Collector for ArcGIS: An Overview

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Agenda

• The ArcGIS Platform
• What is Collector for ArcGIS
• Preparing maps and data
• Feature services: hosted vs server-based
• Collection: online vs. offline
• What is new
• What is coming next
The ArcGIS Platform
How Collector for ArcGIS Fits
The ArcGIS Platform

Available in the Cloud . . .
. . . and in your infrastructure
The ArcGIS Platform

Available in the Cloud . . .
. . . and in your infrastructure

Desktop
Web
Device

portal

Cloud
On-Premise

Server
Online Content and Services

Web GIS
The ArcGIS Platform

Available in the Cloud . . .
. . . and in your infrastructure
The ArcGIS Platform

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. . . and in your infrastructure
The ArcGIS Platform

Available in the Cloud . . .
. . . and in your infrastructure
Foundation Apps
Integrated Within the ArcGIS Platform

- For everyone in the organization
- Intuitive and easy to use
- Configurable, ready to use within your ArcGIS Organization
- Updated frequently
- Cross-platform
- Cloud and on-premise
Esri Strategy toward mobility

- Extend the reach of Web GIS
- Platform agnostic
- Native apps
- Developer toolkits for customization
What is Collector for ArcGIS
Collector for ArcGIS

- COTS Mobile app for field workflows

- Collect and update data
  - Using your location or the map
  - Fill out forms
  - Capture attachments (pictures, videos)

- Types of use
  - Collect asset locations and status
  - Ground-truth GIS data
  - Make observations/conduct surveys
  - Replace paper-based workflows
What can you do?

- Open maps shared to you for data collection
- Collect and update features
- Copy features to save time
- Measure lengths and area
- Get directions
- Switch between basemaps
- Search features and places
- **Record where you went**
Collector uses Web Maps

• **Maps should include:**
  - One or more feature services (editable)
  - Location Tracking layer (optional)
  - Basemap(s)
  - Application settings

• **Share Maps to field workers using Groups:**
  - Create Named Users for each field worker
  - Invite field workers to groups
  - Share maps into groups
Making the map

- Add your layers to your map
- Configure the map: forms, symbology, tools
- Share to your field users

- Choose symbology for the end user
- Leverage domains, subtypes, default values, scale ranges etc…
- Set viewable and editable fields
- Turn off unnecessary tools (measure, basemap etc…)
- Side load basemaps to device to save time
Feature Service Layers and Collection Templates

- **Supported Types**
  - ArcGIS Online (Hosted)
  - ArcGIS Server (On Premise)

- **Supported Operations:**
  - Editing options
  - Sync***

- **Popups and fields**
  - Define the form experience in Collector
  - Take advantage of Geodatabase capabilities
    - Feature Templates
    - Field validation
    - Editor tracking
Preparing Maps and Data for Collector
Authoring tips for good field maps
Publishing and Synchronization Workflow: Hosted Services

Prepare Maps

Export Data

Synchronize

Download

Create Replica

View, Query Edit

Create/Publish Services
Land & Water Conservation Fund

Site Inspection

• Mike Bialousz – GIS Director, Pennsylvania DCNR

• Hosted feature services
• Online collection
• Attribute update only
• Feature attachments
Land & Water Conservation Fund - Site Inspection

- Administered via National Park Service
- Federal requirement to ensure compliance on 1300+ sites in PA
- 5 year rotation

- 7 Regional & 3 central office staff at varying skill levels
- Traditional manual process with several steps
- iPad and MiFi setup
- Initial goal – 300 inspections complete between July & Dec 2013
Land & Water Conservation Fund
Operations Dashboard

1,314
Land & Water Conservation Fund - Site Inspection

- Benefits

- Increased efficiency of inspections, correspondence with NPS & between our own staff
- Reduced collection errors
- Real-time visibility into program (Operations Dashboard)
- Positive feedback internally
- Potential for integration with other systems
Working Offline
Working Offline…

- **Field users can take maps offline and...**
  - View and interact with map
  - Measure distances and areas
  - View popups and media
  - Collect and update features
  - Synchronize changes between field and office

- **Map layer support for disconnected editing...**
  - Editable feature services (Create, Update, or Delete)
    - **Must have Sync enabled**
  - Tiled Map Services (on-premises/hosted)
  - Esri Basemap Services
Publishing and Synchronization Workflows: On-Premise Services
Things you should know...

Maps
- Feature Service and Tiled Map Service Layers
- Both hosted and on-premise Feature Services supported
- Synchronization is bi-directional

Preparing your data and services
- Must enable sync operation on feature services
- Multi-user geodatabases/managed databases only
- Global ID must be primary key for relationships/attachments
Forest Pest Management – Egg Mass Survey
Gypsy Moth, Hemlock Wooly Adelgid, and Spotted Lantern Fly

- Carrie Tropasso – GIS Technical Lead, Pennsylvania DCNR
- On-premise feature services
- Offline collection
- Feature and attribute collection
- Tile packages
- Database triggers
- Sketchbook Express
Forest Pest Management – Egg Mass Survey
Gypsy Moth, Hemlock Wooly Adelgid, and Spotted Lantern Fly

- 8 Regional & 5 central office staff at varying skill levels
- Traditional manual process with several steps
- iPad setup
- Almost 2000 total points collected – All Offline
- Collection period September - March
Forest Pest Management – Egg Mass Survey
Gypsy Moth, Hemlock Wooly Adelgid, and Spotted Lantern Fly

- Benefits
  - Visit more sites
  - More efficient collection method
  - Reduce collection error
  - Real-time data analysis
  - Spray schedule

http://www.gis.dcnr.state.pa.us/maps/index.html?gypsymoth=true
What’s New & What’s Coming
New at 10.3 - Related Data in Forms

- Update and create
- Geodatabase relationship classes
Also New at 10.3

• Versioned feature service support
  - Versioned (not archived) transaction model
  - Offline editing
  - Requires ArcGIS for Server 10.3

• Full permission support

• Hosted tile layers
What’s coming

- More tools for planning offline work
  - Prepare data in advance
  - Pre-package multiple areas
  - Fine grained sync control
- Smarter data collection forms
  - Auto field population
  - Inherited attributes
- Integration of sensors
- Windows Phone
Thank you…

• Please fill out the session survey:
  • Session 44

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Second Offering ID: 176

Paper – pick up and put in drop box