Zero to Hero

Mobile development in 2 weeks

Bob Brennan – IMS

Chris Easton – Applied Logic

Agenda

- 2 Business Cases with 2 Week Timeframe
- How did we do it?
- 2 Development Approaches
- App Overview
- Lessons Learnt
- Questions

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Two business Cases

- IMS install base requiring intranet based mobile apps –
  - Extend existing character app
  - 2 weeks to get demo for user conference
  - Low User expectation
- Applied Logic – Bolt on to existing REST service for mobile sales force outside firewall
  - iPad based
  - High user expectations
  - Competitive threat

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How did we do it?

- Early adopters
- Formed a combined Applied Logic and IMS Team
- Engaged with Progress Mobile Team
- Sit in at PSC Corporate Center Bedford
- Heads down dedication for two weeks

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Acknowledgements

- Shelley Chase
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- Mike Jacobs
- Bob Palumbo

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Two Development Approaches

- IMS: OE mobile Tomcat REST adapter in 11.2 box
- ALS: Existing Webspeed based REST services

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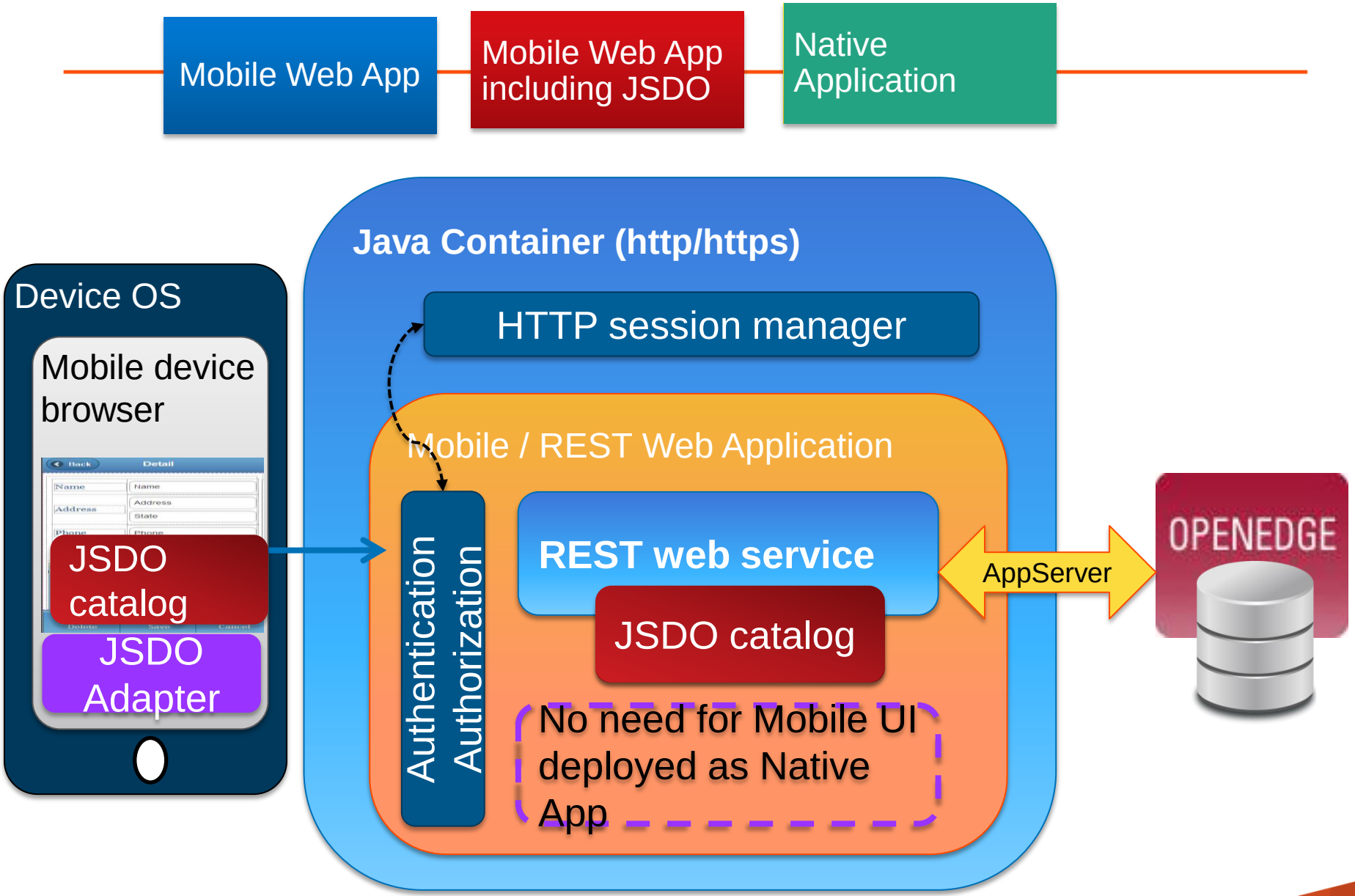
Runtime Architectural Elements



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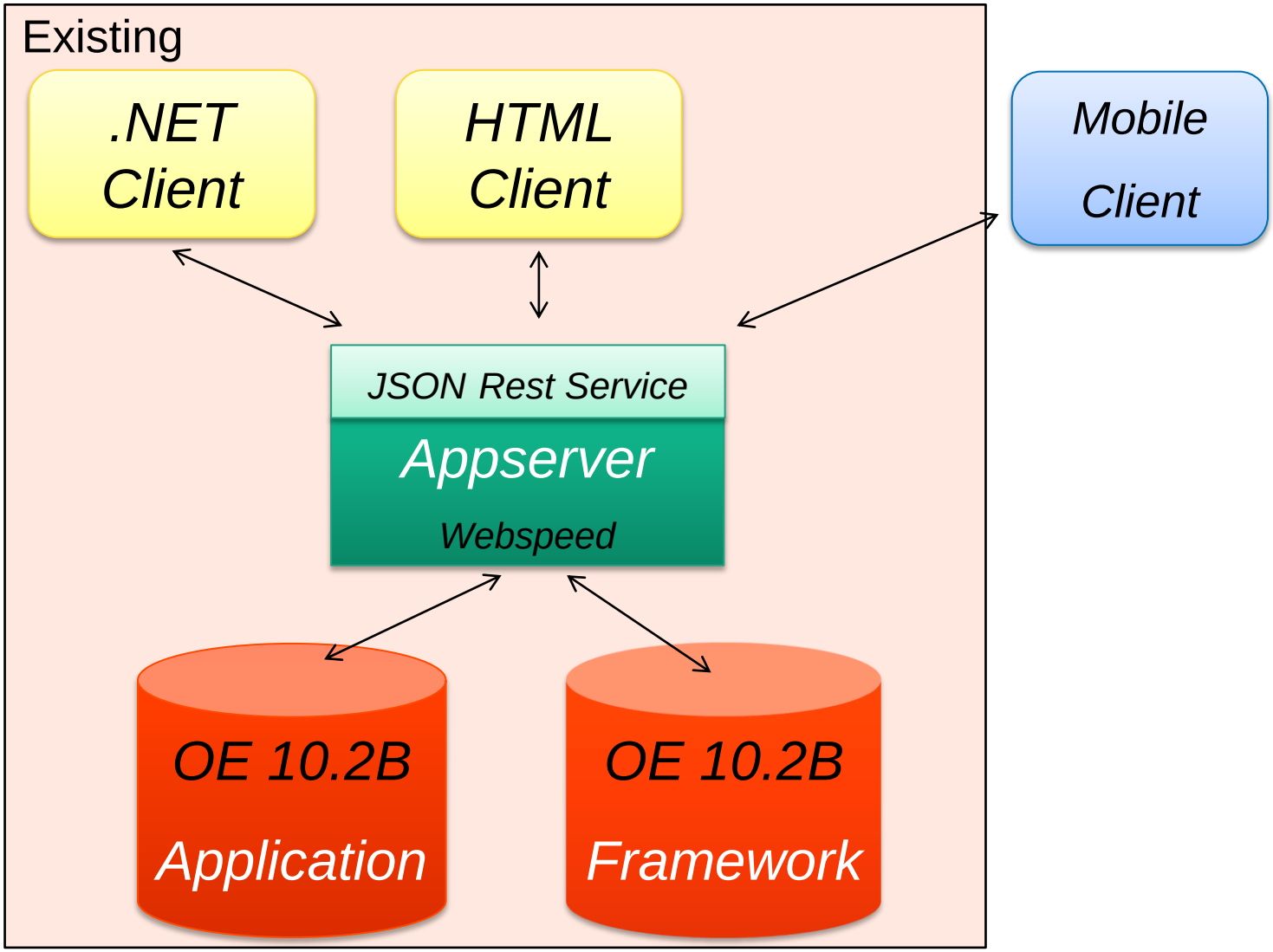
Applied Logic Approach



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App Overview

iPad Quoting Tool

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Demo App Overview

- iPad Sales Competitive Quotation tool
- Interface with existing ERP
- 10.2B Progress – upgrade to 11.2 not possible in timeframe.
- PDF quotation that can be emailed from iPad
- Printing on Server and iPad
- Update of existing pricing
- Security

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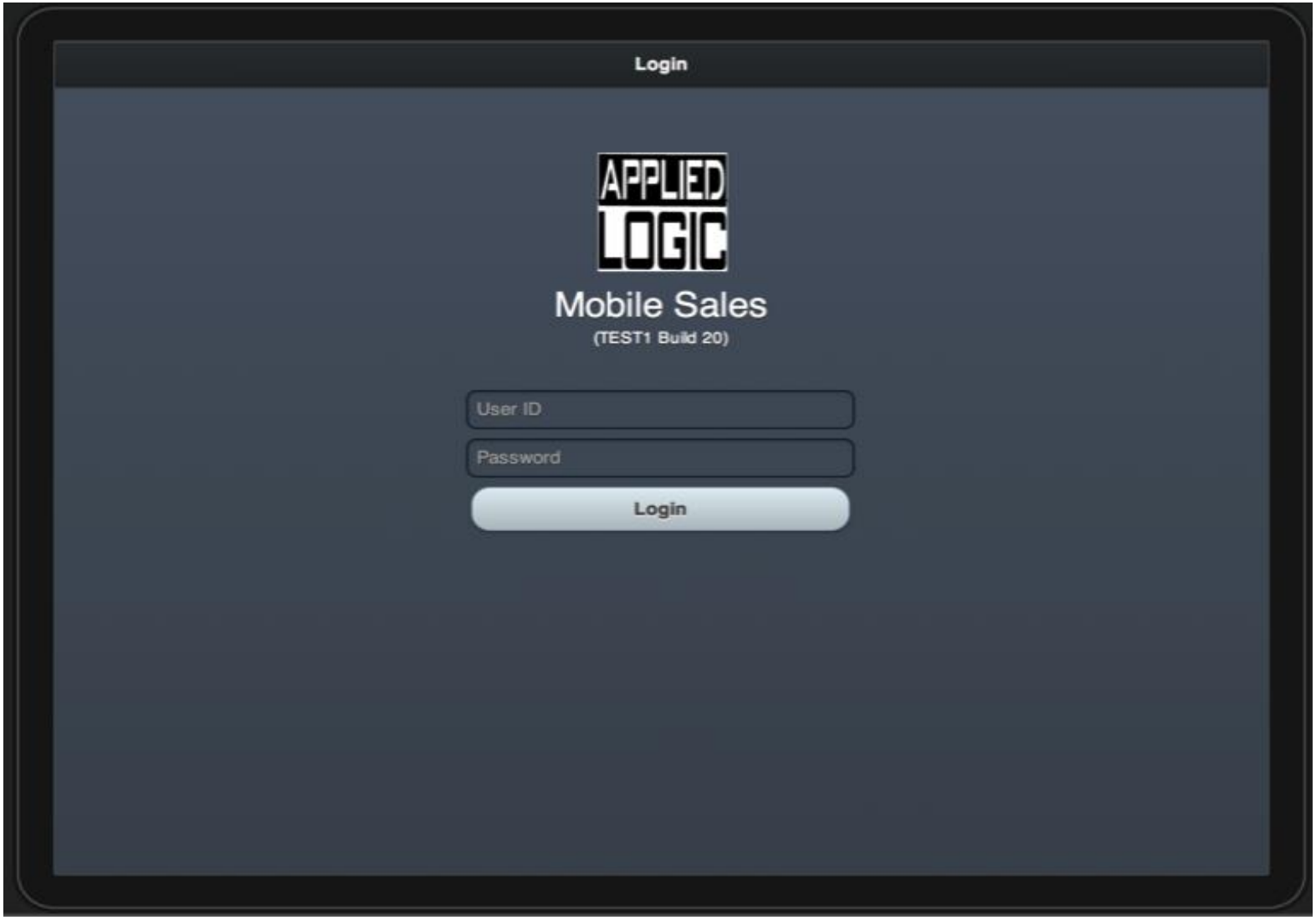
Mobile Sales



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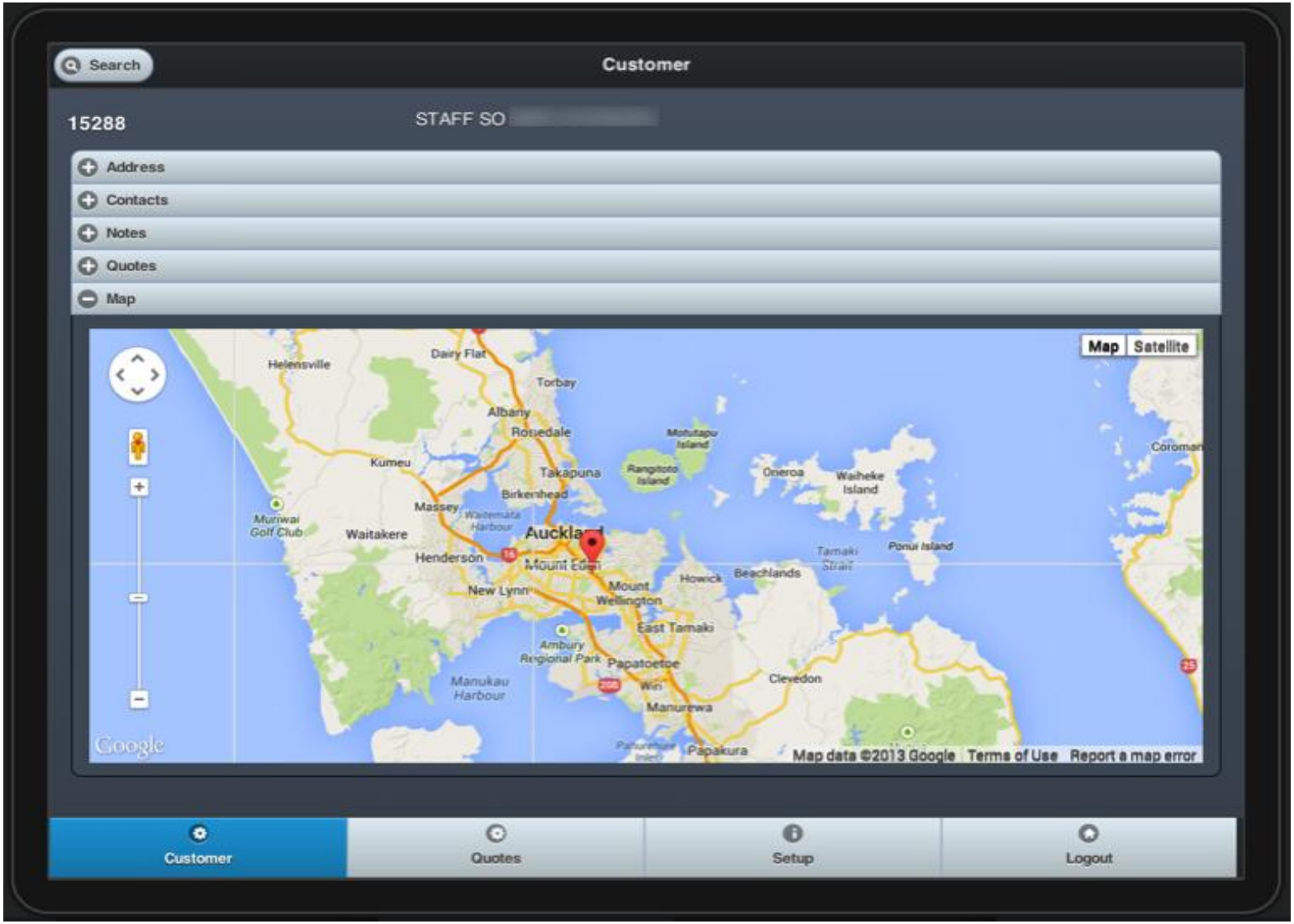
Customer View



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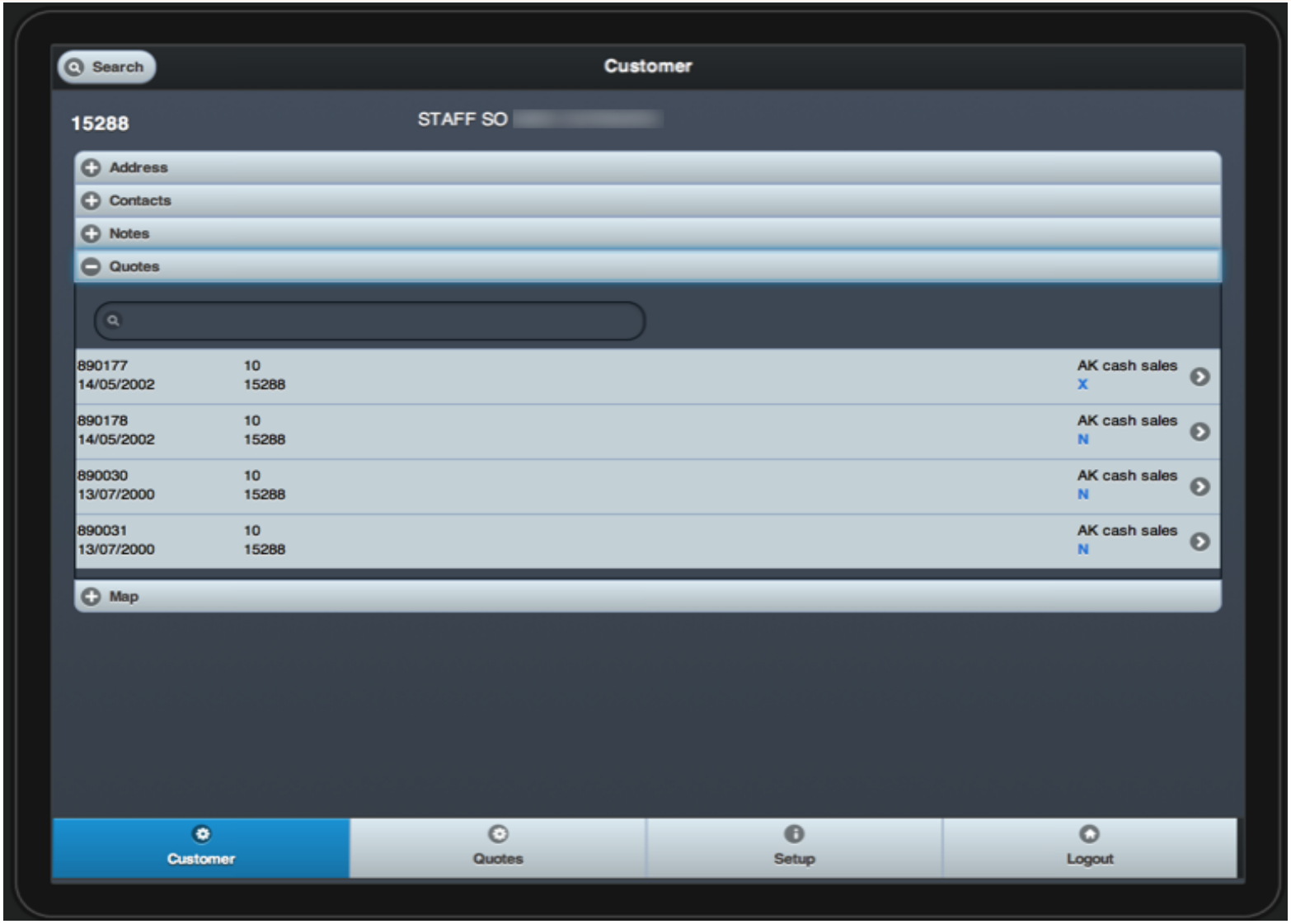
Customer View



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Quotation

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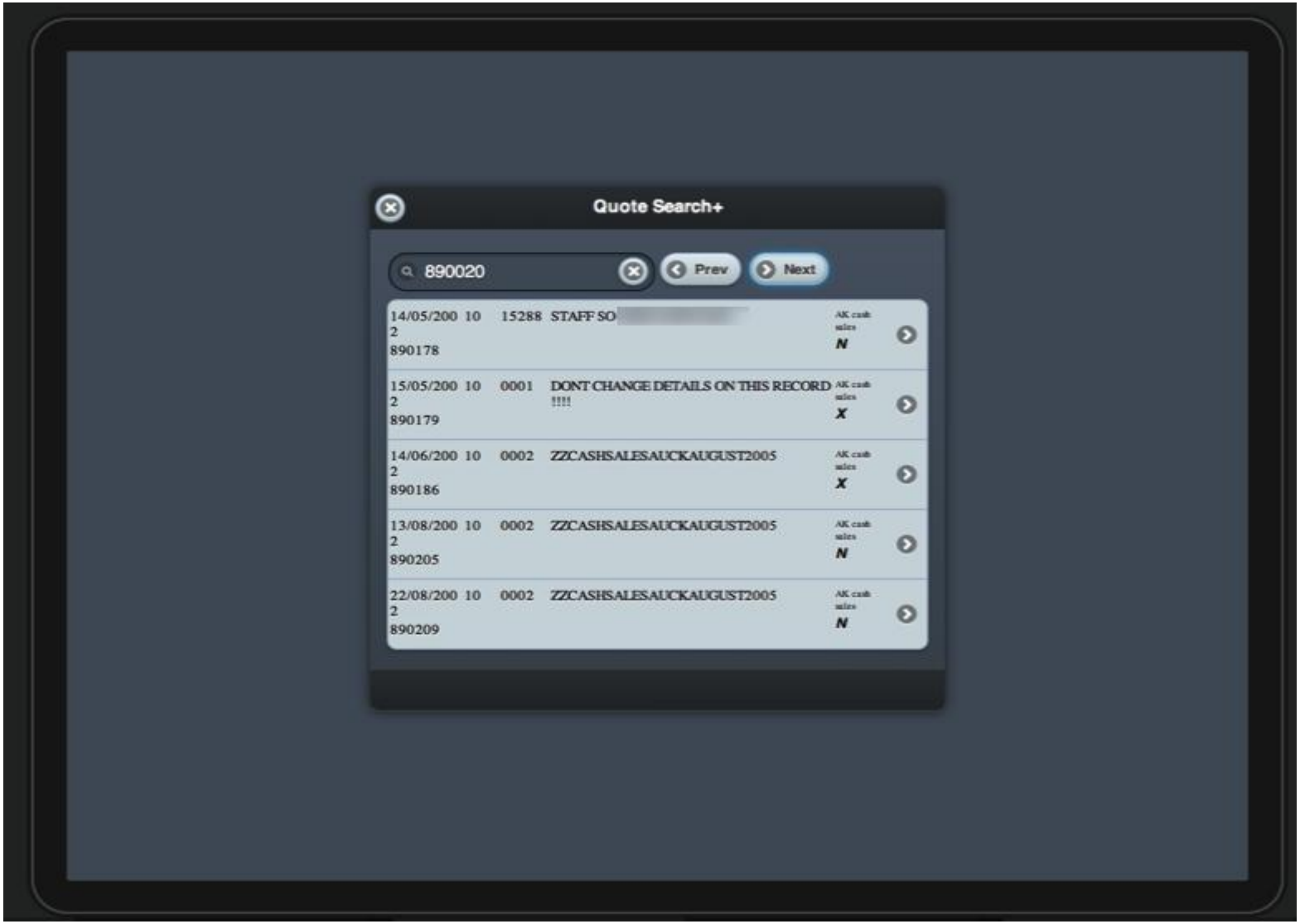
Quote Search Popup



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Item Search Popup

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App Overview

Shop Floor

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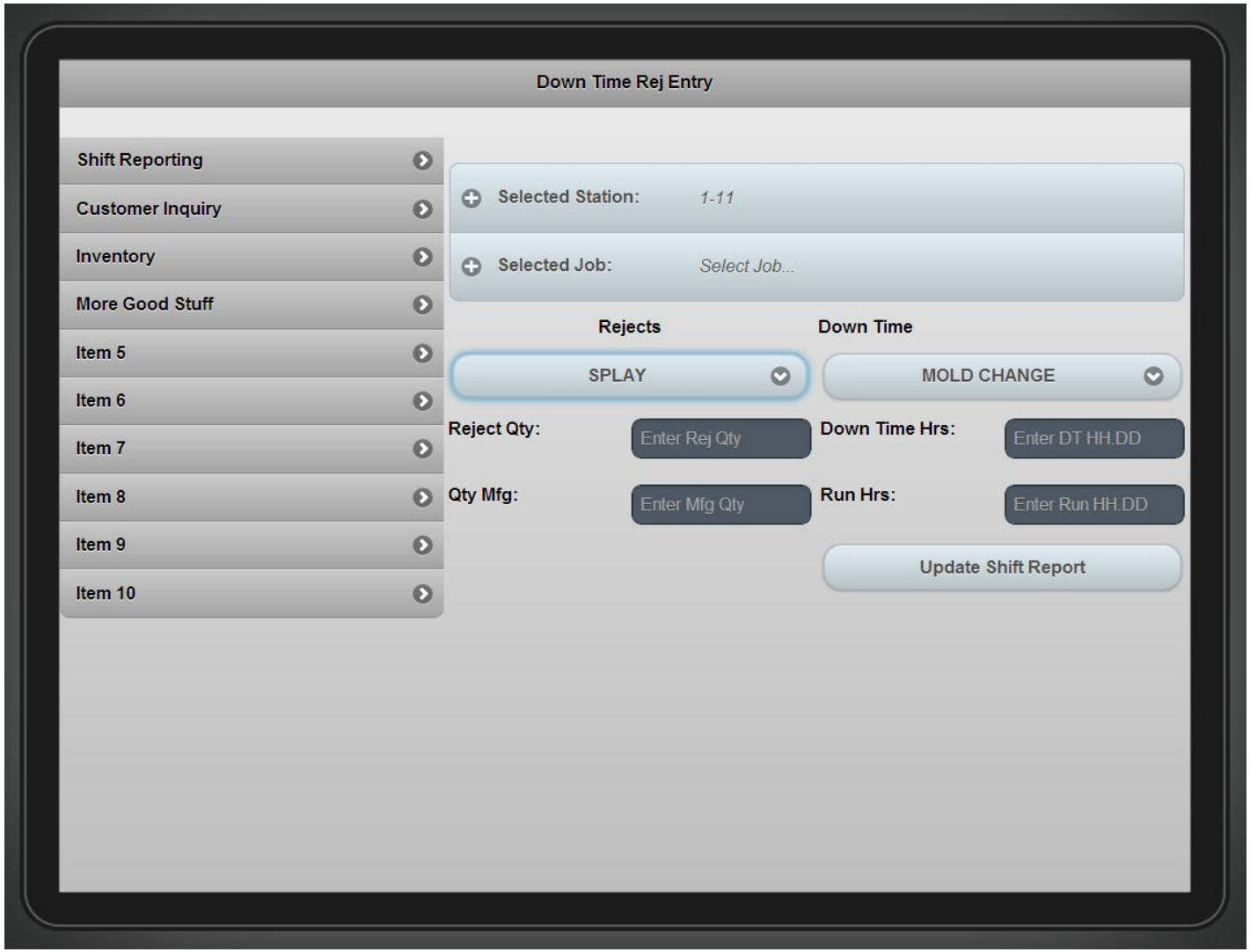
IMS: Opening Screen



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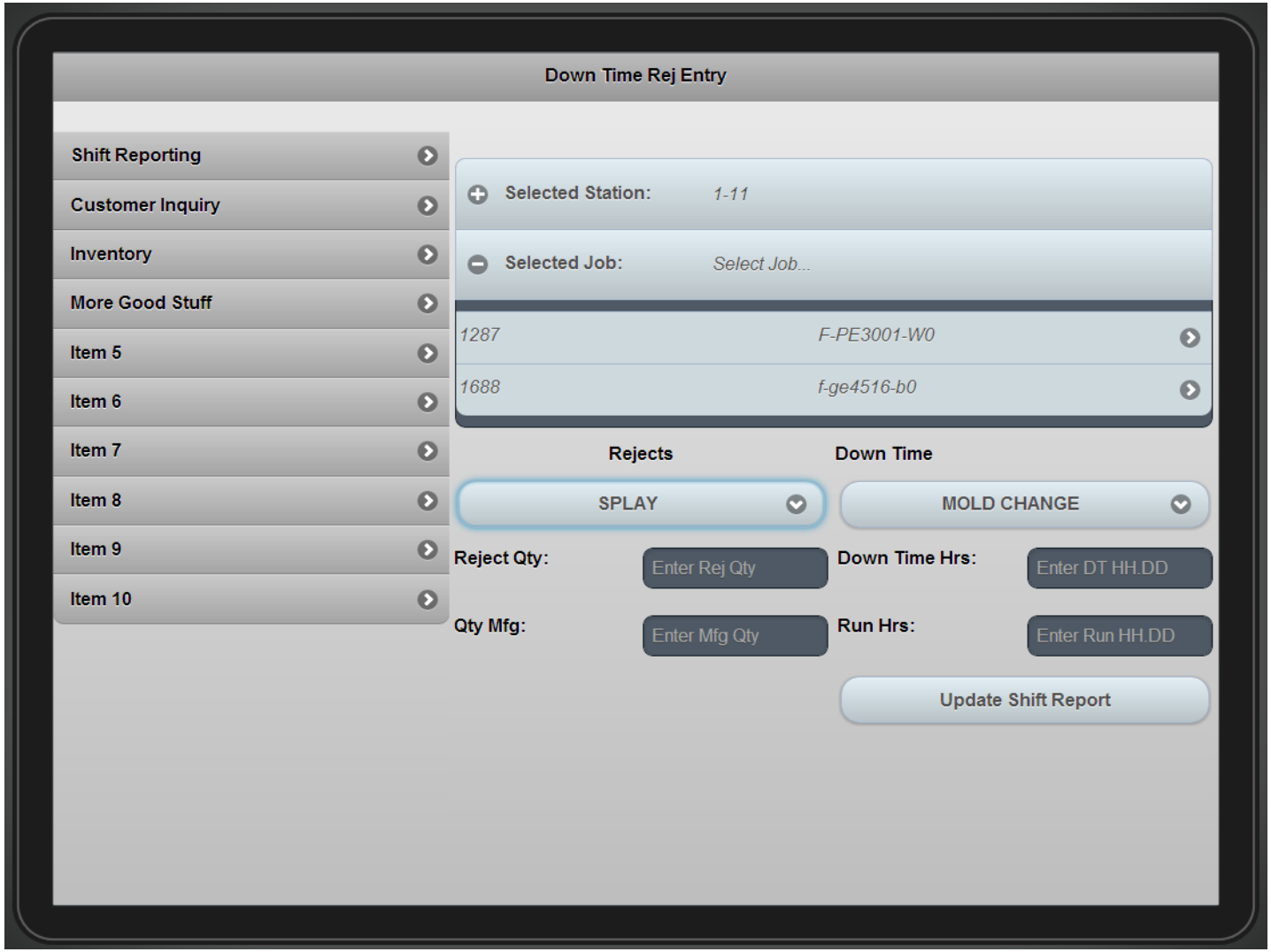
IMS:Collapse set example



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IMS:Selector example

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Rest Services – Two Approaches

- Progress OE11
  - Hard code one OE procedure = one REST service
  - Deploy Service to Tomcat
  - Program Frontend jQuery Mobile to call a specific service

- Generic Dynamic REST service
  - Single point of entry Service with resource parameter
  - Dynamic service that provides resource
  - Does not require redeployment if service changes

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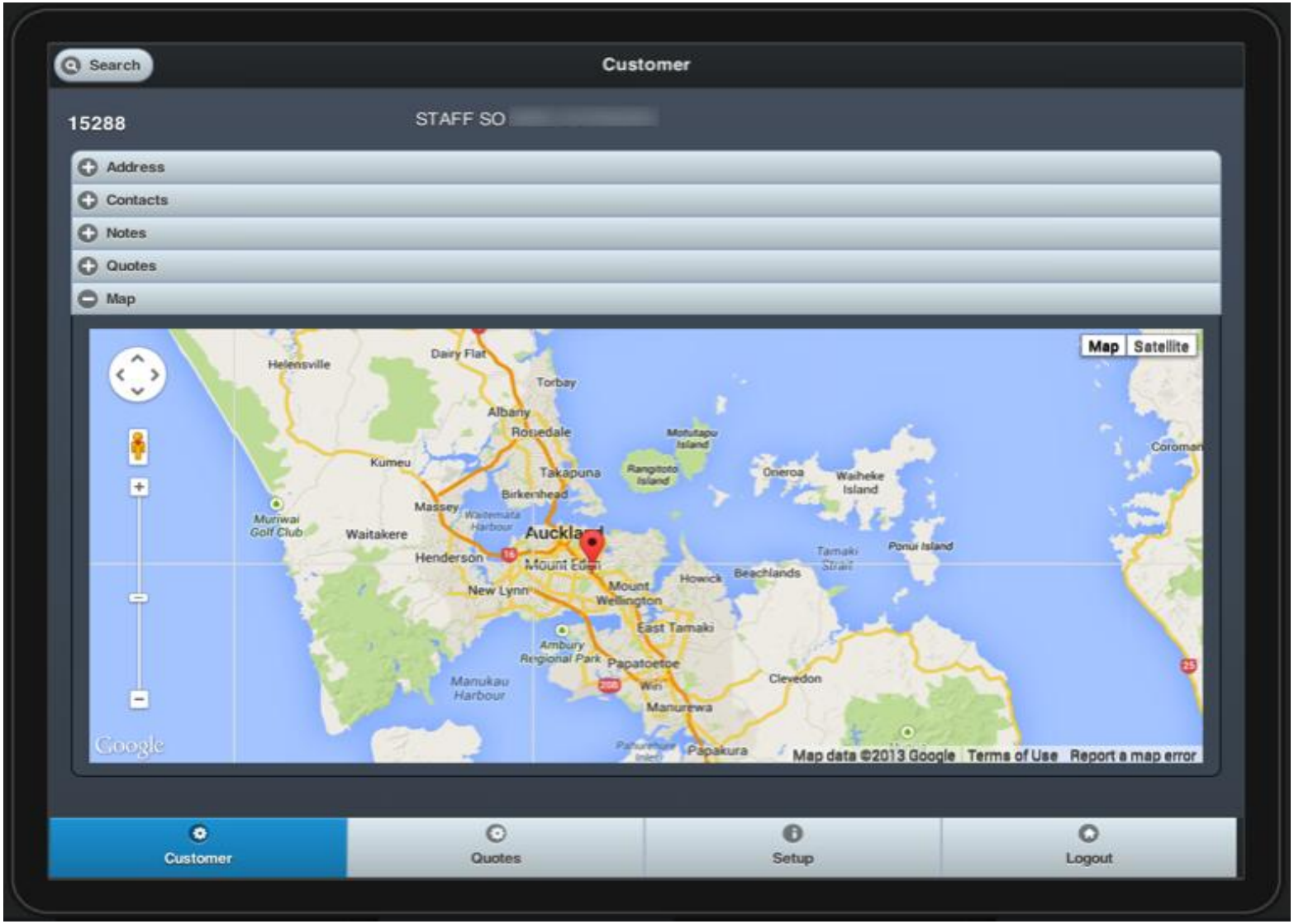
Customer View – Rest Services example



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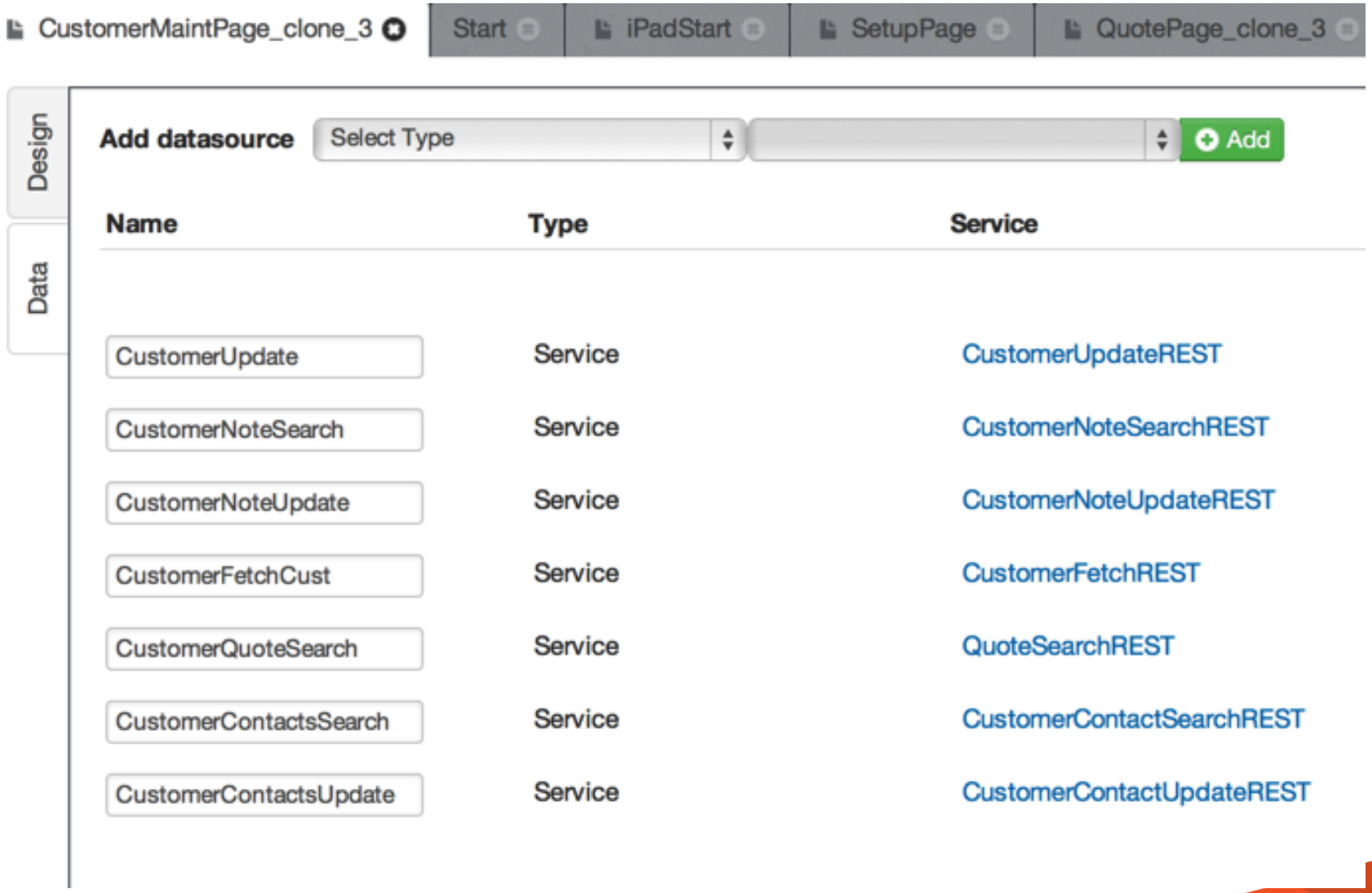
Rest Services



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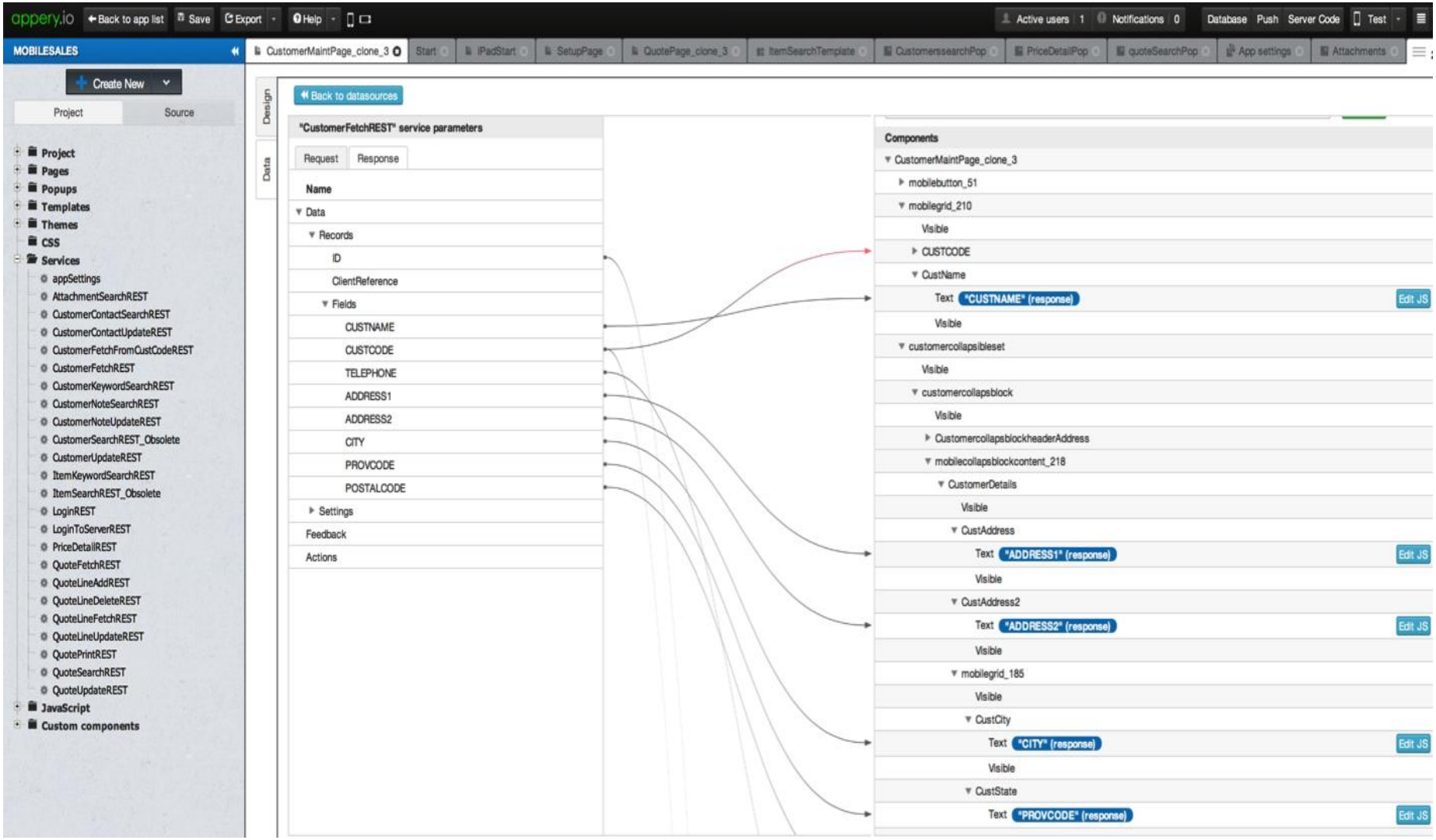
REST Services UI Mapping



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Lessons Learnt

- Native vs. Hybrid
- Skills required
- Design Patterns
- Tools

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Hybrid vs. Native App

- Hybrid is a compromise
  - If your user expects all the features of a native app DO NOT use a Hybrid!
  - If deployment options trump native experience hybrid is a fit
  - It may not pass Apple Store Certification!
- Examples
  - Popups
  - Navigation and Footer menus
  - Native look and feel – ICONs
- HTML5 & JavaScript

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Skills

- JavaScript
- JSON
- jQuery
- HTML5
- CSS
- Tomcat
- Appery.IO toolset
- REST Architecture
- OE Architect
- Apple Developer environment
- Server setup including Appservers, Tomcat
- Security Architecture
- UX Design
- OE programing skill assumed

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Design Pattern

- iPad vs. iPhone vs. Android
- Navigation
- List views
- Popups
- Parent Child
- Forms vs. Updateable Grid
- Printing
- File download

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Design Issues

- Talking to backend was way more complex than expected
- Displaying data easy – updating data is not
- Developing/setup of backend services is complex

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Tools

Appery

- Templates
- Custom Components
- Single Page app vs.. Multi Page app
- Bugs
- State management
- Scrolling
- Error handling
- Data escaping, e.g. textbox
- Event model – on success of REST Service is the way to go!
- Server timeout
- CORS (Cross Origin Resource Sharing)
- Documentation is lacking, forums, HTML5, JQuery sites

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Progress and Related Bits

- Based on OE11.2 (March 2013) not 11.3 (July 2013)
- Tomcat
  - Deployment & redeployment
  - Security Model – Need reference deployment
  - Integration
- Cross Origin Resource Sharing (CORS)
- Javascript – The Necessary Evil

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Summary

- Both IMS & ALS demonstrated working apps within 2 weeks
- 90% done but then spent next 2 months completing the other 90% to get to production
- Follow on projects completed in a fraction of the time
- Added significant competitive advantage
- Customers excited and want more
- Competitive threat defeated

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Questions