Project Plan
MyMeijer: Crowdsourcing Shopping

The Capstone Experience

Team Meijer
Mark Mangliers
Matt Bender
Mike Mei
Nancy Krutty

Department of Computer Science and Engineering
Michigan State University
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Functional Specifications

• Allows customers to alert employees of issues throughout the store
  ▪ Report out-of-stock items
  ▪ Report spilled items in the store

• Allows employees to respond quickly to any issues a customer may need assistance with

• Allows corporate employees to review statistics of reports
Design Specifications

• Three major features
  ▪ Customer mobile application
  ▪ Employee Bluebird application
  ▪ Corporate web portal

• The customer app is a similar layout to the pre-existing Meijer mPerks app

• The employee app includes a list of all reports and selectable actions for each

• The corporate app includes graphs and numbers for average resolution speed, number of reports, commonly out-of-stock items, and other statistics
Screen Mockup: Customer App
Screen Mockup: Customer App
Screen Mockup: Bluebird App
Screen Mockup: Corporate Web App

- Out of Stock Reports
- Okemos Average Response Time
- Spills Reported
- Total Spills Reported This Week: 6
- Total Out of Stock This Week: 47

MyMeijer Logistics

Week

Average Response Time
Week

Number of Spills
Week
Technical Specifications

• Customer Application - Mobile Application
  ▪ Supports Android 4.4+ / iOS 8.0+
  ▪ Developed on Xamarin in C#

• Team Member – Mobile Application
  ▪ Supports Windows (mobile)
  ▪ Developed on Xamarin in C#

• Corporate Scoreboard - Web Application
  ▪ Follows ASP.Net MVC framework
  ▪ Developed using C#/.Net for backend

• MySQL Database hosted on Azure Cloud
System Architecture

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System Components

• Hardware Platforms
  ▪ Smartphone (Android 4.4 / iOS 8.0)
  ▪ Bluebird Mobile Device (Windows)
  ▪ Mac/PC to access the Web Application

• Software Platforms / Technologies
  ▪ Microsoft .NET Framework, C#, ASP.NET, Azure Mobile Services
  ▪ App Insights for Analytics for web and mobile
  ▪ Microsoft Visual Studio Team Server – Source Control
  ▪ Hockey App for deployment (both iOS and Windows)
Testing

- Using Fiddler to check communication between services and mobile/web applications
- Using Android/iOS device emulator on Xamarin to test functionality.
- Deploying customer mobile application to an Android/iOS device to test UI design and ease of use.
- Deploy team member application to bluebird device to check if it can receive notifications.
Risks

• Detecting Customer Location
  ▪ Automatically detecting in-store location is a desired feature
  ▪ Have backup plans if not feasible (manual reporting, etc)

• Scanning Barcodes with Mobile App
  ▪ We need to be able to scan an item’s barcode
  ▪ Most likely use existing libraries – no need to reinvent the wheel

• Displaying Statistics in Web App
  ▪ We need to be able to display statistics in with various filters and views in a web page
  ▪ Begin prototyping early, go through numerous designs, research solutions for displaying graphs, etc

• Managing Push Notifications
  ▪ Need to be able to send notifications to mobile devices
  ▪ Test with dummy applications, begin testing and integrating early
Questions?