



**Esri International User Conference | San Diego, CA**  
**Demo Theater | Tuesday, July 12**

# **ArcGIS for Windows Mobile**

## **An Introduction**

Russell Roberts, Justin Colville

# The ArcGIS System



# What is mobile GIS?

*Extends the reach of ArcGIS from the office to the field*

- With a mobile GIS solution you can
  - Carry your maps to the field
  - Collect and update geographic information
  - Track and geo-collaborate



# What are the benefits of mobile GIS?

*Leverages the investment of your enterprise GIS*

- **Improve Efficiency and Accuracy of Field Operations**
- **Rapid Data Collection and Seamless Data Integration**
- **Replaces paper based work flows**
- **Helps to Make Informed and Timely Decisions**



# Lightweight Applications and Runtime SDKs

Configurable COTS applications and Native ArcGIS Runtime SDKs

iOS	Android	Windows Phone	Windows Mobile	Windows	Linux
<b>Applications</b> <ul style="list-style-type: none"><li>• ArcGIS</li></ul>	<b>Applications</b> <ul style="list-style-type: none"><li>• ArcGIS</li></ul>	<b>Applications</b> <ul style="list-style-type: none"><li>• ArcGIS</li></ul>	<b>Applications</b> <ul style="list-style-type: none"><li>• ArcGIS</li></ul>	<b>Applications</b> <ul style="list-style-type: none"><li>• ArcGIS Explorer*</li></ul>	<b>Applications</b> <ul style="list-style-type: none"><li>• None</li></ul>
<b>Runtime SDK</b> <ul style="list-style-type: none"><li>• Objective C</li></ul>	<b>Runtime SDK</b> <ul style="list-style-type: none"><li>• Java</li></ul>	<b>Runtime SDK</b> <ul style="list-style-type: none"><li>• Silverlight</li></ul>	<b>Runtime SDK</b> <ul style="list-style-type: none"><li>• .NET</li></ul>	<b>Runtime SDK</b> <ul style="list-style-type: none"><li>• WPF, Java</li></ul>	<b>Runtime SDK</b> <ul style="list-style-type: none"><li>• Qt, Java</li></ul>
					

# Esri Mobile Products

*ArcGIS running on ...*

Windows Mobile



Windows

Rugged Devices

iOS



Microsoft  
Windows Phone



Android



Smartphones and Tablets



# ArcGIS on Rugged Devices

## *Windows and Windows Mobile Devices*

- Designed for harsh field conditions
- One handed/vehicle-mounted use
- Occasionally connected workflows
- High accuracy data collection
  - GPS integration
  - Laser integration
- Replace Paper Surveys
  - Intelligent forms
  - Barcode integration



Water Facilities Mapping

Asset Maintenance/Inspection

First Responders

Land Management

# ArcGIS Products for Rugged Devices

## *Windows and Windows Mobile Devices*

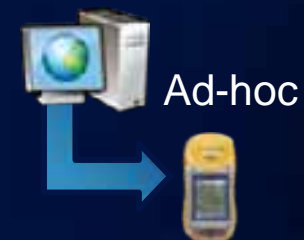
### ArcGIS for Windows Mobile

- Focused Mobile Applications
- Task-based, defined workflow
- High Accuracy Data Collection
- Users have little GIS training
- Scalable to large field workforce



### ArcPad

- Ad-hoc Mobile Application
- High Accuracy GPS Workflow
- Targets small/mid-size org
- Users typically have GIS Training





# ArcGIS for Windows Mobile

- **Application**
  - Rapid Deployment of Maps, Apps & Projects
  - Task-based, Workflow Driven User Experience
  - Synchronization of Data between Field & Office
  - Local Caching of Data
- **Platforms**
  - Windows XP, Vista, Windows 7
  - Windows Mobile



# Runtime SDK and Application Framework

- **Coarse-grained .NET API**
- **Extend COTS application**
- **Create focused Mobile GIS applications**
- **Embed ArcGIS into existing line of business applications**
- **Included in Setup**
- **Help and Samples location at the Mobile Resource Center**

# ArcGIS for Windows Mobile Licensing

- **ArcGIS Desktop**



- 1 free deployment license
- Additional packs of 5 can be purchased

- **ArcGIS Server**



- Advanced Enterprise license (unlimited deployments)
- Standard Enterprise license (purchase 50 packs)

# ArcGIS for Windows Mobile Demo



# Starting the Application

- **Deployment of projects**
  - Local
  - On-Premise Server
  - Cloud (ArcGIS.com)
- **Field Crew tracking**
  - User sign in
  - Silent logging of field crew GPS positions by date/time interval
  - Locate field crew members and last time checked in, notes



# The Map

- **Operational layers**
  - Used for querying and editing data in the field
  - Synchronized with a GIS server
- **Basemap layers**
  - Provide supportive background data and referencing where the user is located
- **Leverage GPS/GNSS receivers by consuming NMEA Output**

# Data Collection

- **Many supported layer types**
  - Feature, Raster, Annotation, Geometric Networks (as simple features)
- **Fields types of a feature class define its behavior**
  - Subtypes
  - Domains
  - Raster
  - Dates
- **Versioning, replication, ETL**

# ArcGIS for Windows Tablet Demo

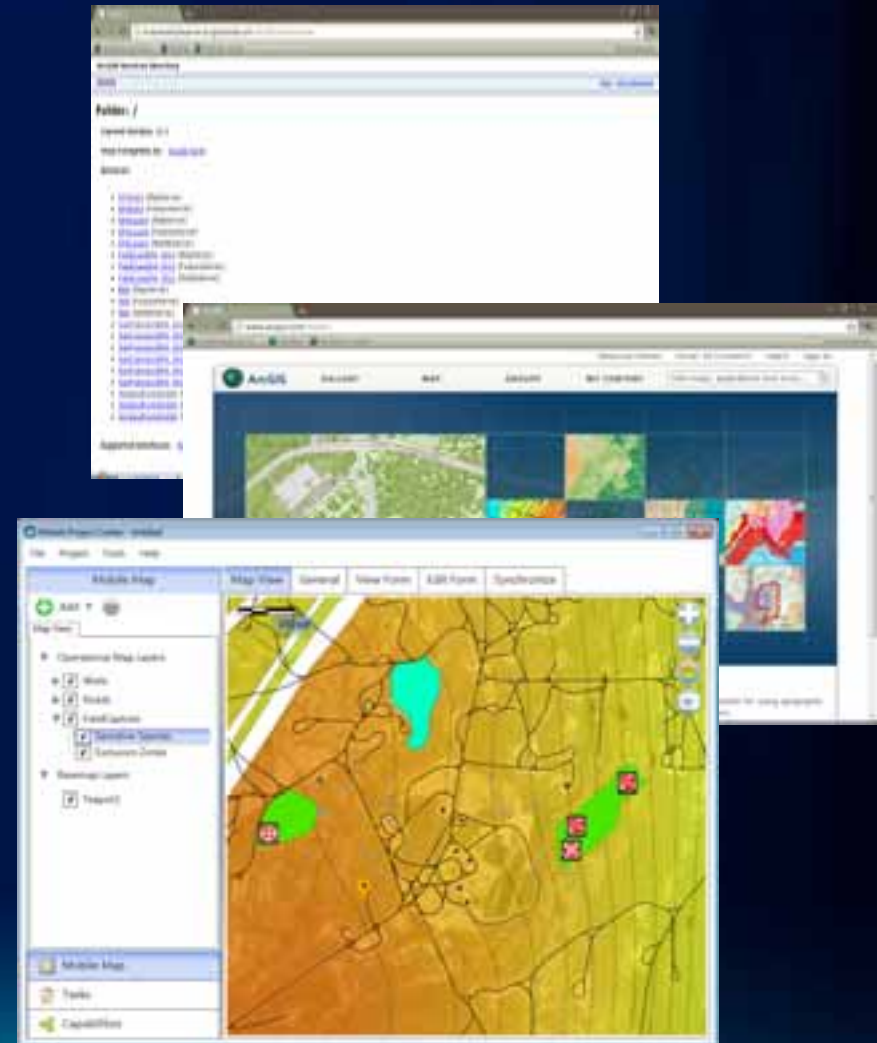


# Mobile Project Center Demo



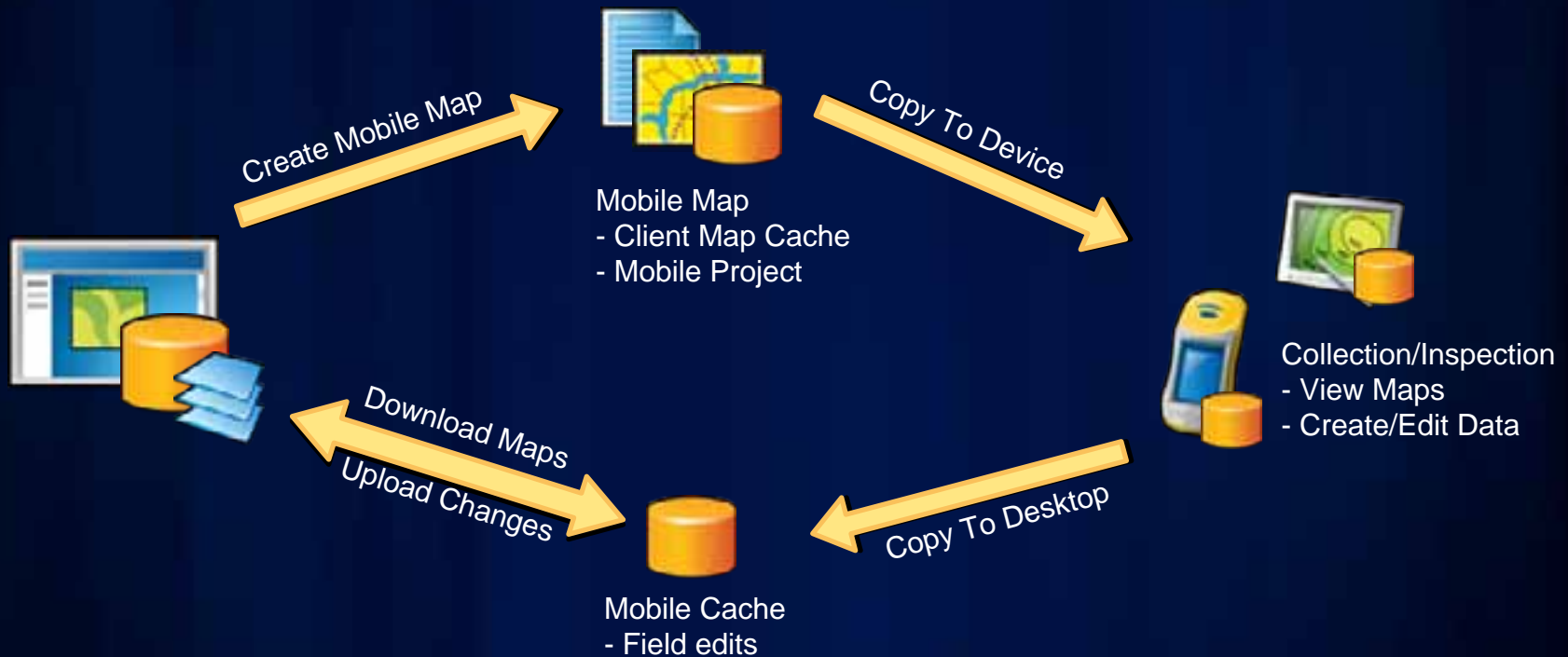
# Creating Mobile Projects

- **Create and Manage Field Applications**
- **Publish and share maps & content**
  - Local
  - On-Premise Server
  - Cloud (ArcGIS.com)
- **Provision Applications and data to field devices.**





# Deployment & Field Workflow - Desktop



# Deployment & Field Workflow - Server



# Roadmap



# ArcGIS Mobile 10.0 Update Schedule



- **Focused Quality Updates**
- **Latest Release Available on Customer Care Portal**
  - Build 2500 NIM List on [Mobile Blog Site](#) (16 issues resolved)
- **Does not require uninstall/re-install of desktop software**
- **List of 21 issues queued for 2525 update**

# Whats New in 10.1?

## Simplified workflows, improved project deployment

- **Simplified Data Collection Experience**
  - Tap on Shape attribute to collect
  - Less taps (Map, Averaging, Streaming on same page)
  - Repeat collection optimizes workflow
- **Editing of Existing Feature Geometry**
  - Recollect the shape
  - Extend linear features
  - Replace portions of lines or polygons
  - Delete portions of lines or polygons
- **Support for Geodatabase Attachments**
  - Capture multiple photos for a feature
  - Attach documents/files to a feature
  - Pull attachments for offline use





# Whats New in 10.1?

## Simplified workflows, improved project deployment

### GPS Configuration and Display

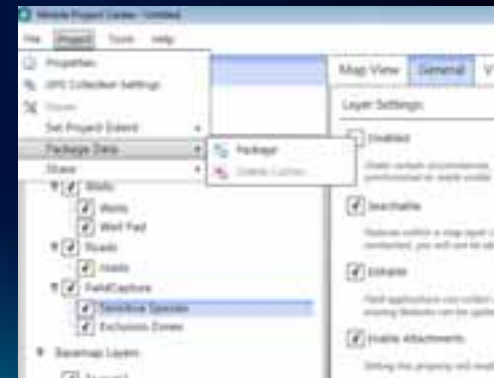
- First time use configuration of GPS settings
- Configurable “heads up” GPS display on all Map pages (Lat/Lon, number of satellites, PDOP, bearing, moving direction)

### Waypoint Navigation

- “As the crow flies” of GPS-based navigation  
Displays location, bearing, distance, direction, speed, arrival time
- Navigate to location on map or a feature

### Publishing and Deployment

- Desktop workflow improvements
  - Package data (mobile cache and base map) into wmpk
  - Package project extensions into wmpk
- Integrated Service Publishing Experience for Mobile Services
  - Find errors and warnings before publishing
- Improved ArcGIS Online integration within Mobile Project Center
  - Support for My Content
  - Sharing maps in Groups



# User Conference

What to do and see...



## Sessions To Attend

- **ArcGIS for Windows Mobile – Developing Apps**
  - Thursday - 3:15pm - 4:30pm
- **Demo Theaters**
  - Tuesday - 2:30pm – 6:00pm
  - Wednesday - 9:00am – 12:30pm
- **Try ArcGIS Mobile Live!**
  - Tuesday/Wednesday - 2:00pm - 4:00pm
  - Thursday - 10:00am - 12:00pm
- **Mobile Special Interest Group Meeting**
  - Tuesday 12:00pm - 1:00pm 23b

**Questions?**





esri