Mobilize Your Users Now with Oracle Mobile Application Framework (MAF)

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Session Objectives

- Understand the components of Oracle MAF
- Use Oracle MAF to create mobile applications for iOS and/or Android
- Learn how MAF provides resources to make application creation simpler

Who Am I?

- John King – Partner, King Training Resources
- Oracle Ace Director 

- Member Oak Table Network 

- Providing training to Oracle and IT community for over 25 years – http://www.kingtraining.com
- "Techie" who knows Oracle, ADF, SQL, Java, and PL/SQL pretty well (along with many other topics)
- Member of ODTUG, IOUG, and RMOUG
- Acting President of AZORA

Who Are You?

- Application Developer
- DBA
- Business Analyst
- UX Expert

Think Mobile First

- Today, most of us reach for our mobile device to accomplish many daily tasks
- Desktop, laptop, tablet, and phone each provide connections with users
  (not to mention personal devices like Basis, Fitbit, Jawbone, GoogleGlass, etc.)
- Your users EXPECT to access information and perform normal tasks using mobile devices
  (if not using your software, then whose?)

Mobile Application Choices

- Native Deploy “native” specific to iOS or Android (or other…)
- Web Deploy as web application; works on pretty much any browser
- Hybrid Vendor provided development environment that deploys to iOS or Android (or other…) but leverages open technologies like JavaScript, HTML5, and CSS

Native vs Web vs Hybrid

- Here's a great comparison done by the Dzone website
  http://java.dzone.com/articles/state-native-vs-web-vs-hybrid

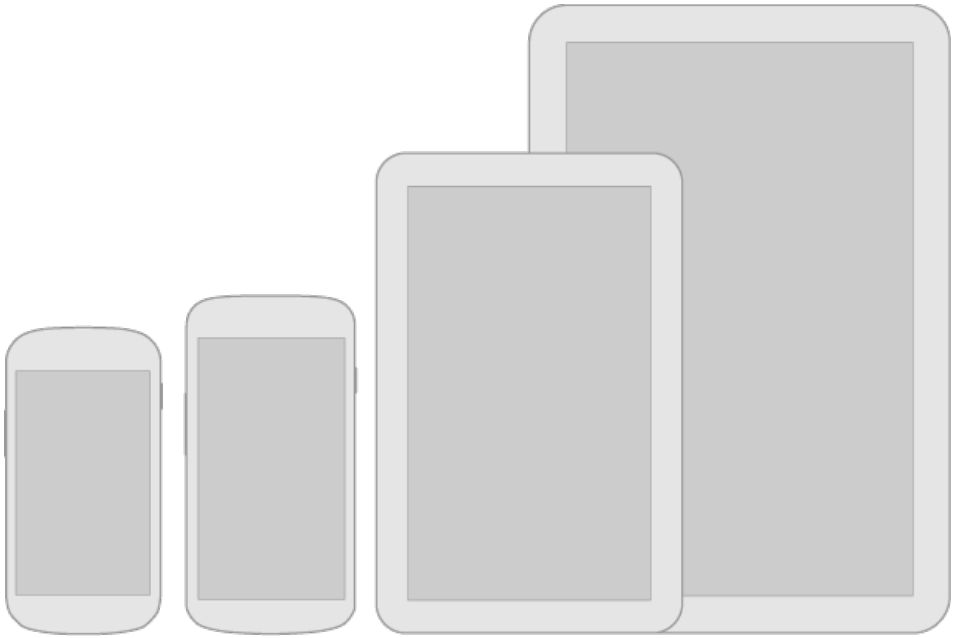
NATIVE vs. WEB vs. HYBRID: 7 FACTORS OF COMPARISON

KEY: CON | PRO | NEUTRAL

	NATIVE	HYBRID	WEB
COST	Commonly the highest of the three choices if developing for multiple platforms	Similar to pure web costs, but extra skills are required for hybrid tools	Lowest cost due to single codebase and common skillset
CODE REUSABILITY/ PORTABILITY	Code for one platform only works for that platform	Most hybrid tools will enable portability of a single codebase to the major mobile platforms	Browser compatibility and performance are the only concerns
DEVICE ACCESS	Platform SDK enables access to all device APIs	Many device APIs closed to web apps can be accessed, depending on the tool	Only a few device APIs like geolocation can be accessed, but the number is growing
UI CONSISTENCY	Platform comes with familiar, original UI components	UI frameworks can achieve a fairly native look	UI frameworks can achieve a fairly native look
DISTRIBUTION	App stores provide marketing benefits, but also have requirements and restrictions	App stores provide marketing benefits, but also have requirements and restrictions	No restrictions to launch, but there are no app store benefits
PERFORMANCE	Native code has direct access to platform functionality, resulting in better performance	For complex apps, the abstraction layers often prevent native-like performance	Performance is based on browser and network connection
MONETIZATION	More monetization opportunities, but stores take a percentage	More monetization opportunities, but stores take a percentage	No store commissions or setup costs, but there are few monetization methods

“Responsive”

- Whether apps are Native iOS/Android, Hybrid, or Web-based; our user’s devices come in all shapes and sizes
- Well-designed apps respond gracefully



Responsive Design

- Think flexibly; layouts should stretch and compress to fit different heights and widths
- Maximize layouts; larger devices should use the extra “real estate” – views should combine multiple sub-views to ease assembly
- Prepare for density differences (DPI); might require resources for different densities

What is MAF?

- Hybrid approach from Oracle
- Free to develop* using JDeveloper or Eclipse (OEPE)
- Runtime Oracle license (per user/per app)
- No requirement for Oracle ADF or WebLogic licenses

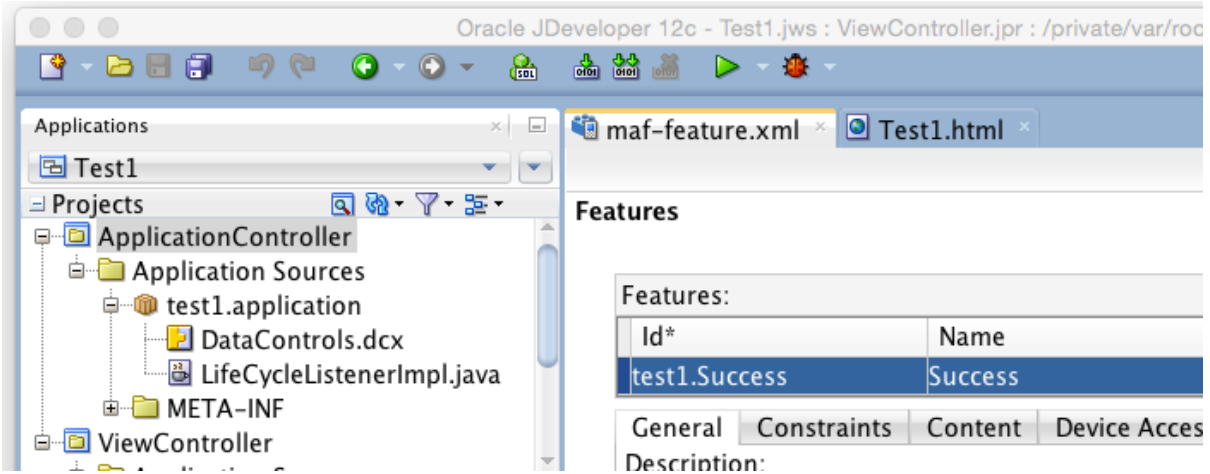
* iOS development requires license from Apple

Why MAF?

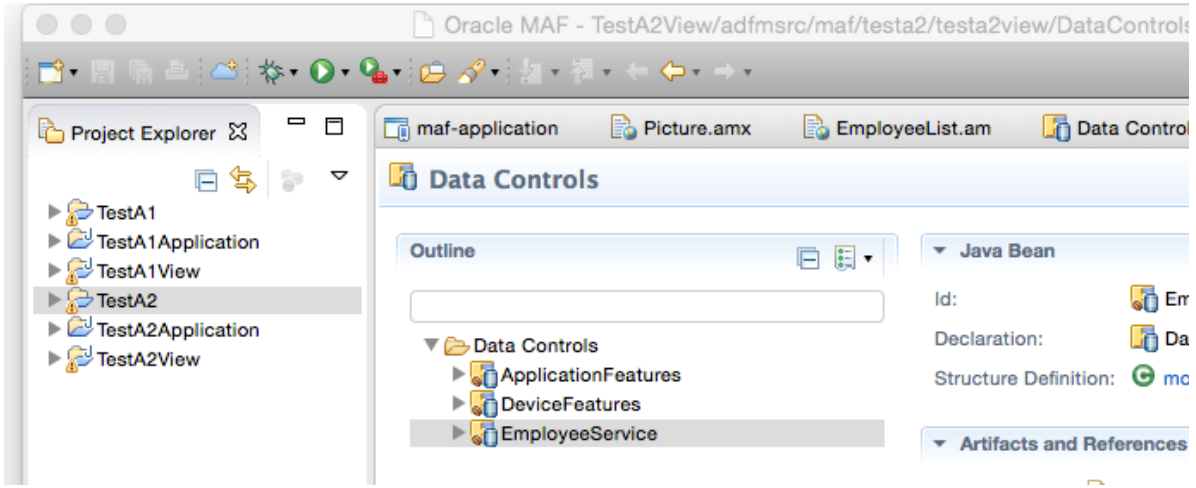
- Single framework for both Android and iOS
- Pre-installed HTML5, JavaScript, and CSS
- Components defined for Apache Cordova (PhoneGap) objects

MAF Development Tools

- Jdeveloper



- Eclipse (Oracle Enterprise Pack for Eclipse – OEPE)



Non-Oracle Tools Needed

- Java SDK 
- Android 
  - Android SDK
  - Android Simulator
  - Intel HAXM (Hardware Accel. Exec. Manager)
- iOS 
  - Apple Developer account
  - Xcode
- Oracle MAF Certification Matrix
  http://www.oracle.com/technetwork/developer-tools/maf/documentation/mafcertification-2218073.html

Working with Data in MAF

- Bindings and Data Controls
- MAF Model Layer
- Business Services (SOAP or WSDL)
- Managed Beans
- SQLLite (via JDBC)
- ADF BC Objects? – Coming in a later release

MAF User Interface

- Views
- Task Flows
- HTML5 + JavaScript + CSS – Touch, Gestures, Responsiveness
- Apache Cordova (PhoneGap) – Device Features

MAF App Basics

- App Project
- App Model
- App View

Creating MAF App, page 1

1. Watch User at Work
2. Design application (wireframe) to minimize interfaces and maximize impact
3. Determine data required for display, input, and output
4. Determine on-device features to use
5. Create MAF project
6. Add Features to app
7. Create main MAF Task Flow & Empty Views

Creating MAF App, page 2

8. Create Data Controls and supporting Model components
9. Create and test UI
   a. Simple functionality?
   b. Ease of use?
   c. Get job done in few steps?

Creating MAF App, page 3

10. Enable and test mobile features
    a) Visualizations
    b) Camera
    c) GPS
    d) Email
    e) Text
    f) Address Book
    g) Web Services
11. Prepare for Deployment
12. Deploy

Creating MAF App, page 4

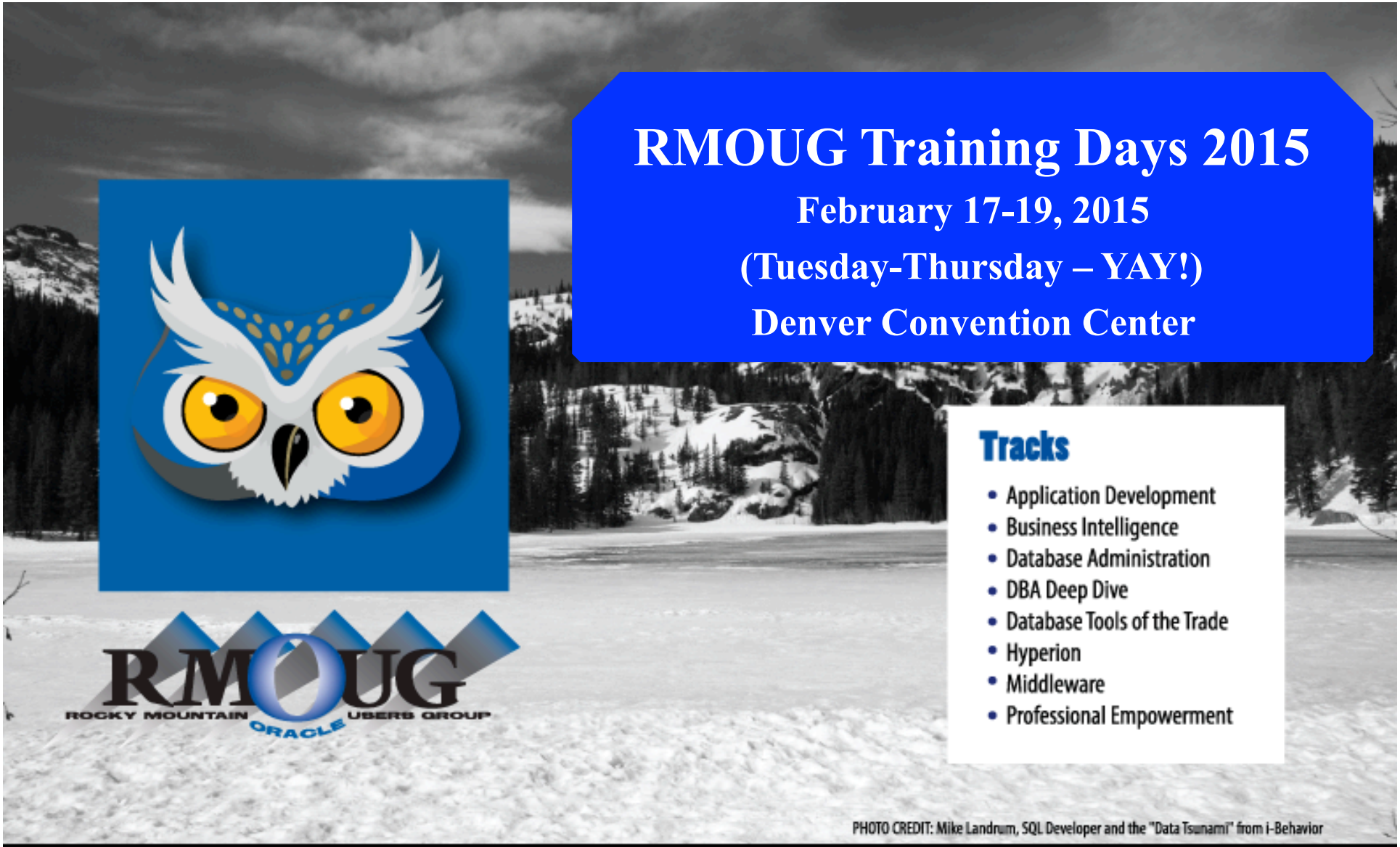
13. Deployment Steps
    a) Create Deployment Profile
    b) Deploy to Android Simulator
    c) Deploy to iOS Simulator
    d) Deploy to live Android
    e) Deploy to live iOS
        a) Deploy to file
        b) Import file into iTunes
        c) Sync with device
14. Test on all likely devices

MAF Resources

- Oracle OTN
  http://www.oracle.com/technetwork/developer-tools/maf/overview/index.html
- Oracle MAF You Tube Channel
  http://www.youtube.com/user/OracleMobilePlatform
- Tutorials
  http://www.oracle.com/technetwork/developer-tools/maf/learnmore/index.html#tutorials
- Free Online Training Video
  http://download.oracle.com/otn_hosted_doc/maf/academy/DevelopingApplicationsWithMAF/presentation.html

Wrapping it Up

- Oracle Mobile Application Framework (MAF) is a toolset you can use today to build and deploy hybrid mobile apps
- MAF's tooling insulates you against changes to standard libraries
- Creating MAF applications is relatively simple; building quality mobile apps will take some real design



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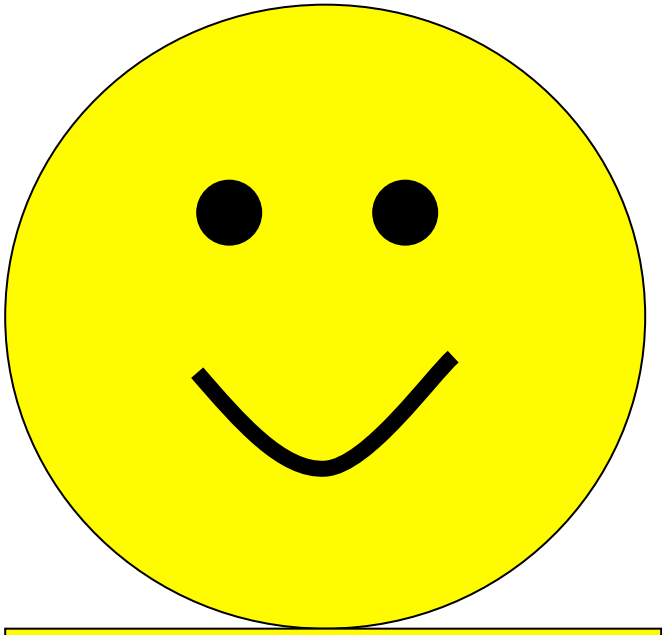

Thanks for your attention!

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http://www.kingtraining.com

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