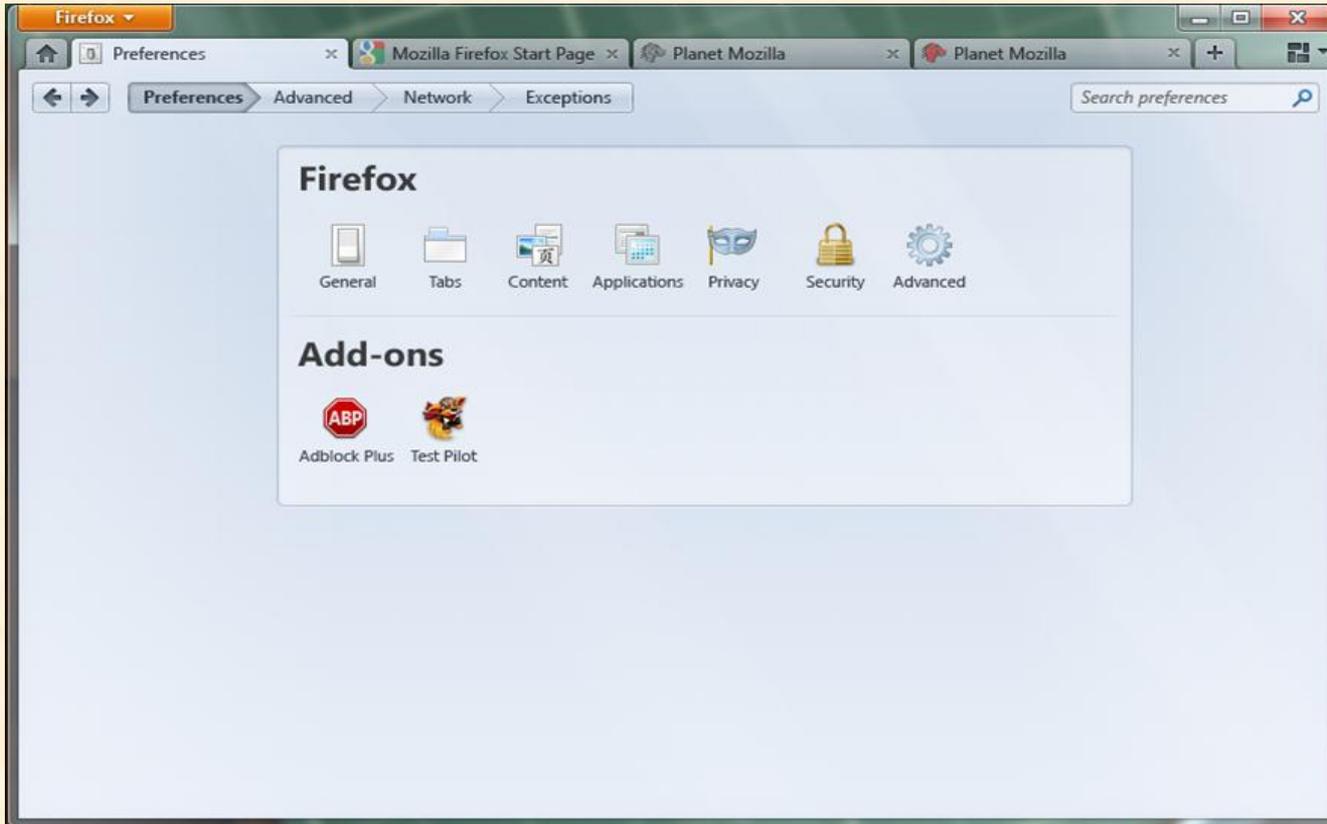
Screen Mockup: Windows



Team Mozilla
Project Plan Presentation

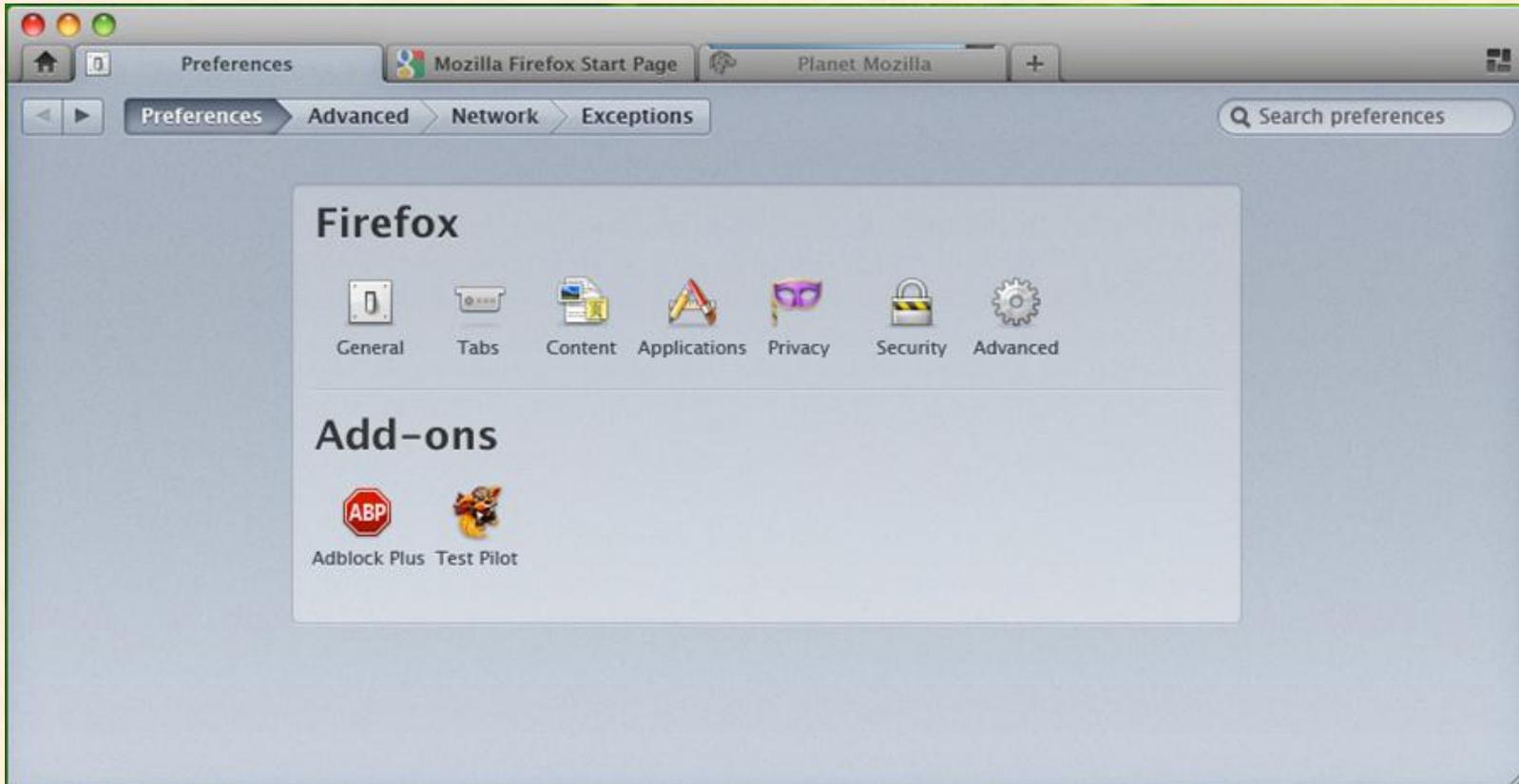
Team Mozilla Project Plan Presentation

Screen Mockup

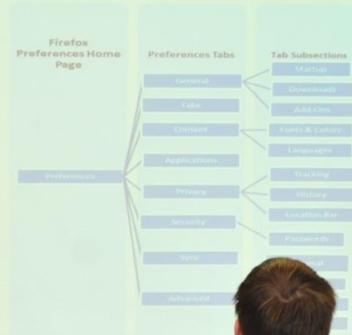


Team Mozilla Project Plan Presentation

Screen Mockup



Preferences Page Architecture



The Capstone Experience

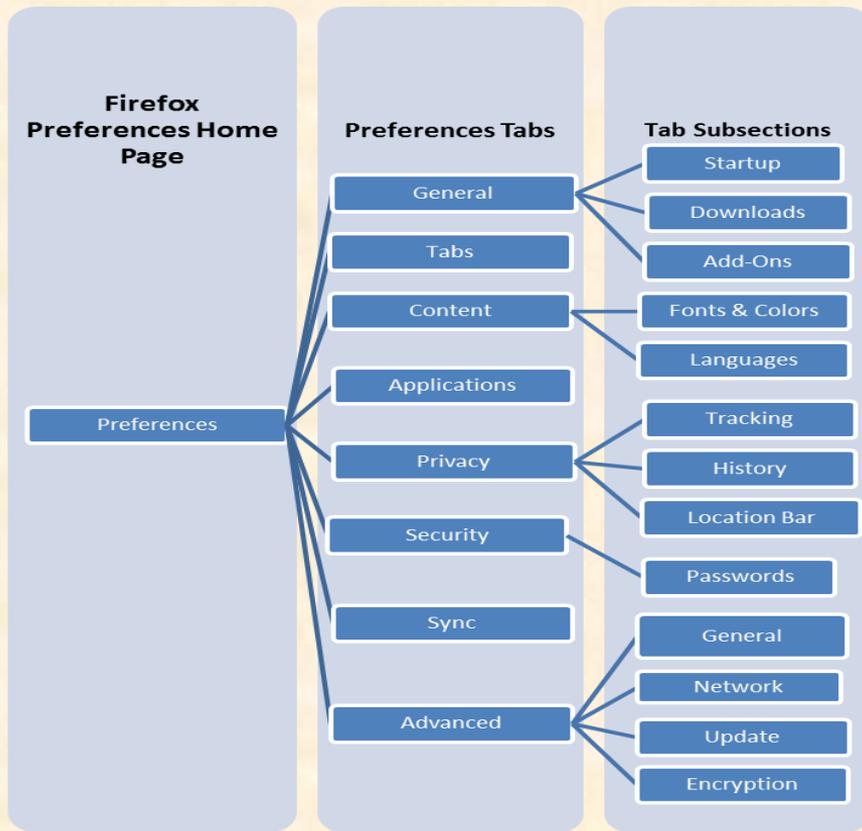
Team Mozilla Project

13

Team Mozilla
Project Plan Presentation

Team Mozilla Project Plan Presentation

Architecture Diagram

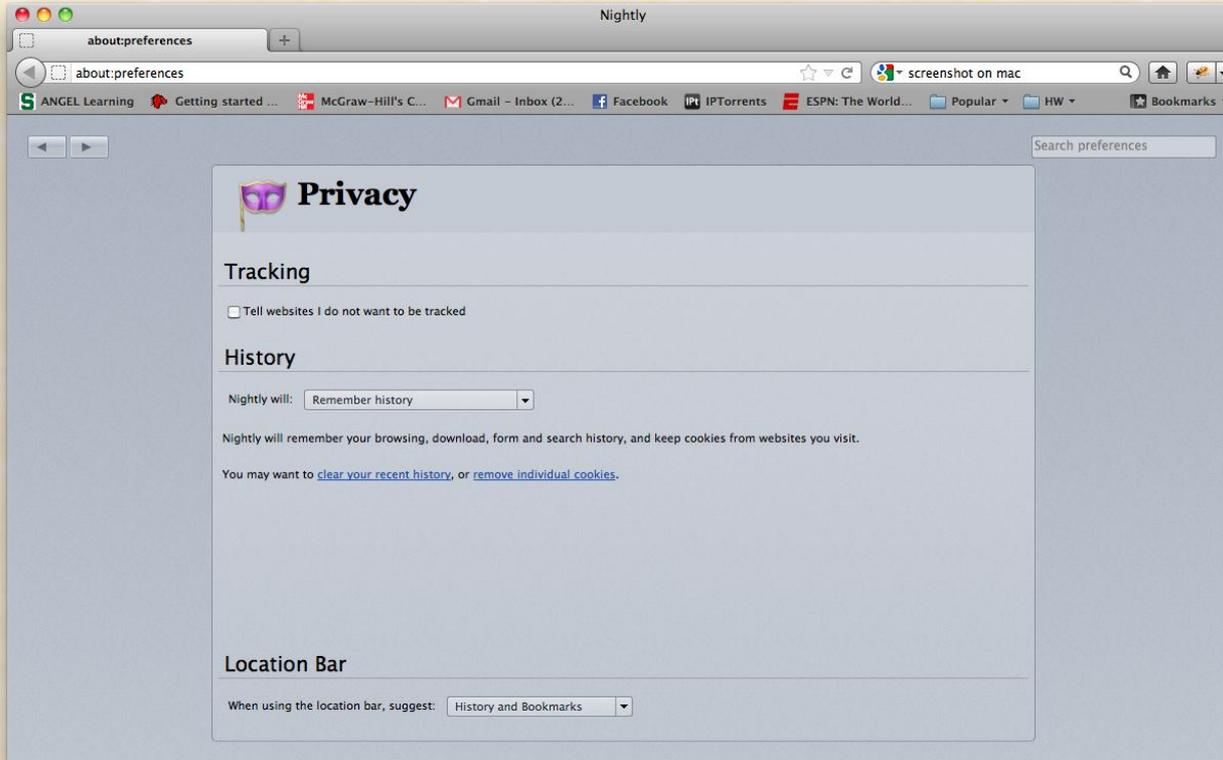




Team Mozilla Alpha Presentation

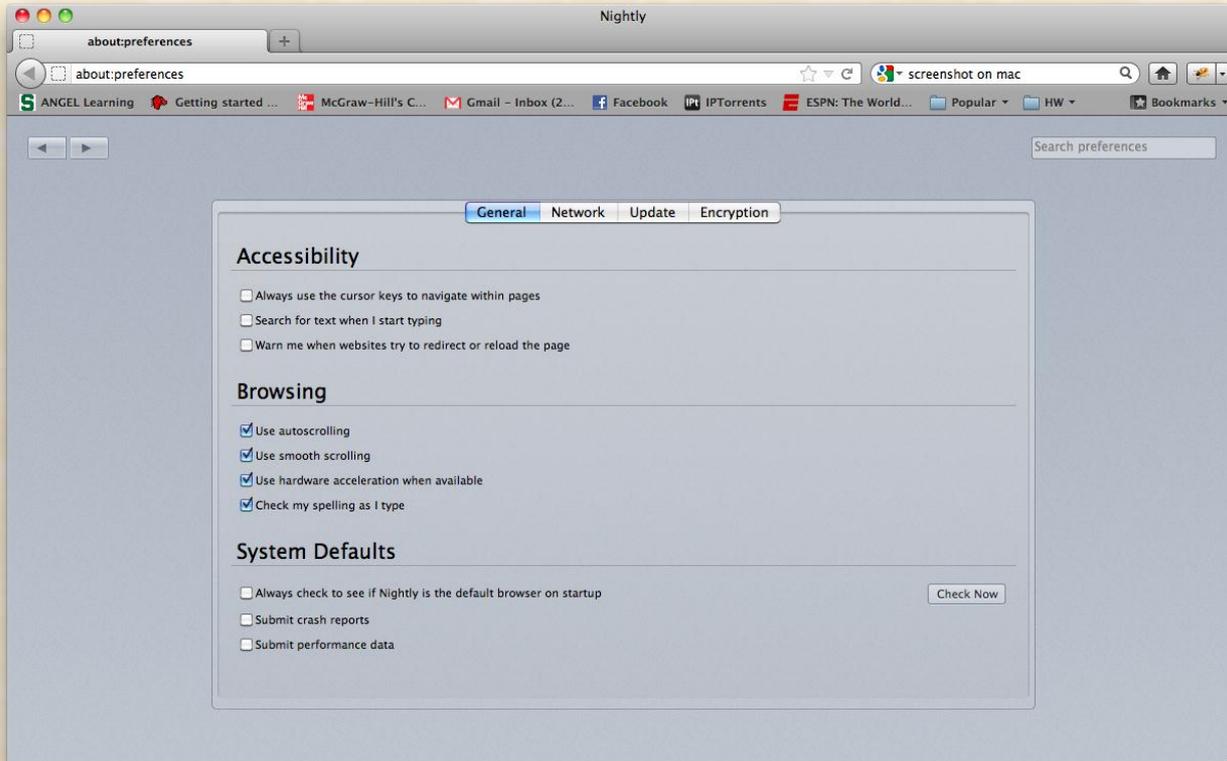
Team Mozilla Alpha Presentation

Privacy Pane



Team Mozilla Alpha Presentation

Advanced Pane





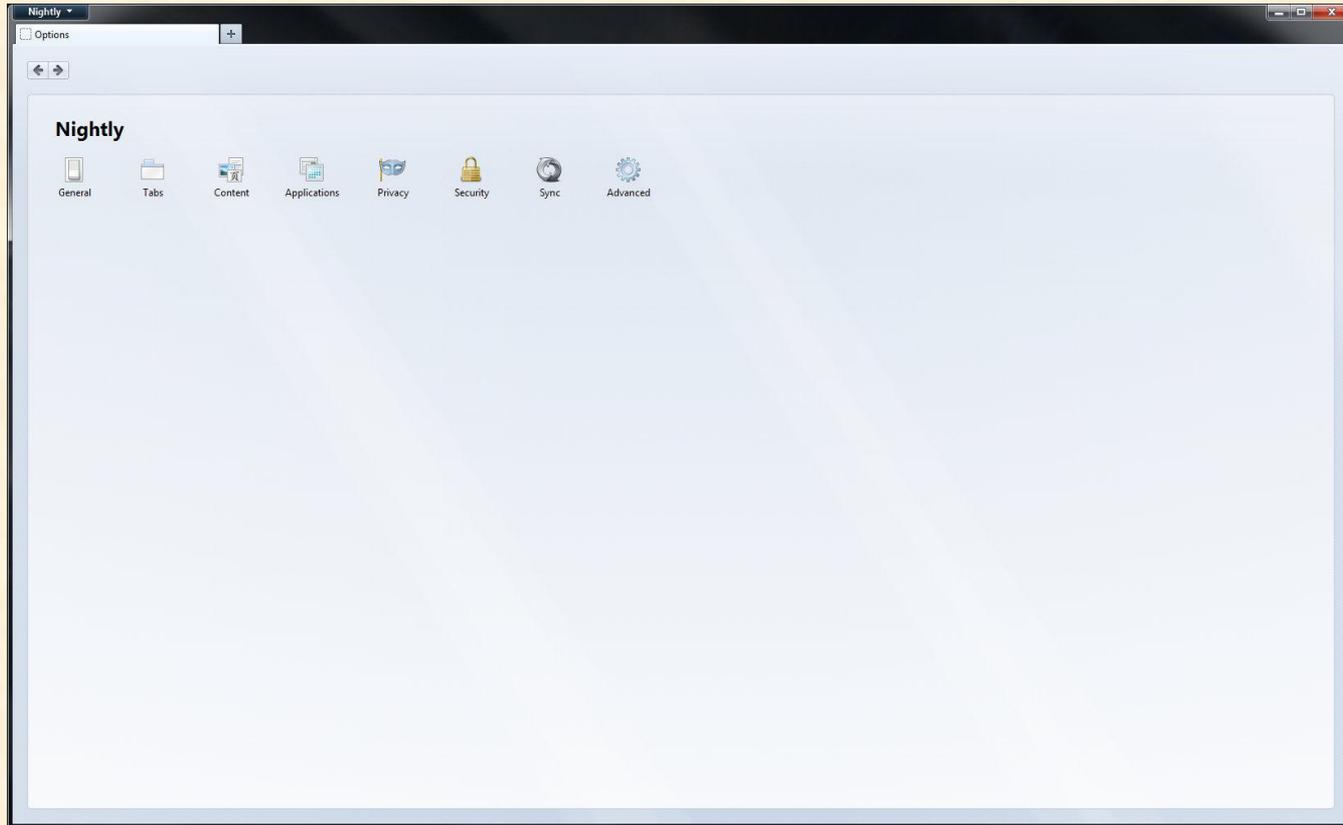
What's left to do?

- Finish creating preference panes and integrate them into new tab
- Work with Mozilla User Experience to adjust and finalize UI and style details
- Implement search functionality
- Testing and bug fixing

Team Mozilla
Alpha Presentation

Team Mozilla Beta Presentation

Landing Page



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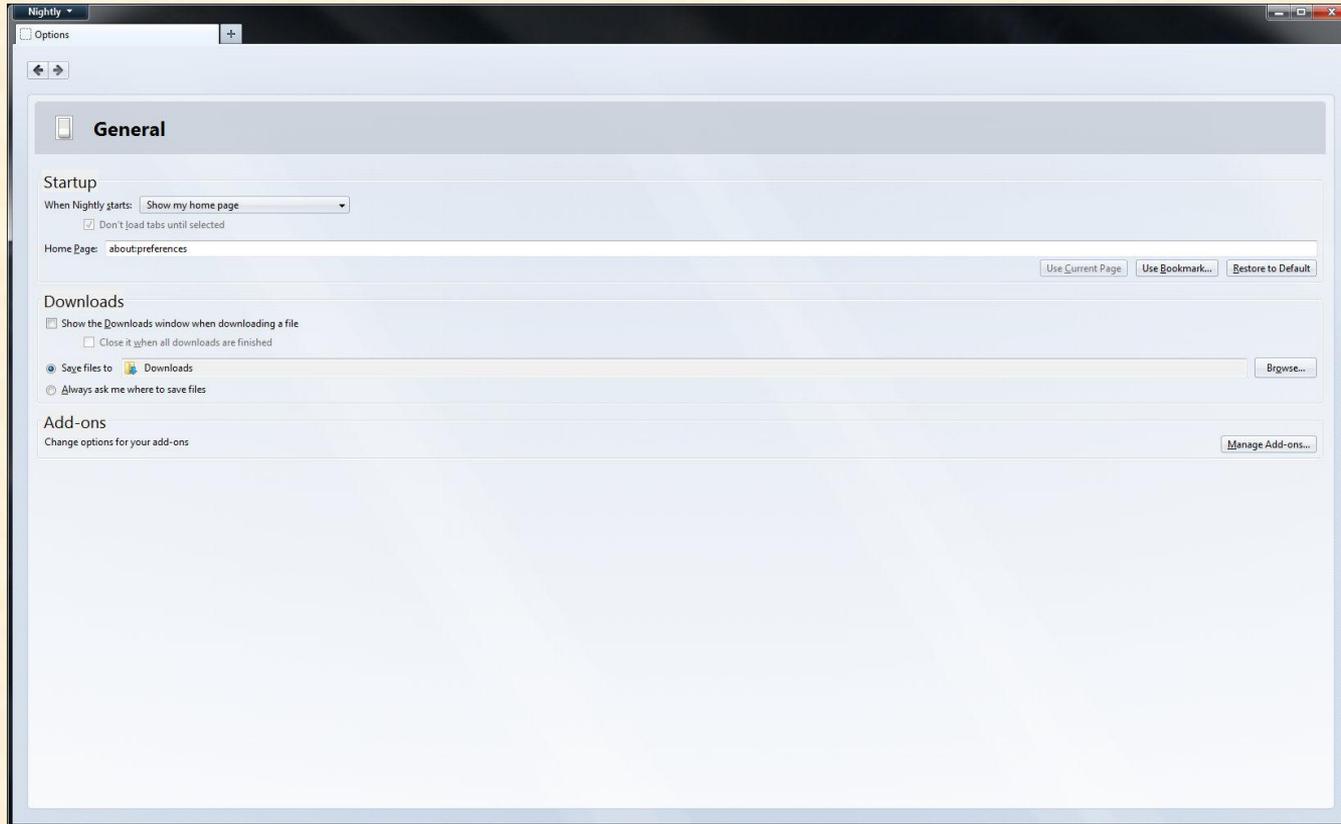


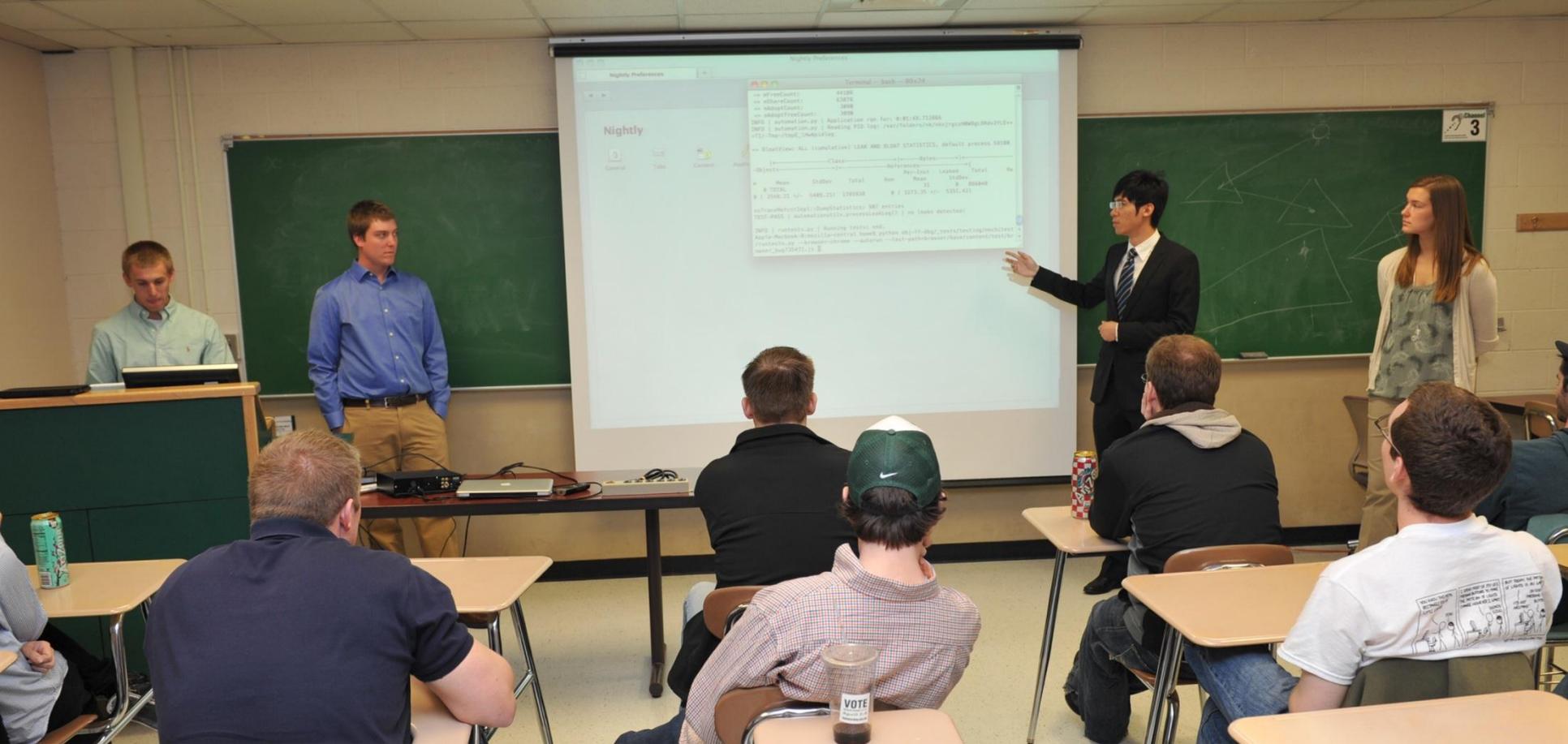


Team Mozilla Beta Presentation

Team Mozilla Beta Presentation

General Pane

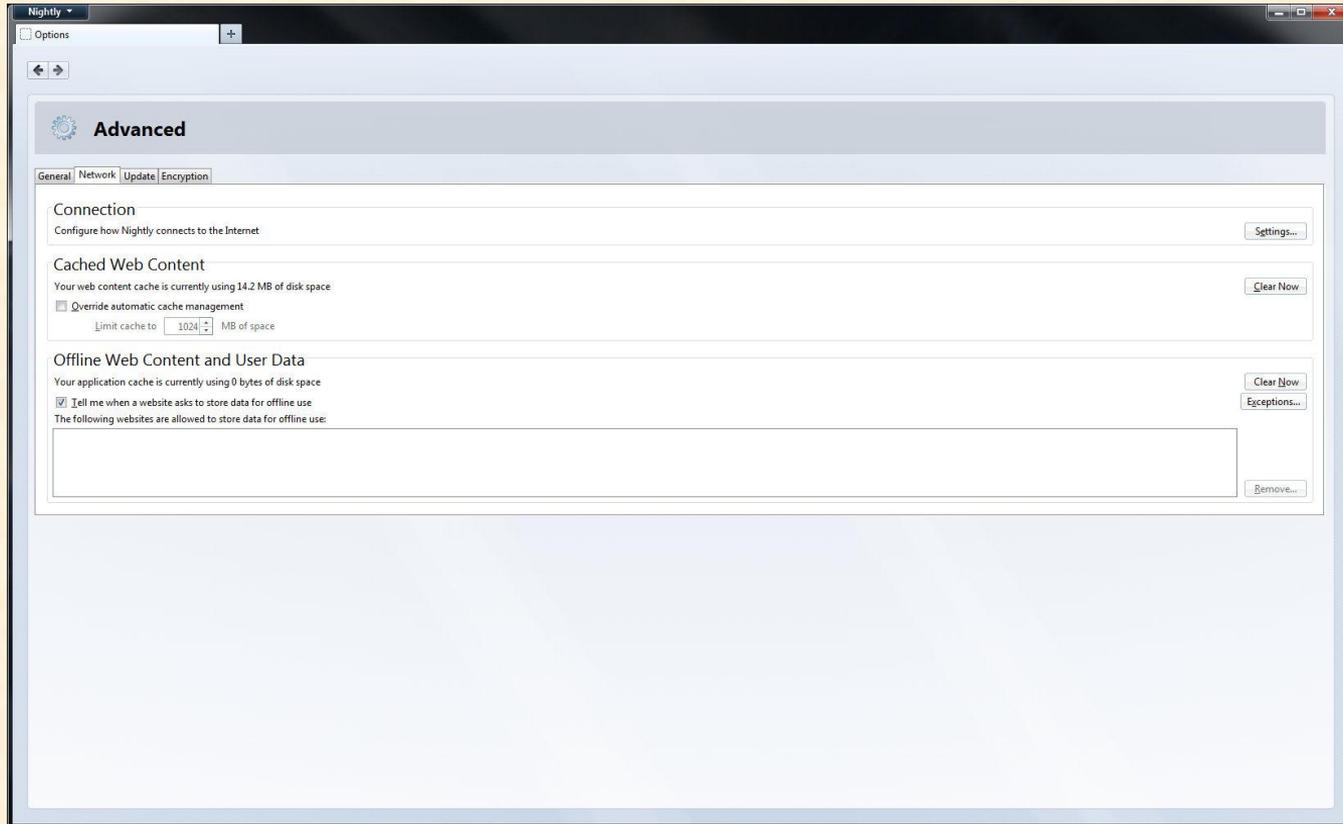




Team Mozilla Beta Presentation

Team Mozilla Beta Presentation

Advanced Pane





Team Mozilla
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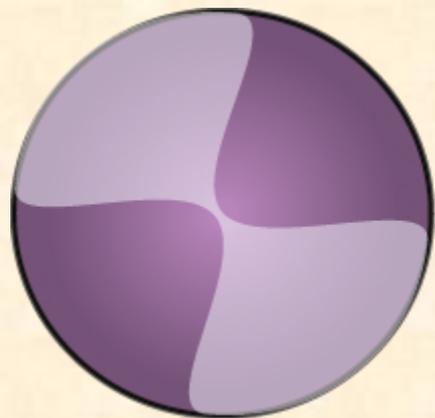
The Capstone Experience

Team Plex Systems

Department of Computer Science and Engineering
Michigan State University
Spring 2012



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Electronics

News: See our latest recorded food safety webinar: Getting Started with GFSI [\(more\)](#)

Plex Online SaaS or Cloud ERP

Plex Online Software as a Service (SaaS) ERP has a global reach. The Cloud ERP

Manufacturing ERP Software

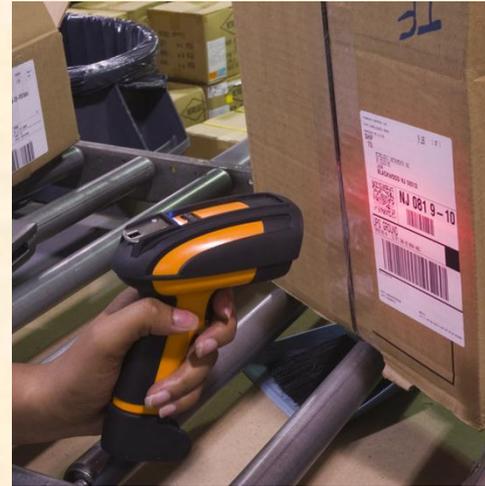
Plex Online manufacturing ERP software provides unparalleled coverage and access

Automotive Demo: Jan. 12

Team Plex Systems Project Overview

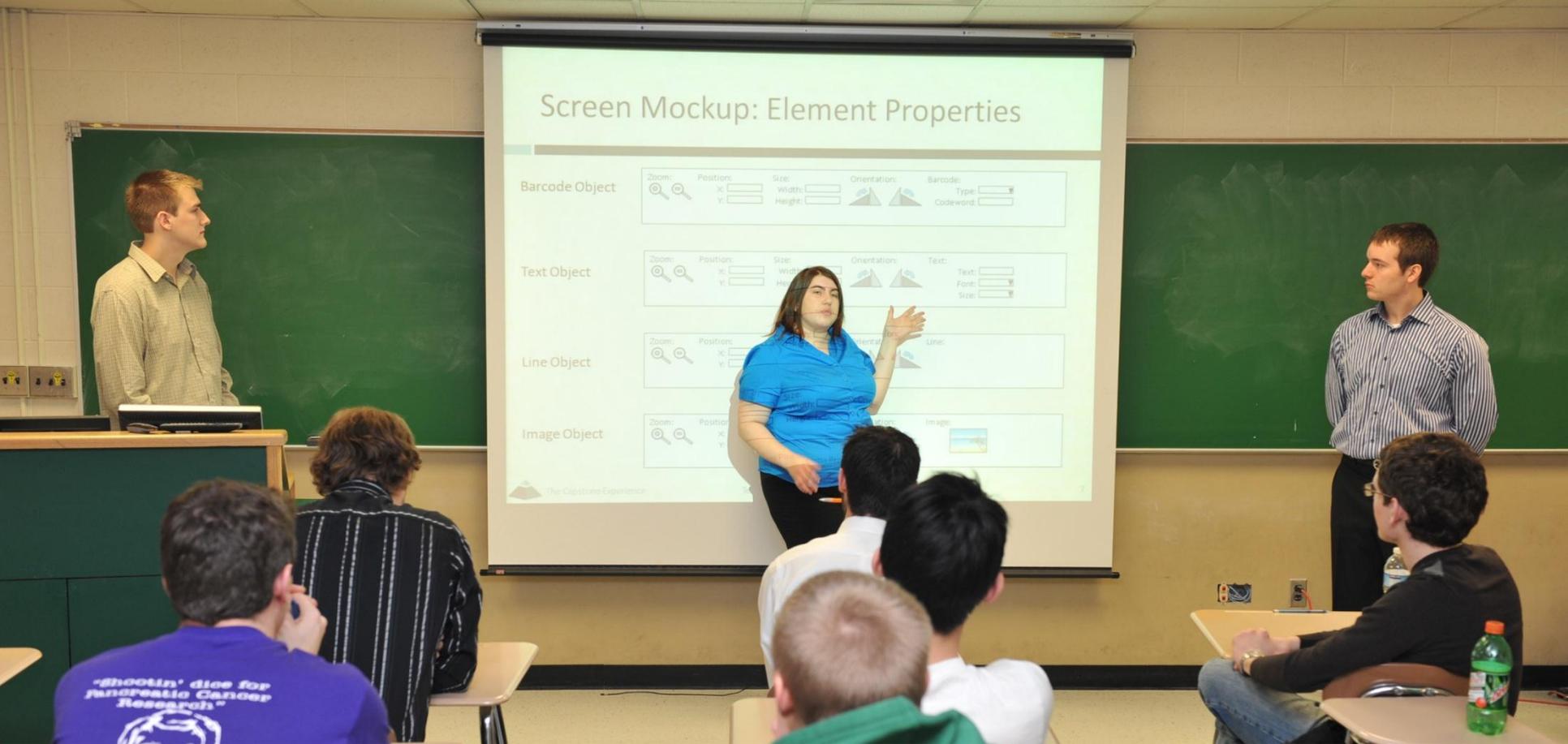
HTML5-Based WYSIWYG Label Designer

- Functionalities
 - Design Labels
 - For Manufacturing Companies
 - To Label Products For End-Customers
- Features
 - What You See Is What You Get (WYSIWYG)
 - Web and Cloud-Based
 - Support
 - Text Labels and Data
 - Barcoded Data
 - 3 of 9
 - 2D
 - Code-128
 - Lines and Images
- Technologies
 - CSS, HTML5 JavaScript, AJAX
 - JQuery
 - Microsoft SQL Server 2008
 - Microsoft C#/.NET, ASP.NET





Team Plex Systems
Matt Duffy, Michele Winsky, Andrew Melfi



Screen Mockup: Element Properties

Barcode Object

Zoom:

Position: X: Y:

Size: Width: Height:

Orientation:

Barcode: Type: Codeword:

Text Object

Zoom:

Position: X: Y:

Size: Width: Height:

Orientation:

Text:

Font:

Size:

Line Object

Zoom:

Position: X: Y:

Size: Width: Height:

Orientation:

Line:

Image Object

Zoom:

Position: X: Y:

Size: Width: Height:

Orientation:

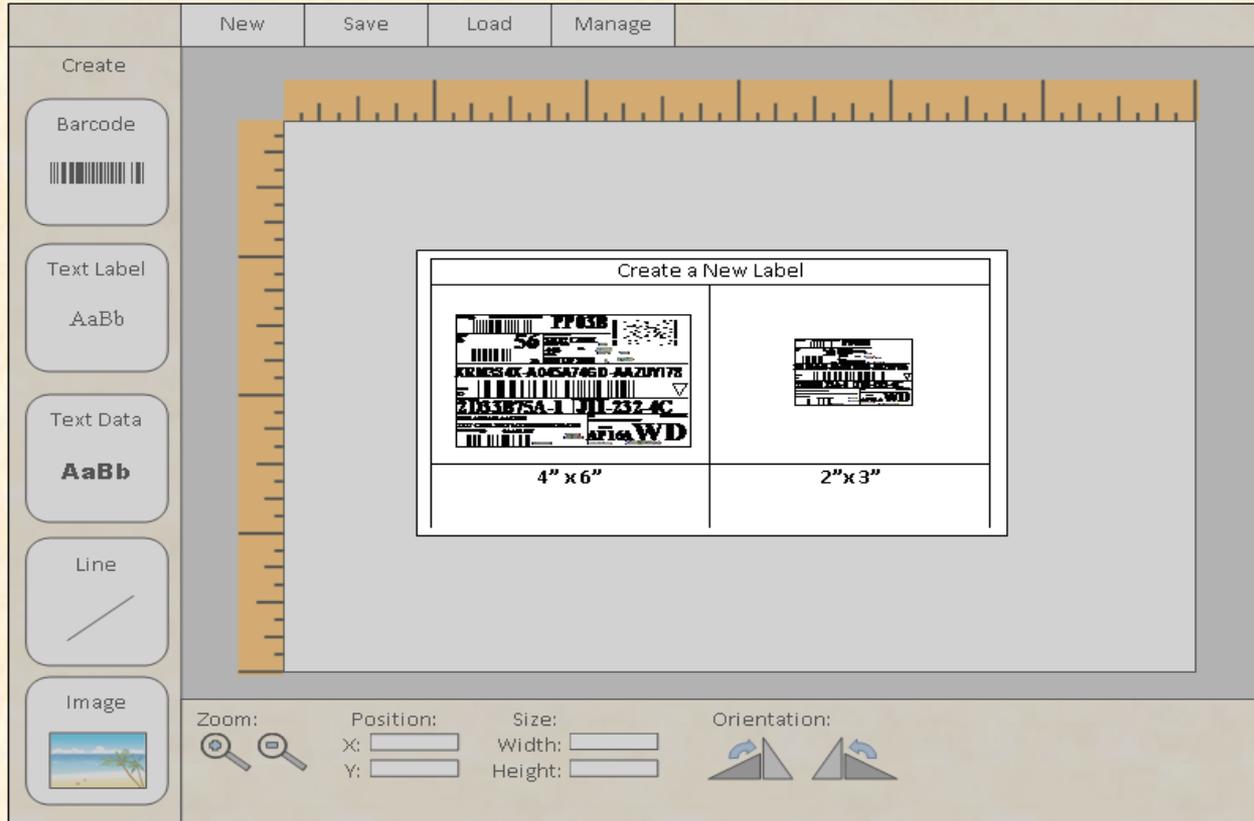
Image:

The Capstone Experience

Team Plex Systems
Project Plan Presentation

Team Plex Systems Project Plan Presentation

Screen Mockup



Team Plex Systems Project Plan Presentation

Screen Mockup

Zoom:	Position:	Size:	Orientation:	Barcode:
	X: <input type="text"/> Y: <input type="text"/>	Width: <input type="text"/> Height: <input type="text"/>		Type: <input type="text"/> Codeword: <input type="text"/>

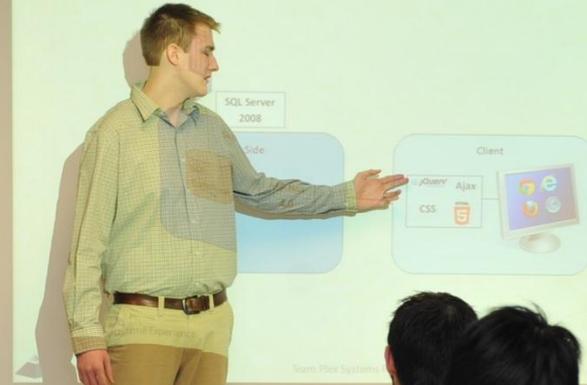
Zoom:	Position:	Size:	Orientation:	Text:
	X: <input type="text"/> Y: <input type="text"/>	Width: <input type="text"/> Height: <input type="text"/>		Text: <input type="text"/> Font: <input type="text"/> Size: <input type="text"/>

Zoom:	Position:	Size:	Orientation:	Line:
	X: <input type="text"/> Y: <input type="text"/>	Width: <input type="text"/> Height: <input type="text"/>		

Zoom:	Position:	Size:	Orientation:	Image:
	X: <input type="text"/> Y: <input type="text"/>	Width: <input type="text"/> Height: <input type="text"/>		



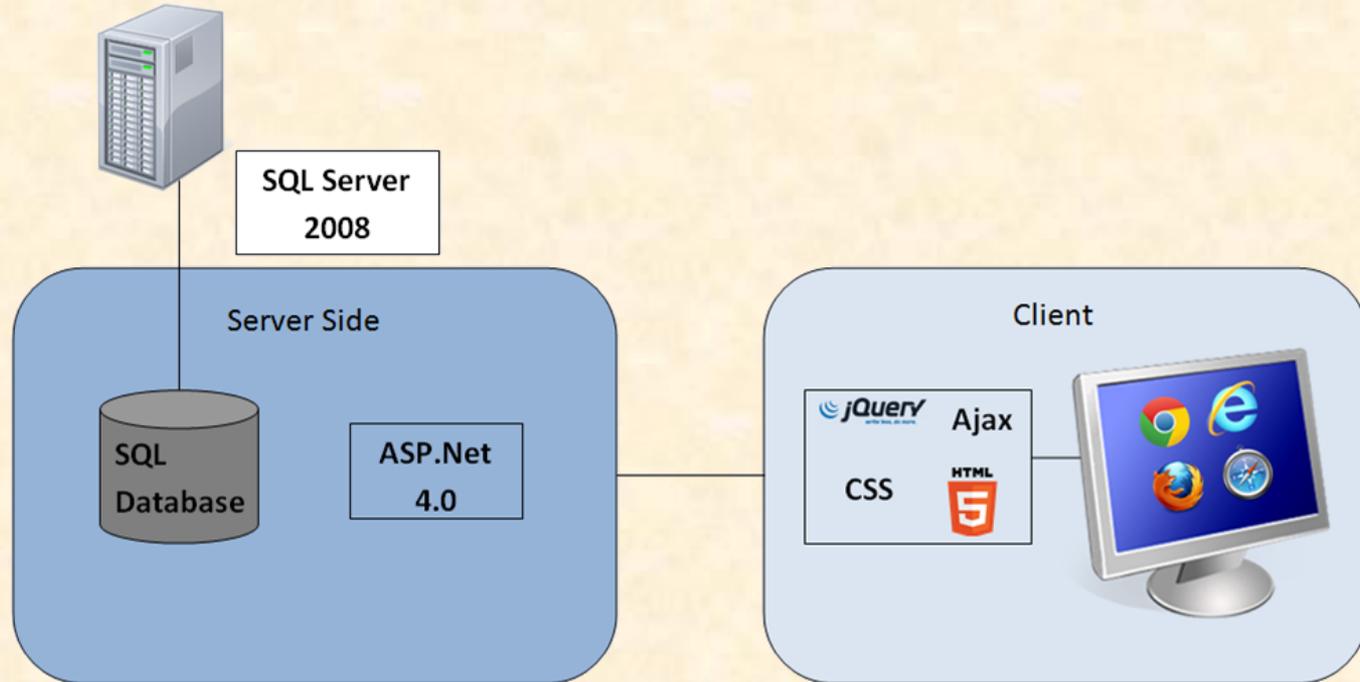
System Architecture

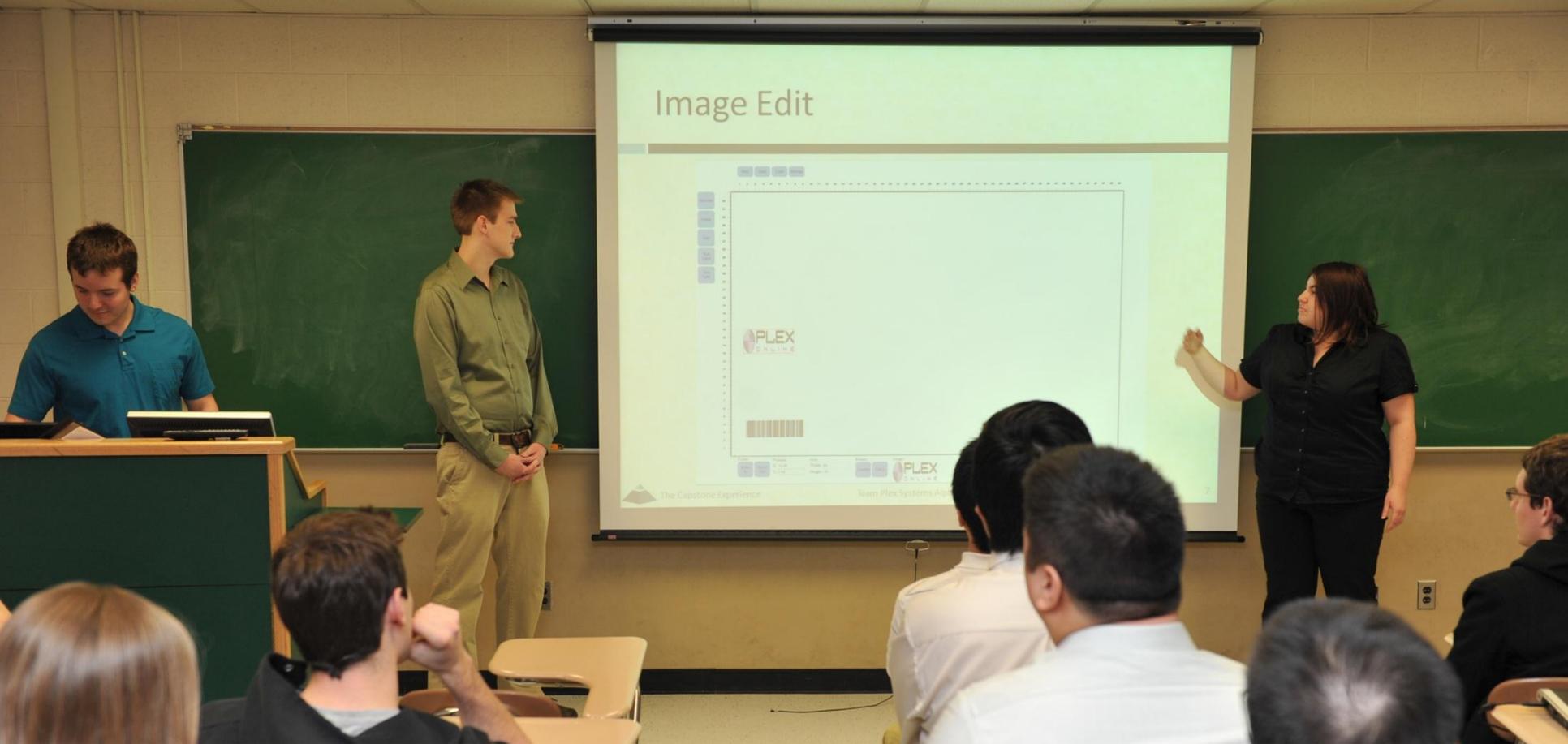


Team Plex Systems
Project Plan Presentation

Team Plex Systems Project Plan Presentation

Architecture Diagram





Team Plex Systems Alpha Presentation

Team Plex Systems Alpha Presentation

Text Data Edit

The screenshot displays the 'Text Data Edit' interface of the Team Plex Systems Alpha Presentation software. The interface features a central workspace with a grid background, a top menu bar, a left sidebar, and a bottom control panel.

Top Menu Bar: Contains buttons for 'New', 'Save', 'Load', and 'Manage'. Below the buttons is a horizontal ruler with a scale from 1 to 49.

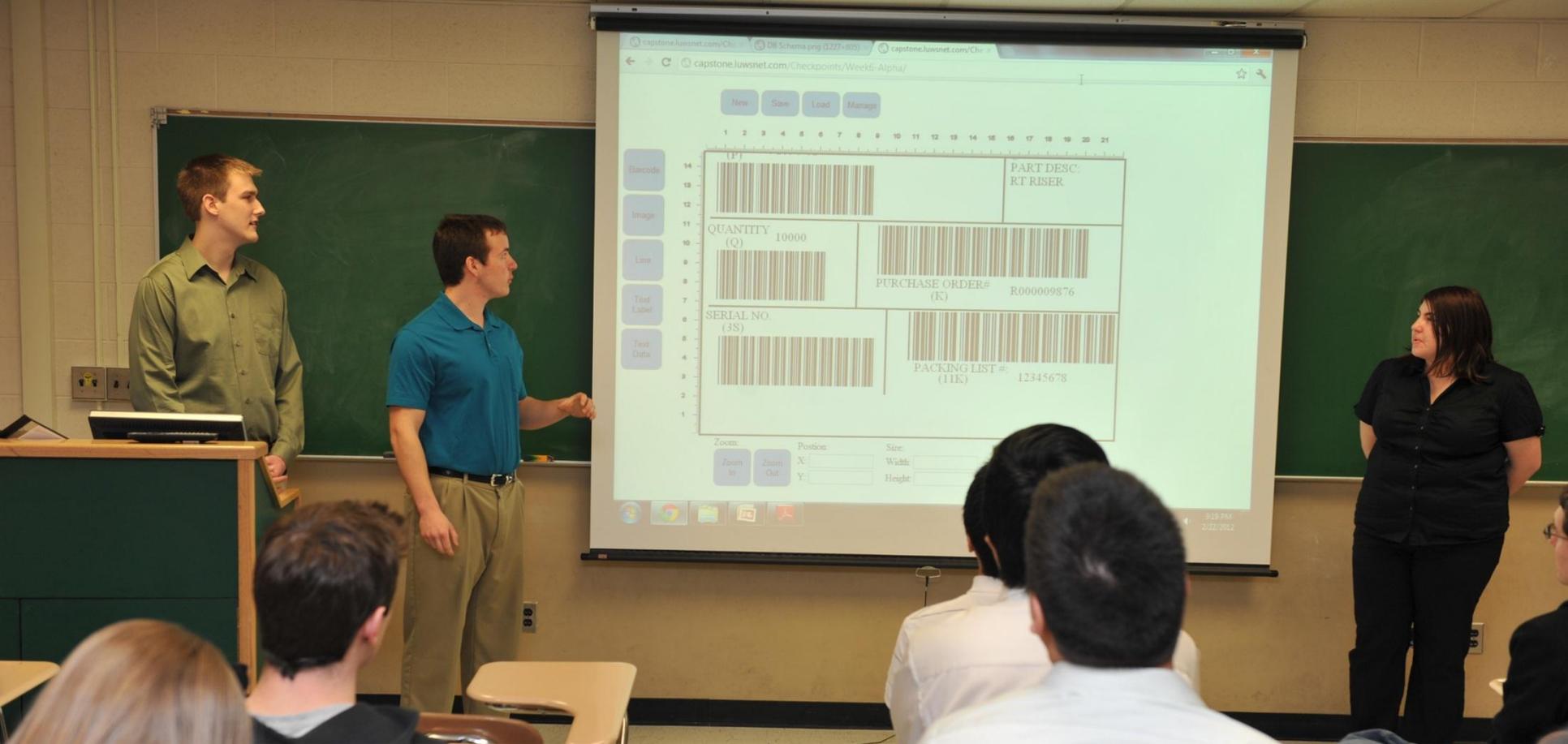
Left Sidebar: Contains buttons for 'Barcode', 'Image', 'Line', 'Text Label', and 'Text Data'. The 'Text Data' button is currently selected.

Central Workspace: Displays the 'PLEX ONLINE' logo in the upper left quadrant. Below the logo, the text 'PartNo' is visible above a barcode. To the right of the barcode, the number '0' is displayed within a red square box, indicating it is the selected text element for editing.

Bottom Control Panel: Includes the following controls:

- Zoom:** 'Zoom In' and 'Zoom Out' buttons.
- Position:** Input fields for X: 105.00, Y: 24.00.
- Size:** Input fields for Width: 20, Height: 20.
- Rotate:** 'Counter' and 'Clock' buttons.
- Text Data:** Input fields for 'Field: 0' and 'Font: Times New Roman'.





Team Plex Systems Alpha Presentation

Team Plex Systems Alpha Presentation

Final Label Layout

New Save Load Manage

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

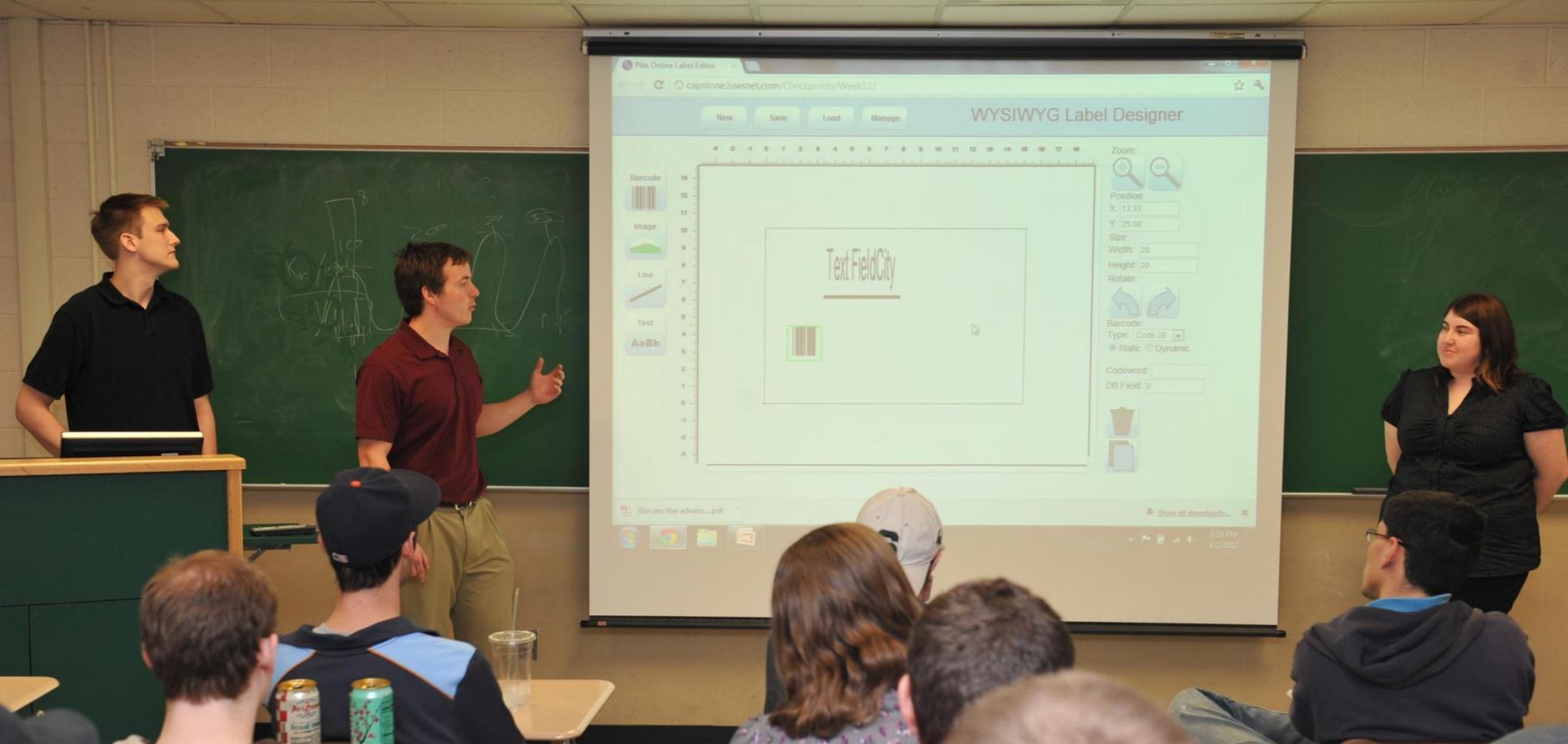
FROM: ABC Company 123 NUMBER LANE ALPHABET, YZ 90785-4321 SUPPLIER# A0000	TO: HARLEY DAVIDSON 1425 EDEN ROAD YORK, PA 17402
DOCK: A3 DEL LOC: XL122222222	REV. LEVEL C PART DESC: RT RISER
PART NO. (P) 91654-01	QUANTITY (Q) 10000
	PURCHASE ORDER# (K) R000009876
SERIAL NO. (3S) 99999999	
	PACKING LIST#: (11K) 12345678

Zoom: Zoom In Zoom Out Positions: X: Y: Size: Width: Height: Rotator: Counter Clock

characters long. Line can extend beyo

FROM: ABC COMPANY 123 NUMBER LANE ALPHABET, YZ 90785-4321 SUPPLIER# A0000	TO: HARLEY DAVIDSON 1425 EDEN ROAD YORK, PA 17402
DOCK: A3 DEL LOC: XL 122222222	REV. LEVEL C PART DESC: RT RISER
PART NO. (P) 91654-01	QUANTITY (Q) 10000
	PURCHASE ORDER# (K) R000009876
SERIAL NO. (3S) 99999999	
	PACKING LIST#: (11K) 12345678

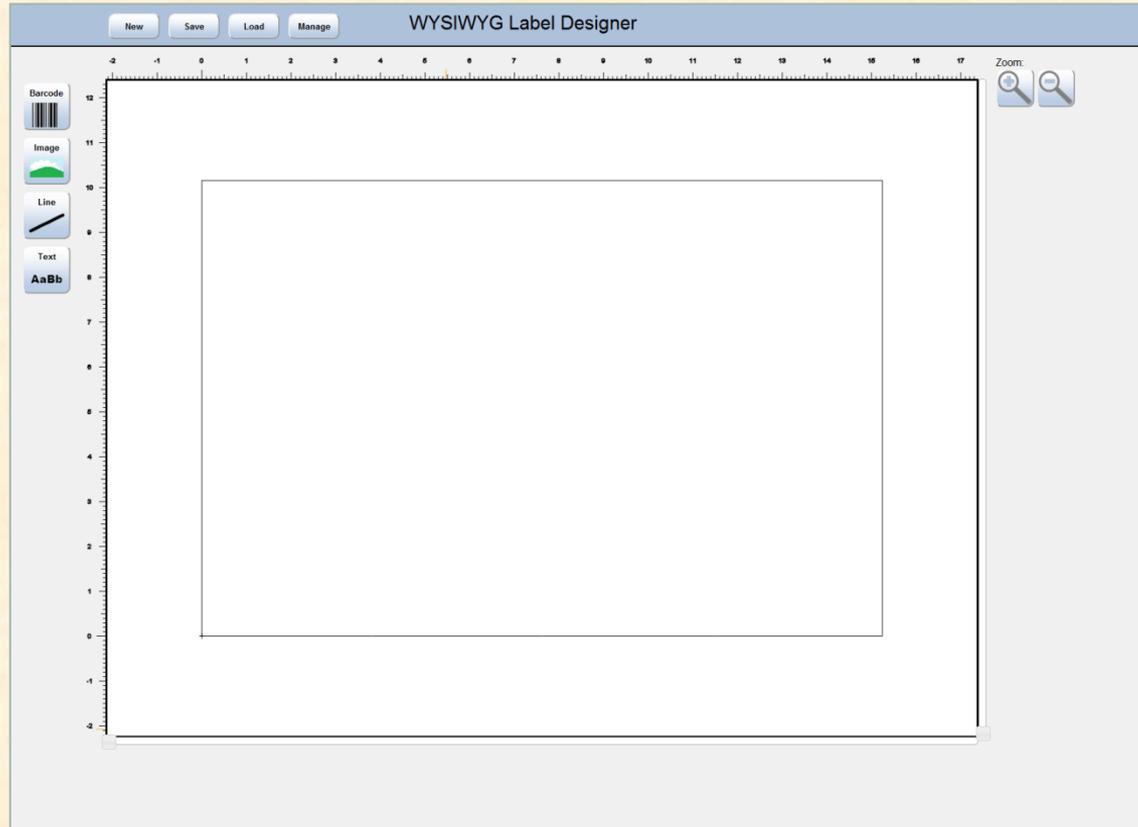




Team Plex Systems Beta Presentation

Team Plex Systems Beta Presentation

Main Application View



Team Plex Systems Beta Presentation

Placed Object

The screenshot displays the WYSIWYG Label Designer interface. The main workspace shows a label layout with the following content:

From: XYZ Company 123 Spartan Lane East Lansing, MI 48823 Supplier # 6381BC	To: Capstone 724 Red Cedar Rd. East Lansing, MI 48824 Dock: B9 Del. Loc. DL 2939502
Part No. (PN) 638292-01	Rev. No. C01
Quantity (Q) 10000	Part Desc. Mid Riser

A barcode is positioned below the Part No. field, and another barcode is located at the bottom of the label design area.

The software interface includes a top menu bar with 'New', 'Save', 'Load', and 'Manage' buttons. A vertical toolbar on the left contains icons for Barcode, Image, Line, and Text. A right-hand control panel includes zoom and position settings (X: 4.77, Y: 53.30), size (Width: 60, Height: 15), rotation, and barcode type options (Static/Dynamic). A status bar at the bottom shows the codeword '638292-01' and the DB field.





Team Plex Systems Beta Presentation

Team Plex Systems Beta Presentation

Completed Label

The screenshot shows the WYSIWYG Label Designer interface. The title bar reads "WYSIWYG Label Designer" and includes buttons for "New", "Save", "Load", and "Manage". A ruler at the top shows inches from -2 to 17. On the left, there are icons for "Barcode", "Image", "Line", and "Text" (with "AaBb" below it). On the right, there are "Zoom" icons. The central workspace displays a shipping label with the following information:

From: XYZ Company 123 Spartan Lane East Lansing, MI 48823 Supplier # 6381BC		To: Capstone 724 Red Cedar Rd. East Lansing, MI 48824 Deck: B9 Del. Loc. DL 2939502	
Part No. (PH) 638292-01 [Barcode]		Rev. No. C01 Part Desc. Mid Riser	
Quantity (Q) 10000 [Barcode]		Purchase Order (O) R087392023 [Barcode]	
Serial No. (3S) 99999999 [Barcode]		Packing List # (39F) 12345678 [Barcode]	





"Riney" on the
Baseball Diamond

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Plex Systems
HTML5-Based WYSIWYG Label Designer

Plex Systems is a cloud-based service provider, which offers manufacturing information technology systems to clients in a number of different industries. A challenge for any cloud-based service is ensuring the ease of customizability of business processes to end users. One such challenge comes from creating additional customized forms for shipping labels. Currently, the creation of a new format for a shipping label is a manual multi-step process. A customer must first lay out the desired design on paper, measure where various features are to be placed, and provide detailed textual information describing the label to Plex. Subsequently, Plex must manually enter this information into the customer database, after which that label becomes available for use by the customer. To simplify this process, our HTML5-Based WYSIWYG (What You See Is What You Get) Label Designer allows customers to create and format labels directly in a web application. These labels are stored into the customer database in the appropriate format for immediate use. Our software eliminates the hand work and enables customers to have direct control over which labels are available to them without required interventions by Plex. Our HTML5-Based WYSIWYG Label Designer is built using HTML5 and JavaScript, and designed to run in common web browsers. Label layouts are stored in a SQL database using SQL Server 2008 and retrieved using PHP and ASP.NET.



PLEX SYSTEMS

PLEX SYSTEMS

Michigan State University
Team Members (left to right):
Matthew Duff
Marketing Manager
Matthew Wrenn
Business Manager
Andrew Mall
Lead Engineer, Michigan

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Team Raytheon

Department of Computer Science and Engineering
Michigan State University
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Team Raytheon

Project Overview

Android Secure VoIP Communications System

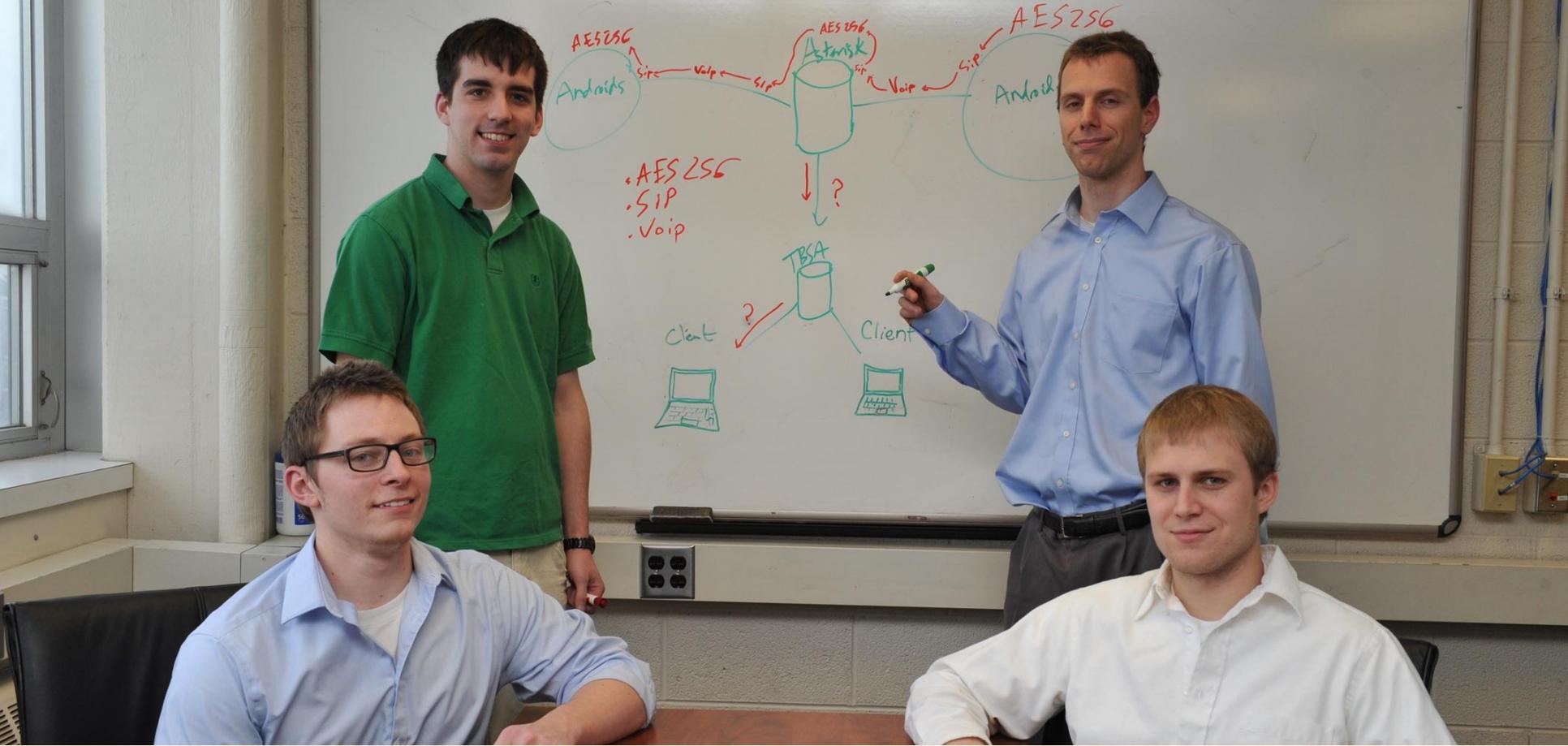
- Functionalities
 - Command and Control Communications
 - Group Voice Collaboration
 - On Android-Based Handheld Devices
 - Via Secure Voice Over Internet Protocol (VoIP)
- Features
 - Select Users or Groups
 - Capture Recordings in Case Folder
 - Integrate with Total Battle Space Awareness (TBSA)
 - Configure MX4025 Radios with Voice Commands
 - Secure with AES 256 Encryption
- Technologies
 - Voice over Internet Protocol (VOIP)
 - Google Android SDK, Java
 - Voice XML, Adobe Flex
 - Speech Recognition
 - Secure Internetworking, Encryption
 - Bluetooth Interface Control



Raytheon

Fort Wayne, Indiana





Team Raytheon

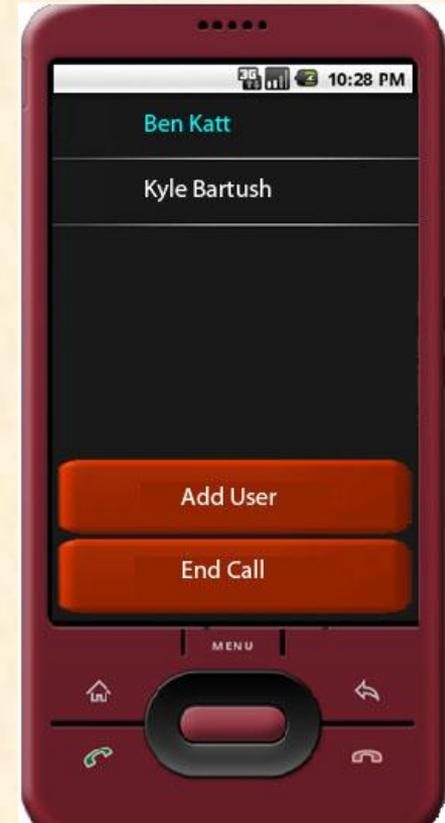
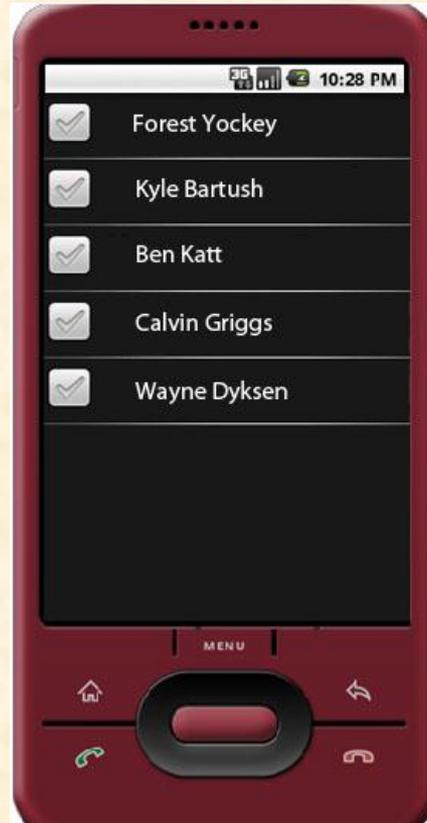
Forrest Yockey, Kyle Bartush, Ben Katt, Calvin Griggs

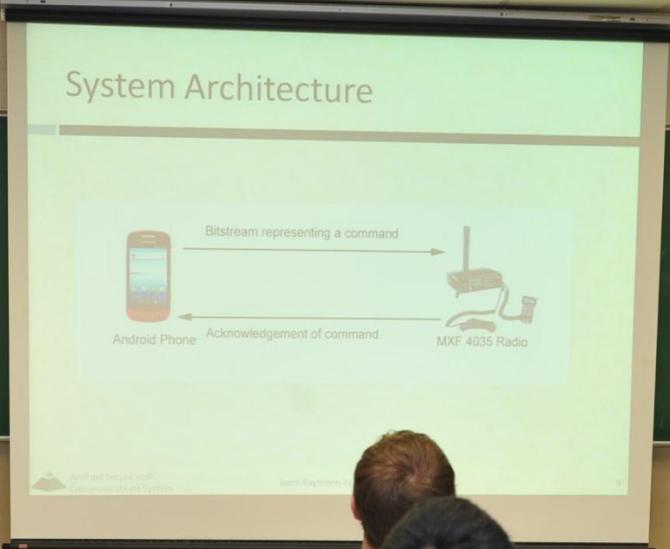


Team Raytheon Project Plan Presentation

Team Raytheon Project Plan Presentation

Screen Mockup

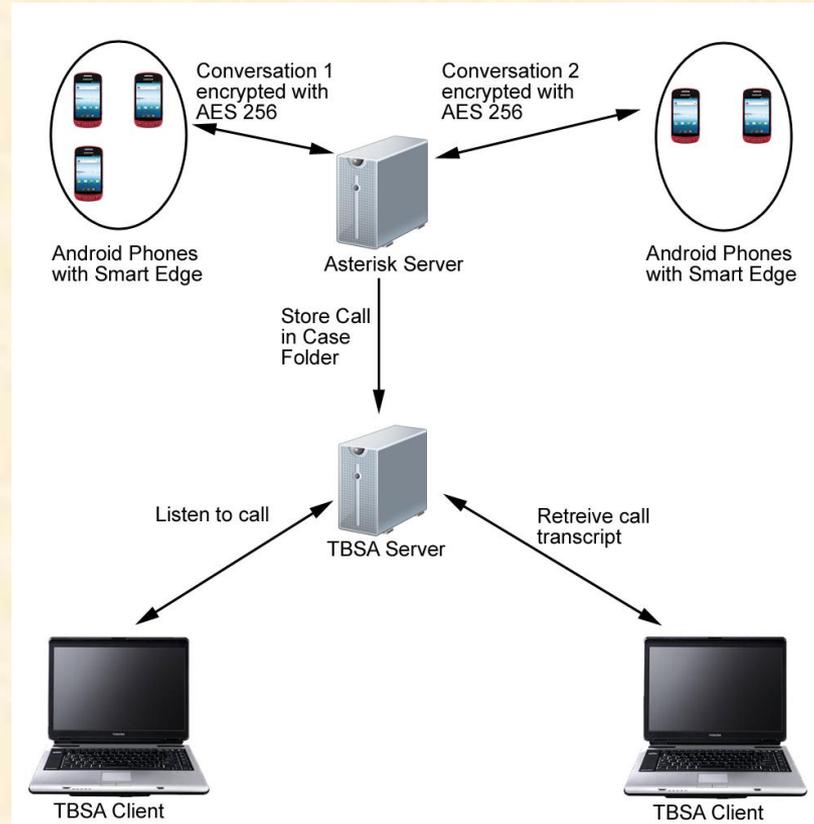




Team Raytheon
Project Plan Presentation

Team Raytheon Project Plan Presentation

Architecture Diagram





Team Raytheon Alpha Presentation

Team Raytheon Alpha Presentation

VoIP Call

Secure VOIP Communications System

Status

Calvin Griggs
(616) 555 - 5555

Kyle Bartush
(911) 444 - 3333

Ben Katt
(311) 867 - 5309

Forrest Yockey
(581) 101 - 2020

1	2	3	Delete
4	5	6	Send Message
7	8	9	Call
*	0	#	Options

Secure VOIP Communications System

Status

Connected Callers

Chuck Norris
(616) 123 - 4567

Kyle Bartush
(911) 444 - 3333

Ben Katt
(311) 867 - 5309

Forrest Yockey
(581) 101 - 2020

Will Ferrell
(581) 101 - 9999

Add Caller End Call



What's left to do?

- Radio project
- RTP/SIP integration
- Conference calls
- Encryption
- Desktop application
- Storing/retrieving calls
- Script to build contact list

Team Raytheon
Alpha Presentation

Team Raytheon Alpha Presentation

Options and Incoming Calls

Secure VOIP Communications System

Status

Options

Change Username

Change Password

Server Address:

Port Number:

Save Cancel

Secure VOIP Communications System

Status

Incoming Call

Calvin Griggs
(616) 555 - 6666

Answer End

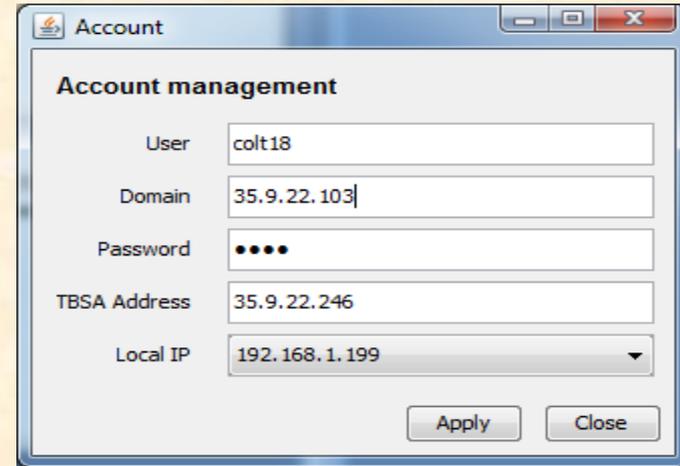
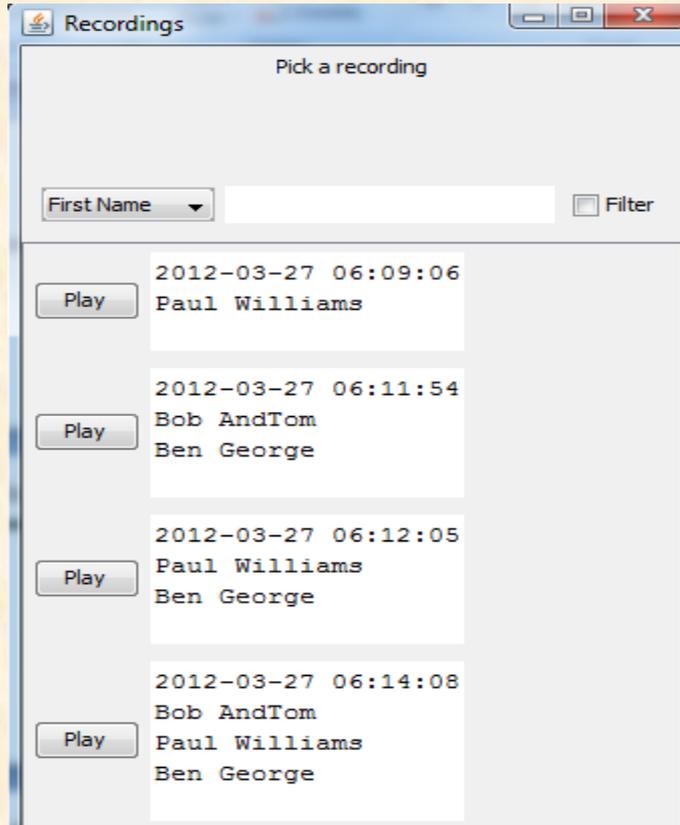




Team Raytheon Beta Presentation

Team Raytheon Beta Presentation

Desktop Application



Team Raytheon Beta Presentation

Android VoIP Application

Raytheon Secure Voip
Registered

Call Options

1	2 ABC	3 DEF	-
4 GHI	5 JKL	6 MNO	.
7 PQRS	8 TUV	9 WXYZ	✕
* # (0 +	⏪	Next

Options

Username

Password

Asterisk IP

Save Cancel

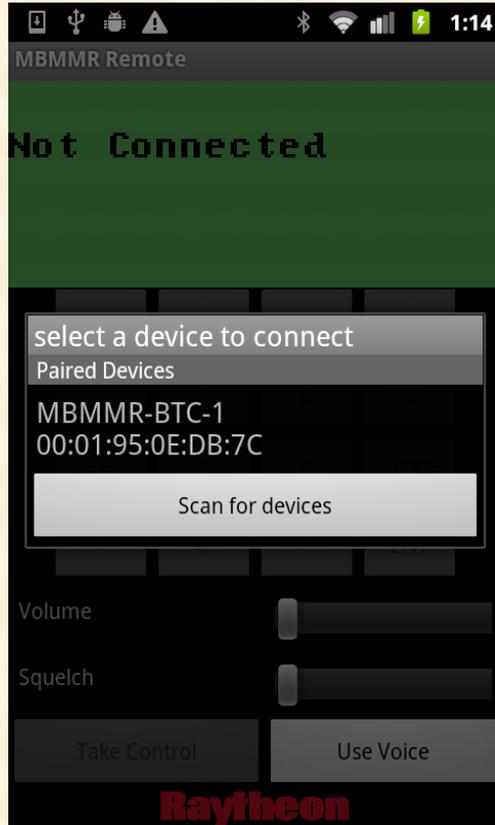




Team Raytheon Beta Presentation

Team Raytheon Beta Presentation

Radio Application





Raytheon Android VoIP Communications System

Voice communication is an essential feature for command and control (C2) applications used in emergency management situations or combat settings. The Android VoIP Communications System enables multiple C2 users to transmit critical information over multiple voice channels and thereby exchange information efficiently and effectively.

Our system provides both one-to-one communication and group collaboration. The latter enables tactical operations centers to provide groups of personnel with situational awareness data quickly.

In addition to beginning and ending calls, our system also allows one user to invite another user onto an existing call. A separate desktop application enables users at operation centers to participate in calls, and to listen to previously recorded conversations.

In an effort to simplify radio configuration in a C2 setting, the system also allows radios to be configured in a hands-free manner. Nearby radios can be configured with appropriate voice commands. A confirmation message is sent back to the Android phone for the user to verify the current state of a reconfigured radio.

Our Android VoIP Communications System is developed with the Android SDK. Calls are managed with the Session Initiation Protocol (SIP) standard. An Asterisk server handles the routing of calls. The entire system is integrated into Raytheon's existing C2 applications.



Raytheon

Raytheon

Special Thanks To:
Meredith Schmidt (mere.schmidt@gmail.com)
Wayne Dyksen (dyksen@cse.msu.edu)



- Michigan State University
Team Members (left to right)**
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 - Kyle Barlach, Lehigh, Michigan
 - Benjamin Karl, Concord, California
 - Calvin Griggs, Natick, Michigan
- Raytheon
Project Sponsors**
- Jay Waring, Fort Wayne, Indiana
 - David Emery, Fort Wayne, Indiana
 - David Holbrook, Fort Wayne, Indiana
 - John Houser, Fort Wayne, Indiana
 - David Pater, Fort Wayne, Indiana
 - Barry Palenik, Fort Wayne, Indiana
 - David Steiner, Fort Wayne, Indiana

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Team Spectrum Health

Department of Computer Science and Engineering
Michigan State University
Spring 2012



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- > Forgot Password

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Melanoma Clinic



Blogs

Team Spectrum Health Project Overview

Web Applications for Healthier Communities

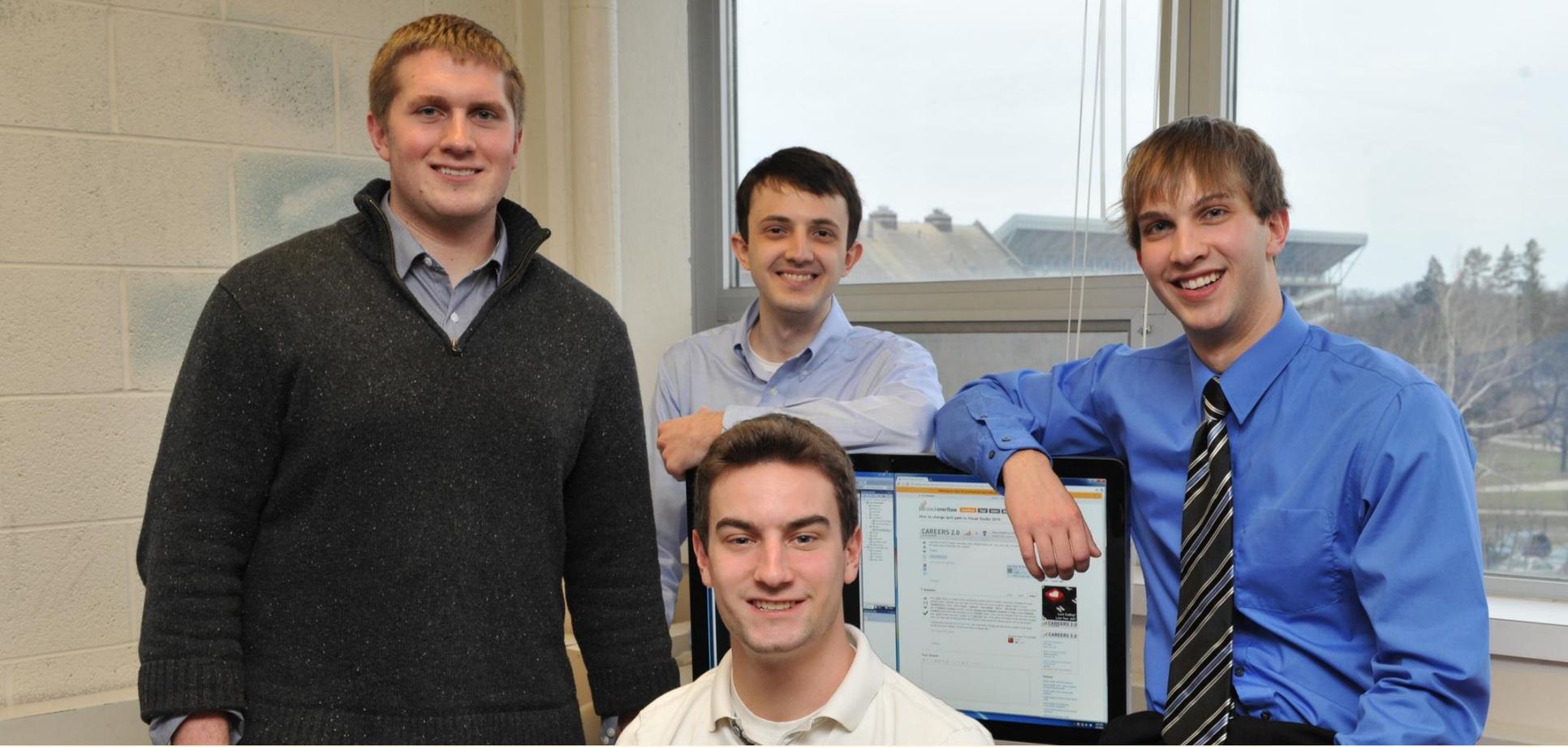
- Functionalities
 - Web-Based Mobile Evaluation System
 - For Spectrum's Healthier Communities Program
 - Provides Health Care to Under-Served People
 - Throughout Western Michigan
 - Collect and Analyze Client Information
- Features
 - Support for Mobile Tablets (iPad and Android)
 - Adherence to HIPAA Guidelines
 - Encryption of Protected Health Information System
 - Integration with Spectrum's Existing Systems
 - C-Trac
 - Enterprise Data Warehouse
- Technologies
 - Microsoft IIS, SharePoint, Active Directory
 - CSS, HTML, jQuery
 - Microsoft C#/.NET, ASP.NET MVC 3.0
 - Microsoft SQL Server, SQLMetal, Linq



SPECTRUM HEALTH 

Grand Rapids, Michigan





Team Spectrum Health

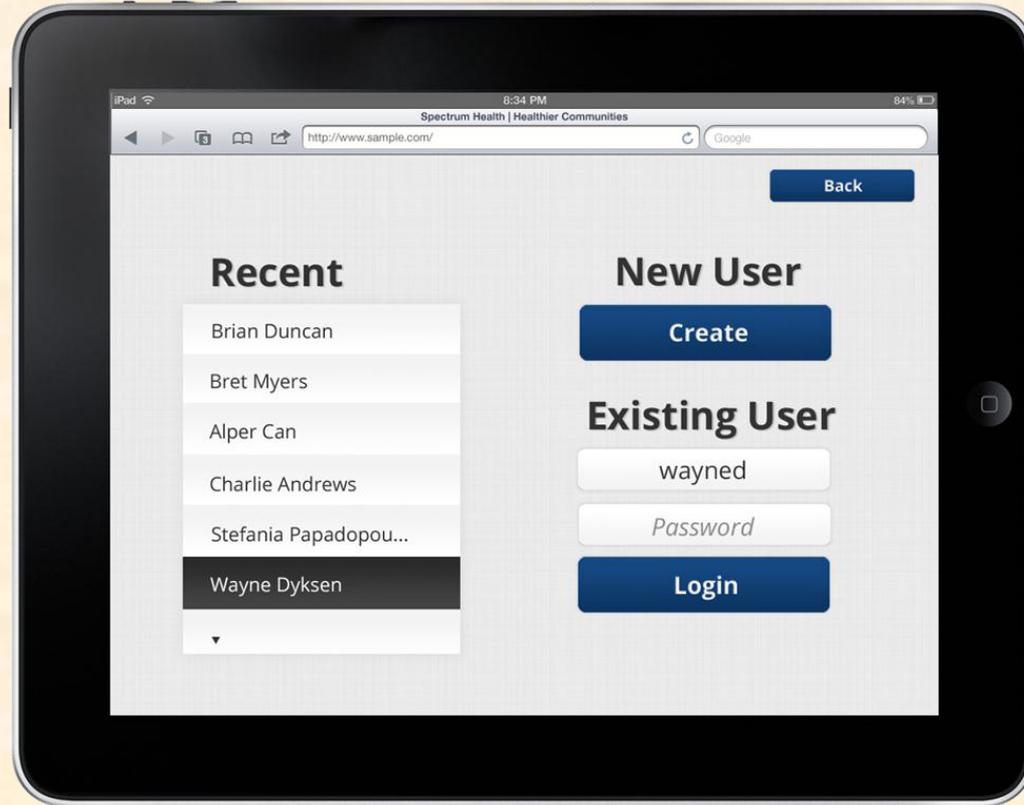
Brian Duncan, Charlie Andrews, Alper Can, Bret Myers



Team Spectrum Health Project Plan Presentation

Team Spectrum Health Project Plan Presentation

Screen Mockup



Team Spectrum Health Project Plan Presentation

Screen Mockup

The image shows a tablet displaying a web browser interface. The browser's address bar shows 'http://www.sample.com/'. The page title is 'Spectrum Health | Healthier Communities'. The browser interface includes navigation buttons for 'Previous', 'Index', and 'Next', and a page indicator '18 / 25'. The main content area is titled 'Basic information' and contains a form with the following fields:

First name	Gender
<input type="text"/>	Male <input type="text"/>
Last name	Primary phone number
<input type="text"/>	<input type="text"/>
Nickname	Alternate phone number
<input type="text"/>	<input type="text"/>
Date of birth	Zipcode
January <input type="text"/> 1 <input type="text"/> 1990 <input type="text"/>	<input type="text"/>

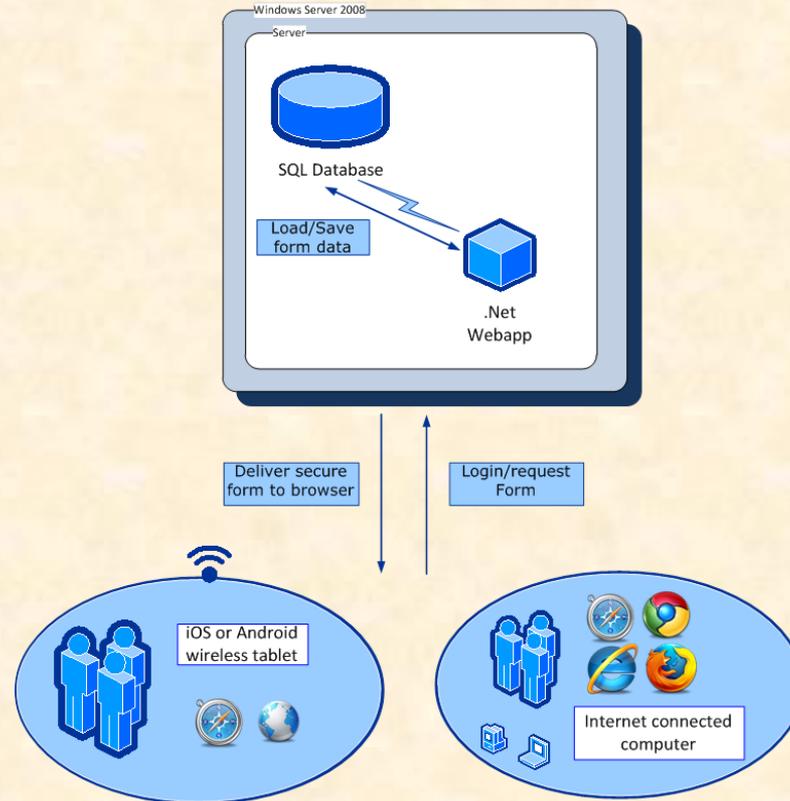




Team Spectrum Health
Project Plan Presentation

Team Spectrum Health Project Plan Presentation

Architecture Diagram

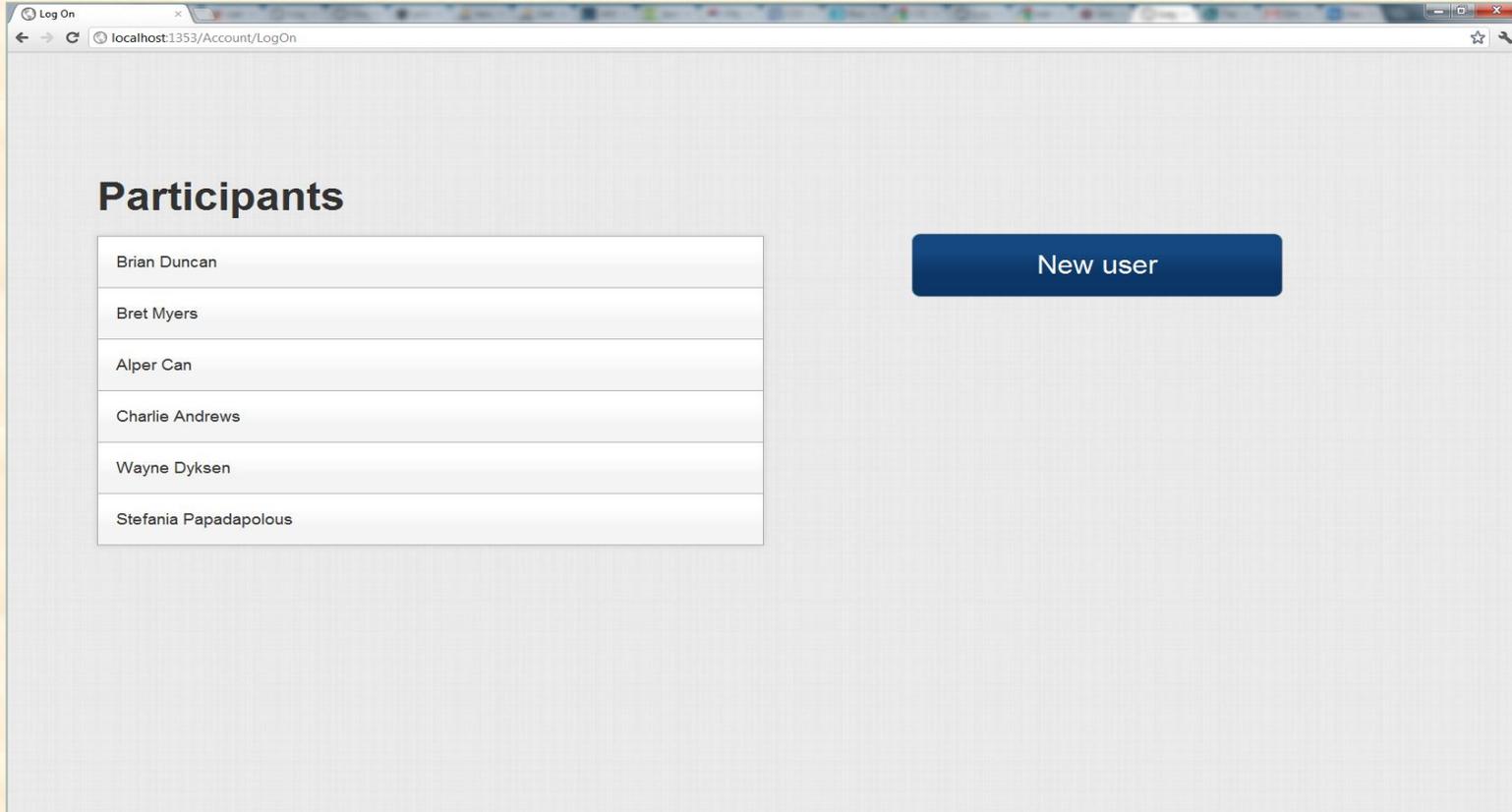




Team Spectrum Health Alpha Presentation

Team Spectrum Health Alpha Presentation

Volunteer Login View



The screenshot shows a web browser window with the following content:

- Browser title: Log On
- Address bar: localhost:1353/Account/LogOn
- Section header: **Participants**
- Participant list (table):

Brian Duncan
Bret Myers
Alper Can
Charlie Andrews
Wayne Dyksen
Stefania Papadapolous
- Button: **New user**





Team Spectrum Health Alpha Presentation

Team Spectrum Health Alpha Presentation

Form View

The screenshot shows a web browser window with the address bar displaying 'localhost:1353/Section/QuestionList?sectionId=1'. The page has a navigation bar with three buttons: 'Previous' (with a left arrow), 'Index', and 'Next' (with a right arrow). Below the navigation bar is a section titled 'Basic Information' containing eight input fields arranged in two columns. The left column contains: 'CPI Number', 'First name', 'Last name', and 'Mother's maiden name'. The right column contains: 'Preferred name', 'Primary phone number', 'Zipcode', and 'Insurance'. All input fields are currently empty.

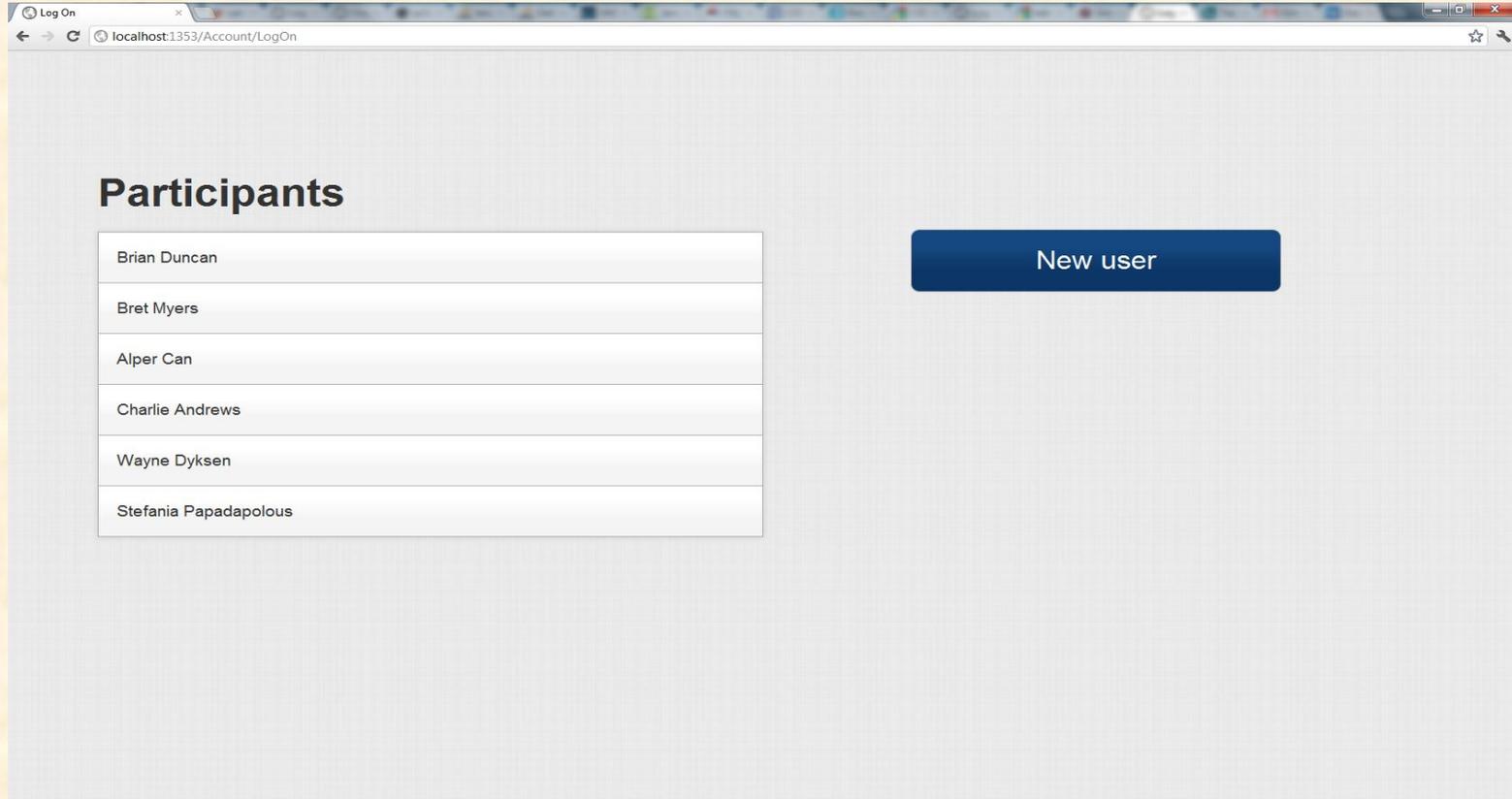




Team Spectrum Health Beta Presentation

Team Spectrum Health Beta Presentation

Volunteer Login View



The screenshot shows a web browser window with the address bar displaying 'localhost:1353/Account/LogOn'. The page title is 'Log On'. The main content area has a light gray background with a grid pattern. On the left, there is a section titled 'Participants' with a list of names in a table. On the right, there is a dark blue button with the text 'New user'.

Participants
Brian Duncan
Bret Myers
Alper Can
Charlie Andrews
Wayne Dyksen
Stefania Papadapolous

[New user](#)



Team Spectrum Health Beta Presentation

Form View

Menu

Next ▶

6/8

Bret

Gender

Male



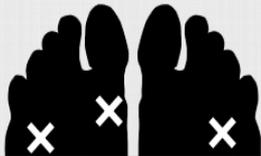
Female



dsf



Feet



Full Name

Bret

3/25/2012

Bret

3/25/2012

Bret

3/27/2012

Bret Myers

4/1/2012

Gender

Male

3/25/2012

3/25/2012

Male

3/27/2012

Male,dsf

4/1/2012



Team Spectrum Health Beta Presentation

Team Spectrum Health Beta Presentation

Previously Completed Forms

New forms

Core Health

Monthly

Previous forms

Core Health by volunteer2 at 4/1/2012 8:26:52 PM

Print

Core Health by volunteer2 at 4/1/2012 6:38:39 PM

Print

Core Health by volunteer2 at 4/1/2012 4:08:14 PM

Print

Core Health by volunteer2 at 3/28/2012 3:46:44 PM

Print

Core Health by volunteer2 at 3/28/2012 3:29:14 PM





Team Spectrum Health
Design Day

MICHIGAN STATE

UNIVERSITY

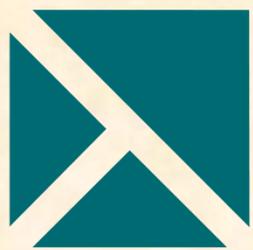
The Capstone Experience

Team TechSmith

Department of Computer Science and Engineering
Michigan State University
Spring 2012



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



TechSmith®

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Camtasia for Mac 2 makes you look like a pro, even if you aren't one. Whether you need to create an eye-catching training, presentation, or demo video, Camtasia for Mac screen recording software makes it easy.

Learn More ▶



Top Downloads



Enhance Communication Anywhere with TechSmith

With our screen capture and recording software,

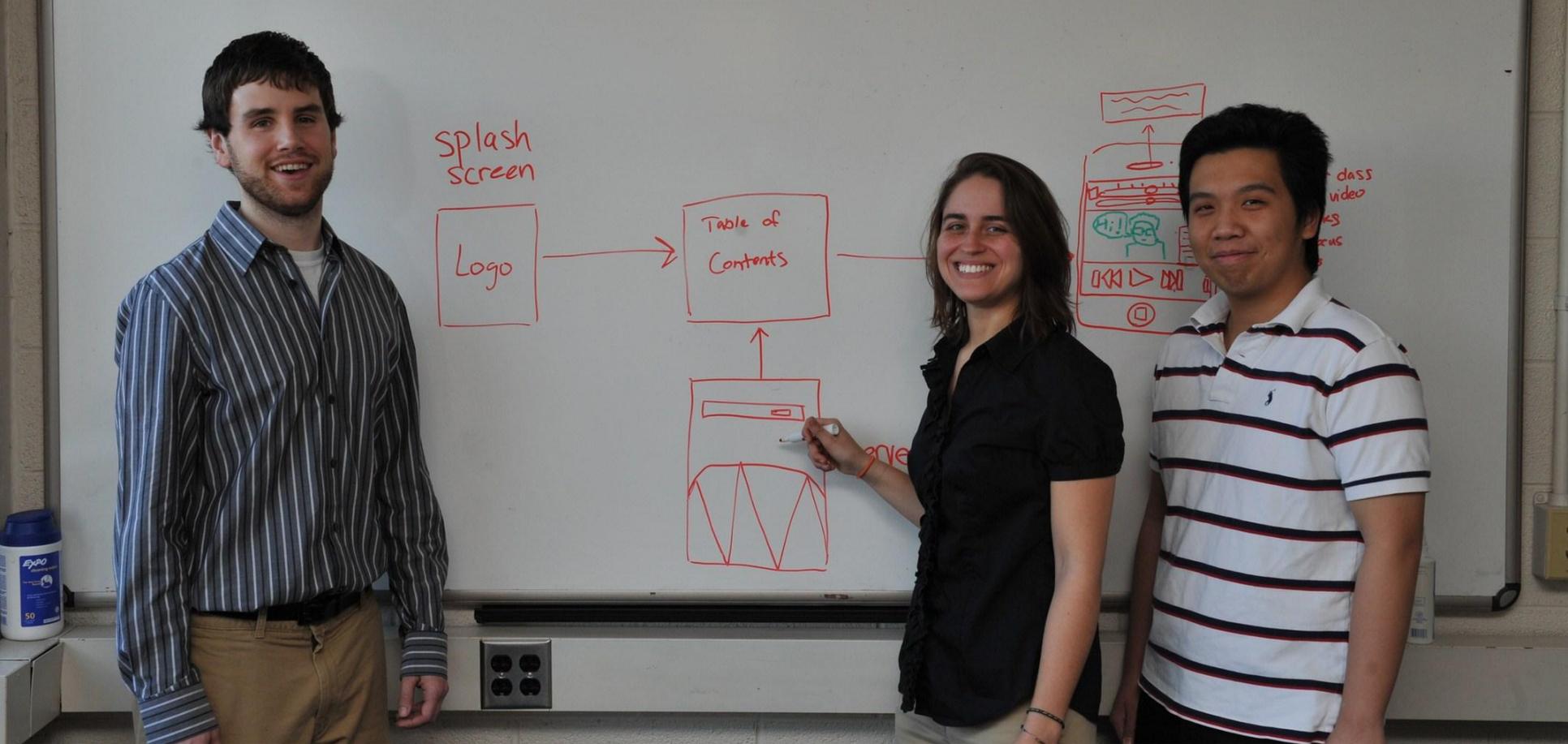


Team TechSmith Project Overview

Mobile Smart Video Player

- Functionalities
 - Video Player for iPhone and iPad
 - Rich Playback Experience
 - Enhanced Navigation
 - Leverage Metadata
- Features
 - Table of Contents and Hotspots
 - User Settable Bookmarks
 - Timed Text Captions Displayed During Playback
 - Support For Panning and Zooming
 - Varied Playback Speeds with Audio Pitch Adjustments
 - Aggregation of Metadata from Multiple Viewers
- Technologies
 - Apple iOS iPhone /iPad SDK, C, Objective-C
 - TechSmith Camtasia Studio
 - Microsoft C#/.NET, ASP.NET
 - Web Services (RESTful)





Team TechSmith

Scott Klum, Meryl Dara Mabin, Yue Lu



Team TechSmith Project Plan Presentation

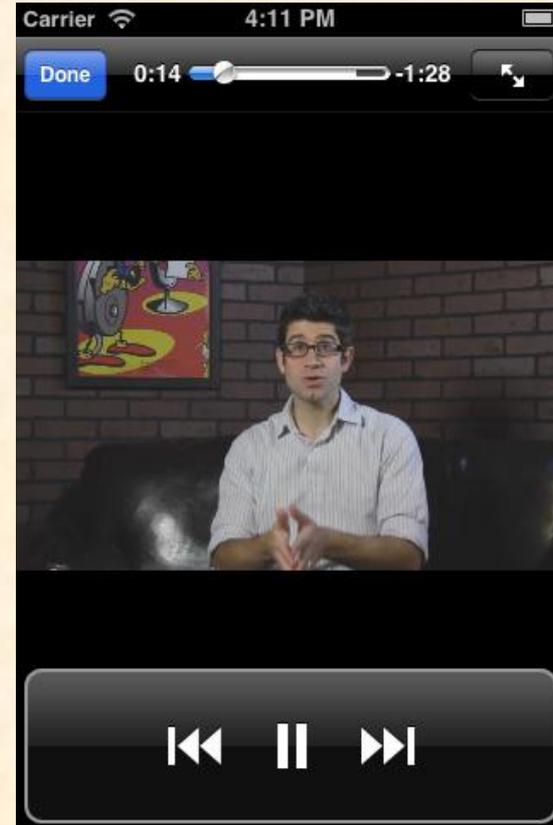
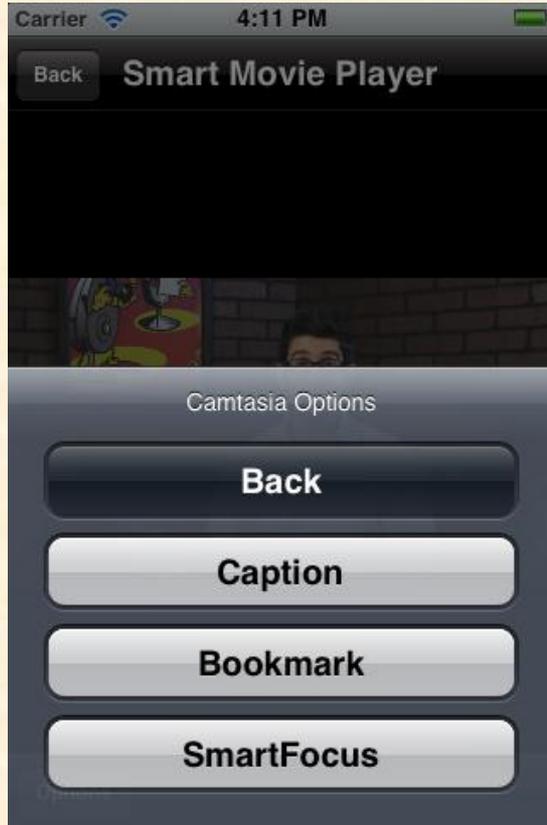
Team TechSmith Project Plan Presentation

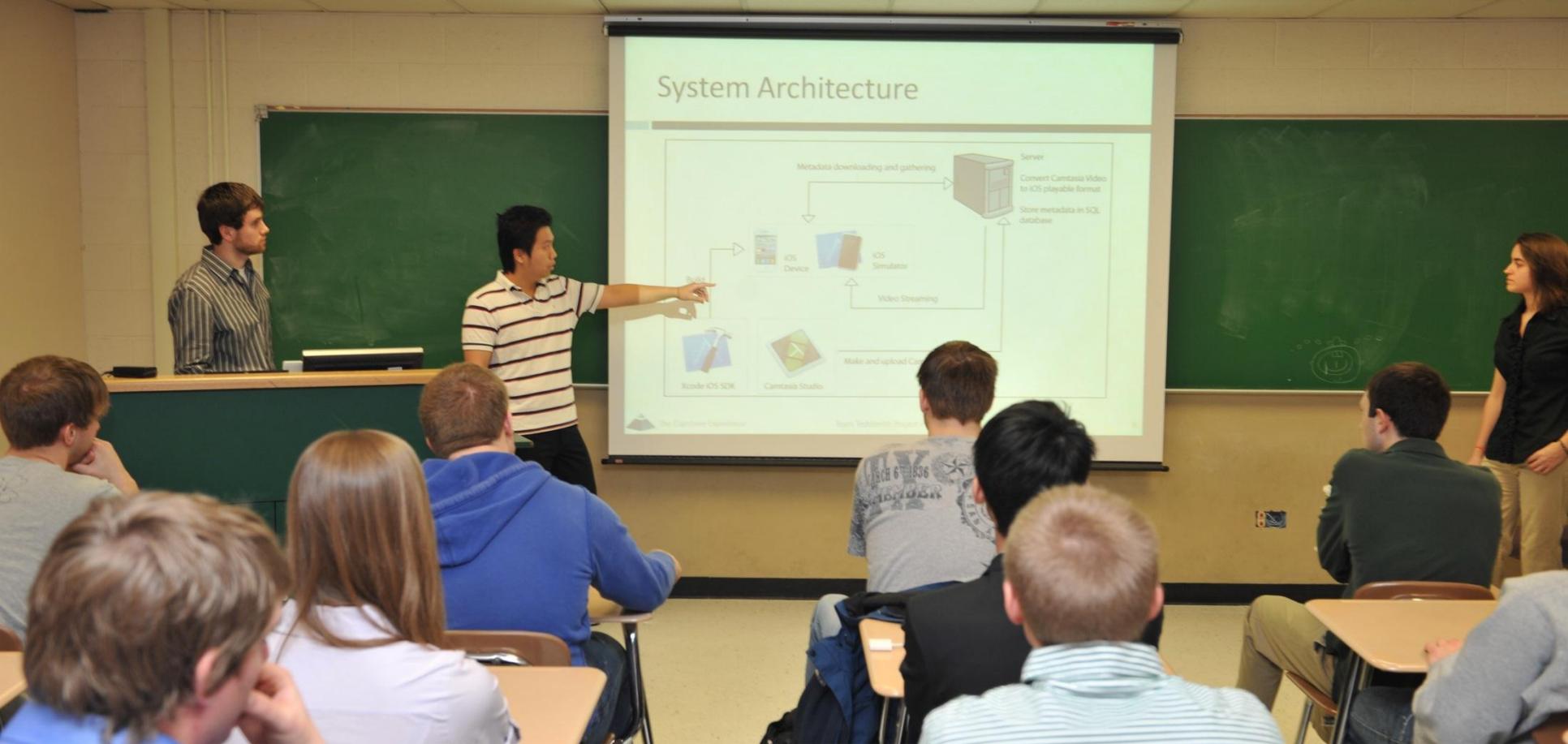
Screen Mockup



Team TechSmith Project Plan Presentation

Screen Mockup

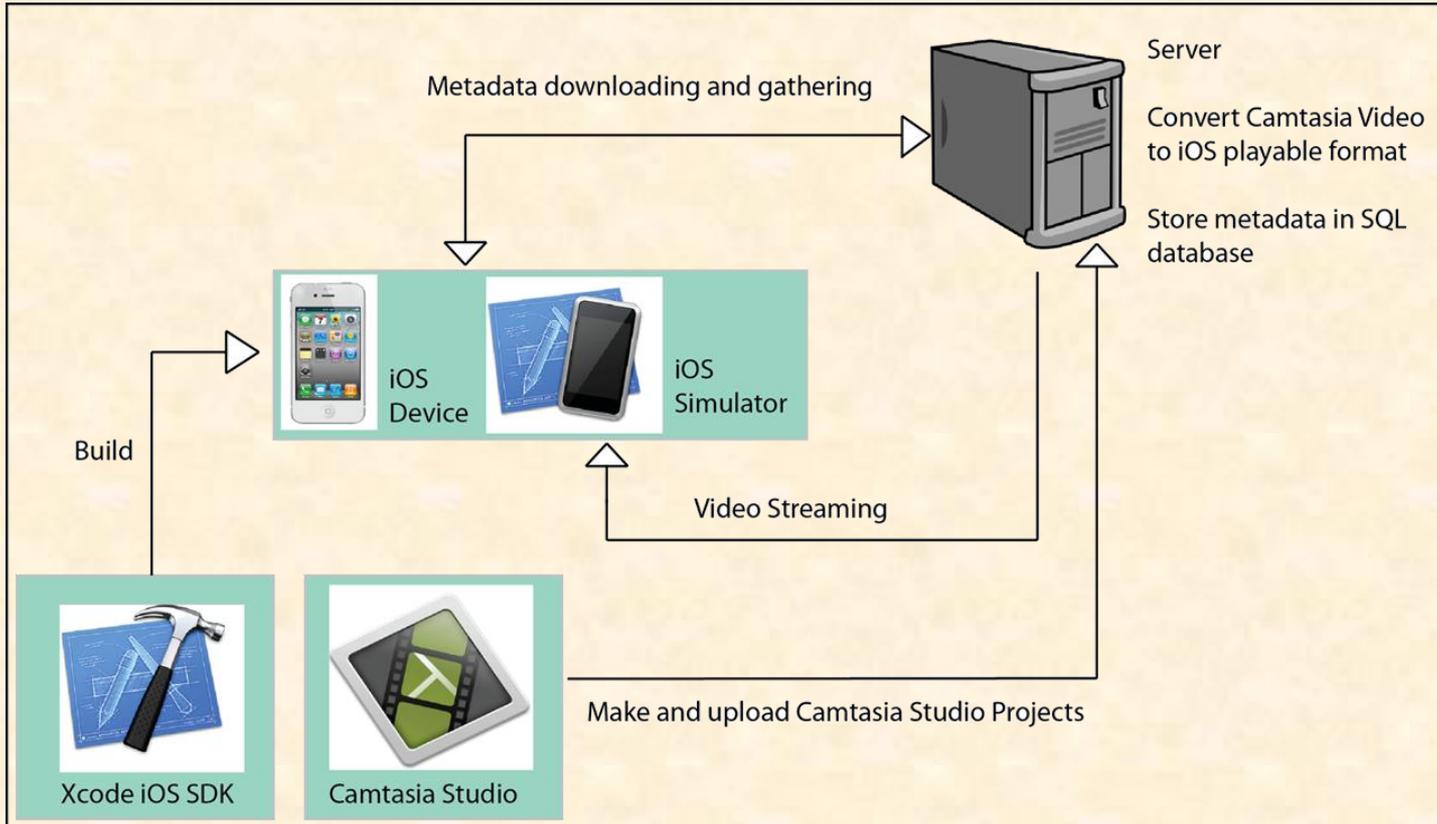




Team TechSmith Project Plan Presentation

Team TechSmith Project Plan Presentation

Architecture Diagram

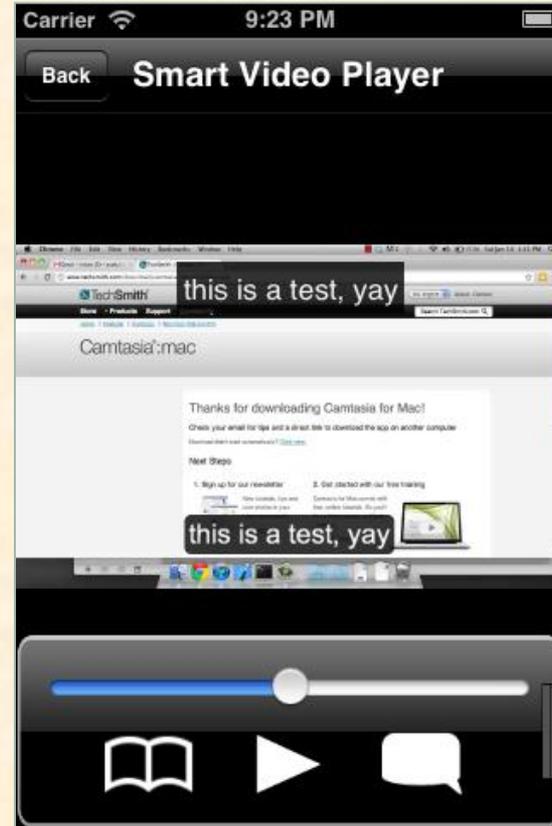
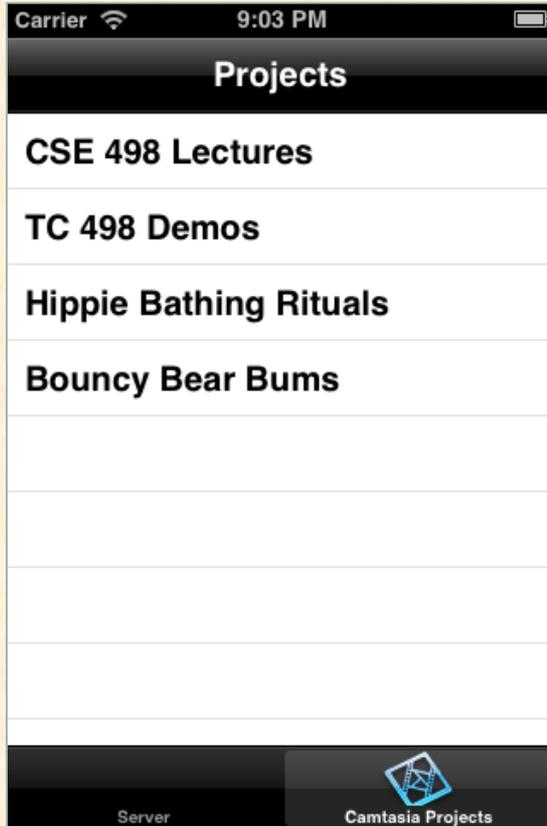




Team TechSmith Alpha Presentation

Team TechSmith Alpha Presentation

Table of Contents and Player

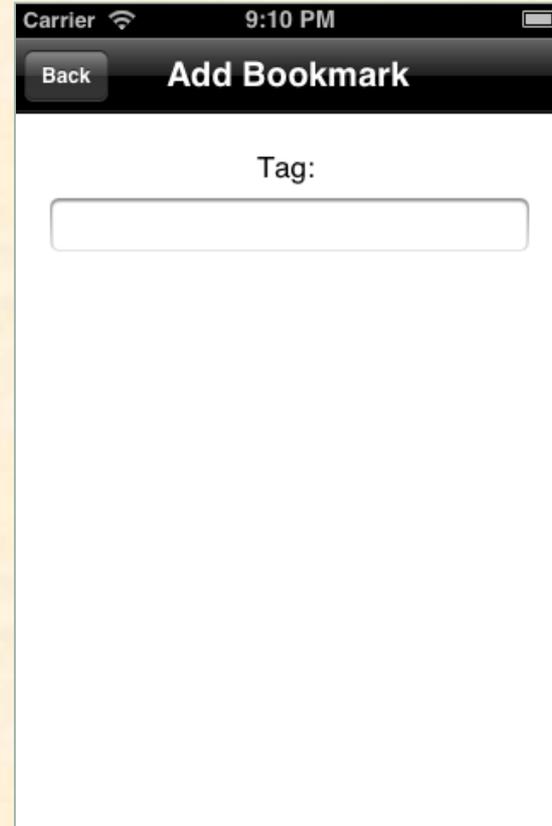
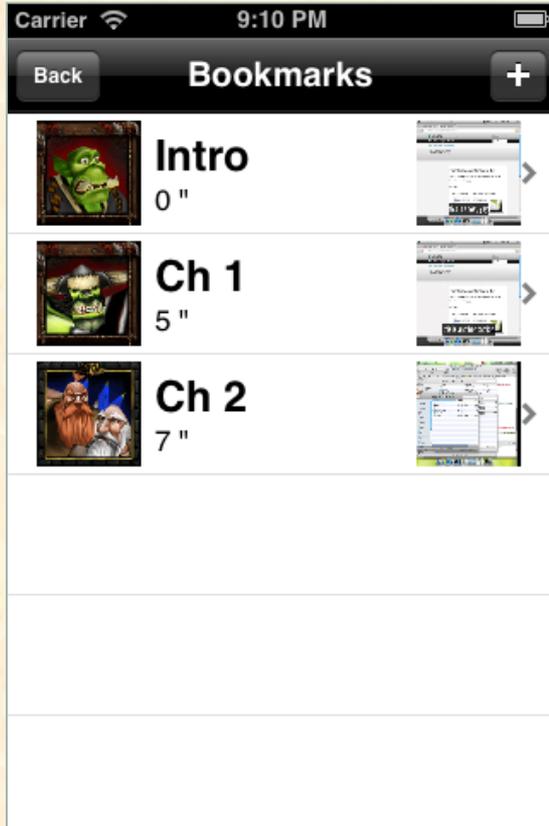




Team TechSmith Alpha Presentation

Team TechSmith Alpha Presentation

Slide Title





Team TechSmith Beta Presentation

Team TechSmith Beta Presentation

Login Screen



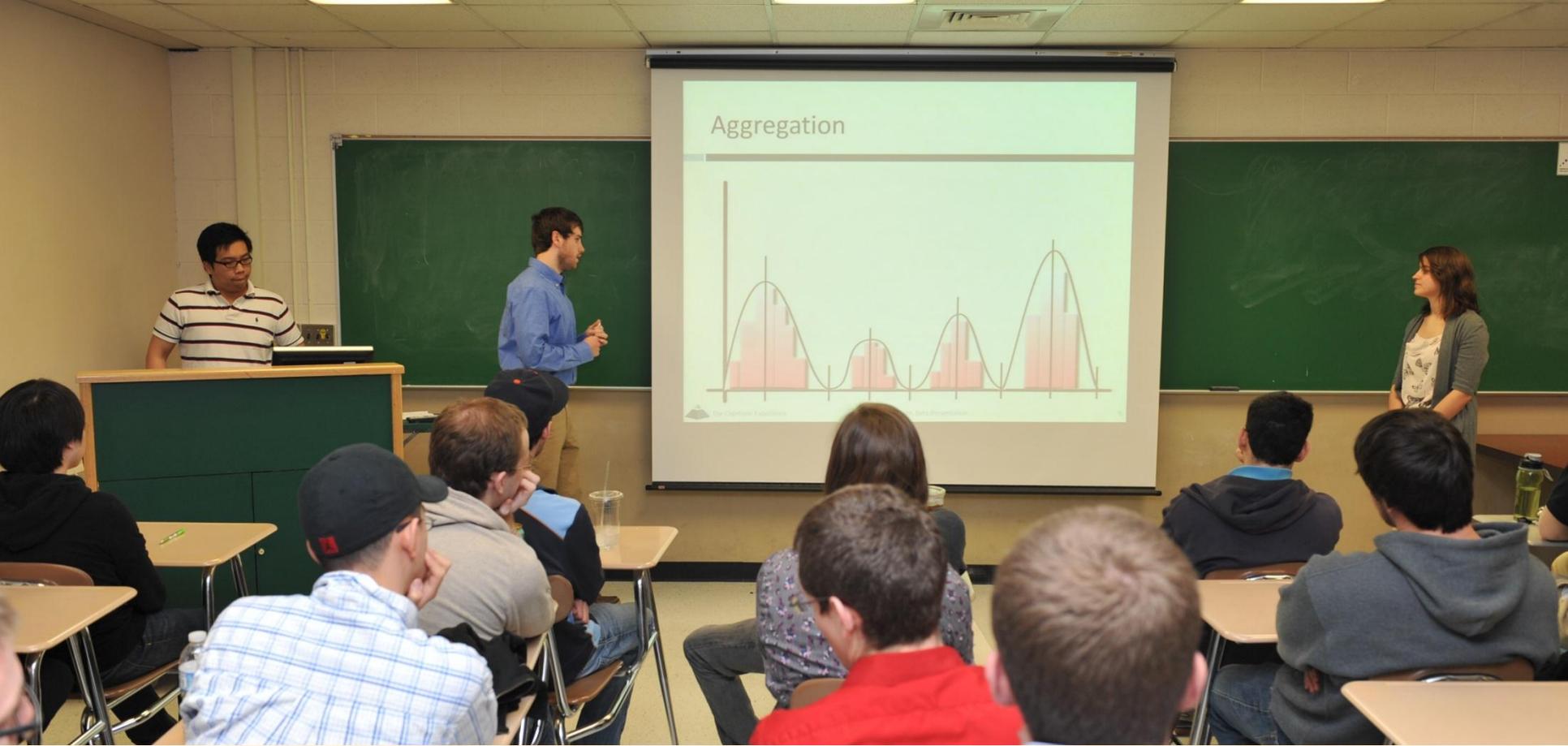


Team TechSmith
Beta Presentation

Team TechSmith Beta Presentation

Video Player

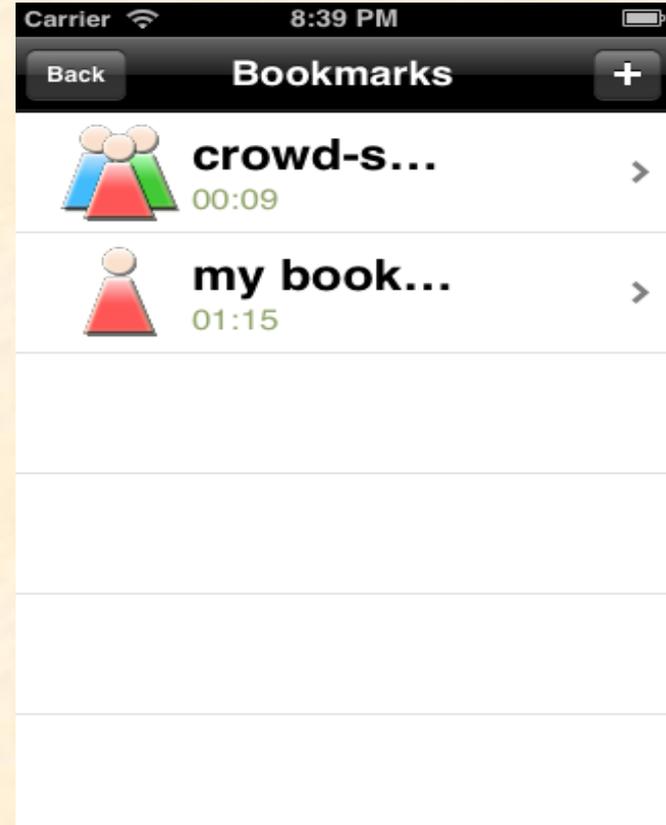
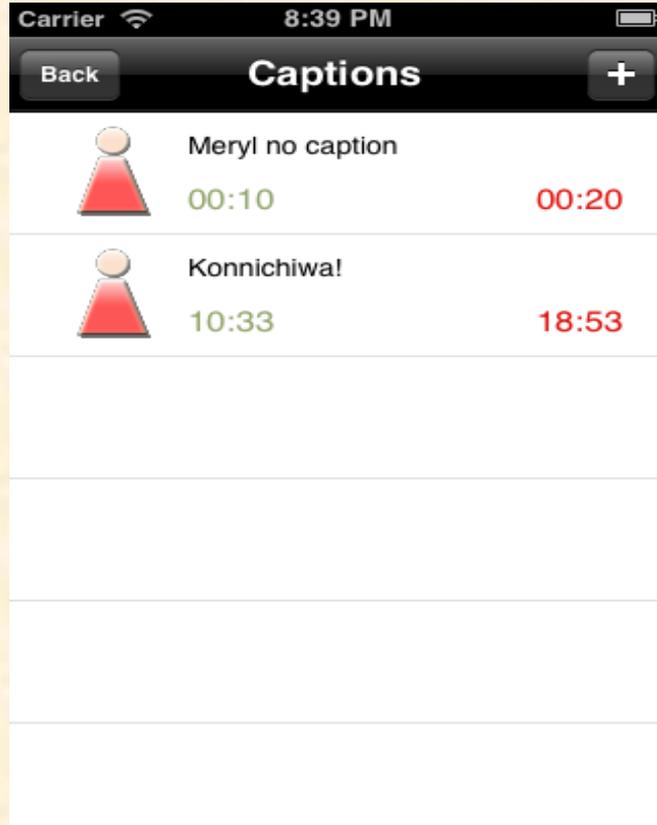




Team TechSmith
Beta Presentation

Team TechSmith Beta Presentation

Adding/Editing Metadata





TechSmith Mobile Smart Video Player

TechSmith is the world leader in screen recording software with millions of users creating informational and educational content. Their content creation products generate valuable metadata that can enhance the viewing experience.

Our Mobile Smart Video Player is an iPhone/iPad application that makes use of this metadata, extending the functionality of TechSmith's Camtasia Studio screen-capture editing software to a mobile environment. It learns what video content is most relevant by sampling each user's tags and by displaying the optimal content to all users.

While watching a screen-capture movie using the Mobile Smart Video Player, a user can gesture to add a bookmark, an on-screen comment about the content, or a SmartFocus zooming or panning point.

Every user-generated tag is added to a database to which tags from users worldwide are constantly being added. The most commonly-placed tags are pulled from this crowd-sourced collection onto all users' iPhones and iPads. Each individual user has the option of viewing their own data alone or the most popular crowd-sourced data from around the world.

Our Mobile Smart Video Player is written in Objective-C. Video content comes from Camtasia Studio. The XML metadata is parsed using Google libraries and is stored in a Microsoft SQL Server database. Our player communicates with the server via the RESTful Open Data Protocol.

TechSmith

<p>Michigan State University Team Members (left to right)</p> <p>Scott Klum Grand Rapids, Michigan</p> <p>Meryl Dara Mabin Rockford, Michigan</p> <p>Yue Lu Chaozhou, Guangdong, China</p>	<p>TechSmith Project Sponsors</p> <p>Dean Craven Owens, Michigan</p> <p>Ryan Eash Owens, Michigan</p> <p>Bill Hamilton Owens, Michigan</p> <p>Dave McColom Owens, Michigan</p> <p>Matt Mercieca Owens, Michigan</p> <p>Mike Simons Owens, Michigan</p>
---	---

Team TechSmith
Design Day

MICHIGAN STATE

UNIVERSITY

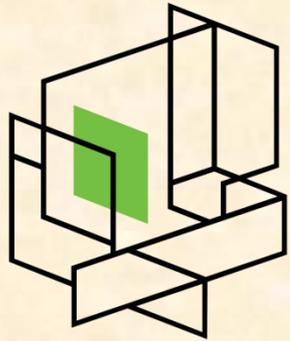
The Capstone Experience

Team Urban Science

Department of Computer Science and Engineering
Michigan State University
Spring 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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We partner with performance-focused clients, and this

News

Auto Dealers Rely on Phones to

Careers

How far can you go at Urban

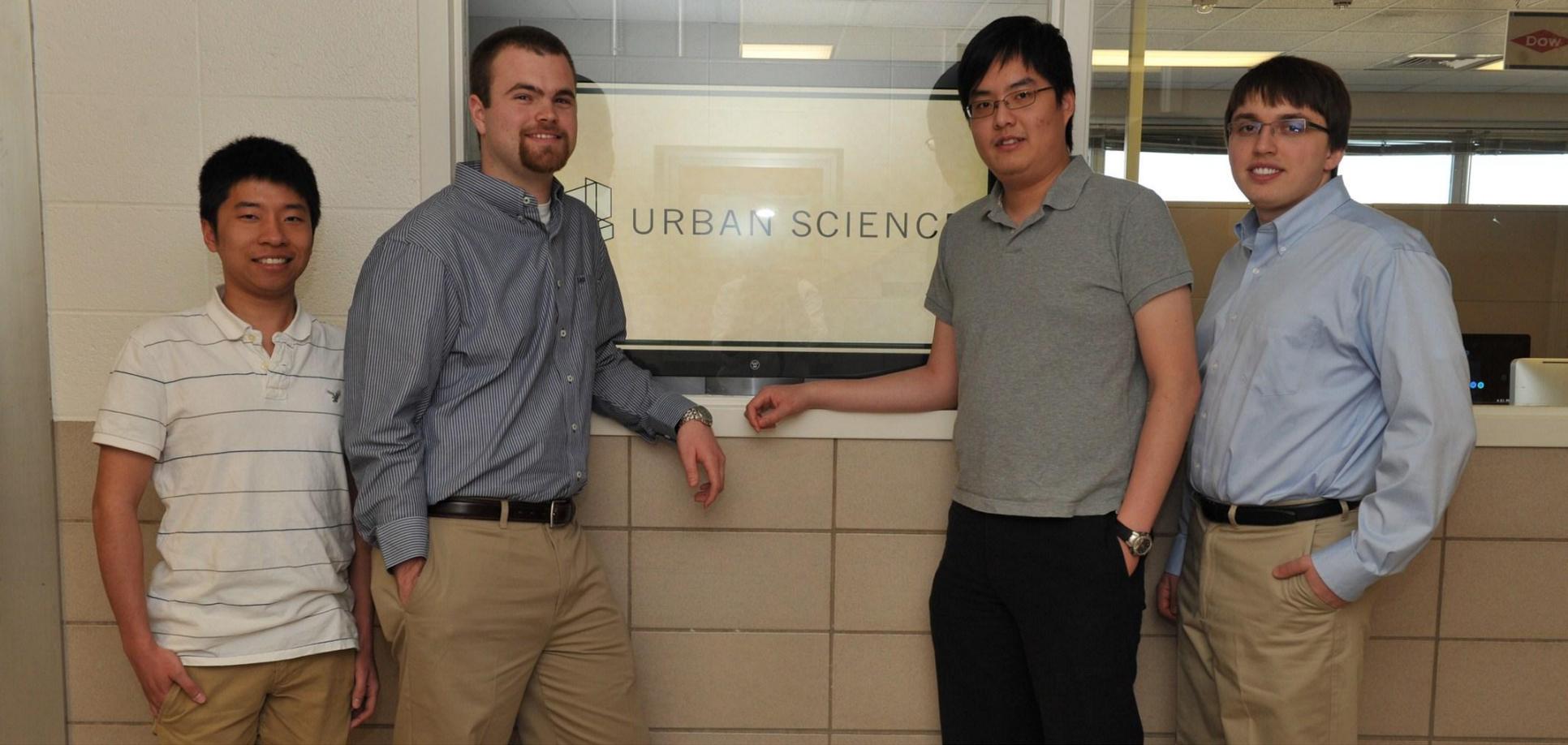
Team Urban Science Project Overview

Infographic Generator

- Functionalities
 - Visualize Data and Information
 - Graphically
 - Compactly
 - Creatively
 - Based on Key Performance Indicators (KPIs)
- Features
 - Dynamic User Selections
 - Key Performance Indicators
 - Timeframes
 - Display Engaging Graphics
 - Scalable
 - Varied
 - Support Drill Down into KPIs
- Technologies
 - Microsoft C#/.NET, ASP.NET
 - JavaScript
 - CSS, HTML5
 - SQL Server



URBAN SCIENCE
Detroit, Michigan



Team Urban Science

Louis Bodnar, Peter Chen, Kevin Shreve, Lok Cheung



Team Urban Science Project Plan Presentation

Team Urban Science Project Plan Presentation

Screen Mockup

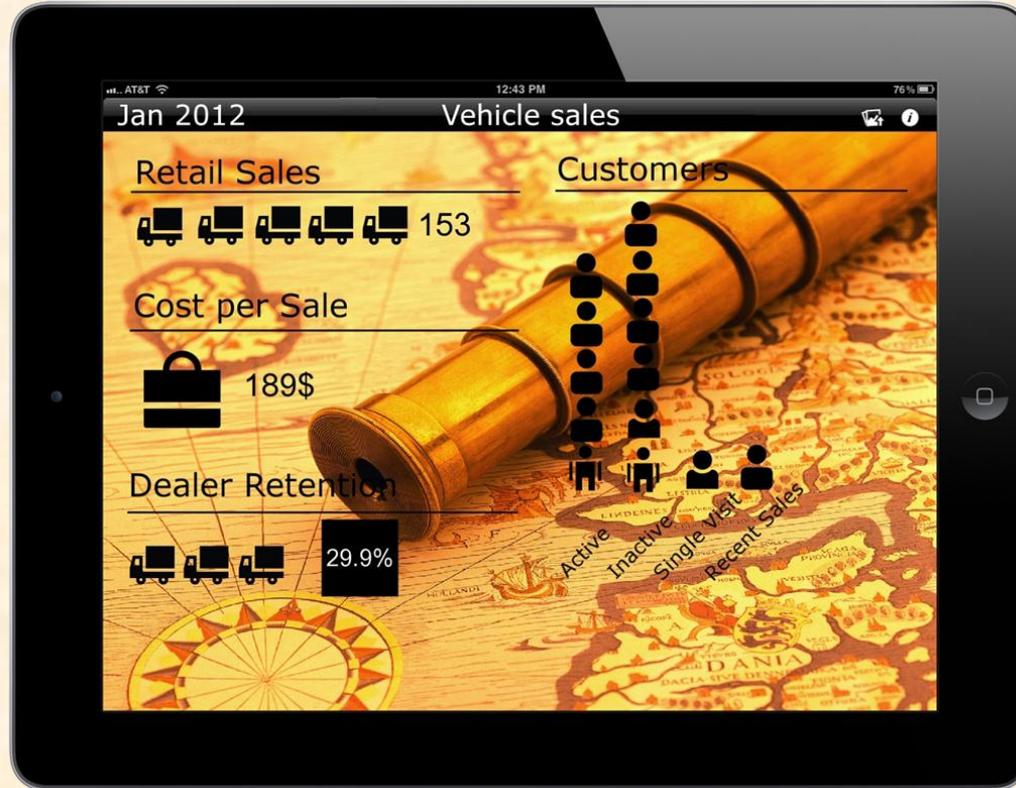


The Capstone Experience

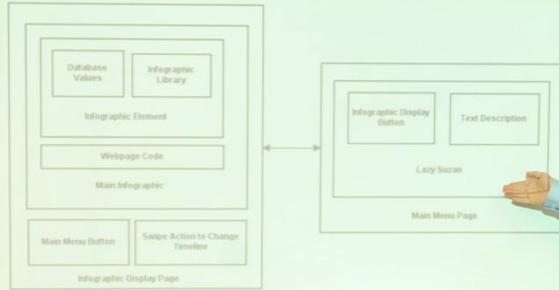


Team Urban Science Project Plan Presentation

Screen Mockup



System Architecture



The Capstone Experience

Team Urban Science

11

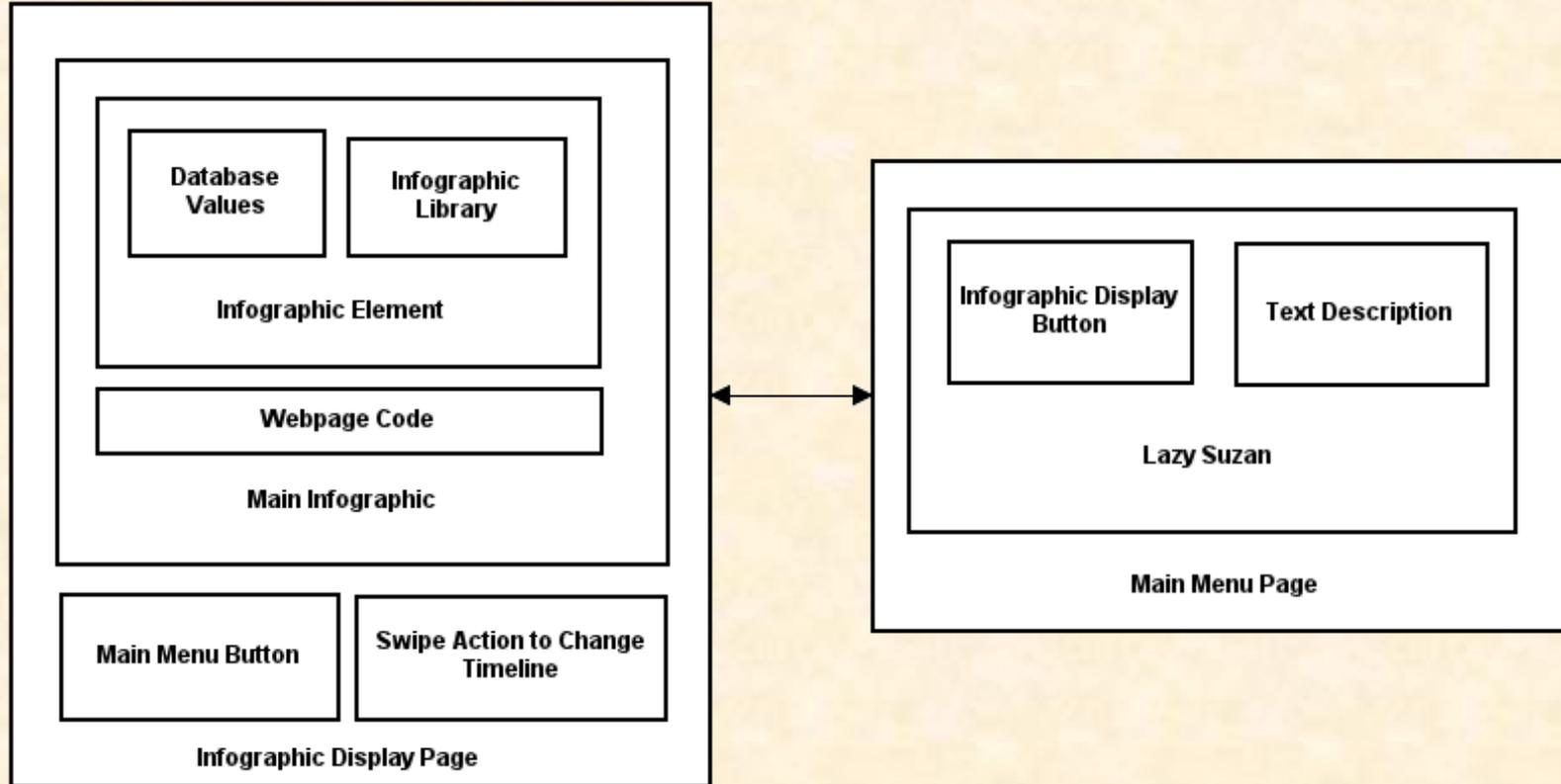
Team Urban Science
Project Plan Presentation

"Shootin' dice for
pancreatic Cancer
Research"



Team Urban Science Project Plan Presentation

Architecture Diagram

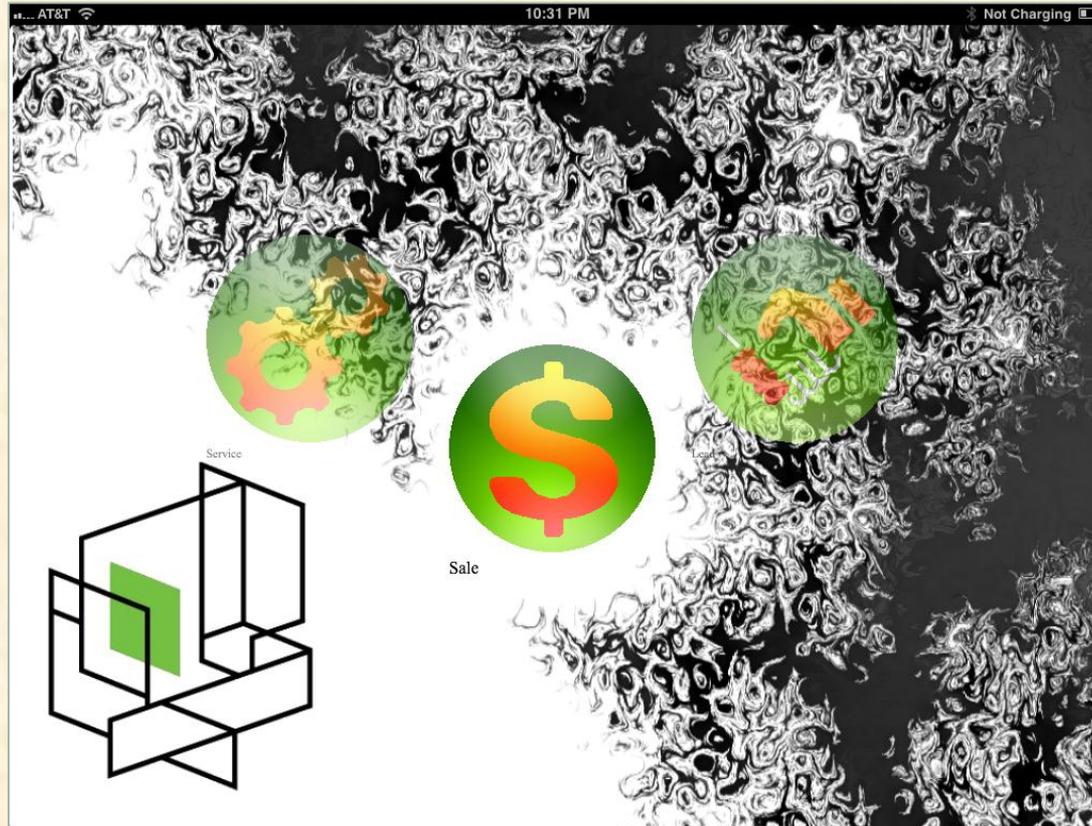


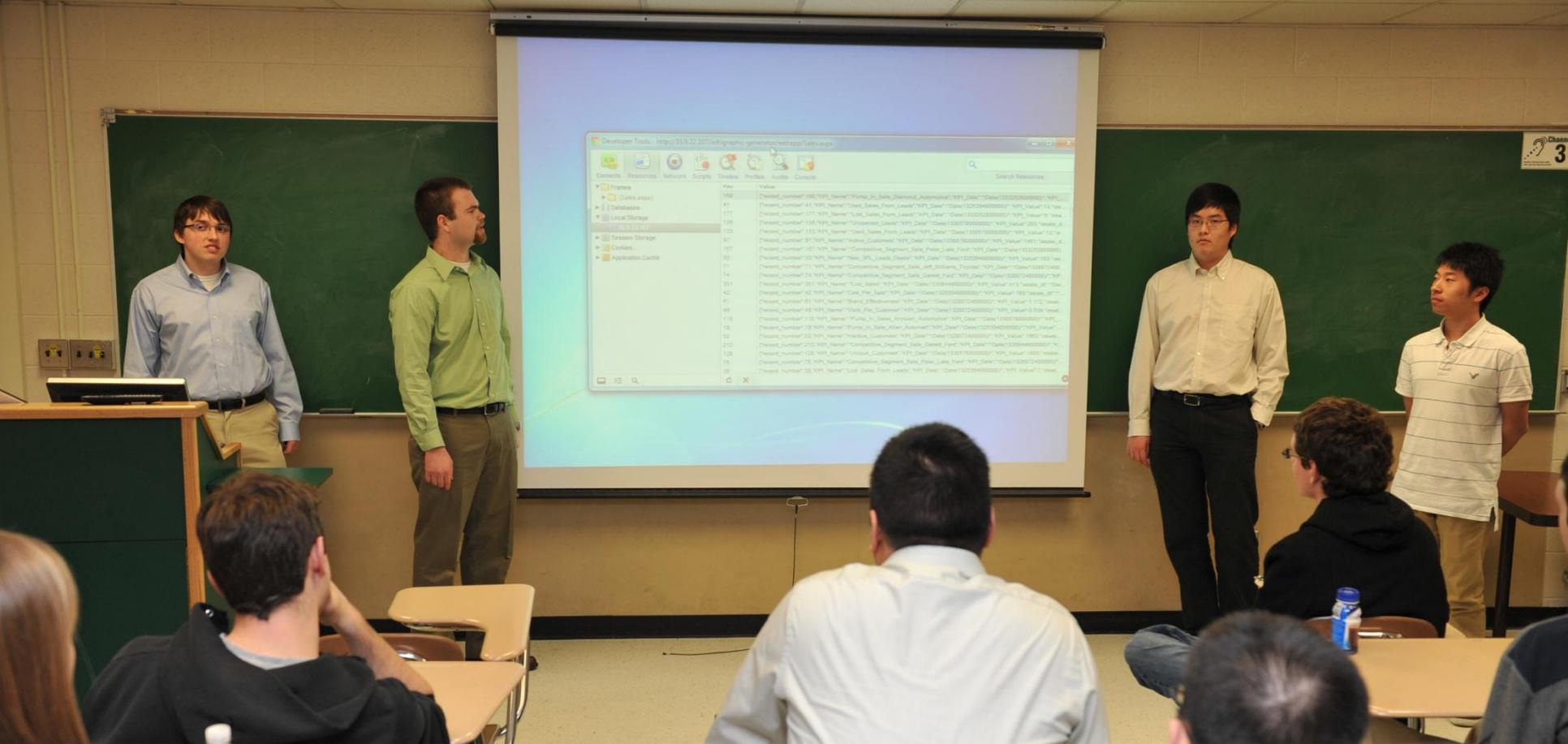


Team Urban Science
Alpha Presentation

Team Urban Science Alpha Presentation

Main Menu (Landscape)

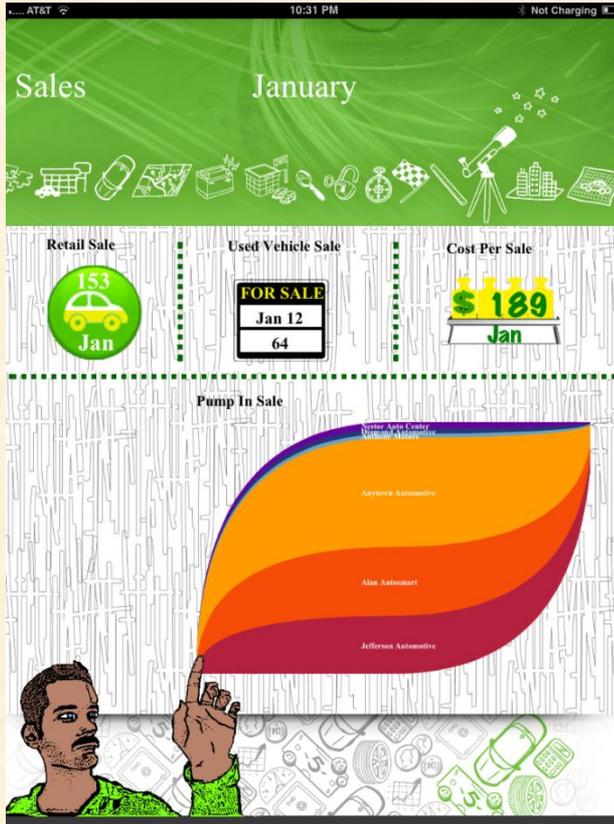




Team Urban Science Alpha Presentation

Team Urban Science Alpha Presentation

Sales Infographics

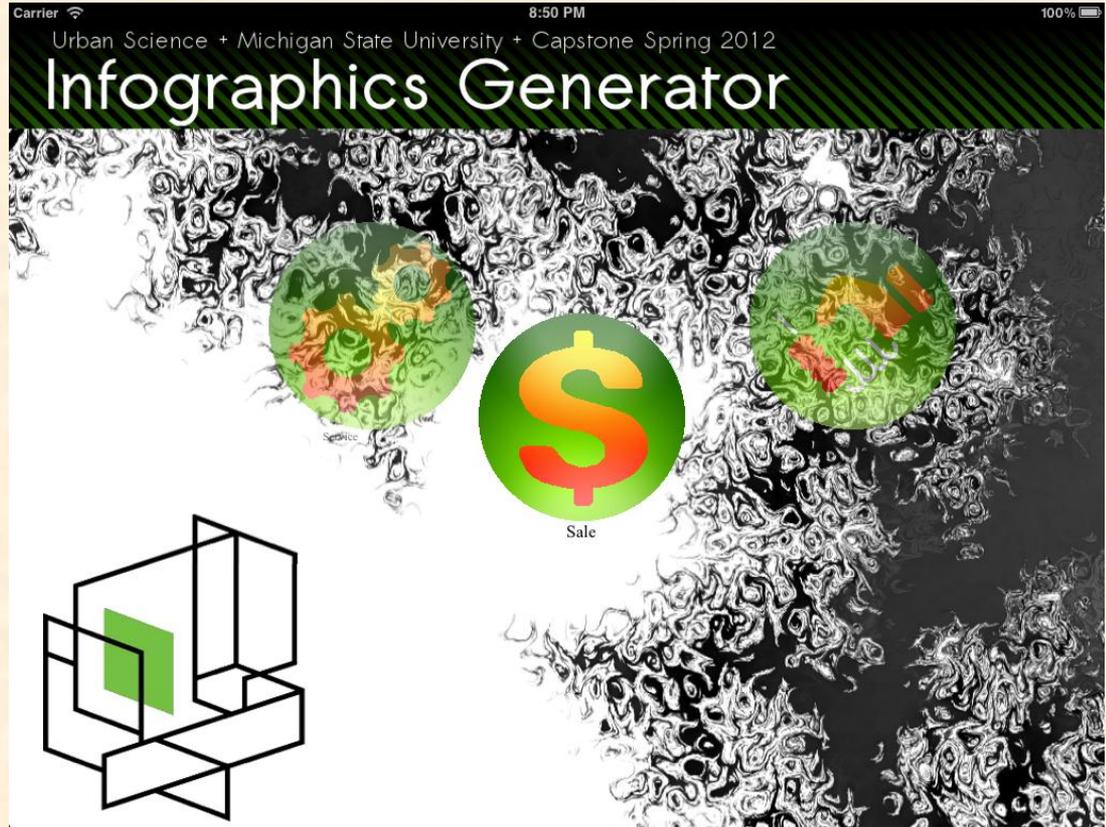
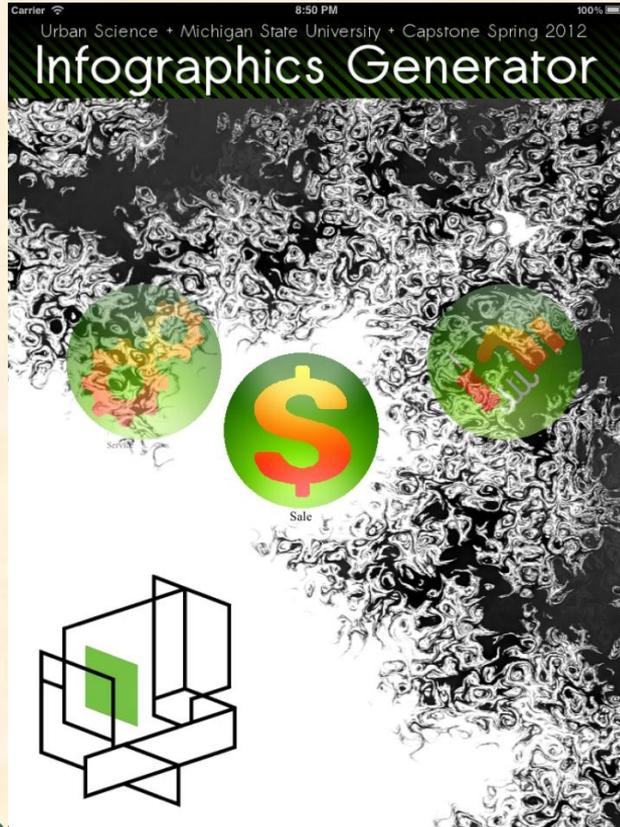




Team Urban Science Beta Presentation

Team Urban Science Beta Presentation

Home Page

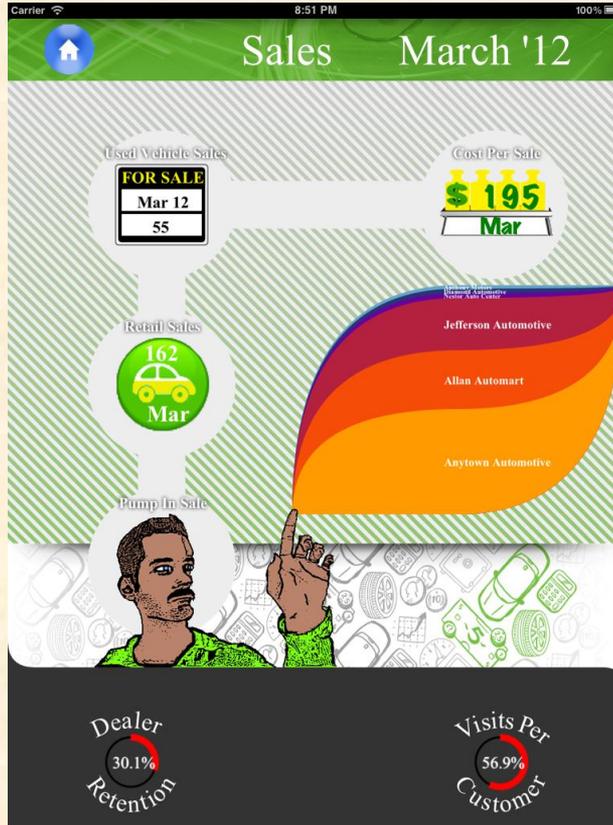


The Capstone Experience



Team Urban Science Beta Presentation

Sales Infographic

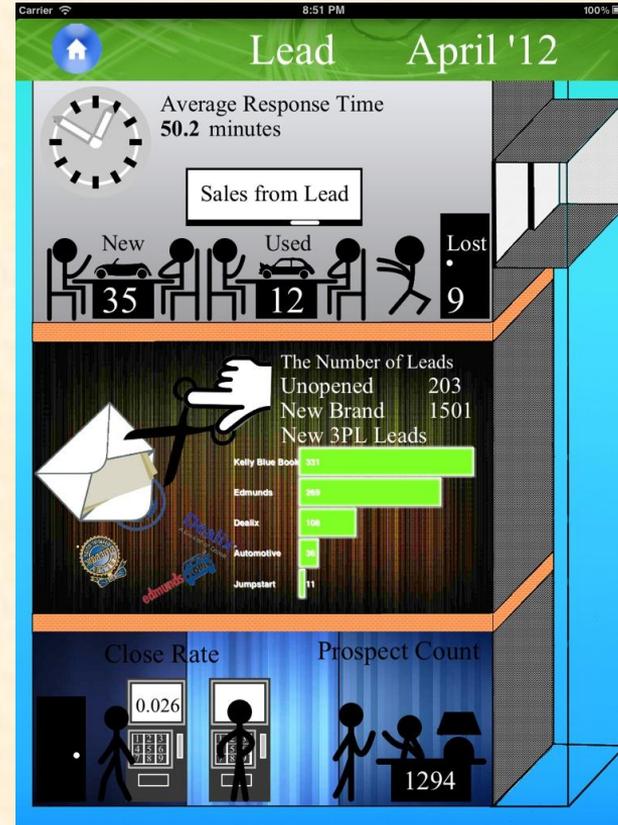
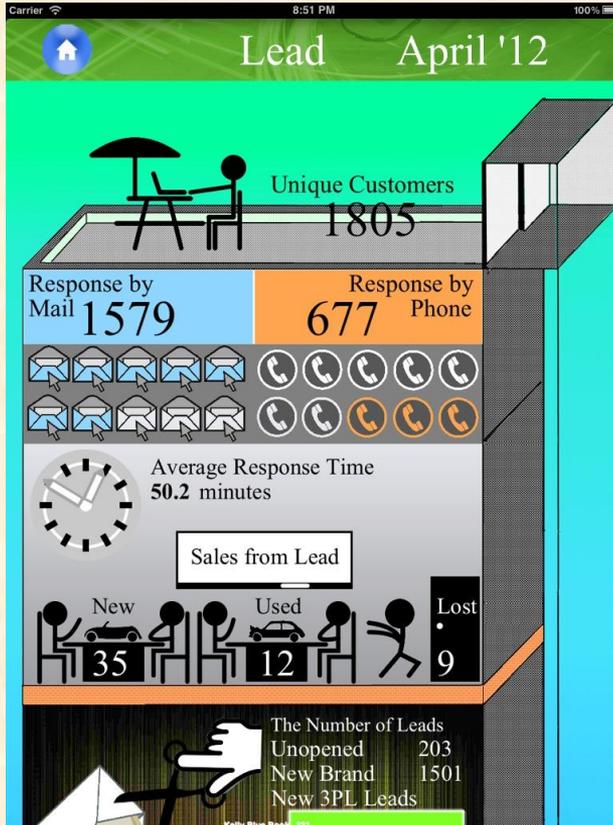




Team Urban Science Beta Presentation

Team Urban Science Beta Presentation

Lead Infographic





Urban Science Infographics Generator

Urban Science serves the automotive industry by improving the sales and services of its customers using comprehensive data driven analysis of key performance indicators. The results produce higher sales and better services at lower costs.

Our Infographics Generator provides an innovative way to visualize these key performance indicators, helping teams track effectiveness in their primary market areas. Our visualization serve as a bridge, transporting users from a confusing table of numbers to a vibrant display of relevant information.

The key performance indicators are divided into three main categories: sales, lead management and service. Each category represents a major slice of business. Our drill down display provides a more in-depth explanation of the information shown on the infographic.

An infographic element, a subsection of an entire infographic, can be selected to display a trend chart covering the last six months of data along with a more detailed description of that element.

Our Infographics Generator is a web application designed for use on the iPad. Our web application supports typical touch gestures such as swipe gestures that one would expect on a tablet, thereby giving users the feel of a native application.

Our Infographics Generator is written using HTML5 and JavaScript. Data for the Infographics generator is stored using a SQL Server 2008 database then sent in JSON format to the iPad's local storage for fast retrieval.

Team Urban Science
Design Day

MICHIGAN STATE

UNIVERSITY

The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering
Michigan State University
Spring 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

MICHIGAN STATE
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The Capstone Experience

Design Day Award Winners

April 27, 2012



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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

MICHIGAN STATE

U N I V E R S I T Y

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 Bonner

Presented by Jim Schumacher and Bob Buchanan of [Auto-Owners Insurance](#)



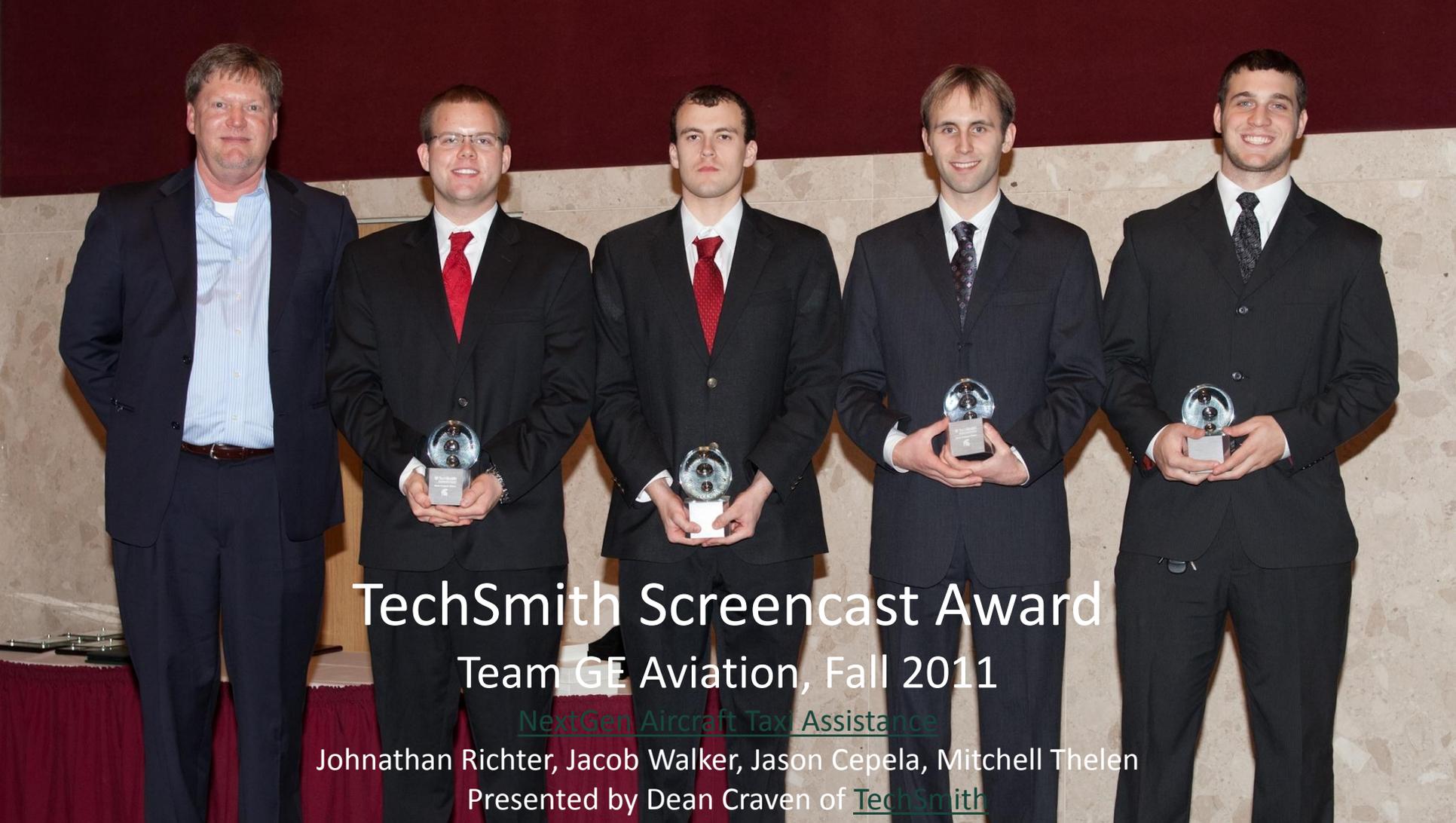
Chrysler Praxis Award

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 Tax Assistance](#)

Johnathan Richter, Jacob Walker, Jason Cepela, Mitchell Thelen

Presented by Dean Craven of [TechSmith](#)



Urban Science Sigma Award

Team Ford, Fall 2011

[Ford Gwikboard](#)

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

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

MICHIGAN STATE

U N I V E R S I T Y

The Capstone Experience

Design Day Award Winners

April 29, 2011



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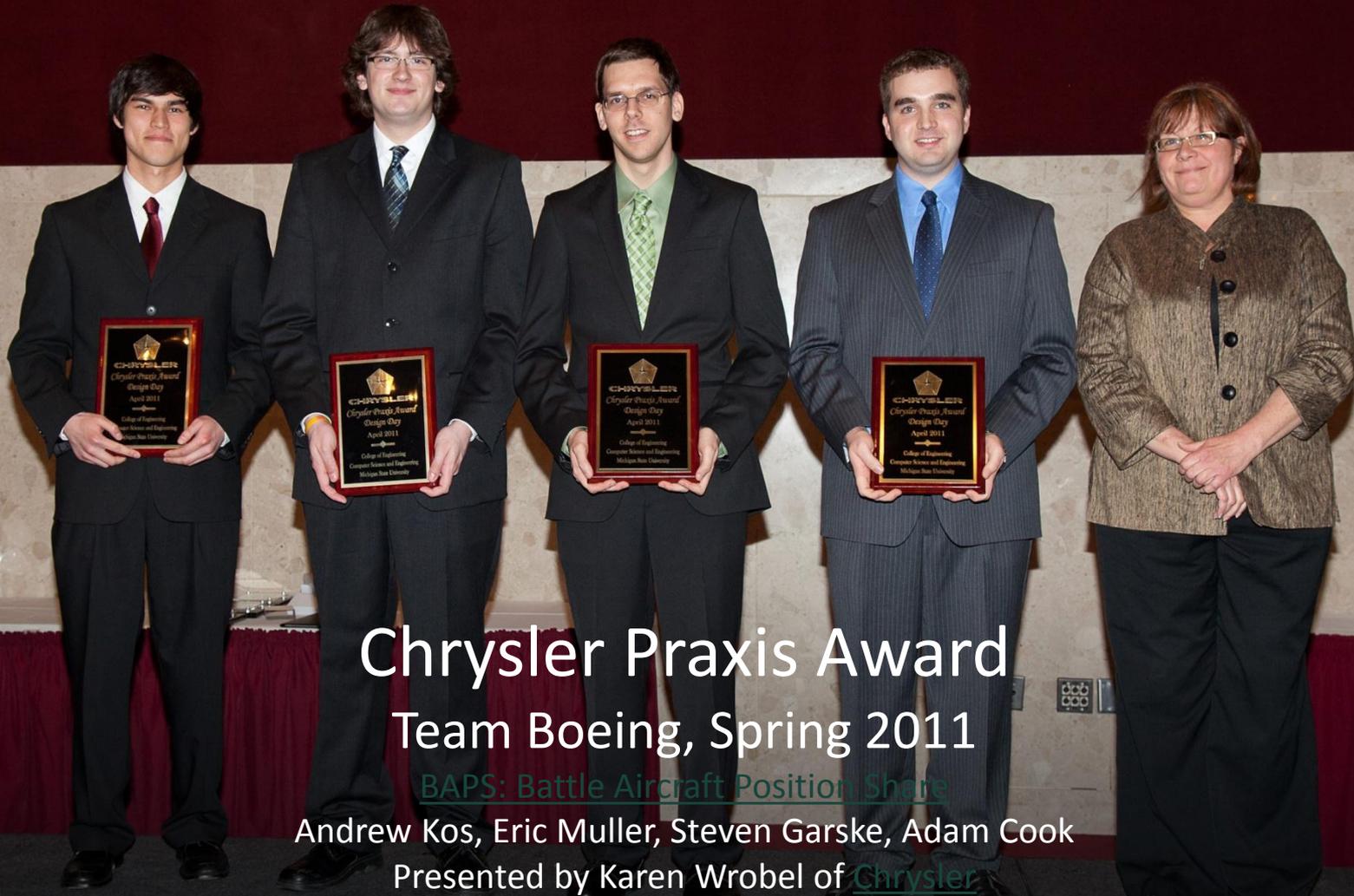
Auto-Owners Exhibition Award

Team Raytheon, Spring 2011

Dynamic Spectrum Access for Network Radios

Matt Bowser, James Voss, William Bonner, Srinivasa Settaluri

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



Chrysler Praxis Award

Team Boeing, Spring 2011

BAPS: Battle Aircraft Position Share

Andrew Kos, Eric Muller, Steven Garske, Adam Cook

Presented by Karen Wrobel of Chrysler



TechSmith Screencast Award

Team Medtronic, Spring 2011

[Cloud-Based Athletics Operations Center](#)

Michael Holp, Evan Francis, Christopher Paterson, Caitlin Russ

Presented by Dean Craven of [TechSmith](#)



Urban Science Sigma Award
Team Sparrow, Spring 2011

[iSupport Center](#)

Ryan Hewitt, Dianna Kay, Brett McMillen, Maurice Wong

Presented by Randy Berlin of [Urban Science](#)

MICHIGAN STATE

UNIVERSITY

The Capstone Experience

Design Day Award Winners

December 10, 2010



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Auto-Owners Exhibition Award Team Meijer, Fall 2010

[ITS Products and Services Request System](#)

Matt Packowski, Austin McCarty, Andrew Thielking

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



Chrysler Praxis Award Team Motorola, Fall 2010

[Enhanced Program Guide for Mobile Devices](#)

Andrew Rossow, Drew Hanlon, Tim Aubel, Brian Cripe

Presented by Karen Wrobel of [Chrysler](#)



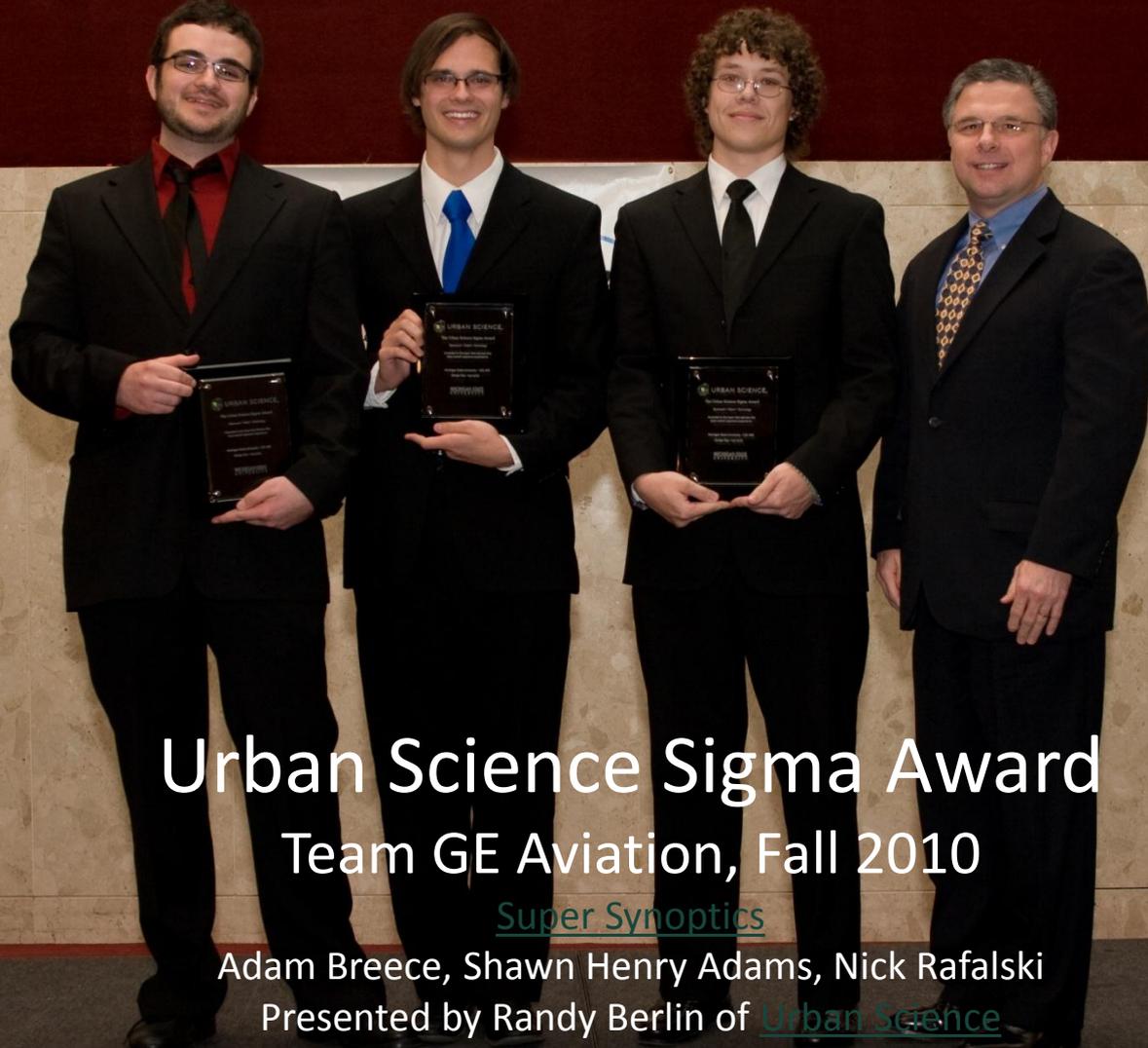
TechSmith Screencast Award

Team Medtronic, Fall 2010

[Medtronic Wellness Portal](#)

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

Presented by Dean Craven of [TechSmith](#)



Urban Science Sigma Award

Team GE Aviation, Fall 2010

[Super Synoptics](#)

Adam Breece, Shawn Henry Adams, Nick Rafalski

Presented by Randy Berlin of [Urban Science](#)

MICHIGAN STATE

U N I V E R S I T Y

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

The "No Problem" People[®]



BOEING



®



meijer[®]

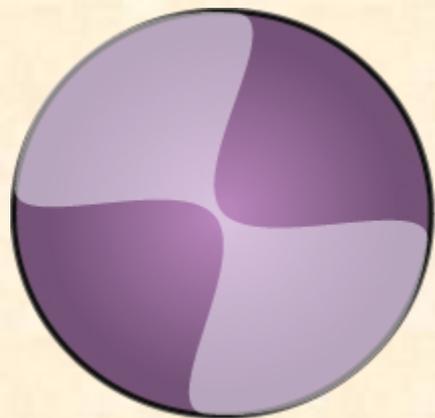


MOTOROLA



mozilla

Firefox[®]

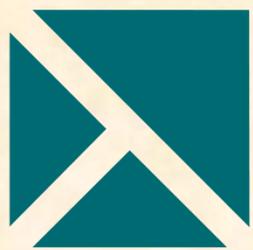


PLEX
SYSTEMS

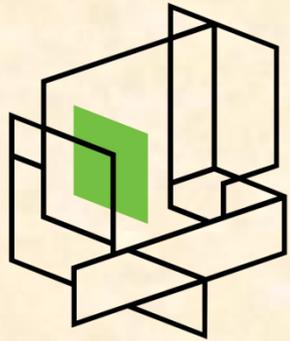
Raytheon

SPECTRUM HEALTH





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