Improving Access & Sharing of Trusted Information for a Unified Approach to Fighting Wildfires

A TFRSAC Update on: GeoCollaborate

Wednesday May 29, 2019 1:15pm-3:00pm PT
NASA Ames Research Center, CA

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Accelerating Trusted Data Sharing
Collaborative Data-Driven Decision Making 3DM

LEADER

FOLLOWER

COLLABORATIVE DASHBOARD

Many People. One Map.
Federal to State/Private Sector Sharing

trusted
Data
CLOUD

NOAA

MD

PA

VA

NC

SC

WALMART

UTILITY

FEMA

BRIEFINGS
STATUS
KEY POINTS
DASHBOARD
Federal to State/Private Sector Sharing

Trusted Data Sources

NOAA, MD, PA, VA, NC, SC, WALMART, UTILITY, FEMA

BRIEFINGS
STATUS
KEY POINTS
DASHBOARD

Many People. One Map.
FLEXIBLE DATA SHARING (requires individual license & Data Sharing Agreement)

Many People. One Map.
Developments Since Last Briefing

Functionality (Data Sharing Across All Platforms)

- Able to connect disparate instances of GeoCollaborate
- Able to add any type of information on the fly outlined by any type of polygon
- Advanced evolution of ORLs
  - Operational Readiness Levels
  - Rapid assessment of trusted data for 30-second decisions
- Increasing access to trusted data services and share them in real-time (i.e. NOAA damage assessment, smoke model data, observations)

FAST ACCESS TO DATA FROM MULTIPLE AND DISPARATE TRUSTED SOURCES
Developments Since Last Briefing

FAST ACCESS TO DATA FROM MULTIPLE AND DISPARATE TRUSTED SOURCES

Last briefing: Dec 14, 2017

NOAA FLOOD PRODUCT with POLYGON and FREE TEXT ENTERED

Over the next week, the Mississippi River is projected to soar to a crest of 44 feet downtown — 14 feet above flood stage — according to Monday evening forecasts based on U.S. Geological Survey data. At that height, the river would surpass all but one flood in the city’s hundreds of years of recorded history, trailing only the Great Flood of 1993 by about 5½ feet.
Developments Since Last Briefing

Contracts – SBIR Phase III (sole source basis)

- WMATA – Washington Metro Area Transit Authority
- DHS – CyberSecurity & Infrastructure Security Agency
- NOAA JPSS – Fire & Smoke; River, Ice & Flooding Initiatives
- GC used to deliver NOAA data into DM environments
- US Census Bureau
- PEMA – Pennsylvania Emergency Management Agency

IMPROVING EFFICIENCIES WITH DECLINING BUDGETS, LEVERAGING FED INVESTMENT
Leveraging GeoCollaborate® within Initiatives

Field Ops

USFS

Population Data
Evap Drought Index
Precip Estimates
HRRR Smoke
Remote Sensing
Satellite Imagery
Snow Cover/Green-up

Field Ops

Command Center

Forward Command Center

Anyone
Anywhere

River, Ice, Flooding

Fire & Smoke

Fire Image sources: Evan Ellicott, Associate Research Professor, Dept of Geographical Sciences, University of Maryland, JPSS Science Seminar January 2019
Establishing an environment for private sector to share sensitive information for Federal & State Decision-Making

State & Private sector share critical information to keep commerce moving, businesses operating

3DM, ORL (really taking off)

Transportation, Food, Fuel, Utilities, Medical Supplies

DHS establishing long-term sustainability approach for AHC

All Hazards Consortium (AHC) Sensitive Information Sharing Environment
Each trusted data source is a separate layer

- Weather Observations
- Pictures of soil conditions in burn scars
- Remote Sensing
- Declarations, Waivers, Guidance
- Critical Infrastructure
- Drone Data
- Cameras
- Federal Open Datasets
- Video
- Municipality Datasets
Very hard to breathe

Hard to breathe

Airline contrails

Camp Fire

November 9, 2018
SUCCESSFUL INITIAL TESTS WITH ‘RECOVER’
NOAA NESDIS GLOBAL HYDRO-ESTIMATOR (H-E) – PRECIPITATION UPDATED 1/HR
EXAMPLE OF GEOCOLLABORATE USE DURING HURRICANE FLORENCE - AHC
Improving Communication & Collaboration

- Leverage Fed Gov’t investment in SBIR program to implement cross-platform data sharing rapidly (sole source)
- Enable communication across agencies and organizations to improve situational awareness
- Placing responders and decision makers on the same map at the same time
- Disseminating trusted information across all platforms and devices (i.e., NOAA, NASA Satellite Data, Federal Data sources)
- Information collection from the field

Creating a Unified Approach to Keeping Communities Prepared & Resilient
Improving Communication & Collaboration

Use case one-pagers
Focus ways to access and share data services
Federal & State agency
Cross-platform information sharing
Private sector data sharing

Hand out there at meeting...

Creating a unified approach to keeping communities prepared & resilient
Webinars & Workshops

- ESIP Webinar: Managing Disasters Through Improved Data-Driven Decision Making
- JPSS Science Seminar Series: Delivering JPSS Data to Improve Situational Awareness and Decision Making
- All Hazards Consortium: Sensitive Information Sharing Environment Webinar on GeoCollaborate
- Natural Hazards Workshop: July in Broomfield, CO
- AmericaView & Disaster Response: November 2019

Creating a Unified Approach to Keeping Communities Prepared & Resilient
Thank You

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