Developing iOS and Mac Apps with ArcGIS Runtime SDK

Divesh Goyal & Al Pascual
Introducing the SDK
• What is runtime
• What are iOS/OS X SDKs
• Min Requirements for SDKs, Supported Devices
ArcGIS Runtime

Runtime built using C++
EXPLOITS THE CAPABILITIES OF THE DEVICE

Functionality exposed to developers via an API
native to the platform
INTUITIVETO LEARN

Common functionality set and conceptual model
EASES MULTI PLATFORM DEVELOPMENT
Where do apps come from?
Personalized View in to the ArcGIS Platform

- Partners
- Developers
- Esri
Runtime SDKs

- Native APIs for building focused applications
- Embed ArcGIS into existing applications
- Common conceptual framework across platforms
- Powered by a Runtime
Before you begin...

- **Intel-based Mac**
  - OSX 10.7, 10.8 and 10.9
    (Lion & Mountain Lion
  - and Mavericks)

- **Xcode (IDE) from the App Store**
  - Simulator
  - iOS SDK
- **ArcGIS Runtime for iOS v10.2**

To test and deploy on actual hardware or older iOS...

- **Join Apple’s iOS Developer Program**
  - Standard : AppStore distribution
  - Enterprise : In-House distribution
Building a mapping application
• Install using cocoa pods
• Display map (web maps / layers )
• Show popups
• Search for places
• Routing
• License (Basic client id)
• Reuse code for OS X apps
CocoaPods

- Get the SDK from Github or CocoaPods
  - pod `ArcGIS-Runtime-SDK-iOS`
  - pod ‘ArcGIS-Runtime-SDK-OS-X’
Runtime Licensing

Development and Deployment Workflow

1. Download and Install
2. Develop and Test
3. Deploy and Distribute
From iOS to OS X
The ArcGIS Runtime SDK for OS X

- **Platform**
  - OS X 10.8, 10.9, 10.10
- **API**
  - API in ArcGIS.Framework - 95% common with iOS
  - Resources in ArcGIS.Bundle
- **Sample Application**
- **Esri Application Framework Kits**
- **Developers.ArcGIS.com**
  - Guides, API Reference, Forum, Blogs
- **ArcGIS.com**
  - ArcGIS Runtime Preview App and Code
  - Sample Application
iOS to OS X

- Cocoa Touch to Cocoa
- ArcGIS Framework – almost identical
- Threading Differences
- UIColor, UIView, UIViewController, UIImage etc.
Demo

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Getting data onto the device.
Offline map use

View maps
Features & Basemaps
Query maps
Edit maps
Route
Geocode

Pre-planned
Occasionally connected
• Workflows
• GIS Assets
  - Titles (Rasters)
  - Features (Vectors)
  - Addresses (Geocoding)
  - Routes (Network)
Workflows

- Pre-planned
- On-demand
- Occasionally connected
Offline ArcGIS

• Disconnected use of the ArcGIS platform
  - Viewing/interacting with maps
  - Querying data
  - Editing features
    - Synchronization
  - Spatial intelligence
    - Find places and locations
    - Get directions
  - Pre-planned or on demand workflows
  - Occasionally connected scenarios

• All Runtime SDKs
Assets

- Tiles
- Features
- Addresses
- Routes
# Runtime Licensing

<table>
<thead>
<tr>
<th>License level</th>
<th>Available functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developer (development and testing only)</td>
<td>All functionality (watermarks and debug messages will be generated)</td>
</tr>
<tr>
<td>Basic</td>
<td>All functionality except:</td>
</tr>
<tr>
<td></td>
<td>- Local locators (geocoding)</td>
</tr>
<tr>
<td></td>
<td>- Local routing</td>
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<tr>
<td></td>
<td>- Local geodatabase editing</td>
</tr>
<tr>
<td></td>
<td>- Local geodatabase sync operations with an upload</td>
</tr>
<tr>
<td>Standard</td>
<td>All functionality</td>
</tr>
</tbody>
</table>
Demo Offline

Divesh Goyal
Future
Using Swift with ArcGIS Runtime SDK for iOS and OS X
Deployment
Release Strategy
Get more information on ArcGIS

http://developers.arcgis.com
http://arcgis.com
http://www.esri.com
@esri
@arcgis_runtime
Thank you...

• Please fill out the session survey:

First Offering ID: 1392

Online – www.esri.com/ucsessionssurveys
Paper – pick up and put in drop box