

NCR GEOSPATIAL DATA EXCHANGE

Stakeholder Initiation Meeting Summary Findings –
May 31, 2011



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Background

The NCR Council of Government's CIO initiated a project for establishing a **National Capital Region Geospatial Data Exchange** in April of 2011.

The goal of the NCR Geospatial Data Exchange project is to establish a mechanism for GIS, public safety and emergency response organizations to securely and easily share data for common operating picture and situation awareness across jurisdictions and agencies in response to natural, man-made or hostile emergency events involving multiple jurisdictions or that span the region.

The first task of the project was to conduct a series of workshops that introduced the project, demonstrated the Virtual USA (vUSA) software framework to be used for data exchange and to solicit stakeholder input on NCR functional and data requirements for customizing and implementing the vUSA software.

Three Stakeholder Sessions were conducted in May and attracted 103 stakeholders that represent State, County, City, University, Federal and special purpose agencies in Virginia, Maryland and the District of Columbia. A full list of attendees is provided as an appendix to this document.

This document represents the summary findings from these initial stakeholder meetings and will be used to generate requirements for the further development of the NCR vUSA portal.

Findings

The following key themes, stakeholder opinions and associated findings emerged over the course of the three Stakeholder Sessions.

Ease of Use / Routine Use

- For the vUSA data exchange portal to be successful it must be a tool that is used on a routine basis. Concern was expressed in each Stakeholder Session that the design and implementation of vUSA needs to enable its routine use. Ideas expressed during the sessions for incorporating vUSA into routine day-to-day use included:
 - Visualizing locations of emergency vehicles by responding jurisdiction.
 - Sharing AVL data feeds to support tracking of mutual aid (police, fire, ambulance) calls that send equipment across jurisdictional boundaries, coordination and documenting cooperation.
- The vUSA data exchange portal software must be easy to use and provide the user with the ability to publish and consume data without executing complicated, multi-step data sharing set-up for exchange of information.
- The system needs to provide a unified log-in procedure that avoids a cumbersome process for logging in or requiring multiple separate login steps to navigate through available functionality and data.
- Stakeholders who have an account to access the national vUSA the ability to avoid logging into a 2nd NCR vUSA account once that is established.

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- Users want to access vUSA data through their native systems. For example, if the user is working in VIPER she wants to see the vUSA data from that system and not be required to open a separate window.
- vUSA should provide a user friendly search method to allow users to discover needed information across participating jurisdictions (see “Locating Information”).

Support for a Full Range of Information and Data Types

- To be a useful instrument during an emergency, vUSA needs to support and facilitate the intra-regional exchange of more than GIS map data and include the full range of available, spatially referenced information from CAD systems, WebEOC systems, real-time sensors, static documents and potentially video and voice systems.
- A better understanding of the use-case for how voice/VOIP information would be published and used by vUSA needs to be developed to determine how vUSA would provide necessary functionality.
- vUSA needs to facilitate the publication and consumption of information that supports the answering of four primary questions:
 - Where is it? (location info provided through GIS, GPS)
 - What do we know about it? (information provided by sensors or information feeds reporting at a location)
 - Can we talk about it? (information shared by voice and voice interaction between different participants in different locations; information sharing made possible with WebEOC)
 - Can we see it? (information provided through video of an event or live video of an unfolding event)
- The project needs to develop a specific list of the types of information that need to be shared or are envisioned as candidates for sharing to enable evaluation of security requirements.

Information Sharing Security

- The vUSA data exchange portal must provide an effective, reliable security control for the publication of sensitive information that limits access to properly authorized recipients only.
- The implementation and use of the vUSA data exchange portal must also recognize that some sensitive information cannot be shared and that arrangements or procedures must be implemented that prevent overly sensitive information from entering the system.
- Various ideas were expressed during the sessions as methods to enhance information sharing security, including:
 - Creating a “Law Enforcement” role to facilitate exchange of data among members of that community of interest.
 - Provide the capability to create named roles and to create custom distribution lists for the roles.
 - Implement a person-to-person method for sharing that enables a request-approval workflow for specific data exchanges.

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- Create security clearance levels and have them assigned to roles and enable data publishers to label data with a security level code. Roles with level 2 security clearance can view data coded for security level 1 and 2, but cannot ‘see/access’ data coded for security level 3 and 4.
- There is interest in having vUSA provide a method for monitoring, auditing and reporting the volume, duration and identity of persons accessing published information. The capability should extend to the monitoring of specific data elements or fields being accessed.
- The capability to audit access and use of published information is needed for two reasons: 1) to support the information security requirements of some organizations and 2) to allow system administrators to understand the source of resource demands placed on their servers to facilitate preparation of justifications for infrastructure enhancements.
- It was recognized by some stakeholders that over-focusing on data security issues can jeopardize an understanding and appreciation of the value vUSA brings to responding to a wide range of regional events that do not involve secure data (e.g., snow storm damage, tree damage, hurricanes, maintenance activities, shelters, road-closures). There is a need to realistically balance security controls with the security requirements of individual data sets.
- Concern was expressed that during an event changes to administrative privileges may need to be made rapidly and that the arrangement of hierarchies, roles and potentially security level privileges could pose challenges to implementation.
- For certain named events (“special events”), vUSA needs to provide tools that allow an Administrator to be assigned to the event and that allow the Administrator to restrict access to data feeds published for the special event to a list of authorized users.

Information Standardization and Governance

- Many stakeholders recognize there is a need for a variety of data standardization initiatives to make vUSA a fully functioning system:
 - The information needed for a common base map needs to be defined and provided.
 - Standards need to be defined and adopted for the common geo-referencing of data.
 - There is a need to define and agree on what categories of CAD data that can be shared and how sensitive CAD data will remain secure or precluded from sharing.
- An institutional governance mechanism is needed to construct and guide on-going NCR data sharing policy, standards and agreements.
- NCR may need to consider developing a strategy for de-conflicting data redundancy and determining authoritative authorship to assist with minimizing redundant data.

Locating Information

- vUSA needs to provide a mechanism whereby a user can easily search, identify and contact data source owners to request access.
- vUSA should provide a method by which a participant could find out about or search for data that is currently published. Similarly, it would be helpful to be able to search and report on information that was published at one point but is no longer an actively available service.

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- vUSA should provide a mechanism whereby a user can send a request for information that can be seen and responded to by all participants.
- vUSA should provide a standardized method for labeling or classifying information so that it can be easily searched.
- Ideas expressed by stakeholders for features that would enhance the ability to locate needed information include:
 - An ability to see all data being shared but greyed-out if the participant currently does not have access to the published feeds.
 - Associating data with event/incident categories (e.g., 'Jan 17th Ice Storm', 'D.C. Marathon', etc.).
 - An ability to create custom distribution groups or lists.
 - An ability to create a named event and invite event participants.
- vUSA needs to provide the ability to name an event and allow data feeds to be associated with the event.
- Data publishers want/need the ability to turn on and off layers within a published map service.
- There was interest in determining if public announcements, alerts and warnings could be integrated into vUSA and whether vUSA could be a vehicle for providing information to the general public.

Infrastructure Impacts and Sustainability

- Multiple stakeholders expressed concern over the increased loads that will be placed on their local servers to publish and sustain data feeds for vUSA, particularly when there is heavy use of a published data feed during an emergency event.
- vUSA should not exclusively rely on NCRNet for participant connectivity because NCRNet is not in wide or common use. There needs to be multiple avenues for achieving connectivity to and participation in the vUSA data exchange portal. Many organizations do not have connection to NRCNet.
- vUSA needs to consider and provide for fail-over support if an incident compromises the electrical supply or network availability within the region.
- There is general concern about the availability of funding to sustain the NCR vUSA system downstream costs that will need to be borne by the participants when grant funding expires.
- The ability to publish data feeds by the stakeholder agencies is evolving but not fully in place.
 - A CAD manager stated that the CAD community is becoming increasingly aware that they will be expected to publish their CAD data in a vendor-neutral format.
 - Some stakeholders report that they are not able to publish their GIS data but will make their data available for use in vUSA – a means for publishing this data, therefor, needs to be provided.

Other Issues

- Some stakeholders operate at the regional level (e.g. Northern Virginia, RITIS) with agencies that do not "fit" in vUSA's gen 4, 3-level hierarchy. They would like vUSA to create a way to handle special purpose entities or organization with an interest in unique geographies. Consider

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extending participation to non or quasi government organizations such as utilities (WSSC, Pepco), volunteer organizations (Red Cross) and other emergency related organizations.

- The NCR Project is encouraged to expand the participation of federal agencies and consider soliciting the involvement of: FEMA, USSS (Secret Service, FBI or HHS (Health and Human Services), Secret Service, U.S. Capitol Police, National Guard, National Park Service, National Geospatial-Intelligence Agency.
- Jesse Osborne (Joint Force Headquarters, National Capital Region) has offered the NCR Project assistance in providing contact information to support expanding the involvement of federal agencies.

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Stakeholder Meeting Participants

The following participants were in attendance:

NAME	ORGANIZATION
Michael Fried	All Hazards Consortium
John Molnar	All Hazards Consortium
John White	Arlington County, VA
Tim Ernest	Arlington County, VA
Mary Beth Fletcher	Arlington County, VA
Margaret Montgomery	City of Manassas, VA
Tom Trobridge	City of Alexandria, VA
Mike Smith	City of Alexandria, VA
Steve Chozick	City of Alexandria, VA
Nate Foster	City of Arlington, VA
Ken Rudnicki	City of Fairfax, VA
Gail Bohan	City of Fairfax, VA
Shafi Khan	City of Falls Church, VA
Marc Weinshenker	City of Rockville, MD
Tim Abdella	Consultant
Joe Underwood	Consultant
Rob Ritch	Consultant
Monideep Nag	Consultant
Ziggy Rivkin-Fish	CTCNET
Scott Scheurich	Data Exchange Hub Project Lead
Denis Gusty	Department of Homeland Security
Paul Reisner	DHS
Marc Caplan	DHS
Eva Stern	District of Columbia
Nina Semwanga	District of Columbia
Brian Gober	District of Columbia, BID
Joshua Jack	District of Columbia, DCEMA
John Codd	District of Columbia, DCRA
Arturo Weldon	District of Columbia, DOH
Erik Johnson	District of Columbia, FEMS

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NAME	ORGANIZATION
Sean Egan	District of Columbia, FEMS
Thomas Wilkins	District of Columbia, MPD
Barney Krucoff	District of Columbia, OCTO
Zhen Lo	District of Columbia, OCTO
Robert Horne	District of Columbia, OCTO
David Strigel	District of Columbia, OCTO
Barney Krucoff	District of Columbia, OCTO
Mario Field	District of Columbia, OCTO
Ethan Goldberg	District of Columbia, OUC
Robert Rike	ESRI
Anthony Puzzo	ESRI
Greg Thomas	Fairfax County, VA
Tim Menda	Fairfax County, VA
Eric Fisher	Fairfax County, VA
Judy Lamey-Doldorf,	Fairfax County, VA
Maurice Rioux	Fairfax County, VA
Tom Conry	Fairfax County, VA
David McKernan	Fairfax County, VA
Roy Shrout	Fairfax County, VA
Shawn Fenn	FEMA
Nelson Torres	FEMA
Lynda Warthen	Frederick County, MD
Sherry Weakley	Frederick County, MD
Seamus Mooney	Frederick County, MD
Yeon Kim	Frederick County, MD
Jack Cibor	HIDTA
John Contestible	Johns Hopkins University APL
Jesse Osborne	Joint Force Headquarters – National Capital Region
Mike Fauss	Loudoun County, VA
Brian Wooley	Loudoun County, VA
Craig Schleiden	Loudoun County, VA
Kate Nedrich	Loudoun County, VA

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NAME	ORGANIZATION
Chris Athey	Loudoun County, VA
Taran Hutchinson	MATOC
Kaushik Dutta	MDTA
Mick Brierly	MEMA
John Reginaldi	MEMA
Ed Donald	Metropolitan Washington Airports Authority
Merrill Phelen	Metropolitan Washington Airports Authority
Renee Gordon	Metropolitan Washington Airports Authority
Diane Hirsch	Metropolitan Washington Airports Authority
Michael Shean	M-NCPPC, Prince George's County, MD
Sarah Ierley	Montgomery County, MD
Steve Emanuel	Montgomery County, MD
Catherine Miller	Montgomery County, MD
Christine Vandeyar-Wise	Montgomery County, MD
Bill Ferretti	Montgomery County, MD
Bob Moseley	Montgomery County, MD
Apollo Teng	Montgomery County, MD
Alvin Marquess	MSHA
Martha Kile	MWCOG
Pat Powell	MWCOG
Melissa Rivord	MWCOG
Patrick Callahan	Prince George's County, MD
Adriana Umberger	Prince George's County, MD
Hina Ansari	Prince William County, VA
David Freiberg	Prince William County, VA
Kathy Prescott	Prince William County, VA
Sarah Price	University of Maryland
Steve Beavers	University of Maryland
Steve Halpern	University of Maryland
Nikola Ivanov	University of Maryland
Chris McIntosh	Virginia Department of Emergency Management
Brian Crumpler	Virginia Department of Emergency Management

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Dan Widner	Virginia Information Technologies Agency