Homeland Security

Science and Technology

# *Virtual USA*
# *National Information-Sharing Capability*

## The Problem

The need for real-time, actionable information is critical during day-to-day and emergency response operations where multiple jurisdictions and disciplines interact. A significant amount of homeland security-related information exists at the local, tribal, state, and Federal levels; however, since equipment investment decisions have often been made based on the specific operational needs of individual agencies without the benefit of a national strategy, this information is often trapped in silos. As a result, the Nation's ability to seamlessly share information across multiple jurisdictions is limited by incompatible technology applications, information assurance concerns, and costly data collection efforts that affect the sustainability of maintaining current information.

## Virtual USA – An Open Government Initiative

To address these problems, the Command, Control and Interoperability Division (CCI) created the Virtual USA (vUSA) initiative, a cost-effective, nationwide capability that significantly improves information sharing and decision making during emergencies and day-to-day operations. Based on current and emerging technologies, vUSA integrates existing information-sharing frameworks and technologies to enable collaboration at the local, tribal, state, and Federal levels by providing critical context for information—thereby making it actionable. Developed in partnership with the emergency response community, vUSA improves emergency response by ensuring practitioners at all levels have immediate access to the information they need to make decisions.

## A Virtual USA Solution – The Generation II Prototype

CCI reached out to vUSA practitioners—specifically officials from state emergency management and homeland security agencies participating in vUSA's Southeast Regional Operations Platform Pilot (SE ROPP)—to gather their requirements for regional information sharing across disciplines and jurisdictions. In response, CCI developed the Generation II Prototype as a model for a national information-sharing capability for the vUSA initiative. The Generation II Prototype (see corresponding graphic) provides a Web-based, trusted environment and a common space for users to discover information, and seamlessly collaborate in real time.

The prototype is similar to a dynamic library. Some information is cataloged for common users and some for preferred users, but all information is subject to constant change and upgrade by the owners of the information. This is a critical tenet of the vUSA governance—empowering authorized users to decide *what* information they share, with *whom*, and for how *long* they share it. This tenet enables users to maintain control over their information and thus be well positioned to rapidly respond to changing and unpredictable situations. The prototype allows users to set preferences notifying them when information matching their criteria becomes available. Likewise, users can alert other users in the trusted environment of newly-available information. In this way, the prototype adds value to the myriad of information-sharing systems used across this and other communities by providing a common space where those systems' outputs can be discovered.

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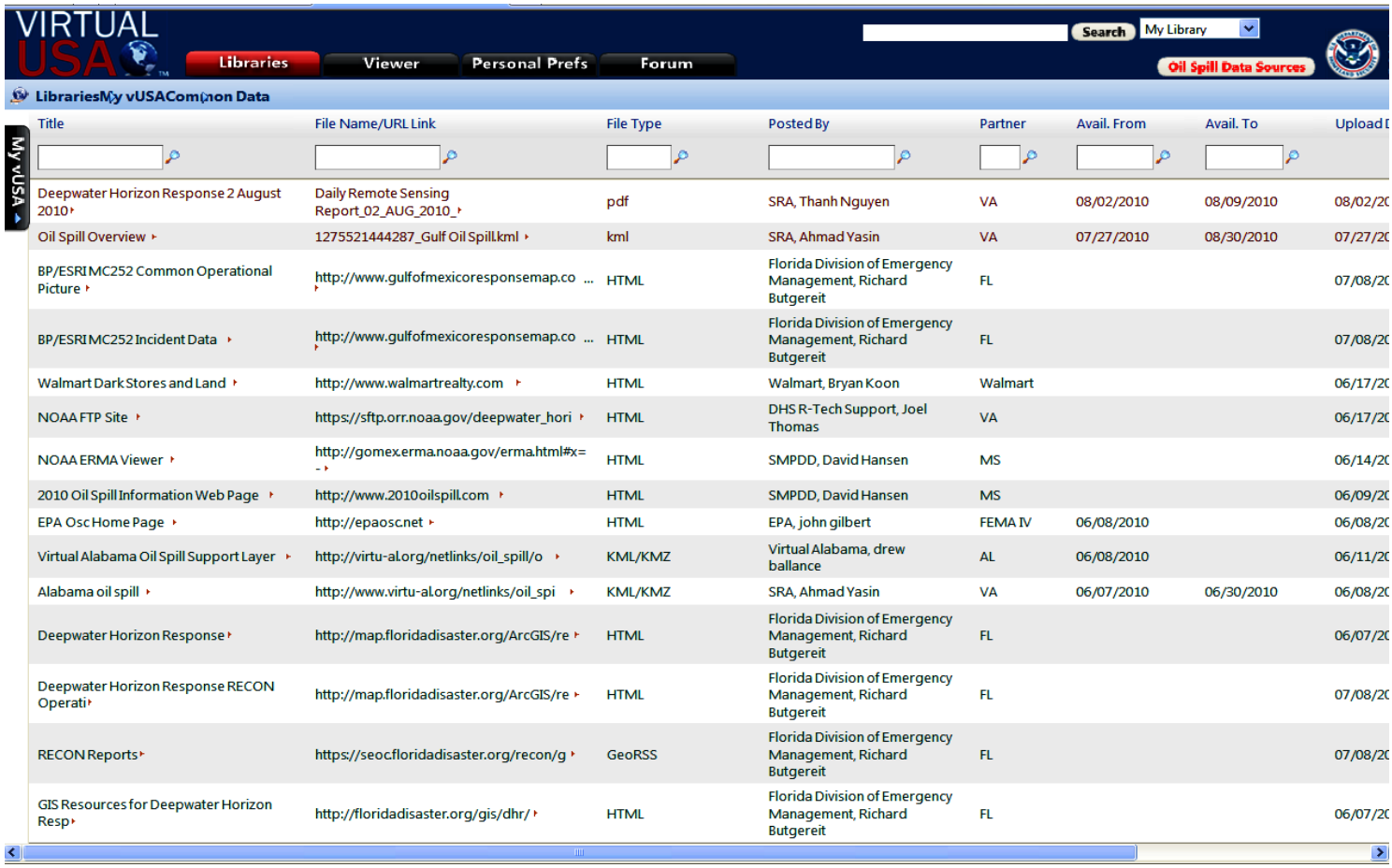


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| Oil Spill Overview | 1275521444287_Gulf Oil Spill.kml | kml | SRA, Ahmad Yasin | VA | 07/27/2010 | 08/30/2010 | 07/27/20 |
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| NOAA FTP Site | https://sftp.orr.noaa.gov/deepwater_hori | HTML | DHS R-Tech Support, Joel Thomas | VA | | | 06/17/20 |
| NOAA ERMA Viewer | http://gomex.erma.noaa.gov/erma.html#x=- | HTML | SMPDD, David Hansen | MS | | | 06/14/20 |
| 2010 Oil Spill Information Web Page | http://www.2010oilspill.com | HTML | SMPDD, David Hansen | MS | | | 06/09/20 |
| EPA Osc Home Page | http://epaosc.net | HTML | EPA, john gilbert | FEMA IV | 06/08/2010 | | 06/08/20 |
| Virtual Alabama Oil Spill Support Layer | http://virtu-al.org/netlinks/oil_spill/o | KML/KMZ | Virtual Alabama, drew ballance | AL | 06/08/2010 | | 06/11/20 |
| Alabama oil spill | http://www.virtu-al.org/netlinks/oil_spi | KML/KMZ | SRA, Ahmad Yasin | VA | 06/07/2010 | 06/30/2010 | 06/08/20 |
| Deepwater Horizon Response | http://map.floridadisaster.org/ArcGIS/re | HTML | Florida Division of Emergency Management, Richard Butgereit | FL | | | 06/07/20 |
| Deepwater Horizon Response RECON Operati | http://map.floridadisaster.org/ArcGIS/re | HTML | Florida Division of Emergency Management, Richard Butgereit | FL | | | 07/08/20 |
| RECON Reports | https://seoc.floridadisaster.org/recon/g | GeoRSS | Florida Division of Emergency Management, Richard Butgereit | FL | | | 07/08/20 |
| GIS Resources for Deepwater Horizon Resp | http://floridadisaster.org/gis/dhr/ | HTML | Florida Division of Emergency Management, Richard Butgereit | FL | | | 06/07/20 |

## Evolution of the Capability – Generation III Prototype

In May 2010, the Generation II Prototype was made available to the states, agencies, and private partners responding to the oil spill crisis in the Gulf prior to a functional assessment of the Prototype. A functional assessment of the Prototype will be conducted in August 2010. This assessment will include, but not be limited to, data loading, interoperability, individual platform functionality, data sharing, access, and data input tests to validate the functionality of the system's information-sharing mechanisms. The results of this assessment will incorporate lessons learned from an after-action review with practitioners in the SE ROPP, as well as the prototype's developers. It will also include technical, operational, and policy best practices. These lessons learned, best practices, and recommendations for additional functionalities will then be incorporated into the Generation III Prototype development plan.

Simultaneously, the vUSA technical team, in cooperation with the vUSA Strategic Resource Group's team of practitioners from across the Nation, are constantly reviewing and evaluating emerging technologies to determine their suitability for the vUSA capability. If a technology is deemed complementary to the tenets and requirements of vUSA and the practitioner base, it will then be considered by the technical team for inclusion in the Generation II Prototype. Depending on the production schedule, CCI plans to conduct T&E of the Generation III Prototype by December 31, 2010, with the Pacific Northwest (PNW) states currently participating in the vUSA PNW regional pilot. This iterative cycle of building, testing, gathering lessons learned, and incorporating new technologies and functionalities into the vUSA capability represents the vUSA methodology for technical development.

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