VISUAL ANALYTICS FOR COMMAND, CONTROL, AND INTEROPERABILITY ENVIRONMENTS
A U.S. Department of Homeland Security Center of Excellence

VACCINE

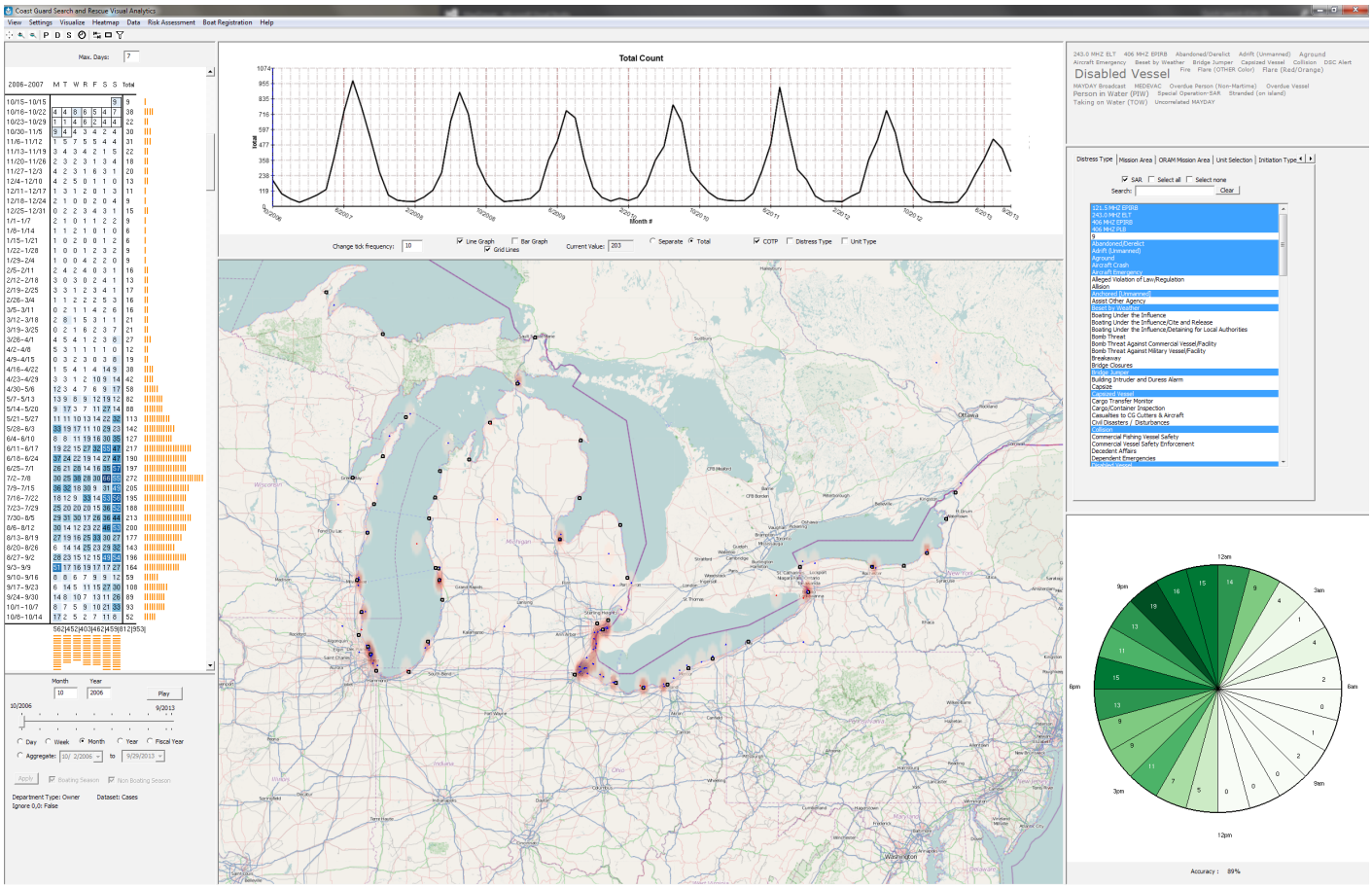
cgSARVA (Coast Guard Search and Rescue Visual Analytics) PRODUCT

What cgSARVA Does

The Coast Guard Search and Rescue Visual Analytics, cgSARVA, is an interactive system designed to assist U.S. Coast Guard decision-makers and analysts in understanding and assessing operational efficiencies of different Coast Guard missions at different organizational levels.

A computer software tool, cgSARVA provides a user interface and a suite of tools. The system allows the consideration of station closures through an analysis of the potential risks to the maritime environment related to response time as well as the potential for lives lost and property damage. The cgSARVA tool also provides optimal direction to the nearest available station in case of station closures.

In addition, cgSARVA enables the analysis of trends, patterns, and anomalies associated with the distribution of cases in both space and time conducted by the Coast Guard throughout the United States. The system has been developed with a user-centered approach, tapping the expertise of several different Coast Guard analysts and decision-makers in the design process.



Screen shot of cgSARVA showing analysis of the Great Lakes region.

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Why it is Useful

The cgSARVA tool enables analysts to better see and understand where incidents are occurring and how resources can be reallocated when stations are forced to close because of inclement weather. The tool also allows analysts to see the risks involved in each scenario.

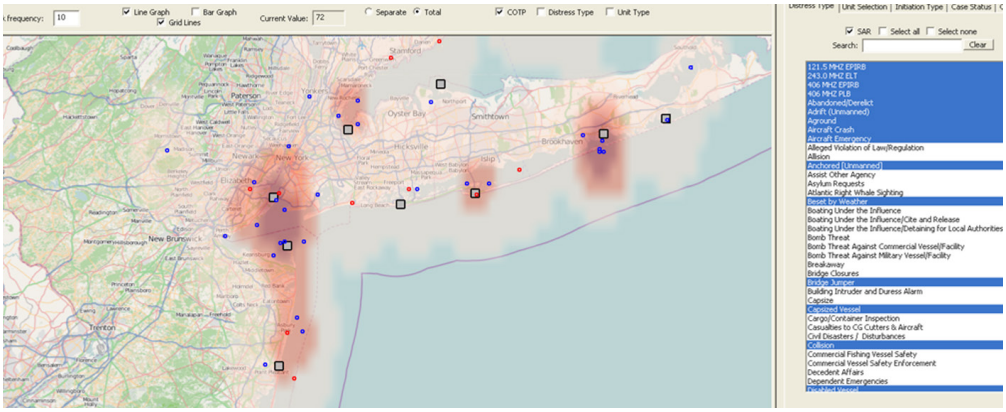

Image of cgSARVA analyzing Superstorm Sandy, and assessing how to reallocate resources in light of damage to stations in New Jersey.

Consensus

"The cgSARVA model formulation proved to be tremendously insightful for the Coast Guard as it began to prioritize the repair of its stations. Even upon receiving full funding for all damages, the Coast Guard is unable to execute all repairs at the same time, and the outputs from cgSARVA have been instrumental in assisting senior leadership in prioritizing work."

— Commander Kevin Hanson, analysis team leader

"The accreditation is the first time anything produced by a DHS Center of Excellence has been verified and validated for use by the Coast Guard. The cgSARVA tool can help DHS agencies and law enforcement agencies across the country."

— David Ebert, VACCINE Director and Silicon Valley Professor of Electrical and Computer Engineering at Purdue University

"The cgSARVA tool is especially helpful in guiding operations and resource decisions by carefully analyzing data in a way that ensures the best return on investment. This project serves as a great example of positive partnerships that are being forged between the Coast Guard, the DHS Center of Excellence and academia."

— Retired Vice-Admiral Robert C. Parker, Commander U.S. Coast Guard Atlantic Area (LANTAREA)

Contact Us

Want to find out how VACCINE's research can help your organization? Email **vaccine@purdue.edu** or visit **www.visualanalytics-CCI.org**.

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