

Data Specialist Lessons Learned

Garner Fire – 7/2018

Keep it simple - The available tech is amazing, but when all we need is a lat/long a simple point will do fine. The new tech can come after the main objectives are accomplished.

Data Specialist from the start - Insitu did a good job capturing the necessary and requested data, but relaying it to the IMT is difficult unless the person is familiar with the GISS processes. The data specialist can also relay how the data was collected, the accuracy and how it differs from other typical GIS products. They can also describe some of the limitations we have.

Small Team - This may be more of a manager thing, but I like the small team concept from the contract. It seemed like each night we had new people on site. This made it difficult to keep things consistent from night to night.

GCS Maps - If we could stipulate that the vendor GCS must be able to display a GeoTIFF or GeoPDF it will make things much easier and consistent. If this was the standard we can either use or create maps similar to what the local unit or IMT is using.

KML or Shapefiles layers in the GCS - It would also be nice if the GCS could utilize KMLs Shapefiles as overlays in the GCS. This way if something comes up during the flight, we could add it quickly as an overlay with no impact on the main GCS map

Connectivity - Like we experienced in NV, not having network connection made things difficult. Working offline is OK and we should be prepared for it, but having some form of network connection makes the data specialists job much easier.

Backups Backups Backups - Backup everything in case something crashes and have a backup plan for when it does.

AGOL - Using the AGOL groups that Fern setup for us worked well for sharing data. This does rely on connectivity, but it is a simple way to share data with the IMT. Our current service template is super simple and we may want to update it. Adam was going to look at possibly switching it to something similar to the National Collector Feature Service.

BLM UAS Call When Needed Contracts

Data Specialist role and function

J Murgoitio, August 2018

The UAS CWN Data Specialist operates in several capacities on an incident, from technical liaison to cartographer to intelligence analyst. While not a GISS position, a strong background in geospatial technology is essential for success. The functions of a data specialist fall within three categories: Spatial Data Management, Intelligence, and Team Interaction.

1. Spatial Data Management – the data specialist manages a significant amount of spatial information before, during, and after each UAS flight. To manage this information, the data specialist:
 - a. Acquires, updates, and stores incident data for use in UAS operations, including aviation data such as airspace classification, TFR boundaries, and aerial hazards.
 - b. Creates and/or uses file and folder naming conventions for standardized data storage including data disseminated by the incident, UAS data products, and base layers such as roads, surface management, elevation, and imagery.
 - c. Publishes data in compliance BLM and or incident standards for accuracy, attribution, and metadata, and uses appropriate technology for distribution and use including NIFC FTP, ArcGIS Online, Avenza, Google Drive, etc. Coordinates with vendor technical staff for file conversion and storage appropriate for use in flight systems, ground control stations.

2. Intelligence Management – information derived from the UAS can be beneficial as real-time situational awareness, as intelligence for tactical planning, or as amplifying information for strategic plans. The data specialist is responsible for integrating and applying the best available technology for reporting UAS products in the following ways:
 - a. Monitors and interprets EO/IR imagery and full motion video collected during UAS flight operations, and manages recorded data for retrieval and conversion to intelligence products.
 - b. Understands incident plans, goals, and priorities, and develops geospatial intelligence products such as maps, slides, and videos to assist the decision making process by incident planning and operations personnel.
 - c. Leverages technological resources to disseminate UAS intelligence

products through methods such as hardcopy (paper maps), digital (email, ftp, text), or voice (phone, radio) communication.

3. Team Interaction – teamwork with the vendor, UAS manager, and incident personnel is a critical component of mission success. During the incident, the UAS data specialist is expected to:
 - a. Rapidly integrate into established crew procedures and/or develop procedures for safe and effective employment of the UAS on the incident; and facilitate seamless transition to incoming crew members at the end of an assignment.
 - b. Translate and communicate incident requirements for information into technical UAS workflows that may require changes to sensor operation, aircraft positioning, collection techniques, and more.
 - c. Utilize effective crew resource management for successful UAS operations in complex, stressful, and austere environments with individuals from diverse agencies and backgrounds.