What Would John Snow Do (Today)?
Part 2
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Thurs Oct 19th, 2017
Outline

- Esri Mobile Field Apps overview
- Field collection workflow
  1. Create hosted feature layers and surveys
  2. Field data collection
     - Survey123 for ArcGIS
     - Collector for ArcGIS
  3. Create web apps
     - Configurable application templates, Story Maps, and Web AppBuilder for ArcGIS
- Summary
Esri Mobile Field Apps

Field Operations
Field Operations

ArcGIS for Desktop

Analysis
Field Operations

ArcGIS for Desktop

Workforce for ArcGIS

Dispatcher
Assigns Work

Field Workers
Receive Assignments

Work as a Team
Survey123 for ArcGIS

Navigator for ArcGIS

Field Operations

Survey123 for ArcGIS
Collector for ArcGIS

ArcGIS for Desktop

Workforce for ArcGIS

Navigator for ArcGIS

Smart Forms
Now in Beta
Source Code Available
Operations Dashboard

Survey123 for ArcGIS

Collector for ArcGIS

Navigator for ArcGIS

ArcGIS for Desktop

Workforce for ArcGIS

Field Operations
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• Summary
ArcGIS Online Capabilities

- Browse, search, and discover your GIS assets
- Self-service mapping
- Content creation and management
- Sharing and collaboration
- Data hosting and mapping
- Visualization, collection, and analysis
- Ready to use maps and layers
Create Feature Layer

- **ArcGIS Desktop**
  - ArcMap or ArcGIS Pro
  - Create feature classes, then share as web service to edit

- **ArcGIS Online – easier**
  - Create hosted feature layer

- Feature layers are used to support web editing workflows
Jump Start With Templates in ArcGIS Online

- Templates for creating new feature layers
- Use directly or fine tune them with the map viewer

Examples:
- AEDs Inventory
- Boom Placement
- Bridge, guardrail inventory
- Water quality assessment
- Environmental Impact

Over 60 Collector-based Solution Templates!
What is a Web Map?

- Enables “intelligent maps” → A web map stores references to
  - Web services and data
  - Display and behavior settings
- Supports: smart mapping, pop-ups, web editing, and analysis
- Foundation for your maps and apps
- Create in the portal Map Viewer or ArcGIS Pro
- Can be leveraged by all other Esri client Apps
Demo

• Overview of ArcGIS Online
• Create hosted feature layer, add to web map
Apps for Field Data Collection

- **Survey123 for ArcGIS**
  - Form-centric field app, collect data in the field
  - Supports point data

- **Collector for ArcGIS**
  - Map-centric field app, collect data in the field
  - Supports point, line, and polygon data
Form

*a printed or typed document with blank spaces for insertion of required information*

- Universally used
  - Utilities (Water, Electric, Telco, Gas)
  - Transportation
  - Government
  - Humanitarian, Non-Profit, Conservation
  - Census
  - Health
  - Emergency Management
  - Agriculture, Forestry…
Survey123 for ArcGIS
Survey123 Components

Survey123 website
- Author Simple Surveys
- Complete Simple Surveys
- Manage Access
- Analyze Results

Survey123 Connect for ArcGIS – Author Complex Surveys

Survey123 for ArcGIS – Complete Surveys

What bird can you see near you?
- Crow
- Eagle
- Kingfisher
- Robin
- Sparrow
- Tit
- Woodpecker
- Wren

Click the audio button on the right to hear the sound of each bird.
What makes a form ‘Smart’?

• Types of questions
  - Text, Integers, Dates, Time, Signatures, Photos, Scales
  - Multiple Choices, Single Choice Lists, Barcode, Sketch

• Form Logic and Validation
  - Skips, Cascading Selects, Default Expressions
  - Pre-Computed Responses, Mandatory questions, Favorite answers
  - Use reference data

• Look and Feel
  - Groups, Multiple pages, Notes, Media
  - Multiple-Language Support, Themes, Hints
Authoring forms

- **Quick → Survey123 website**
  - Interactive WYSIWYG user experience

- **Sophisticated → Survey123 Connect**
  - XLSForms based; use with a spreadsheet editor
  - Supports more advanced logic and validation
Demo

- Author survey in Survey123 Web Designer
Survey123 Connect for ArcGIS
Creating Smart Forms with XLSForms

- Works in combination with a spreadsheet editor
- Add questions to spreadsheet…
- … Preview in Survey123 Connect
- Publish to ArcGIS
Demo

- Author survey in Survey123 Connect
Survey123 for ArcGIS App

- Form-Centric data capture app
- Available on Smartphones and Tablets
  - IOS, Android, and Windows
- Also available on desktops
  - Windows 7,8,10; OS X, and Ubuntu Linux
- Requires ArcGIS account
- Workflow
  - Login & download survey
  - Capture data using smart forms (connected or disconnected)
  - Submit data when online
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Collector for ArcGIS

Map Centric Data Collection

High Precision

Works offline
What are people using Collector for?

- Collect Asset Inventory
- Ground-truth locations
- Cite Map-Change requests
- Inspecting Existing Structures
- Maintaining and replacing infrastructure
- Marking Violations
- Assessing Damage
- Capture Control Points
- More…

Collector for ArcGIS | Field Data Collection

Maintenance

Asset Inventory

UAV Control
Deploying Mobile Solutions | Collector uses Web Maps

• **Collector uses maps that include:**
  - Layers from 1+ feature services (editable)
  - Location Tracking layer (optional)
  - Basemap
  - Application settings
  - Offline Mode advanced settings

• **Share Maps to field workers using Groups:**
  - Create Named Users for each field worker
  - Invite field workers to groups
  - Share maps into groups
Collector for ArcGIS | Edit Using Feature Layers

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

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

- **Popups and fields:**
  - Define the form experience in Collector
  - Take advantage of Geodatabase capabilities
    - Domains and Subtypes
    - Related Tables
    - Feature Templates
    - Field validation
    - Editor tracking
Demo

- Show Collector for ArcGIS app
Activity – 10 mins

• Download both apps from App Stores
• We will go into the field
• Survey123 for ArcGIS
  - Open app, sign into ArcGIS Online
  - Download survey
  - Go out and complete surveys
• Collector for ArcGIS
  - Open app, sign into ArcGIS Online, access web map
  - Go out and collect features
Configurable Web Apps and AppBuilders

Complexity and functionality

Configurable Application Templates

sub-group

Story Map Apps

Web AppBuilder for ArcGIS
Configurable Application Templates

- Collection of well defined, workflow driven templates
- Designed to support many common use cases; 32 different templates
- Included within the web site interface of ArcGIS Online and/or Portal for ArcGIS
- Access from
  - the Map Viewer
  - on the My Content page
Configurable Application Templates – Categories

- Collect/Edit Data
- Compare Maps/Layers
- Display a Scene (3D)
- Explore/Summarize Data
- Make a Gallery
- Map Social Media
- Provide Local Information
- Route/Get Directions
- Showcase a Map
Demo

- Show configurable application templates
Story Map Apps

- A subset of the Configurable Application Templates
- Focused apps that enable customers to communicate their work
Demo

- Show Story Map app templates
Web AppBuilder for ArcGIS

- Functionality within ArcGIS Online and Portal for ArcGIS
  - ArcGIS Online since Dec 2014
  - Portal for ArcGIS in 10.3 and later
- **Enables new apps to be created without coding**
  - Interactive WYSIWYG user experience
  - Supports 2D and 3D apps
  - 2D apps runs on any device, in a web browser
- Built with ArcGIS API for JavaScript and HTML 5 technology
- Extensible
Web AppBuilder for ArcGIS

• Create new web apps without programming

50+ widgets
Available Widgets for 2D Web Apps

- **Widget**: a chunk of code that can be added in a modular fashion; provides functionality
- 40+ available; enable core web mapping application capabilities
Run 2D Apps on Any Device
2 Options to Work with Web AppBuilder

1. **Within ArcGIS Online or Portal for ArcGIS**
   - Embedded in the web site
   - Activate from the map viewer or My Contents

2. **Developer Edition**
   - Separate download and installed locally
   - Sign into ArcGIS Online or Portal for ArcGIS
   - Support for custom widgets and themes

• Both offer the same “builder” user experience, same capabilities
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• Questions
John Snow Workshop – HHS conference

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