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Title: Disaster Life Cycle Testbed - Addressing an Immediate Need: Establishing the Multi-State Fleet Response Working Group C-COP to Accelerate Geospatial Data Testing Across Public and Private Sectors

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Description:

Community and economic resilience is a present and growing objective of industry and government in every corner of the United States. The Department of Homeland Security (DHS), while being charged with improving the disaster resilience of the nation’s critical infrastructure, must out of necessity work to accomplish this through the individual states that make up the nation, each with their own interests and priorities.

For the first time in ESIP Federation history we have the opportunity to connect with a user community that has a need for ESIP Testbed capability, has had multiple workshops since 2012 that identify the critical nature of gaining access to and sharing data across state and private sector borders in response to disasters that impact the public. We will be addressing the core goal of the AHC, to get ‘business back to business’ following a disaster while also directly addressing ESIP Testbed goals to offer a unified environment to gain consensus on community best practices and approaches to technological advances that are of interest to the ESIP Federation community.

State agencies, driven by their geographic nature and political setting, typically focus on operational issues within their own borders. This approach overlooks the inherent interconnectedness of the country, which the economy and security of the nation depends on. The public sector conducts much of their disaster preparedness, response and recovery efforts without the need to involve the private sector businesses. Additionally, most of the critical infrastructure that supports our modern society is not confined to single states, and is owned and operated by private businesses. Private sector critical infrastructure, in many instances, crosses multiple states and even national borders. These businesses, in servicing their public and private customers across broad swaths of the nation, conduct much of their business continuity and emergency management efforts without involvement from the public sector.

Yet, as we have seen time and time again with widespread regional disasters that impact multiple states, the need for private and public sector coordination at the operational level is more important than ever. Operational coordination is critical for the flow of information and effective utilization of resources. New approaches are needed that, while continuing to respect state and corporate sovereignty, leverage a multi-state regional approach that increases the resilience of “life-line” sectors.

It is in this environment and particularly in the aftermath of Hurricane Sandy in 2012, that the Multi-State Fleet Response Working Group (FRWG) was established at the recommendation of the states of the All Hazards Consortium as an independent entity guided by private sector representatives from multiple sectors and state advisers. While SANDY brought attention to the issue of utility delays while crossing through multiple states, this issue has been lingering since prior to Katrina. The FRWG creates a framework for coordinating and collaboration efforts to be facilitated year round in order to address these issues once and for all.

The purpose of the FRWG is to support initiatives and organizations that can help expedite the movement of private sector utility repair and supply line fleets across multiple states in response to both major disasters and day-to-day disruptions. The FRWG engages operational professionals from multiple sectors including electric, food, fuel, transportation, water, retail, finance, medical, information technology, and telecommunications. Additionally, the FRWG also engages state and local government operations officials in emergency management, transportation, law-enforcement, public health, communications, regulatory, public policy, and the executive branches.

In 2014, the Fleet-Response Working Group refined its long-term objectives with regards to the development of operational solutions with a policy that was developed to help guide all solutions produced by the FRWG to:

- Be developed with long-term sustainability in mind;
- Not require government declarations/waivers;
- Provide the ability to move through tolls/weigh stations legally;
- **Expedite the ability to obtain and share critical operational information needed in a disaster;**
- Utilize and operationalize a FRWG “trust framework” for secure information sharing

The purpose of this testbed proposal is to address the goal in bold above. To introduce to the FRWG our testbed capability to bring multiple organizations and agencies together into a single data sharing and visualization environment to expedite obtaining and sharing of critical operational information needed in a disaster. Demonstrating success in this area will set the stage for expanded applications across multiple agencies and organizations looking to increase the efficiency of accessing and using trusted data for disaster response.

Proposed Phase I Solution

StormCenter sees this as an opportunity to leverage ESIP Disaster Lifecycle Cluster activities to address a real-world need to connect disparate agencies and organizations together to address the priorities identified by the multi-year Multi-State Fleet Response Working Group (FRWG). StormCenter proposes to set the stage for select FRWG members to connect in a real-time data sharing environment (similar to the ESIP Testbed GeoCollaborate™ instances that have been established for JPL and UAH) and to access and share additional unique data sources for improved situational awareness and decision making. This includes relevant datasets from NASA and NOAA as well as ESIP member organizations along with private sector data sources such as open/close proprietary datasets that leverages global satellite technology and helps operations professionals

locate and be routed to open places of business that provide gasoline/diesel fuel, food/coffee, medications & medical supplies, retail stores and hotel rooms during a disaster or prolonged power outage within a city, county, state, region or across the United States.

StormCenter proposes to create and launch a Fleet Response Working Group Collaborative Common Operating Picture (FRWG C-COP) that will be used as a platform to test data access and exchange. StormCenter and The All Hazards Consortium (AHC) will lead collaborative decision making sessions that include FRWG members and gather feedback on their thoughts for how this approach may positively impact their decision making environment.

This FRWG C-COP platform will provide the initial phase for a one-to-many collaborative experience that can be used to stimulate the thoughts and minds of the many organizations that have identified specific needs that GeoCollaborate™ can address and will also introduce the ESIP Federation as an organization of scientists and researchers that can apply data to real-world problems. UAH has also expressed interest in working with this effort to provide relevant event-based data albums that may be applied to fleet response activities. Therefore UAH will also be a partner in this proposal and can leverage the previous efforts involving the ESIP Disaster Cluster Testbed.

It is the goal of this pilot project within the FRWG to stimulate additional support from member organizations such as states, electric utilities and cooperatives in the following 6-month period so this project becomes a rallying point for All Hazards Consortium Fleet-Response activities that was initiated within the ESIP Federation Products & Services Committee and the ESIP Disaster Lifecycle Cluster.

Plan:

- Project award in December 2015
- Establish FRWG C-COP by mid-December 2015
- Identify sample data products and tools to be hosted by early January 2016
- Highlight C-COP, demonstrate limited use with example products and tools at ESIP Winter meeting in January 2016 Disaster Lifecycle Breakout Session: Include All Hazards Consortium Executive Director in Breakout Session
- Present FRWG C-COP Testbed January 27, 2016 at All Hazards Consortium Annual Meeting to be held in Philadelphia
- Demonstrate and present results at ESIP Summer meeting in July 2016

Resource Request:

- Funding - \$12K
- Development to establish and launch C-COP, Cloud server and storage, support, testing with select Multi-State Fleet-Response Members and training to Fleet-Response Working Group Participants

Team Member Role:

- \$9.5K - StormCenter (Creation of Fleet-Response Working Group C-COP), Cloud Environment on Amazon EC2 for testing (Dave Jones)
- \$2.5K - All Hazards Consortium. (Support and evaluation/annual meeting session participation)
- Total Funding of \$12K to be delivered to StormCenter with \$2.5K being transferred from StormCenter to AHC.

Planned StormCenter Deliverables

| Task | Deliverable | Delivery Date |
|-------------|--|------------------------------------|
| Task 1 | Deliver GeoCollaborate™ instance to Multi-State Fleet-Response Working Group FRWG (Tom Moran). | December 2015 |
| Task 2 | Deliver on-line help documentation for FRWG instance for FRWG members to evaluate. Begin testing select datasets for Working Group Feedback, schedule demonstrations with FRWG members, conduct LIVE data sharing sessions and gather feedback | 12/2015 to 3/2016 |
| Task 3 | Participate in Disaster Lifecycle Telecons / other Telecons and/or meetings when needed related to GeoCollaborate™ testbed activities. Continued testing of combined datasets for FRWG feedback | Ongoing 12/1/2015- 5/31/2016 |

Members of the multi-State Fleet Response Working Group include:

- Private Sector Companies
(Energy, Tele-communications, Transportation, Food & Supply Chain, etc)
- 25 States throughout the United States
- Federal Government (FEMA, DOE, DOT, DHS)
- Trade Associations/Non-Profits/Groups (including Edison Electric Institute, MITRE Corp)