ArcGIS Collector – Online and Offline Field Data Workflows

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Web GIS Extends GIS Across Organizations
Throughout Communities
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Across Organizations
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Providing Mapping, Analysis, Data Management, and Collaboration

Available on the Open Web . . .
and On-Premises
Device Strategy
Get the device that makes sense for your work

- Identify the level of ruggedness required
- Hardware requirements
- Decide on the size
- Software requirements
  - Off the shelf, custom, etc.
- Do you have IT restrictions
- Choose a platform
- Do a pilot project before scaling up
- Cheap is tempting but not always the right choice

Source: www.trinda.net
Collector for ArcGIS an Overview

What is the problem we are trying to solve

Organizations need an easy way to build or maintain a GIS of authoritative data:
- Some of that data is collected from scratch in the field
- Some of that data comes from other sources (surveying, photogrammetry, digitizing)
  - That data needs to be validated by ground truthing
- Some of that data may already exist and simply needs to be assessed and updated
  - Condition of assets
- In the “past” this was done with notebooks, clipboards, and maps
  - Can be error prone, and slow down the turn around time to make that data accessible and useful to your organization
What can Collector for ArcGIS do?

- **Collect and update data**
  - Using your location or the map
  - Fill out forms
  - Capture media (pictures, videos)
  - Additional tools to help your field workforce (measure, search, basemaps, directions)

- **Types of use**
  - Collect and inspect assets
  - Ground-truth their GIS data
  - Make observations/conduct surveys
  - Replace paper-based forms/process
  - Spatial awareness in the field
Collector for ArcGIS an Overview

How can I make a map for collector?

- **Offline layers needs to have sync enabled**
- **Tips**: leverage domains, subtypes, default values, scale ranges etc.
- **Choose symbology for the end user (sunlight)**
Collector for ArcGIS an Overview

How can I make a map for collector?

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

- Only show the fields in the form that the end user needs
- Turn off tools the user won't use to do their job (measure, basemap etc)
- Use scale dependency to hide read only layers till they're needed
- Side load basemaps to device to save time
Working with offline

Great idea, BUT, consider…

Offline is a great way to work in areas of no connectivity

- **Requires**
  - A sync enabled feature service either hosted in AGO or from your own server (10.3.1 recommended)
  - Tiled map service (basemap) with export tiles enabled or a previously created/side loaded TPK
- **Sync frequently when you have access to a stable connection**
  - Reduces the risk of timeouts
  - Attachments can add up and cause sync to take awhile
- If you are using server and seeing failed syncs check the server debug logs for more information
- Increase the IIS uploadReadAheadSize for your server (~20mb)
When bad things happen to good GIS people

Help is on the way

- **Recovery tool in desktop**: Copy Runtime Geodatabase To File Geodatabase
  - This is not a substitute for sync, it is intended for recovery scenarios (deleted service)
  - Make sure to copy the entire offline map folder to your computer (use iTunes for Apple devices, Android just plug in)
Demo Using Collector
Online and Offline
Mark Scott
Tips and Tricks
Avoiding pot holes along the way

• Maps in collector need an editable layer and to be shared through a group to show up in collector
• Do not use the same layer twice in a map if you intend to use it offline
• Definition filters are not supported offline
• Test your symbology outside before sending people to the field
What’s next?
Filling in the missing features

• Collector for ArcGIS on Windows!
• More tools for planning field work (pre-planned)
  - Prepare your data in advance
  - Pre package multiple areas
  - Skip attachment downloads
• High accuracy collection
• Smarter data collection forms
  - Auto field population
  - Inherited attributes
• More templates
Questions ?
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