DOI sUAS Capabilities

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Our goals: to facilitate the aviation requirements of all Bureaus across DOI and find effective solutions to the Bureaus’ UAS operational needs.
Where does DOI OAS fit in the bigger picture?
Why sUAS?
Filling a data collection gap…

- Landsat 8 (30 meter)
- NAIP 2010 (1 meter)
- UAS at 400 ft (5 cm)
- UAS at 200 ft (2.5 cm)
The Aircraft

**DOI “Experimental” Aircraft**

DJ I M600 Matrice
- Heavy-lift hexcopter
- 20-25 minute flight time
- ~2 mile range

DJ I Mavic Pro
- Small EO camera quadcopter
- 20-25 minute flight time
- ~2 mile range

**DOI Fleet Aircraft**

BirdsEyeView – FireFly 6 Pro
- Medium lift VTOL Fixed wing
- 25-35 minute flight time
- ~3 mile range

3DR Solo
- Small EO/FLIR quadcopter
- 10 minute flight time
- ~1 mile range
The Ground Control Station (GCS)
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The Pilots: 385 in DOI and counting
What can sUAS provide?
Support for…

Mapping/Monitoring/other dull and boring* data collection efforts

* : when things go smoothly
Support for…

INCIDENT RESPONSE

WILDLAND FIRE
VOLCANO/EARTHQUAKE
HURRICANE
SEARCH & RESCUE
SPILLS/OTHER ACCIDENTS
Aerial Photography → Photogrammetry → 3D Surface Models & Orthoimages
Wildlife Monitoring
Multi-Spectral Sensors
Thermal Sensors
Real Time Video
Gas Monitoring Sensors
Into the future…

- “Dummy”-proof aircraft
  - Automated aircraft operation
  - Standardized fleet

- No physical data transfer
  - Sensor hard-drives instead of cards
  - Onboard/cloud processing

- Satellite-based communication
  - Communication systems that work anywhere
2018/2019
FireFly 6 Pro integration
DJI suite of UAS?
New Technologies
Water Sampling Sensors…not just yet…
Questions?