Pulling Back the SARCOP Curtain

A dive into the backend and inner workings of the Search and Rescue Common Operating Platform

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Purpose

• We get lots of “How did you guys...” questions – this seeks to answer those!
• Show how SARCOP is structured
• Major enhancements and best practices
• There will be time at the end for open forum “Ask the developer”
SARCOP Overview

• Search and Rescue Common Operating Platform
• Built to collect and share information during disasters
• Developed through a partnership between DHS, FEMA, and NAPSG
• 100+ USAR teams have access, including all 28 FEMA USAR teams
• Can be used for everything between Hurricane Ian and local SAR searches
• Everything is community driven
What is SARCOP?

Search and Rescue Common Operating Platform
SARCOP V8 vs V9

- Updated SARCOP from version 8 to version 9 in March - May 2023
- Major changes were mostly backend
Frontend differences

• No more Survey123 for WAS
• New App: Admin Editor
• Few new tracklogs
• New thumbnail in the sandbox
Backend differences

- All the layers are contained in one layer
- Still lots of view layers, but each view has every SARCOP layer instead of individual layer having multiple views
- Only Admins can truly delete data
- Revamped post-incident archive process
v8 > 40 Items
v9 < 20 Items

Proposed Architecture v9 2023/2024

SARCOP Sandbox
How did we swap from V8 to V9? “Operation U-Haul”

1. Started out on the sandbox
2. Build out the schema in Pro
3. Published to AGOL
4. Recreated views, maps, and apps
5. Replaced existing apps in Experience with new apps
6. Spent weeks testing
7. Cloned to FEMA org
8. Repeat step 5 on Deployment side
2. Setting up in Pro

<table>
<thead>
<tr>
<th>Current Layer</th>
<th>SARCOP Waypoints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Name</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Object ID</td>
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<tr>
<td>Event Name</td>
<td>Event Name</td>
</tr>
<tr>
<td>Event Type</td>
<td>Event Type</td>
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<tr>
<td>Team Name</td>
<td>Team Name</td>
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<tr>
<td>Squad ID</td>
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<tr>
<td>Operator Name</td>
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<td>Search Type</td>
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<td>DEIM</td>
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<tr>
<td>Waypoint</td>
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<tr>
<td>Original Waypoint</td>
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<tr>
<td>Waypoint Category</td>
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<tr>
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<tr>
<td>Structure Type</td>
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<td>Number Fed Evacuated</td>
<td>Number Fed Evacuated</td>
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<td>Water Depth</td>
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<td>Assigned To</td>
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<tr>
<td>Follow-Up Priority</td>
<td>Follow-Up Priority</td>
</tr>
<tr>
<td>Start Time</td>
<td>Start Time</td>
</tr>
</tbody>
</table>

**Symbology**

- **Primary symbology**
  - Field: Mission Type
  - Unique Values:
    - Value: Ground Reson
    - Value: Aerial Recon
    - Value: Water Recon
    - Value: Hotline
    - Value: Primary
    - Value: Secondary High
    - Value: Secondary Low
  - Color scheme:
    - Add field
    - Value: SARCOP WAS Layers
      - **SARCOP Waypoints**
      - **SARCOP Exposed Structures**
      - **SARCOP Event Points**
      - **SARCOP Tracklog**
      - **SARCOP Search Segments**
      - **SARCOP Divisions**
      - **SARCOP Branches**
      - **SARCOP Incident Area**
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Best Practices for Version Updates

• ArcPro published sublayers start count at “1”, not “0”
  • Causes problems with scripts if you’re not careful
• The QC json swap still needed some configuring afterwards
• Divide and conquer with your team
• Don’t make the swap right before a major incident to get feedback... you’re going to have a bad time
New App: Admin editor

- Drawing Incident Areas, Branches, and Divisions
  - Usually drawn by IST, prevents accidental editing by Task Forces
New App: Admin editor

Deleting data in V8

Deleting data in V9
Deleted Data
Location Tracking

- Uses Tracker built into QuickCapture and Field Maps
- Login dependent
- Sends “Last known location” every 30 sec – 1 min
How do we share information?
Two user groups for SARCOP

**Internal 41484b**
- Primary group for accessing and using SARCOP
- For Task Force members
- Editing capabilities for all members
- Access to external and internal layers

**External d77f7d**
- Primary group for high level access to SARCOP
- For state EMA, fire chiefs, or other high-level management
- No editing capabilities
- Access to only external apps and layers
Who can be added

• Anyone who works for a public safety agency
  • Including fire departments, task force members, and other members of public safety
• Must be validated by a manager at the host agency
  • Can’t just add John Doe from FDNY, has to be validated by a known reliable member of the group
• Limited named user accounts
• Usernames are owned by the agency
Questions/ Open Discussion

Some Ideas
• Next contract year technical development
• Dashboard deeplinks and waypoint list follow-up
• UAS workflows
• Pro Tool creation/ how do we make custom tools
• How do we archive incident data – deeper dive
THANKS!

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Sessions after lunch:

Navigating the Flames: GIS in Local Fire service
Room 502

Riding the Data Highway: GIS Use in Transportation
Room 501

Taxonomies, Ontologies, and Schemas – Room 1104