

Developing a Real World Mobile App with OpenEdge Mobile

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Who are BCP?

- Major supplier in Europe of Food Wholesale, Retail and Cash and Carry systems
- Users: Spar, NISA, Pets at Home, BWG, Musgrave, ADM, Morrisons, etc...
- Area: currently UK and EU, keen to expand!
- 1st “Extranet” - Late 1970s Telspar
- 1st Scanning in convenience stores in UK
- Early adopter of SonicMQ with our AIMS wholesale/ retail messaging hub
- Continuous innovators

Agenda

- The Target Application - Self Scanning
- Demo
- OpenEdge Mobile –the bad news and the good news
- Code view
- Lessons
- Deploying on devices
- Conclusion

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Self Scanning

- Customer scans their shopping as they go, using a dedicated device or mobile app
- They pack their bags as they go
- They check out through a dedicated checkout, avoiding the queues
- At random intervals, baskets are rescanned to discourage pilfering

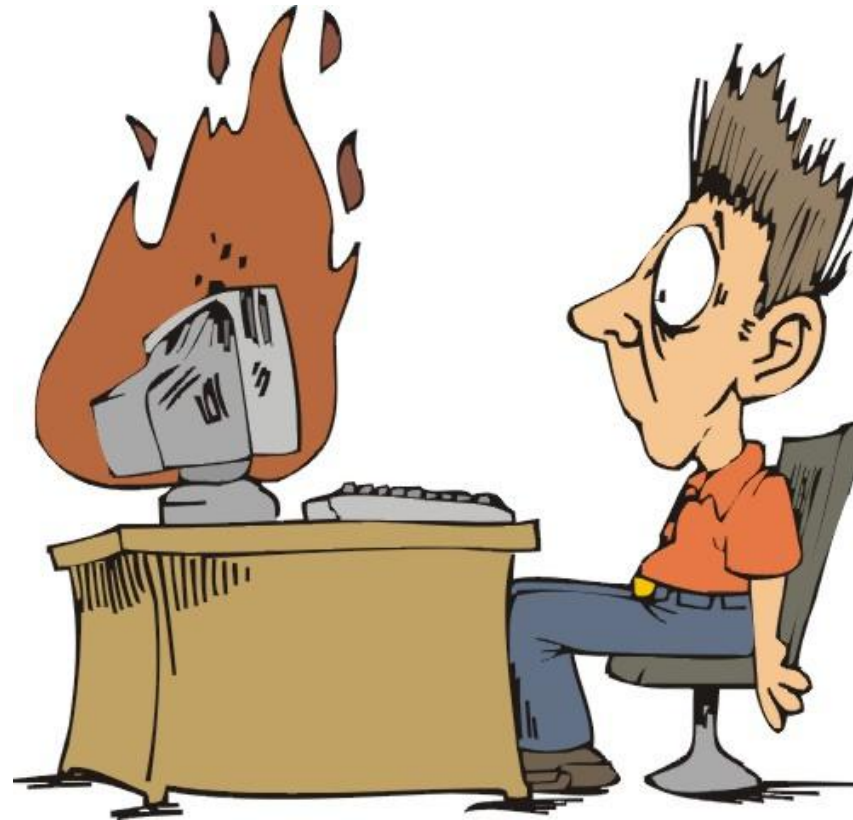
A win-win for both store and customer

Benefit	Customer	Store
Less queuing at checkouts	😊	😊
Eliminates packing at checkouts	😊	😊
Privacy of purchases	😊	
Can see the total cost of their basket	😊	
Alerted to offers	😊	😊
Track customer's purchases	?	😊

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Demo



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Bad news first!

- Complex technology stack
 - HTML5/ CSS/ JavaScript/ JQuery Mobile/ Appery.io/ PhoneGap
- JavaScript is the worst language ever!
 - Not proper OO
 - No type checking
 - No syntax checking
 - Primitive debugging
- It's all Steve Jobs' fault!

Now the good news!

- Going with the mainstream
- Industry standard skills
 - Generally available
 - Easy to outsource
- Front end/ Back end integration excellent
- Visual designer easy
- Best environment for this technology stack

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Code view



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Lessons learnt so far

- Most crucial number 1 lesson:
 - Services are invoked asynchronously, so may return after other actions linked to the same event
- Next most crucial lesson:
 - On a mobile device, the “Load” event only occurs when the application is freshly loaded.
 - Need to attach initialisation logic to “Resume” event as well

Things to remember

- Some things only work on the physical device:
 - Obviously things like camera and scanner
 - Less obviously, PhoneGap functions like `navigator.notification.beep(1)`
- Although a service returns a dataset, it is the temp-table that should be mapped to multiple UI elements like grids
- The Appery API is not intuitive. Sometimes it returns a UI element, others a DOM object e.g. `Appery("RegisterSound").get(0).play();`
- Need to restart OE Web Server after changing the services in a REST service as well as uploading the new JSDO to the MAB.
- Need to invoke JSDO before calling any services in a BE, even the "Invoke" ones
- To access local storage, the syntax is `localStorage.getItem("variablename")/setItem("variablename", val).`

More things to remember

- Transfer REST services from development environment to a deployment server by copying .war file from development environment to production environment and publish using “restman” command line tool.
- REST services use “state-free” AppServer mode, so no context is guaranteed, but instances are not initialised before reuse, so you need to initialise variables and empty temp tables
- Ensure you put the correct URI in the annotation part of new “Invoke” methods
- Default REST AppServer propath is \wrk folder – beware having two BE with the same name

Bugs

- If BE is based on a temp table and “like” syntax is used, BE does not generate
- Only create one Mobile Service containing all REST classes and only put login information in one service, otherwise app crashes – may have changed recently
- Special MAB right-click functions don’t work in DB Navigator perspective
- Don’t change Nav Bar button labels – format screwed up
- “Invoke” method output parameters have to be added to the “service mapping” screen manually

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Deploying on devices - Android

- Android - easy
 - Tick Application/ properties/ Mobile App Builder/ export local/ Android
 - Install Android SDK
 - Connect your device
 - Ensure it is recognised by ADB
 - If not, ensure you have correct driver loaded
 - Deploy with command line:
 - Adb install “*full path/filename for .apk file*”

Deploying on devices - iOS

- iOS – an obstacle course
 - Get an Apple Developer Account
 - Register your device as a test device
 - Create developer credentials using this guide:
 - http://community.phonegap.com/nitobi/topics/detailed_guide_for_setting_up_building_ios_apps_without_a_mac (assuming you don't have a Mac)
 - Load the project into the Mobile App Builder
 - Put the credentials into App Settings/iOS binary
 - Tick build for iOS in mobile app preferences

More ...

Deploying on devices – iOS (ctd)

- Plug in device
 - Drop .ipa into iTunes apps list
 - Select device/ apps
 - Click on “install” button next to app
 - Click on Apply
 - App should load!
- Need to create app credentials for each app

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Conclusions

- OE Mobile is a very effective way to create “hybrid” mobile business-quality apps”
- In particular, the integration between UI and back end services is excellent
- You need training in at least CSS and JavaScript, maybe also JQuery Mobile

Questions?



Thank you for your time

See more at www.bcpsoftware.com

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