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NOAA Brings Charting into the 21st Century – "There's An App For That"

Since I was a wee nip of a mariner, updating charts has been a chore, often observed in the breech. With digital chart plotters, updating actually went backwards because there often wasn't an easy way to update the "chip" in your GPS/chart plotter. With a proud history of being created by President Thomas Jefferson in 1807 (17 years after the US Coast Guard's Revenue Cutter Service was established by Alexander Hamilton), NOAA's Office of Coast Survey has been beset with multiple systems and many clients. Now, they may really and finally have something here.

Scope of the Task

NOAA has over a thousand nautical charts covering the Nation's 95,000 miles of shoreline to manage and keep current, adding data and making corrections that are critical to the nation's infrastructure and maritime industry. From the US Coast Guard to the captain of those leviathans that ply the oceans to the private boat owner with a 20' skiff, they are both sources of updates and users of the end-product. Since starting the "electronic-ization" of chart production in the over 15 years ago, NOAA has moved fitfully towards a system that truly integrated its many systems of input and of use. In October 2004, the Office of Coast Survey began the production improvement project with Fairfax, Va.-based ManTech International Corporation,

and ESRI, a leading provider of GIS technology based in Redlands, Calif. Their goal, coming to fruition now, was to develop an integrated production system for NOAA chart production.

Explains Capt. John Lowell, director of the Office of Coast Survey, "To produce more navigation products, faster, we developed a single source production system that produces all NOAA chart products from one central database instead of the two production lines used since charting technologies first started changing in the mid-1990s."

End Product

NOAA's development of a new navigational chart processing system, designed to meet the changing needs of the maritime community, moves into initial limited production on September 21. The new system, which slims down the current map production process while it beefs up performance, represents a technological leap forward in creating the navigational charts used to speed ships and products safety through the nation's maritime transportation system.

With greater efficiencies and versatility, the system speeds chart updates to users; presents opportunities for private industry development of customized products; and improves data exchange capabilities for multiple maritime uses.

Notably, with the efficiencies gained from the new system, Coast Survey can produce more navigation products, with flexible access to more data, without a corresponding increase in budget or personnel.

"Technological advancements are spurring a revolution in nautical charts, and navigators need flexibility and increased access to data that mariners from the last century could only dream about," Lowell said. "The system we developed with ManTech and ESRI provides the platform for a wide range of new applications for commercial mariners, recreational boaters and, indeed,

for coastal planners along the nation's 95,000 miles of coastline."

The Road Ahead

The full transition of data covering all U.S. waters will take several years, progressing in sets of charts as geographically located in U.S. Coast Guard Districts. As the data is transitioned to the new system, chart users will see more congruity between paper charts that are now produced on one system and electronic charts produced on another. Under the new system, cartographers will enter the same data into a single system and the changes will be sped along to all associated NOAA's Office of Coast Survey has been the Nation's trusted source of navigational charts and data since it was organized in 1807 by President Thomas Jefferson. Today, mariners and other users download nearly 300 million free navigational charts annually from www.nauticalcharts.noaa.gov. Users can get fast notice of updates to electronic nautical charts from Coast Survey's Twitter account - <http://twitter.com/nauticalcharts>.

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