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# ArcGIS Runtime SDKs for iOS and Android

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# Agenda

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- What are the iOS and Android Runtime SDKs
- Who is it for?
- What can you do with the API?
- Deploying your apps
- How do you get started?

# ArcGIS 10 — A Complete System

Easier  
More Powerful  
and Everywhere





# Mobile Applications

*ArcGIS running on ...*

Windows Mobile



Windows

Android



iOS

Microsoft  
Windows Phone

Rugged and Embedded Devices

Smartphones and Tablets

# Native Runtime SDKs

**Windows Mobile**

**Windows**

**Linux**

**iOS**

**Android**

**Windows Phone**

**Runtime SDK**

- .NET CF

**Runtime SDK**

- WPF, Java

**Runtime SDK**

- Java, Qt

**Runtime SDK**

- Objective C

**Runtime SDK**

- Java

**Runtime SDK**

- Silverlight



Rugged and Embedded Devices

Smartphones and Tablets



# iOS and Android Runtime SDKs

- **Powerful**
- **Native APIs**
- **Rich, Sample driven SDK**
- **Similar object models**
- **REST-based**



# iOS and Android Runtime SDKs

## Advantages

- **Access your own authoritative data**
- **Advanced analysis**
  - Ask questions of your data
- **Collect new data**
  - Improve the accuracy of your data
  - Citizen as a sensor
- **Build focused apps**
- **Implement mapping in to an existing app**



# Who is it for?

- **Existing ArcGIS Customers**
  - GIS developers
  - ESRI business partners
- **iOS and Android developer Community**
  - Location based apps

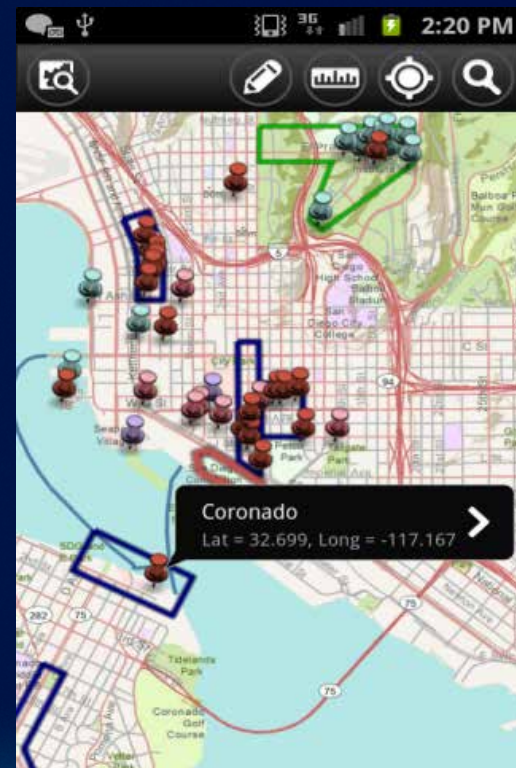




# What can the iOS and Android SDKs do?

## Map Layers

- **Tiled**
  - ArcGIS Server, Bing
- **Dynamic**
  - ArcGIS Server, ArcGIS ImageServer
- **Graphics Layer**
- **Feature Layer**
  - ArcGIS Server
- **Web maps**



# What can the iOS and Android SDKs do?

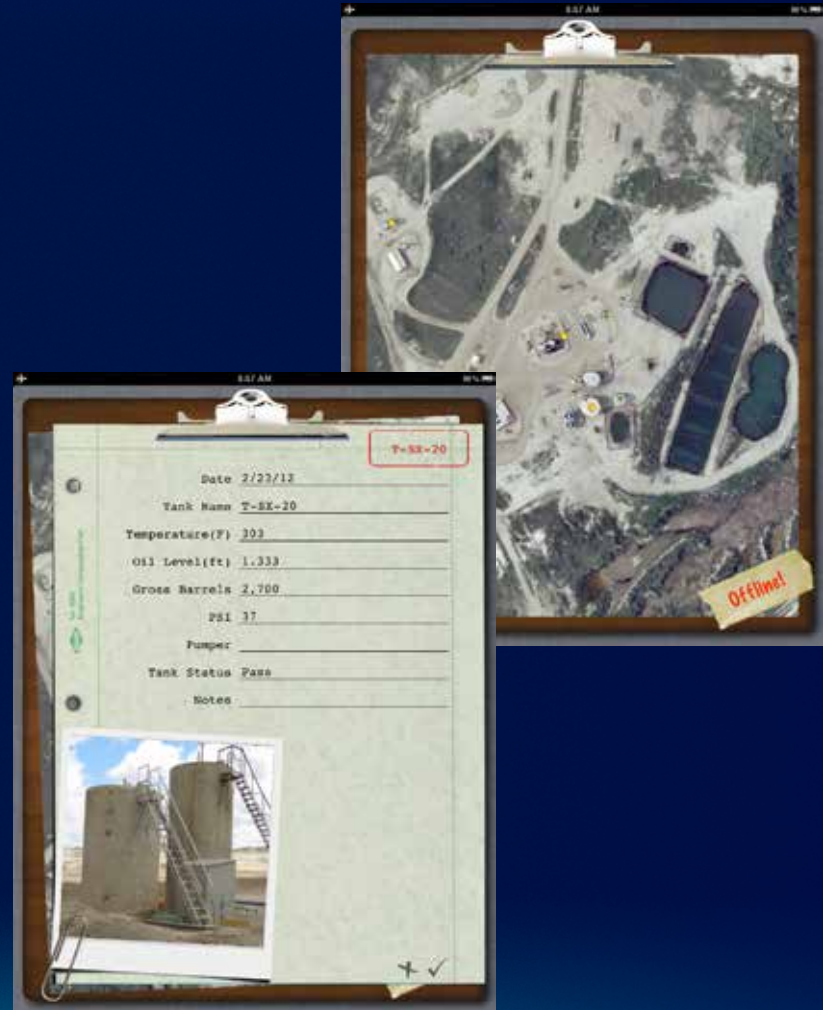
## Local Tiled layers

### iOS

- Caches
- Tiled packages (.tpk)

### Android

- Caches

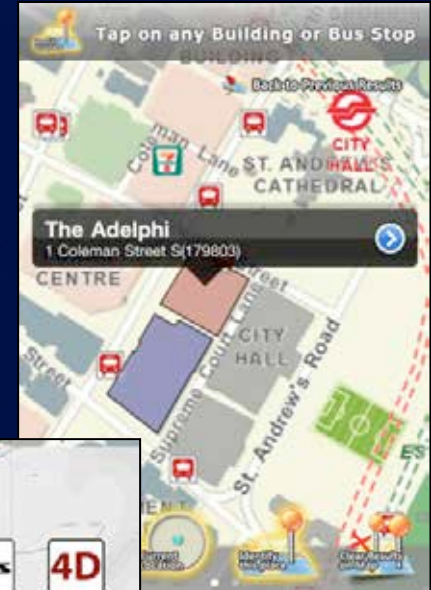




# What can the iOS and Android SDKs do?

## Graphics

- Arbitrary objects added to a Graphics Layer
  - Point, Lines, Polygon, Text
  - Geometry + Symbol + Attributes
- Commonly used
  - Sketching
  - Callouts
  - Popups
    - authored in ArcGIS online
  - Attributes

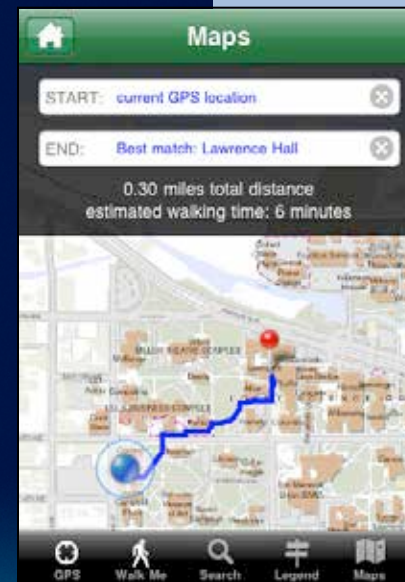


# What can the iOS and Android SDKs do?

iOS, Windows Phone, Android

## Analysis

- Query, Identify, Find GIS features
- Locate/Geocode addresses
  - Reverse geocode
- Geometry Engine
  - Native, high-performance engine
  - geometric operations on the device
    - Cut, Union, Buffer, etc.
- Geoprocessing Tasks
- Routing

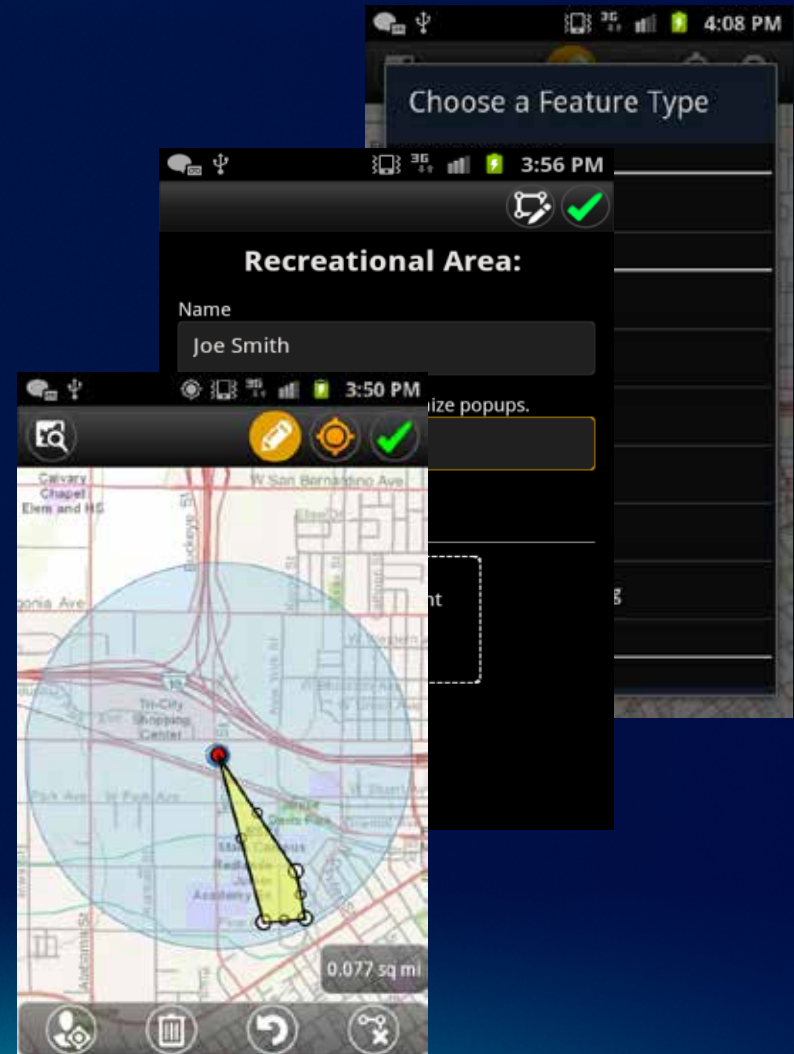




# What can the iOS and Android SDKs do?

## Data Collection

- **Against a Feature Service**
- **Connected Editing**
- **Attachments**
- **Add, delete, modify, cancel**





# Apps in the App Store/Market





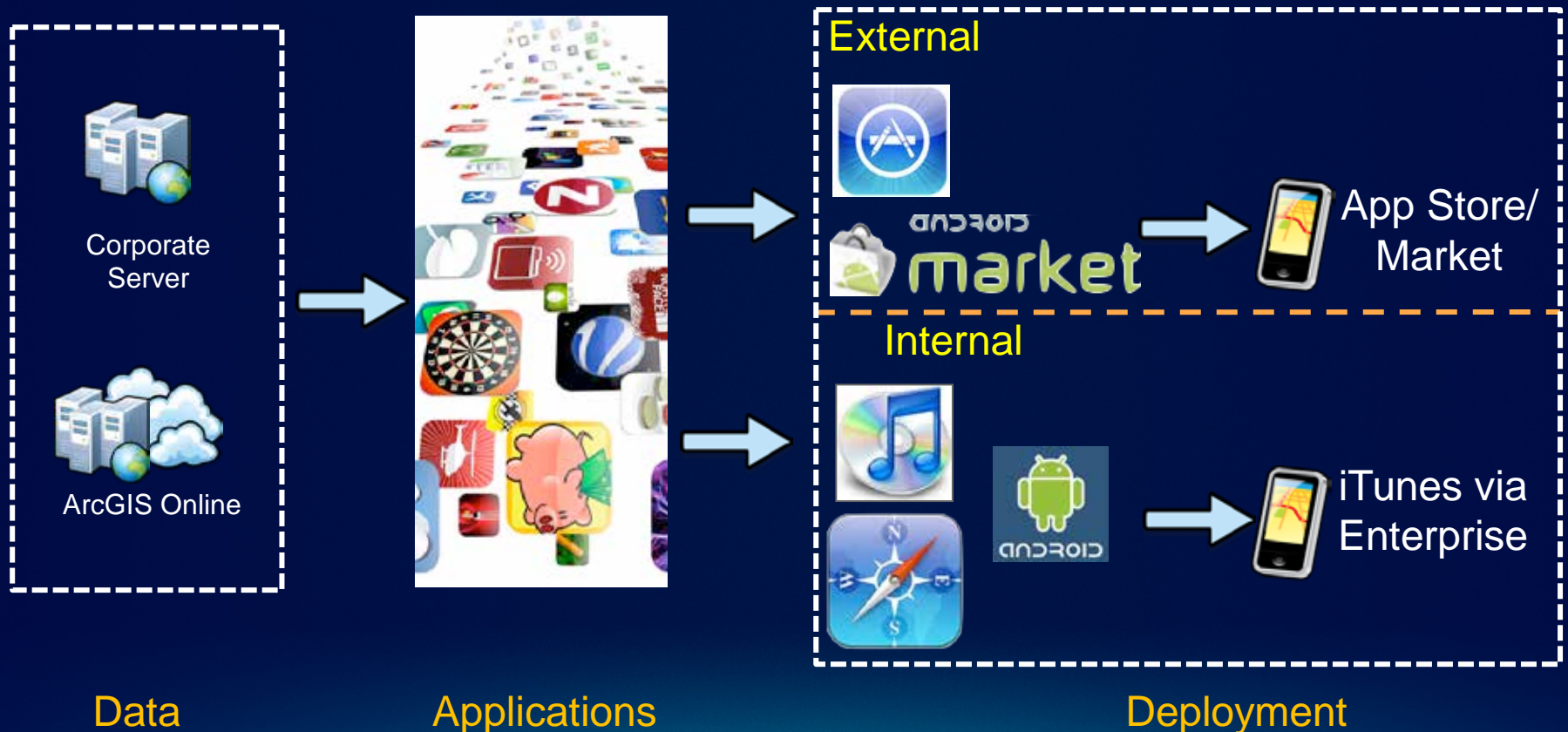
# Deployment



# iOS Application Deployment

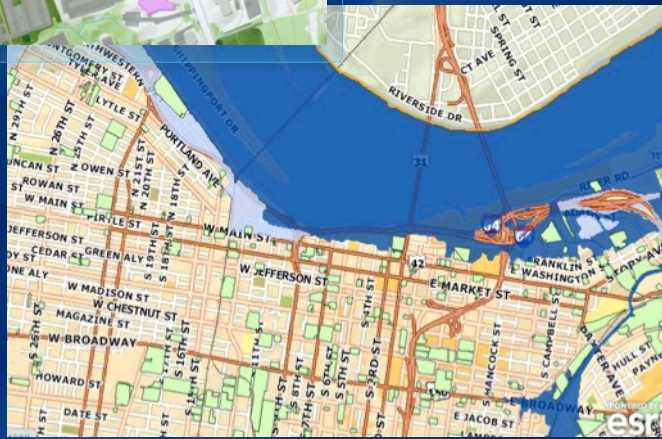
*What are my deployment options?*

- Will the application be publically available?





# Enterprise Deployment



# Getting Started





# How do I get the iOS and Android SDKs?

- **ArcGIS Resource Center**
  - API download
  - Conceptual and reference help
  - Community resources
  - Samples
  
- **API Download**
  - Libraries
  - Help System
  - IDE Integration



<http://resources.arcgis.com/>

# What do you need to get started (iOS)?

## *Hardware*

- Intel based Mac
- iOS device
  - iPhone, iPad, iPod Touch
  - Essential for testing



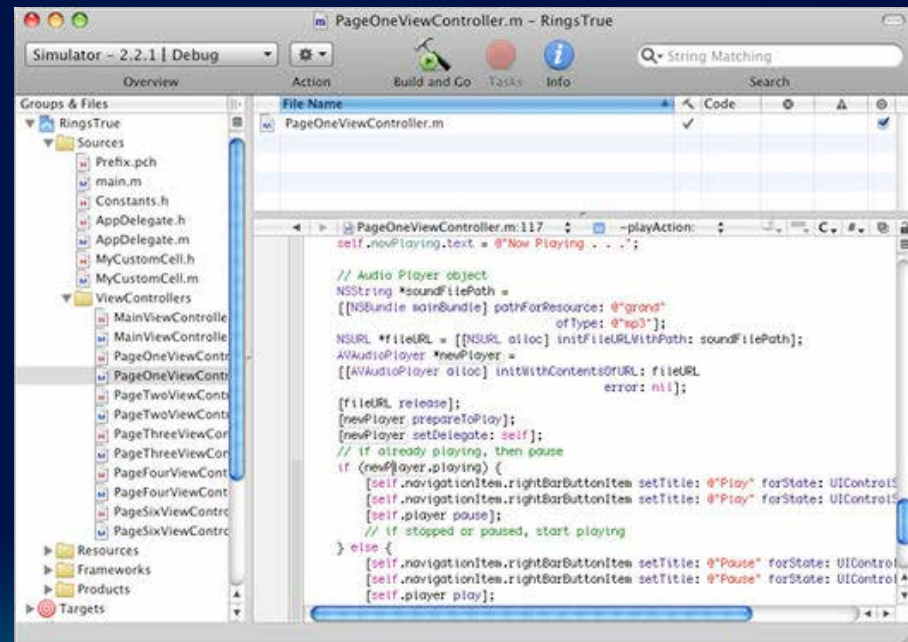


# What do you need to get started (iOS)?

## Software

- Apple's iPhone SDK 4.x
  - Xcode, Interface Builder and instruments
- ArcGIS Runtime SDK for iOS

- Technologies
  - Objective C
  - Cocoa Touch
  - iPhone SDK



# What do you need to get started (Android)?

- § Java Development Kit (JDK) 5+
- § Eclipse 3.6+ (Helios)
- § Google Android SDK - 2.2+ (API 8)
- § Eclipse plug ins
  - § Android Development Tools (ADT)
  - § ArcGIS API for Android
- § **Android Device**

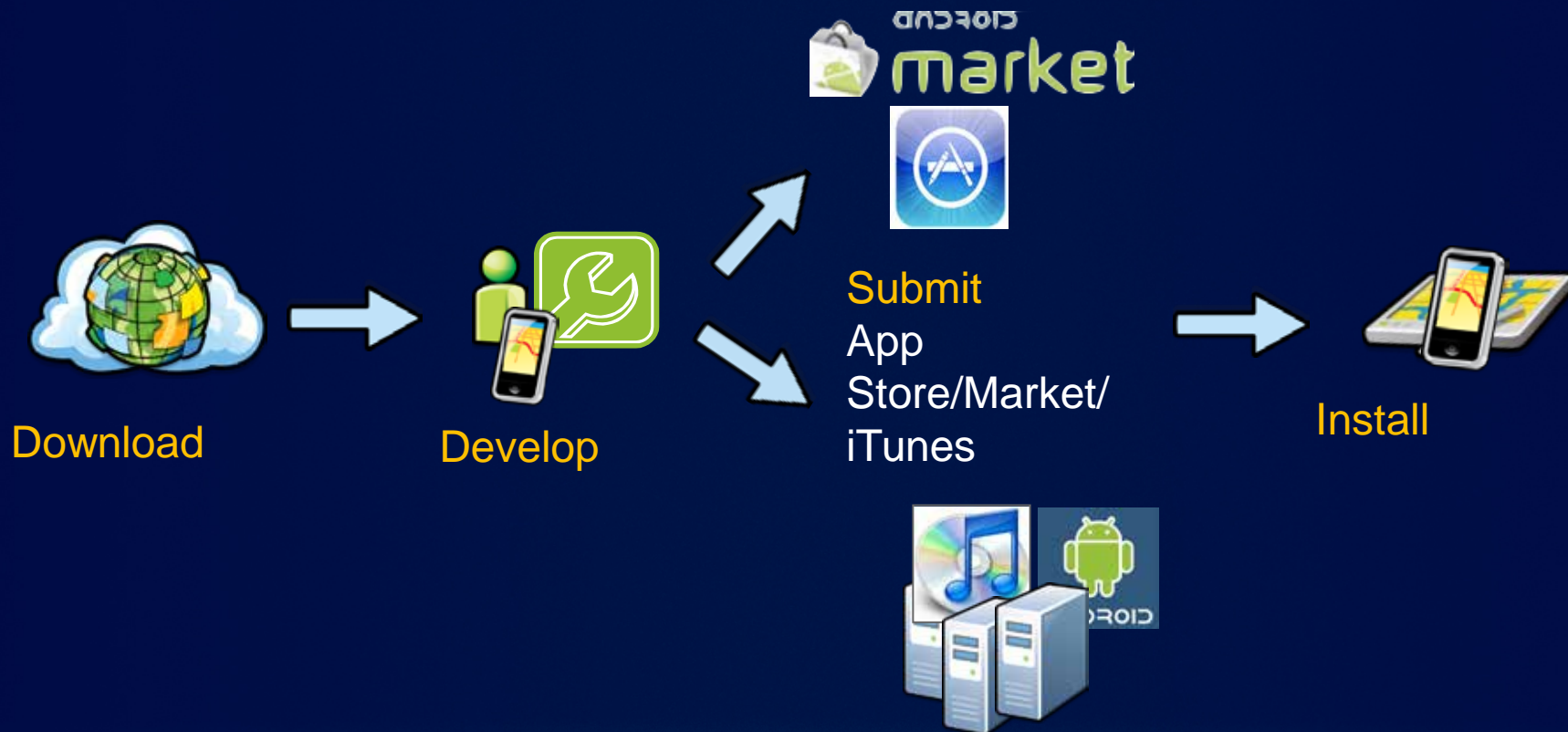


Eclipse



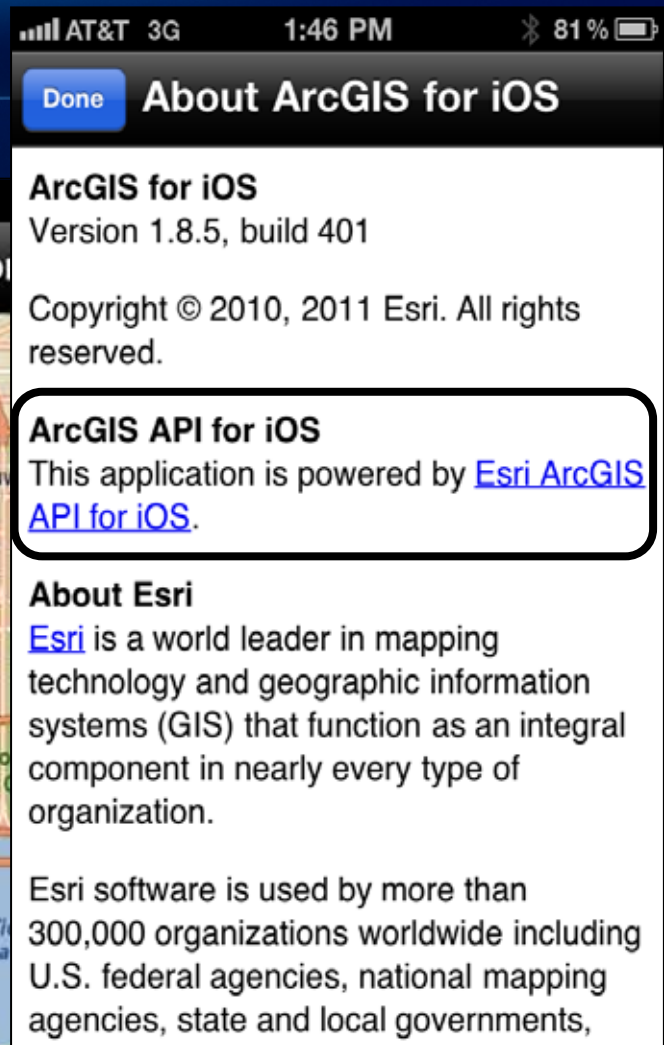


# ArcGIS API Developer Experience



# Attribution Requirements

- Attribution in *About or Credits*
  - API
  - Data
- Esri logo on map screens
  - When using ArcGIS Online basemap





## Resources (iOS)

- Apple iPhone dev center
- Human Interface Guidelines (HIG)
- ESRI iPhone Resource Center
- Mockup tools - **MockApp**
- Screen casts
  - iTunes U
    - Stanford University - iPhone Application Development
  - Pragmatic Studios
- Books (Apress)
  - David Mark, Jeff LaMarche, Michael Ash, James Dovey

# Resources (Android)

- **Web training**
  - **Mobile GIS: Using the ArcGIS for Smartphone and Tablets**
  - **Mobile GIS: Creating Web Maps for Lightweight Mobile Apps**
- **Android Developer site**
- **ArcGIS Resource Center**



# Thank You

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