Field Operations in ArcGIS | Optimize field operations with the power of location

Plan
Use location to assign and coordinate field activities

Navigate
Route to your work using your roads, your GIS data—even while offline

Coordinate
Act on real-time conditions in the field to update worker tasks

Monitor
Know where workers are and see the progress of work in real-time

Capture
Perform data collection and send it back to the office from anywhere

Understand
See what’s happening around you with maps
ArcGIS QuickCapture
The rapid data collection app

A “big button” mobile app

Simplest way to capture field observations

At-speed & rapid data collection workflows
At-Speed Asset Inventories and Inspections

Colorado DOT, USA
Aerial Surveys and Inspections
Minnesota Power, USA
Trail Maintenance and Mapping

Velo Quebec, Canada
Noxious Weed Abatement

King County, USA
QuickCapture designer

A web tool to create your own QuickCapture projects

Available at quickcapture.arcgis.com and through the app launcher in ArcGIS Online and ArcGIS Enterprise 10.8
Device Variables

- Use them to automatically calculate GIS attributes when a feature is captured
  - Speed
  - Direction of travel
  - Time of capture
  - Etc.

- Over 40 variables
User Inputs

- Update attributes on new features
  - Enter input after button is pushed
  - Or when the project starts
- Can be required or optional
- Supports data validation rules
Exclusive Groups

• QuickCapture supports capturing multiple observations at the same time:
  • Bike trail on the right side
  • Also on the left side
  • …
Exclusive Groups

• QuickCapture supports capturing multiple observations at the same time:
  • Bike trail on the right side
  • Also on the left side
  • …

• You can also group buttons to capture information in a mutually exclusive manner:
  • Pavement condition good vs bad
  • Beginner trail vs intermediate
QuickCapture Tour
Live Demo
QuickCapture Public Projects

- Available since December 10, 2019
- For ArcGIS Hub Premium customers ONLY.
- Share your QuickCapture projects publicly from designer
- End users can download and use with or without signing in
- Use cases:
  - Crowd-sourcing
  - Citizen-science
  - Community engagement
  - Emergency response
Santa sighting season has begun!

If you have spotted Santa around your neighbourhood, record it using ArcGIS QuickCapture!
A few more things you should know...
ArcGIS QuickCapture mobile app licensing

Included with Field Workers, Creators and GIS Professionals at no additional cost
Optional add-on for Editor user types

- Viewer (not applicable)
- Editor (add-on)
- Field Worker (included)
- Creator (included)
- GIS Professional (included)

The mobile app can also be used without an ArcGIS account, if a QuickCapture project is shared publicly to an ArcGIS Hub Premium organization.
ArcGIS QuickCapture and Enterprise

- Officially supported with ArcGIS Enterprise 10.7.1 and above
  - It actually works well with previous versions after registering the mobile app and designer

- Designer:
  - quickcapture.arcgis.com can be easily configured to work against Enterprise.
  - Starting with 10.8, the ArcGIS Enterprise setup includes QuickCapture designer
External GNSS receiver support:

- **Use for:**
  - Increased accuracy
  - Access to GNSS metadata (through variables)
  - Higher frequency data collection

- **Add receiver by:**
  - Bluetooth
  - USB (Windows Only)
  - Network (Windows Only)

- **Supported receivers:**
  - Bad Elf – EOS – Leica - Trimble (R1, R2)* - Garmin GLO - Geode
ArcGIS QuickCapture custom url scheme

arcgis-quickcapture://?portalUrl=<portalurl>&itemId=<itemid>

- Configure the portal url
- Download a project
- Open a project
- Initialize project with a project user input
- Use app links to integrate QuickCapture with other apps
Data Recovery Workflows

• Field users can e-mail any features that fail to upload as a QuickCapture recovery file (.qcr)

• Default recipient of the email is set by the project author

• Contents of the qcr file are:
  - A SQLite database
  - Photo attachments
  - Text files describing the feature layer schema
QuickCapture QCR file reader

- ArcGIS Pro Add-In
- View geometry, attributes and error information
- Use append tool to update source layer
QuickCapture Documentation

Prepare a project

This tour describes how to prepare a project that allows you to capture data fast. You can capture both the location and attributes of assets or incidents as you travel. To do this, you create a feature service and data collection buttons that represent each unique set of data to be collected.

The following steps describe how to use ArcGIS Pro and the QuickCapture web designer to prepare a project for data collection:

Create a feature service

All QuickCapture data is stored in feature services. A single project may refer to layers in multiple feature services, but to get started, it’s common to create a feature service for your project.

A feature service can be created in many ways; however, it is recommended that you use ArcGIS Pro because it provides tools to define symbology and rules to help you when preparing the project.

1. Create feature layers in ArcGIS Pro that represent the data you want to capture.

QuickCapture GeoNet place (Blog, Forum, Tutorials…)
ArcGIS QuickCapture
2020 Roadmap

- QuickCapture for Community Engagement
  - User Inputs
  - Optional photos
  - Built-into ArcGIS Enterprise

Designer:
- User Inputs
- Optional photos
- Built-into ArcGIS Enterprise

App:
- Split screen
- Biometric authentication

Designer:
- Save as
- Drafts
- Configure map

FedRAMP

Accessibility VPAT

Research:
- Android Wear OS and Apple Watch
- Hands-free
- AI-based object detection

Synchronized release across all supported platforms (iOS, Android and Windows)
Esri Boston’s Hub: https://go.esri.com/bostonhub

Sign Up and Follow Esri Boston

Sign up and follow Esri Boston to receive updates on local events and GIS stories from around Boston.
Q & A
mscott@esri.com

Will collect questions from the chat that we did not get to.
Lunch Break

Returning at 1:00 pm
The outbreak of COVID-19 has presented great challenges to the world. Esri has provided new solutions that can be built on top of ArcGIS Online to help address some of these challenges.