



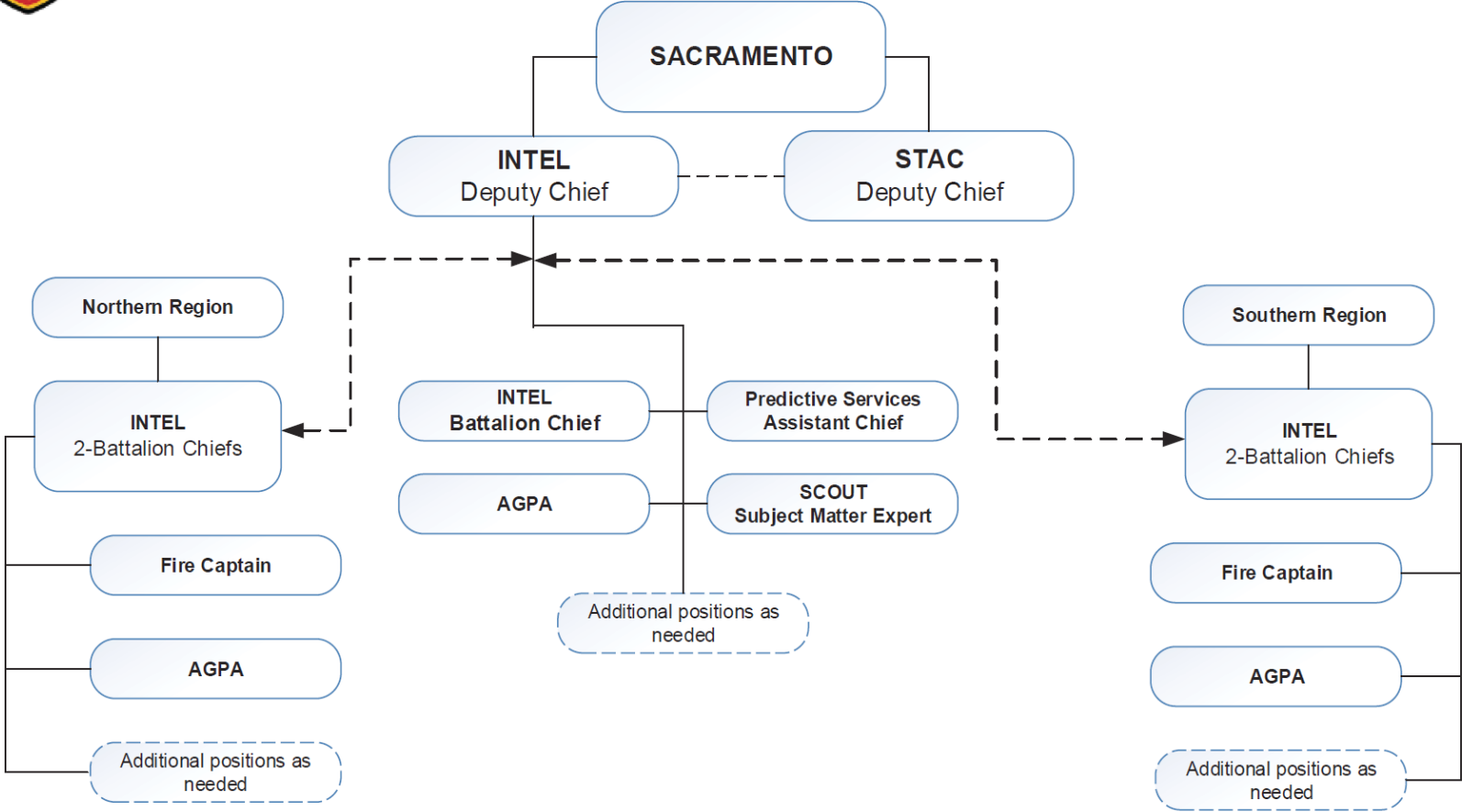
CAL FIRE Seasonal Outlook

2020

INTEL Program



PROPOSED INTEL PROGRAM ORG CHART



INTEL Program

Pre-Incident:

Fuels treatment areas, CAL Mapper, ESRI – AGOL
GIS products

Incident occurring:

Report on Conditions

FireGuard

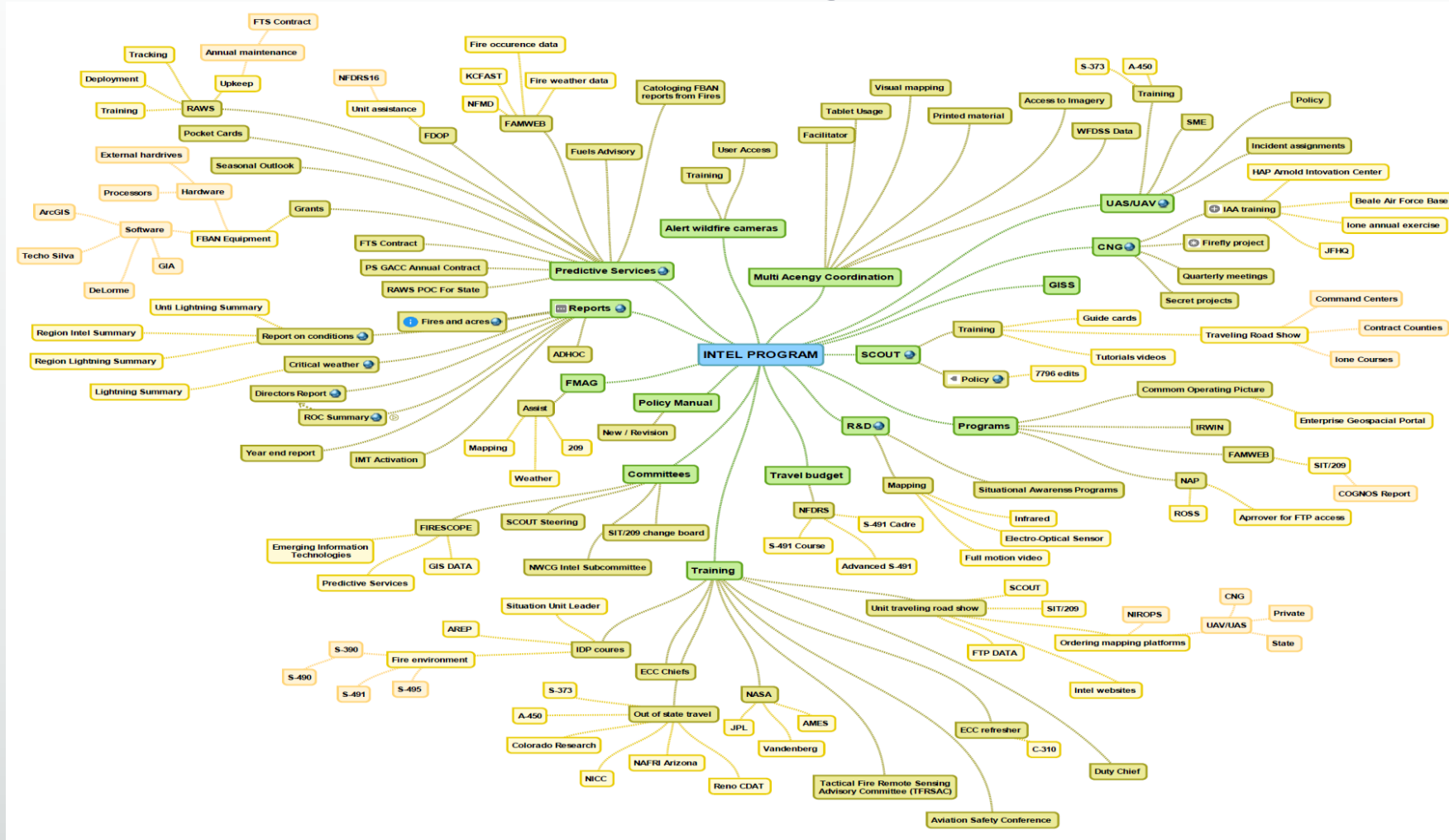
IR / mapping for situational awareness

Post-Incident:

WERT, Damage inspection



INTEL Program



RFI2 Request for Innovative Ideas



RFI2 Request for Innovative Ideas

▪ Problem Statement

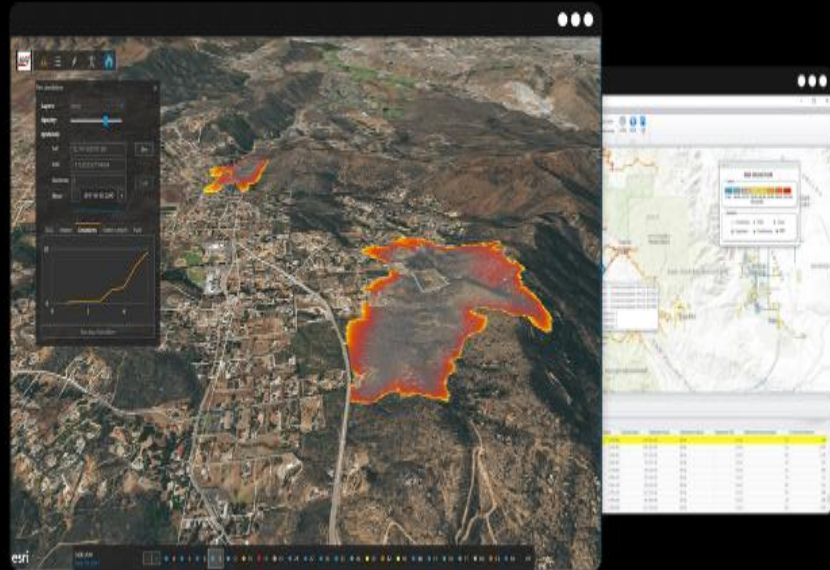
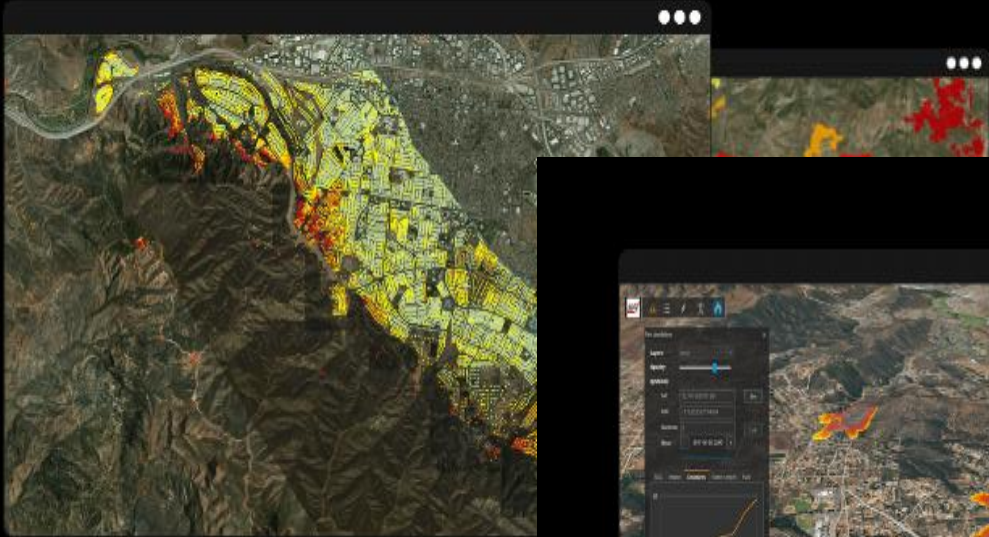
- First responders and decision makers are faced with challenges of **early wildfire detection**, ability to adequately **dispatch** the most **appropriate emergency resources** to the scene and the ability to make **public notifications**.
- They are further challenged to make a definitive **prediction of the path of travel of a wildfire** based on the materials or fuels burning, the current and predicted weather factors based on California's climate zones and micro climates and the topography.

▪ Procurement Sprint Goal

- Provide working-solution deployments in 2019 and final awarded deployments by spring 2020.



RFI2 Request for Innovative Ideas

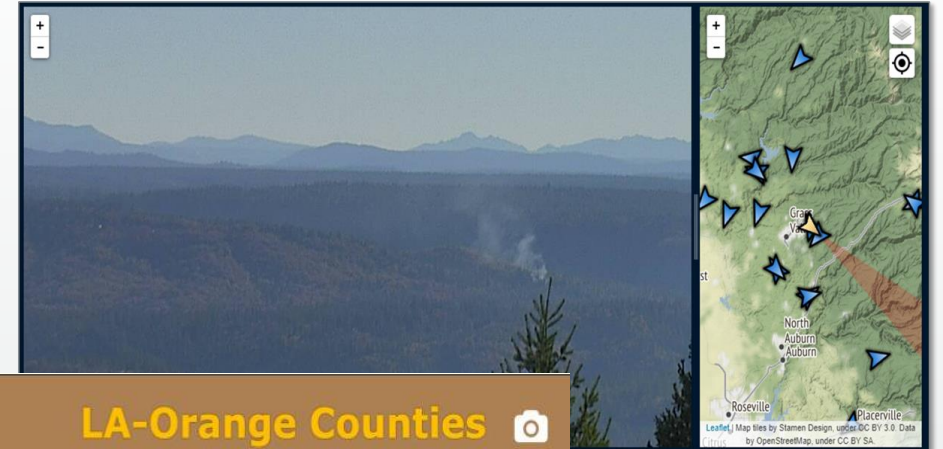
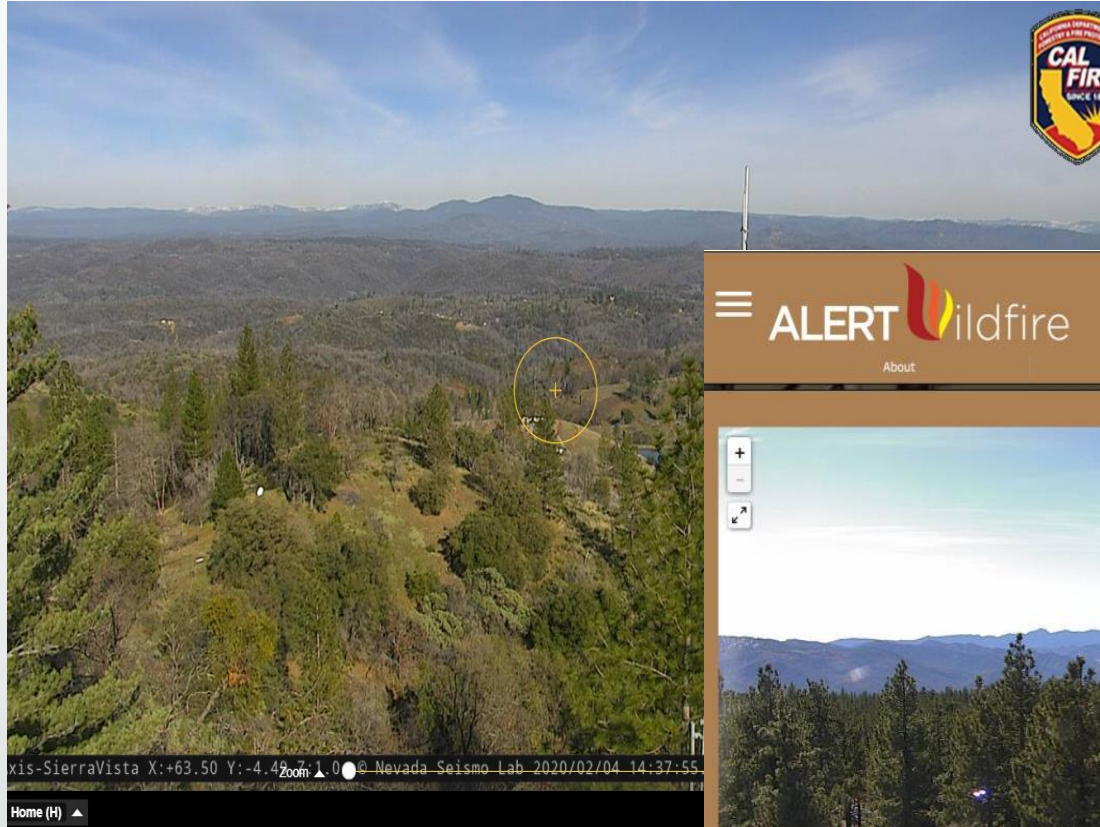


Technosylva

- Wildfire modeling in seconds



CAL FIRE 100 CAMERA PROJECT



ALERT Wildfire LA-Orange Counties

About Partners YouTube FAQ

LA-Orange Cameras

EDISON

Rosedale

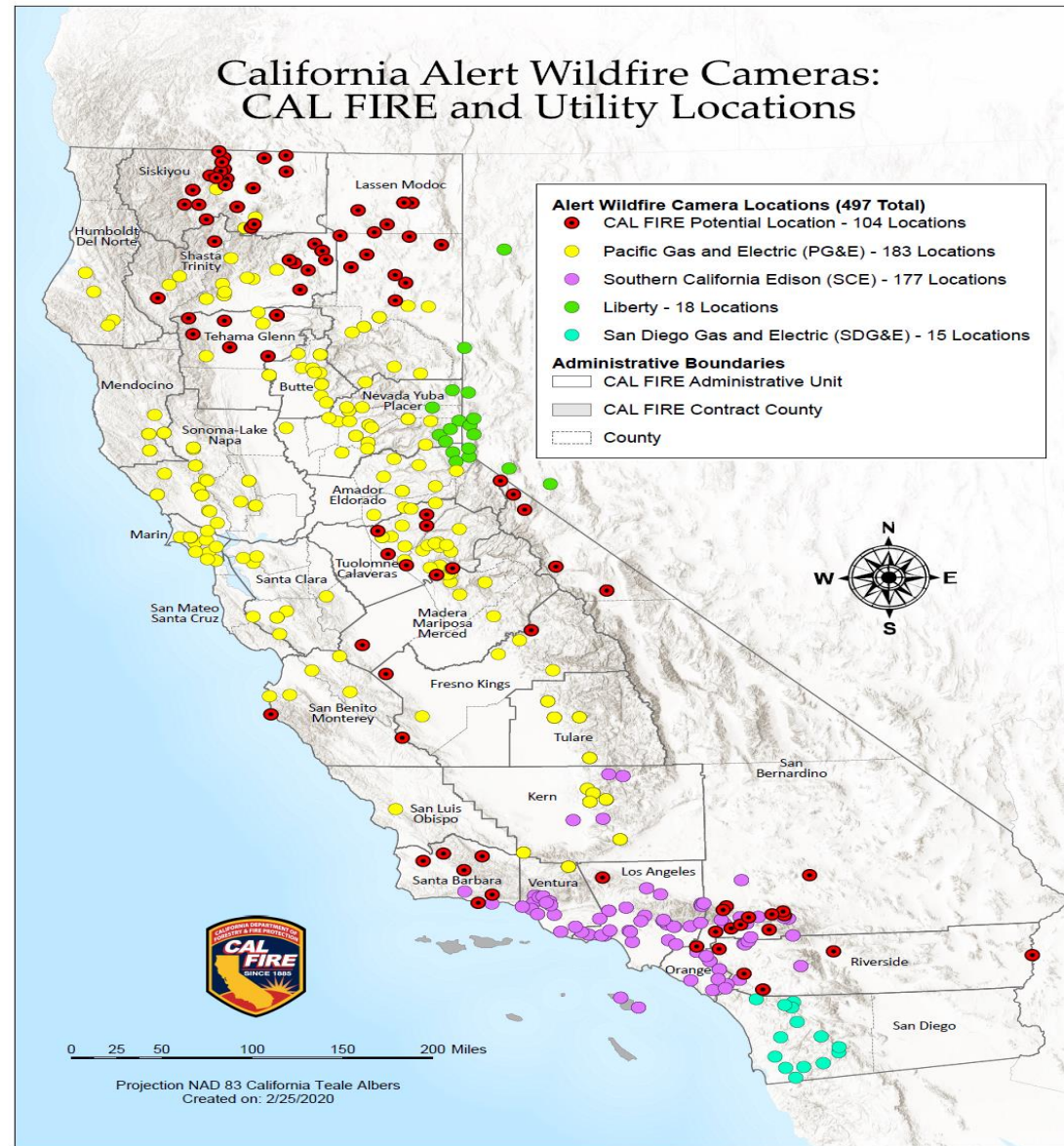
Mt Frazier1
Target: 207 degrees
Net: laorange
County: Ventura
Region: VNC
ISP: Geolinks
Sponsor: SCE
 Camera target on

Colocated cam:
[Axis-MtFrazier2](#)

axis-MtFrazier1 X:-152.84 Y:-6.00 Z:1.0 VCFD.aalton.12-04T13:23 © Nevada Seismo Lab 2019/12/19 11:28:30.82 Home



ALERT Wildfire Cameras



CAL FIRE 100 CAMERA PROJECT

50 by 5/1/20

30 more by 8/1/20

Last 20 by 10/1/20

All of the 100 locations will be mutually agreed upon by CAL FIRE and UCSD/UCR



California National Guard FireGuard

- This fire season the California Military Department will be supplying CAL FIRE with Incident Awareness and Assessment (IAA) information from multiple platforms to extract the best intel.
- Through out the month of May, region intel staff will be scrutinizing the fire information for accuracy and early detection effectiveness.
- Beginning 1 June-Intel will relay the Fire Detection Information to the appropriate ECC via phone notification followed with an email containing the Spot Report and KML
 - KML is a file format used to display geographic data in an Earth browser such as Google Earth



REMOTE SENSING ASSETS

- MQ-9
 - HQ's at March AFB
 - 3 hour flight to most of CNR
 - Over most incidents for about 8 hours
 - Provides real time video and perimeter mapping
 - Requires a COA - remote operated
- RC-26
 - Staffed aircraft, not requiring a COA
 - Approximately 3 hours over incident
 - Provides video and perimeter mapping once landed



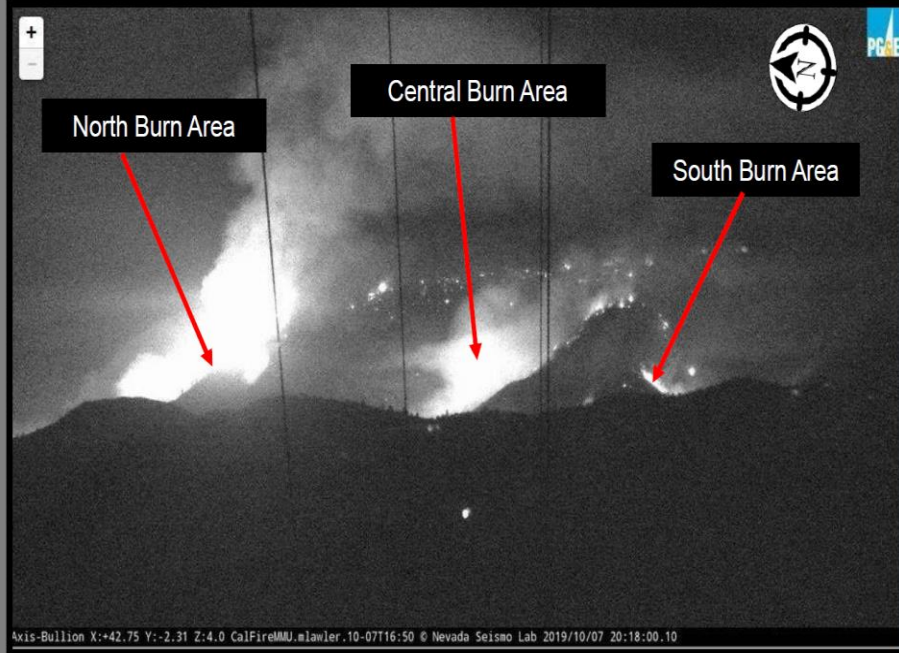
REMOTE SENSING ASSETS CONT.

- Fire Guard IAA (Incident Awareness Assessment)
 - Monitoring entire State for new starts
 - Spot Reports
 - Currently report to Intel
 - Intel will report to ECC with
 - Lat/Long
 - County
 - DPA
 - Will report to ECC in the future
 - Geo-referenced PDF
 - Usable in Avenza
 - Intel reports to Unit Duty
 - Email D/C and ECC

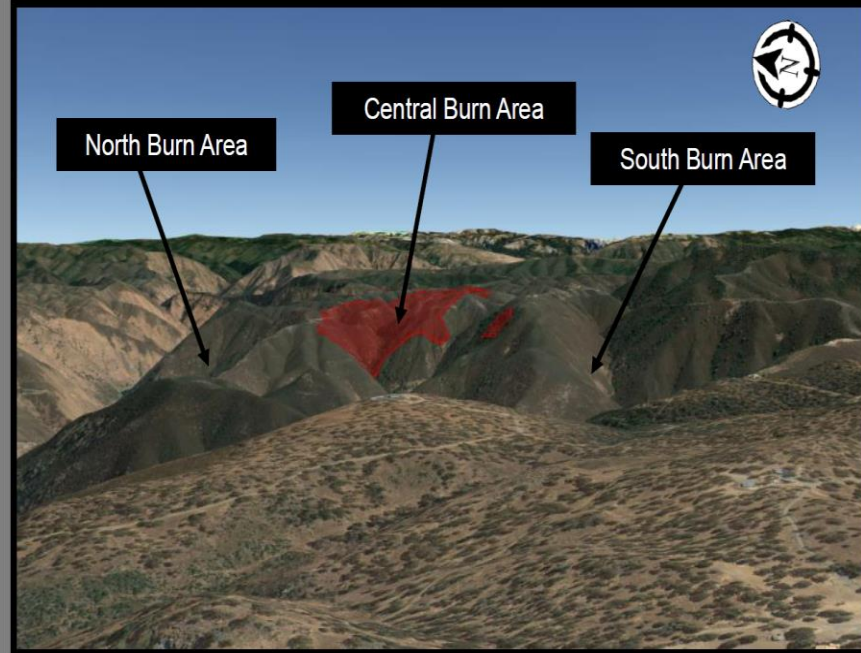


Briceburg

Terrain Association to Axis – Bullion Camera



(07OCT2019 at approximately 2018HRS)



(08OCT2019 at approximately 0100HRS)



Camera field of view from Axis –
Bullion Briceburg Fire

— Detection Area



HADR PROJECT

Joint Artificial Intelligence Center
Humanitarian Assistance Disaster Relief (HA/DR)
National Mission Initiative (NMI)



Firefighters & First Responders

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis

HA/DR PROCESS

- 1 A major wildfire is detected via satellites or on-the-ground reporting.
- 2 During the declared wildfire emergency, the DoD and National Guard obtain the legal approvals necessary to operate large UAVs in U.S. airspace.
- 3 The National Guard flies a UAV over the wildfire region to collect Full Motion Video (FMV) data.
- 4 The UAV transmits the FMV data to the Ground Control Station, which is also where the UAV pilot and sensor operator work.
- 5 The GCS retransmits the FMV data to an Unclassified Processing and Dissemination (UPAD) unit.
- 6 National Guard geospatial analysts at the UPAD use the JAIC's AI tool to automatically analyze the FMV data and map the rapidly changing fire line location in near-real time.
- 7 The UPAD publishes its wildfire location map data to the mobile phone and web applications used by planners, firefighters, and other first responders. Use of the AI tool enables near-real time map updates, a major improvement over previous capabilities.
- 8 Planners at Incident Command Posts use the AI-generated wildfire maps to more effectively distribute personnel and other resources and to rapidly adjust their directions to changing conditions on the ground.



Fire Integrated Real-Time Intelligence System

Integrated Actionable Intelligence



FirstNet Mesh



Intterra

- Remote Sensing Data Exchange
- Collaborative Map
- Fire Data Lab



Fire Behavior Prediction

FirstNet Mesh

Internet
FirstNet
Mesh



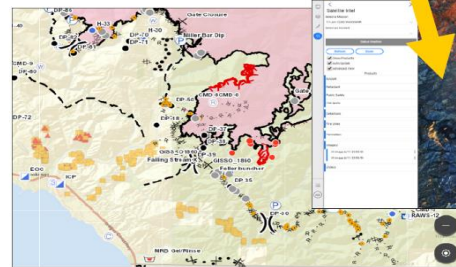
Any Platform

Partner Systems

SCOUT
ATAK/Team Connect



Ventura Situational Awareness Tool



San Diego Fire and Rescue

NIFC Enterprise Geospatial Portal

Other Jurisdictions on Intterra

Santa Barbara
Kern County
San Bernardino
Sacramento (regional)
Santa Clara (regional)



EXAMPLE INCIDENT

Situation Awareness & Collaboration Tool

Incident: CA SLU Chimney [x] Incidents Rooms Caroline ThomasJacobs Help Logout

Workspace PublicInformationOfficer Maps Data Weather Tracking Tools

Zoom 11

Evacuation Order

Re-population @ 1200 8-25-16

Evacuation Warning 8-24-16 @ 8:32 a.m.

ROAD CLOSURES: G14 Interlake Road from Lake Nacimiento Dam to Bryson Hesperia Road, Van Gordon Creek Road and San Simeon Creek Road.

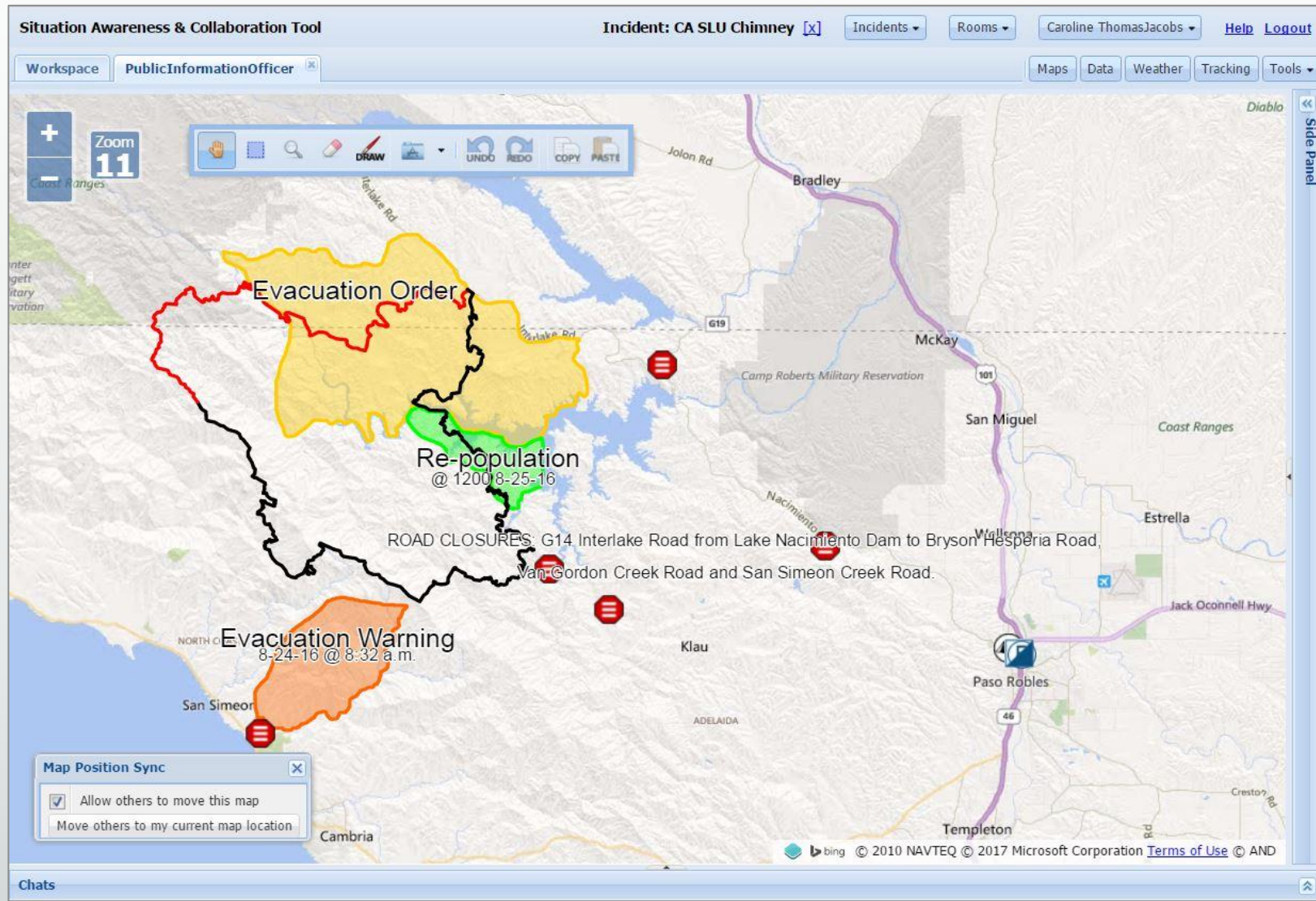
Map Position Sync

Allow others to move this map

Move others to my current map location

Diablo Side Panel

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REMOTE SENSING ASSET USER GUIDE

Fire Imaging Capability Guide

2018

Pacific Southwest Region

*Human Aiding Technology
Infrared Enhanced Aircraft*

2018 User Guide

