



Enhancing Search and Rescue Decision Support Applications with Web Services, 3D Visualization and Open Source Technologies

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This presentation summarizes an on-going work to enhance the NASA Search and Rescue (SAR) Mission Office's systems by (1) using NASA WorldWind's open source 3D geospatial information platform and (2) leveraging web services and OGC standards via the US Geospatial One Stop (GOS) Portal.

The US GOS Portal is a catalog of geospatial information with references to thousands of metadata records and links to live maps, features, catalog/clearinghouse services, downloadable datasets, and more. The GOS Portal supports the OGC Catalog Service for the Web (CSW) as well as REST search interfaces.

The SAR Mission Office is the only NASA office to support the US National SAR Plan and focuses on R&D of technologies that will help save lives and property, and reduce SAR costs and risks to SAR personnel. The NASA SAR Mission Office is using NASA WorldWind to integrate and visualize radar tracks, historical weather information, and statistical analysis of relationship between aircraft crash position and last known location.

NASA WorldWind is an open source 3D geospatial information platform that is continually advanced by NASA, its partners and the open source community. It allows users to easily visualize and explore distributed geospatial information in a visually rich and extensible 3D environment.

This presentation focuses on the on-going work to enhance the WorldWind-based SAR application to adopt OGC standards to connect to the GOS Portal via Web Services in order to tap into its rich and diverse assets and standards-based discovery and metadata protocols to provide a platform for discovery, integration and visualization of data as needed in SAR missions.