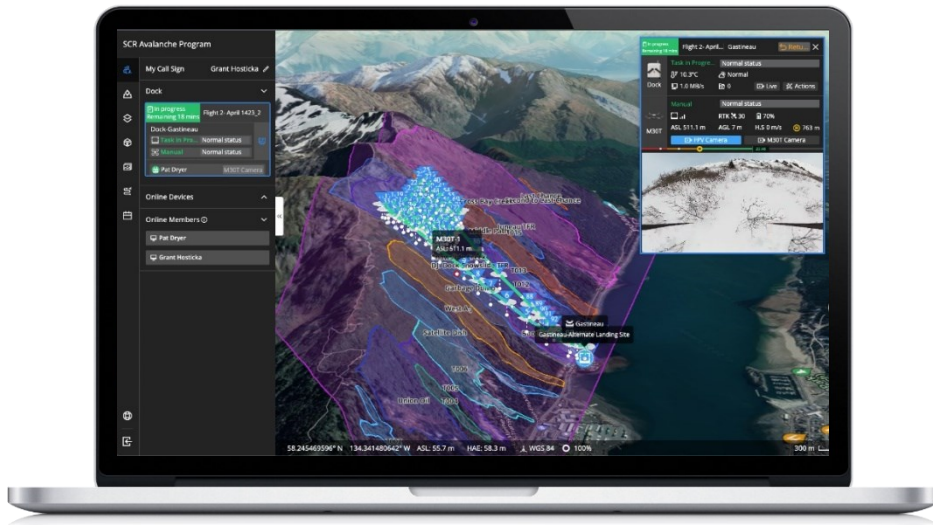


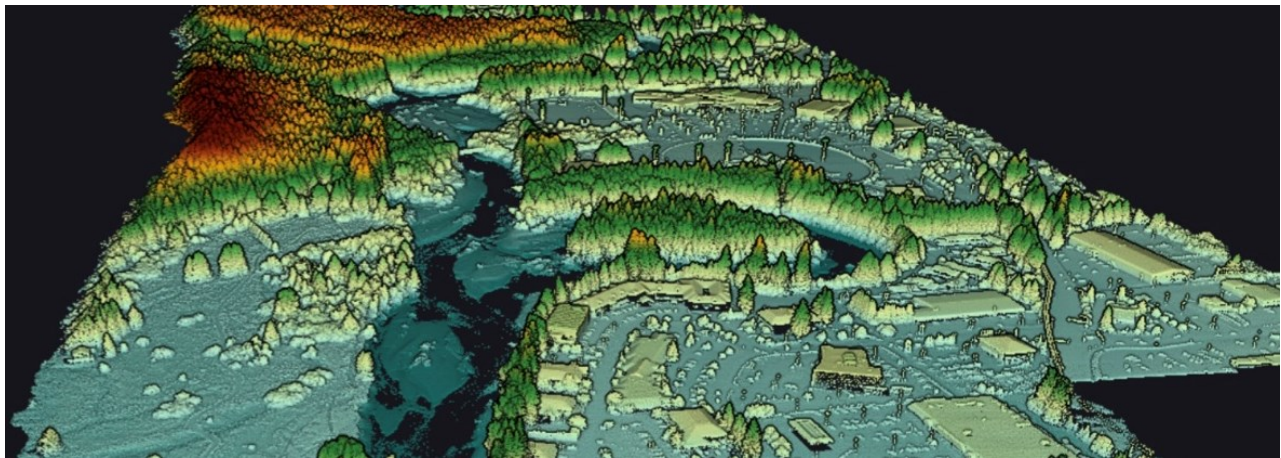
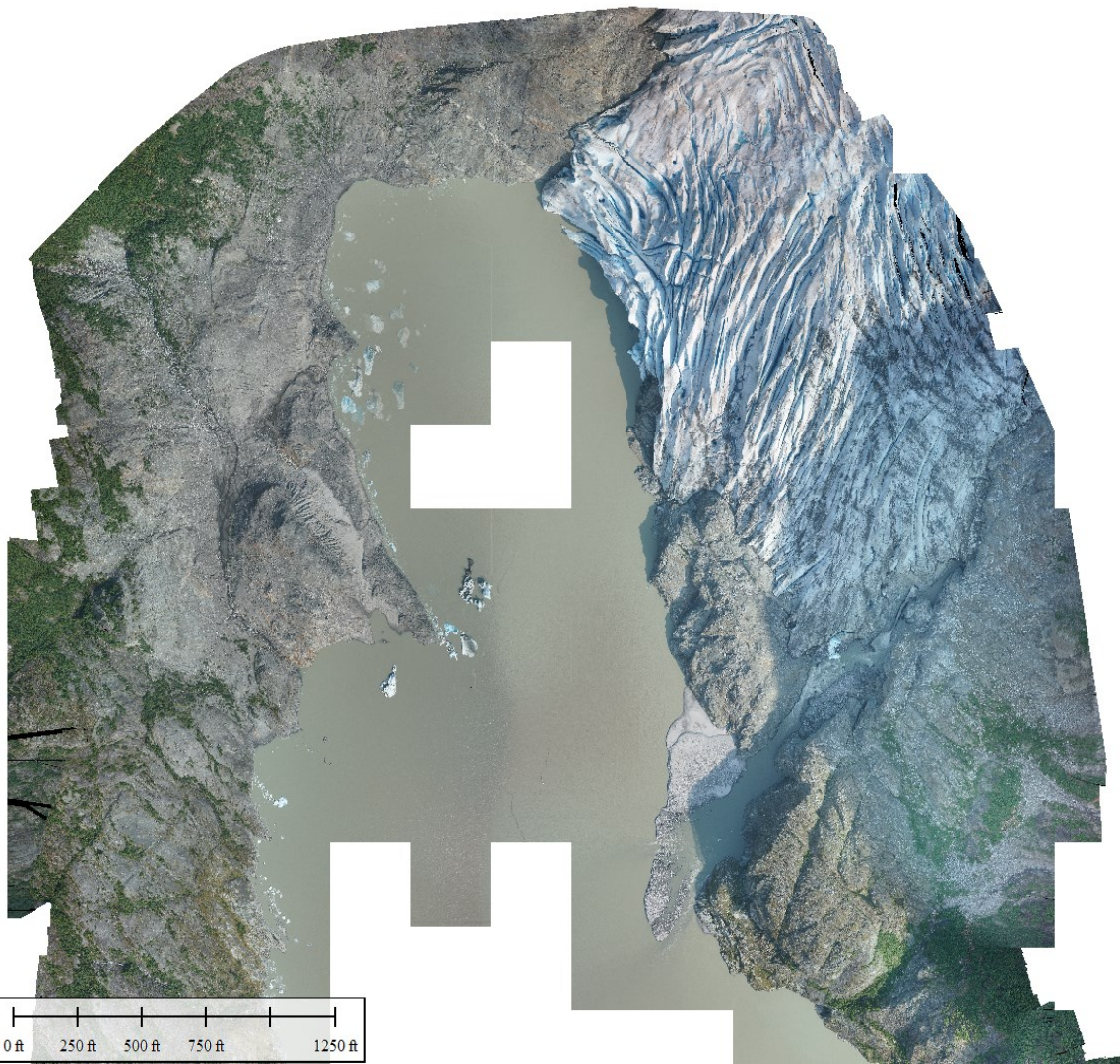


Automating Emergency Response Data Collection with

DRONE DOCKS



Emergency Response – Glacier Outburst





WHEN CRISIS HITS ALASKA'S INFRASTRUCTURE



DJI and Skydio Dock Operations



Remote Sensing Lab DOT&PF

Projects Members Devices English pat.dryer@alaska.gov

Project List

- Ongoing** Juneau Glacier Flooding
Under authority of the State Disaster Declaration for the 2023 August Juneau Glacial Outburst Flo...
Created: 2023/08/14
Ryan M | Pat Dryer
- Ongoing** Middle Fork Koyukuk Bridge...
EO Ice Damage
Created: 2023/06/14
Ryan M
- Ongoing** Dalton Highway MP403.5
Flooding and Erosion Monitoring Public Aircraft Operations COA 2022-WSA-11502
Created: 2023/06/10
Ryan M | Pat Dryer



Fleet

Scans

Media

Missions

Planning

Results

Reports

Summary

Activity

Flights

Alerts

What's New

Search

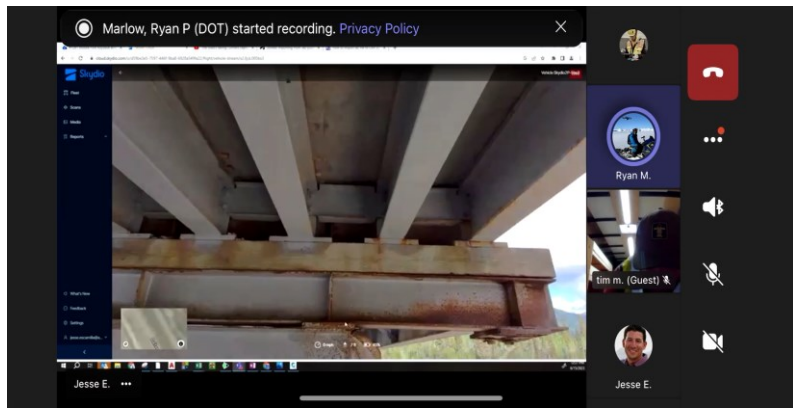
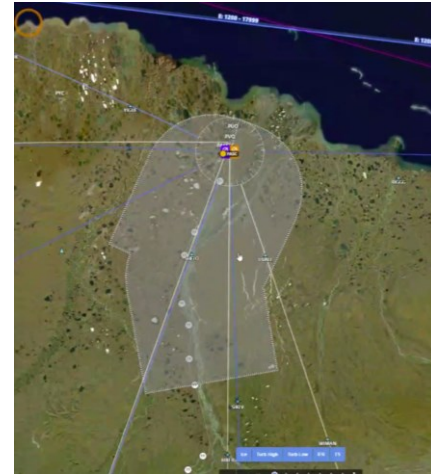
Search Vehicles

Online

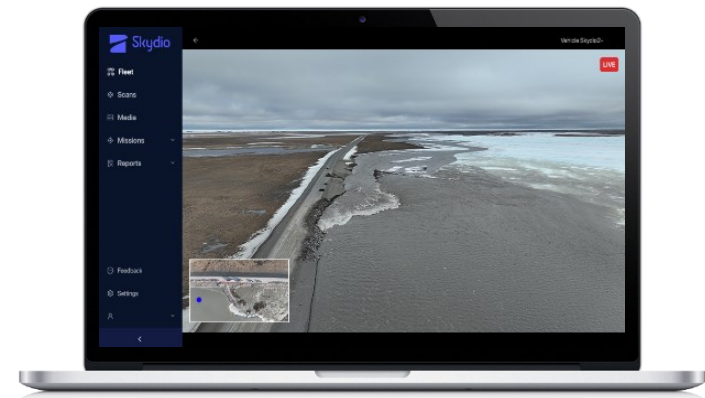
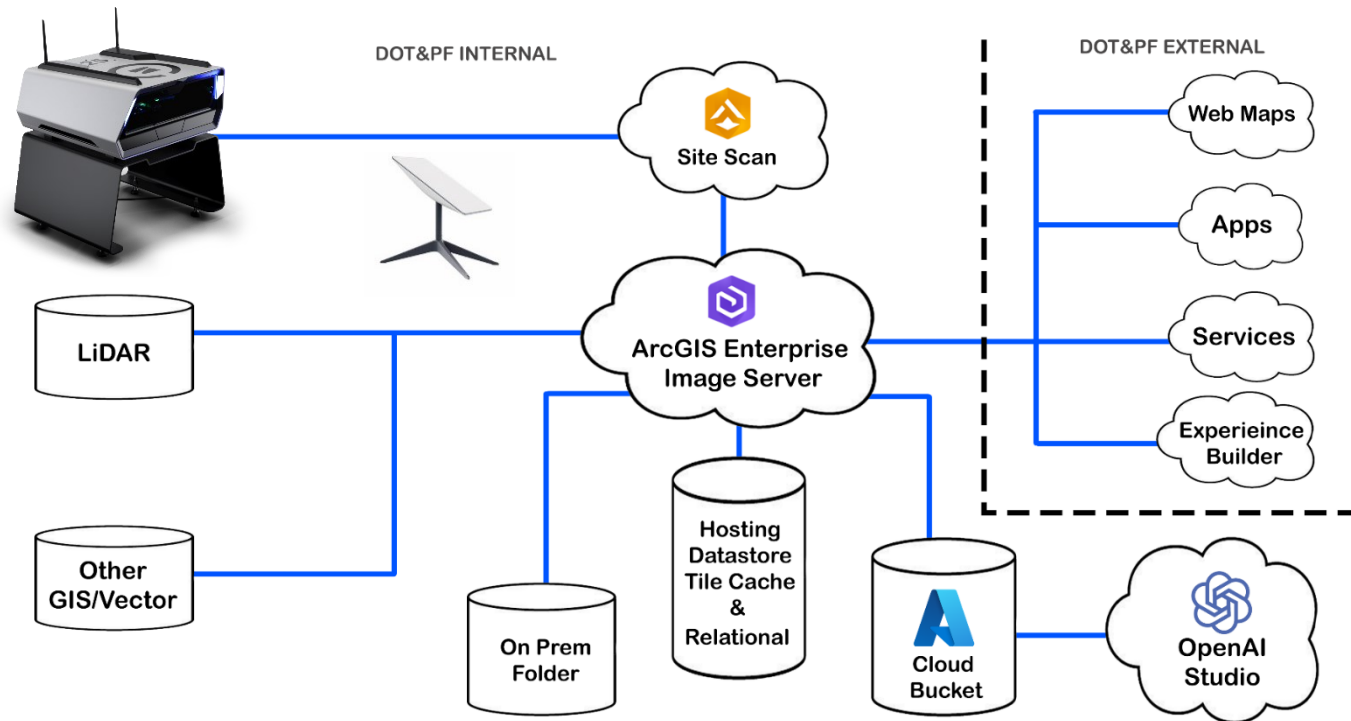
- hornet126
SkydioX2-he46 Online



Emergency Response with Docks - BVLOS

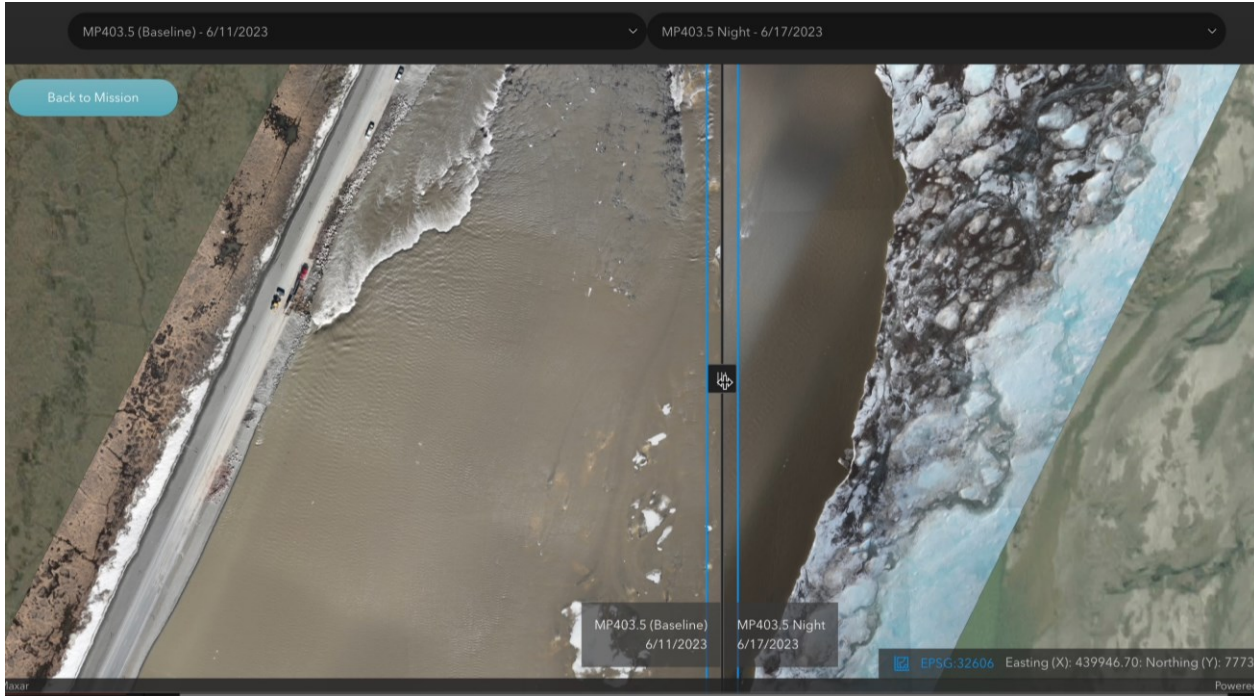


Automating Drone Dock Data Workflows





Data-Driven Decision Making

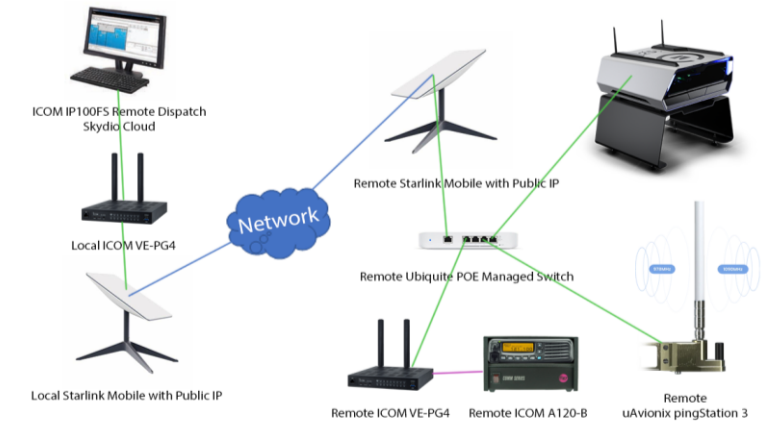


BVLOS AIRSPACE PROCEDURES

NOTAM, ATIS, TFR's & SGI COA's



Remote Monitor and Broadcast for VHF/ADSB



FAA REQUEST FORM FOR EXPEDITED SGI WAIVER OR AUTHORIZATION FOR UAS OPERATION

Basic Qualifications

- The requesting operator must possess a Certificate of Waiver or Authorization (COA) or Part 107 Pilot License
- The UAS operator must support an emergency response or other effort being conducted to address urgent circumstances that will benefit the public good
- The requested FAA approval cannot be secured via normal processes in time to meet urgent operational needs

Operator Information

Requester name:

Operator Organization (e.g., agency or company): Alaska Department of Transportation & Public Facilities

Operator Address: 4111 Aviation Avenue, PO Box 126500

Operator Point of Contact (including name, office mobile phone number, and email): Ryan Marney (907-258-4433) ryan.marney@alaska.gov & Patrick O'Neil (907-252-5100) patrick.oneil@alaska.gov

Pilot and Observer (including names, media phone numbers, and email):

Altitude: 1000ft

Type of UAS and Registration Number: DJI M30T (#A3P96CM7), DJI M30T Dock (#A3MPPW4H), DJI M300 (#A3BNWPPF)

Documentation

If the requested UAS operation will be flown under a pre-existing COA, please attach it to the request.

If the requested UAS operation will be flown under Part 107, please provide the Part 107 Pilot License number below: 2023-04-1102 with S1 11018, TFR COE and BVLOS

If the requested UAS operation will be flown under Part 107, please provide the Part 107 Pilot License number below: 2023-04-1102 with S1 11018, TFR COE and BVLOS

If the requested UAS operation will be flown under Part 107, please provide the Part 107 Pilot License number below: 2023-04-1102 with S1 11018, TFR COE and BVLOS

Requested Flight Details

Enter the dates of the proposed UAS operation (e.g., 05/18/2024 to 05/18/2024): Mandatory entry

Enter the time of day of the proposed UAS operation (e.g., 08:00 to 12:00): Mandatory entry

Enter the time of day of the proposed UAS operation (e.g., 08:00 to 12:00): Mandatory entry

Enter the location of the proposed flight (reference the nearest city or town, and state, e.g., Anchorage, AK):

Enter the distance and direction from the nearest airport, and FAA identification of the same (e.g., 4.0 mi W of Seward & 6 miles South of SCC)

Identify the class(es) of airspace in which the flight will be conducted (e.g., class G/Class E): Class G



My Call Sign Grant Hosticka

Dock

In progress Flight 2- April 1423_2
Remaining 18 mins

Dock-Gastineau

Task in Pro... Normal status

Manual Normal status

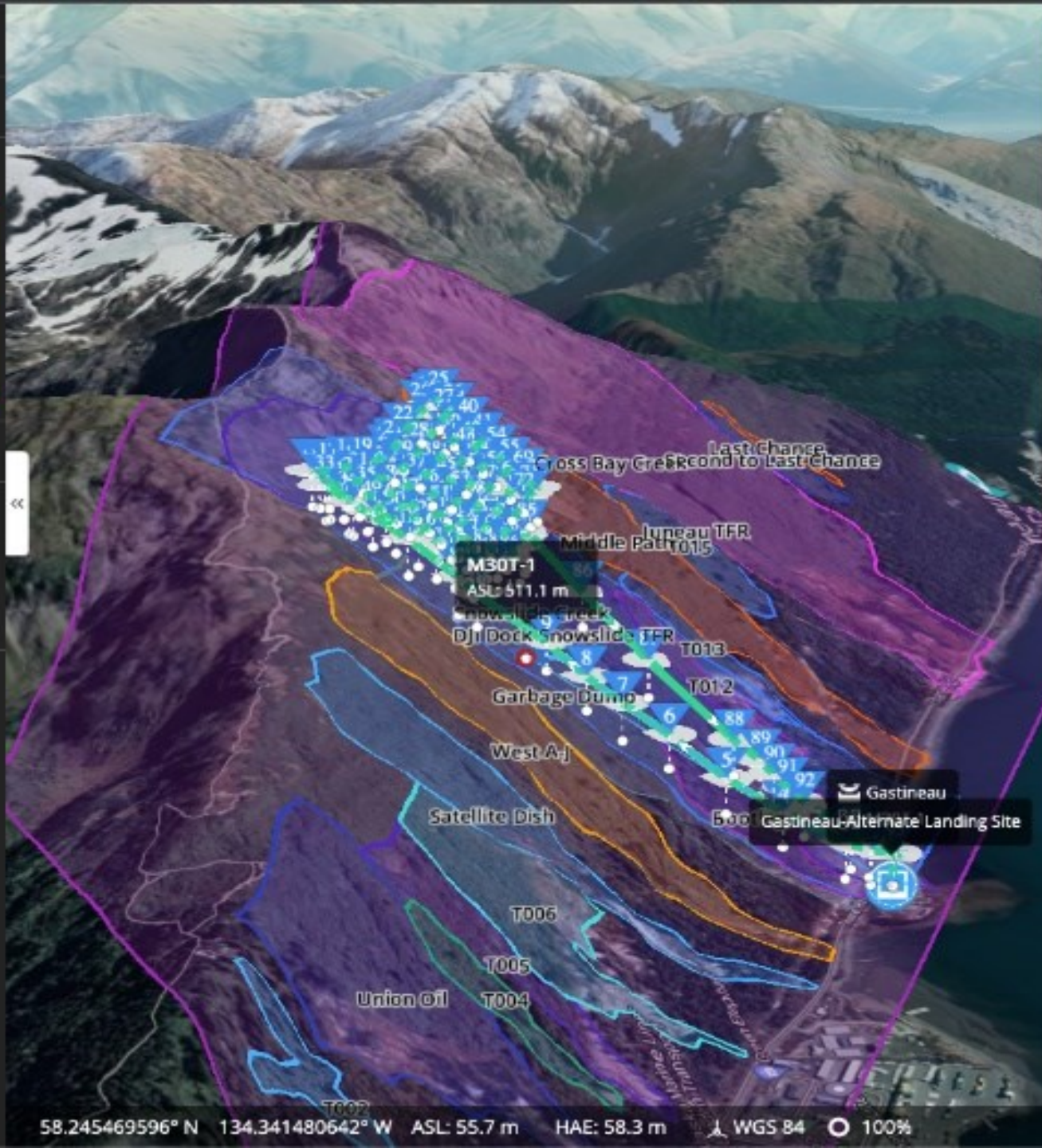
Pat Dryer M30T Camera

Online Devices

Online Members

Pat Dryer

Grant Hosticka



In progress: Remaining 18 mins Flight 2- April... Gastineau

Task in Pro... Normal status

10.3°C Normal

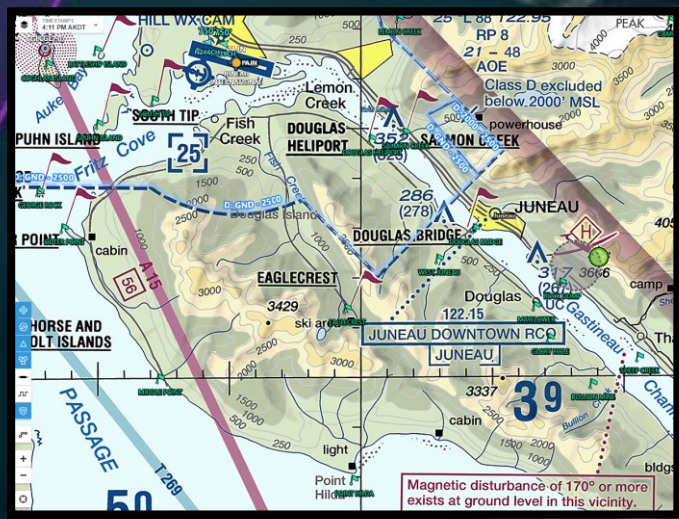
Dock 1.0 MB/s 0 Live Actions

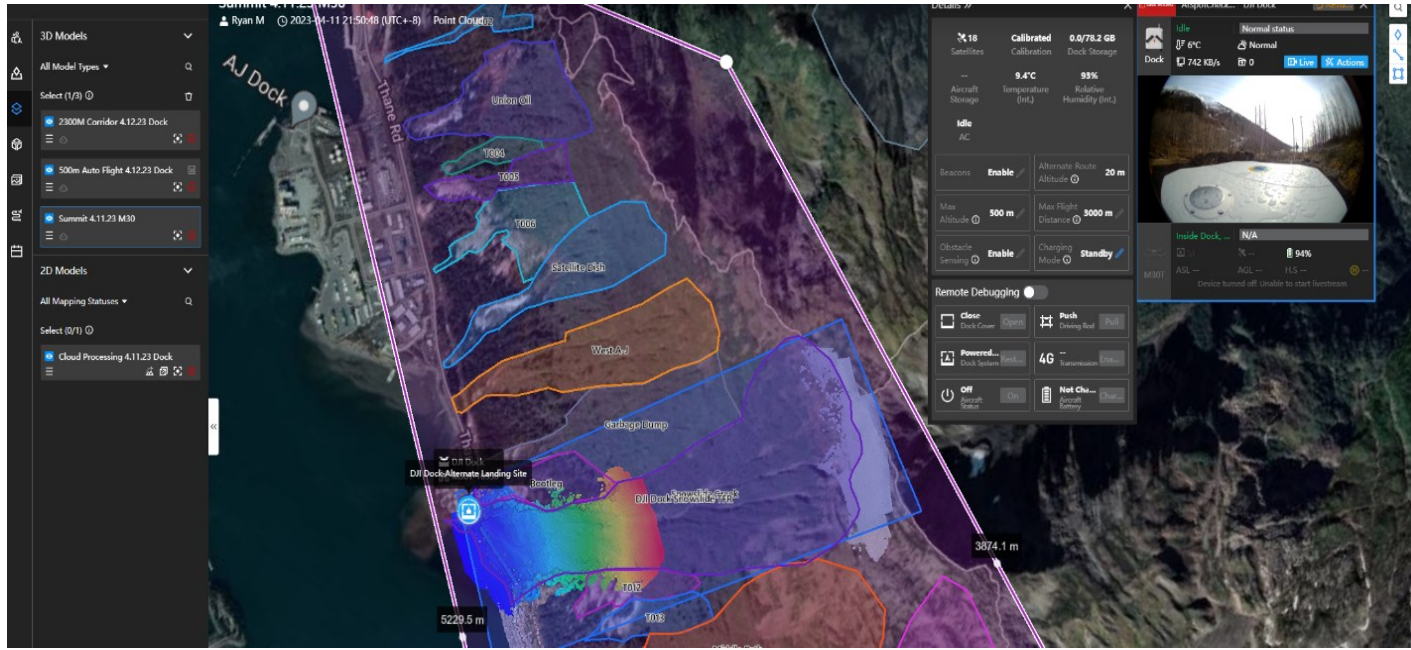
Manual Normal status

M30T ASL 511.1 m AGL 7 m H.S 0 m/s 763 m

FPV Camera M30T Camera

22:46





UAS Dock Development

Challenges:

- Require AC power and network connectivity
- Limited field of view from the drone dock
- Currently lacking ability to monitor or broadcast remote VHF traffic
- Inclement weather
- Environmental challenges

Benefits:

- Increased efficiency of many aspects of workflows
- Building resiliency through response
- Data-driven decision making
- Increased effective communication
- Increased collaboration amongst groups



DOT&PF UAS Resources



Visit
dot.alaska.gov/uas/
for all things UAS



Ryan Marlow, CMS
UAS Program Coordinator,
Statewide Aviation
P: 907-269-0741
E: ryan.marlow@alaska.gov

A screenshot of the Alaska Department of Transportation and Public Facilities (DOT&PF) website's UAS resources page. The page has a dark blue header with the DOT&PF logo, the text "Alaska Department of Transportation and Public Facilities UNMANNED AIRCRAFT SYSTEMS", and a search bar. Below the header is a navigation menu with links for Travel, Business, News and Social, Projects, and About Us. The main content area features a large image of a person standing on a runway at sunset. Below this is a section titled "UNMANNED AIRCRAFT SYSTEMS (UAS)" with a warning icon and text explaining the Operations Over People rule. There are also links for "Operations Over People and at Night Information" and "Operations Over People and at Night rule". A yellow button labeled "UAS Live Events" is visible. At the bottom, there are three categories: "Recreational User", "Commercial Operator", and "Public Operator", each with a corresponding image and a button.