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Information Paper for Consideration by HSSC

National Report of the United States (NOAA) on Technical Matters

Submitted by:	United States (NOAA)
Executive Summary:	The United States reports on two new applications that provide ENC data using web mapping services. The Maritime Chart Service provides an ENC visualization tool for NOAA ENCs[1] and ENC Direct provides NOAA ENCs in a GIS friendly format. The US also reports that it will discontinue printing of lithographic charts on April 13, 2014.
Related Documents:	None
Related Projects:	None

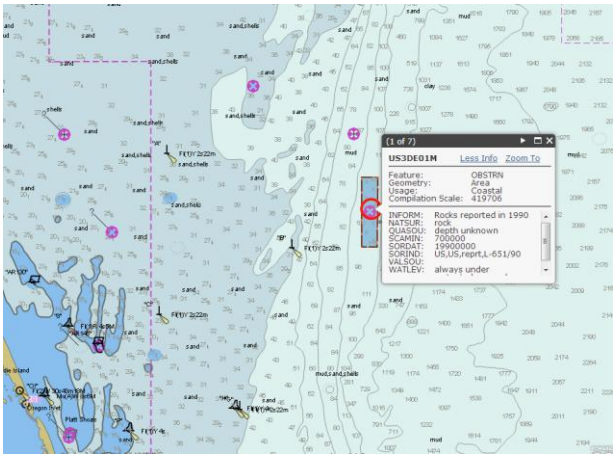
Introduction / Background

This paper reports on two new developments in the area of web mapping services that the United States (NOAA) has been working on since HSSC4. S-57 ENC data has an extensive customer base for SOLAS shipping and other navigational applications, but the same data is also of interest to GIS (Geographic Information System) users outside the maritime community. Thus, NOAA has been working to provide S-57 data in a variety formats that can easily be imported into applications used by different communities. In addition, this paper all reports that it will discontinue printing of lithographic charts on April 13, 2014.

Analysis/Discussion

Topic 1 – NOAA Maritime Chart Service - http://www.nauticalcharts.noaa.gov/ENCOnline/

In December 2012, ESRI developed a prototype application called the Maritime Chart Service (MCS). MCS is a web application that provides a visualization tool for NOAA ENC's using S-52 symbology. To help speed loading of the web map and visualization the entire suite of ENCs, including any new or updated ones, are processed into a system ENC (SENC) every night. This enables NOAA to provide the most up-to-date visualization of our ENCs.



NOAA has also found that this web service enables better quality control of the data by allowing multiple users within the organization to visualize the data without the need of third party software. In addition, it will allow NOAA to see the entire ENC suite as it is intended to be seen by mariners and help pinpoint areas where there may need to be additional surveys to improve the quality of the data or to improve the consistency of encoding.

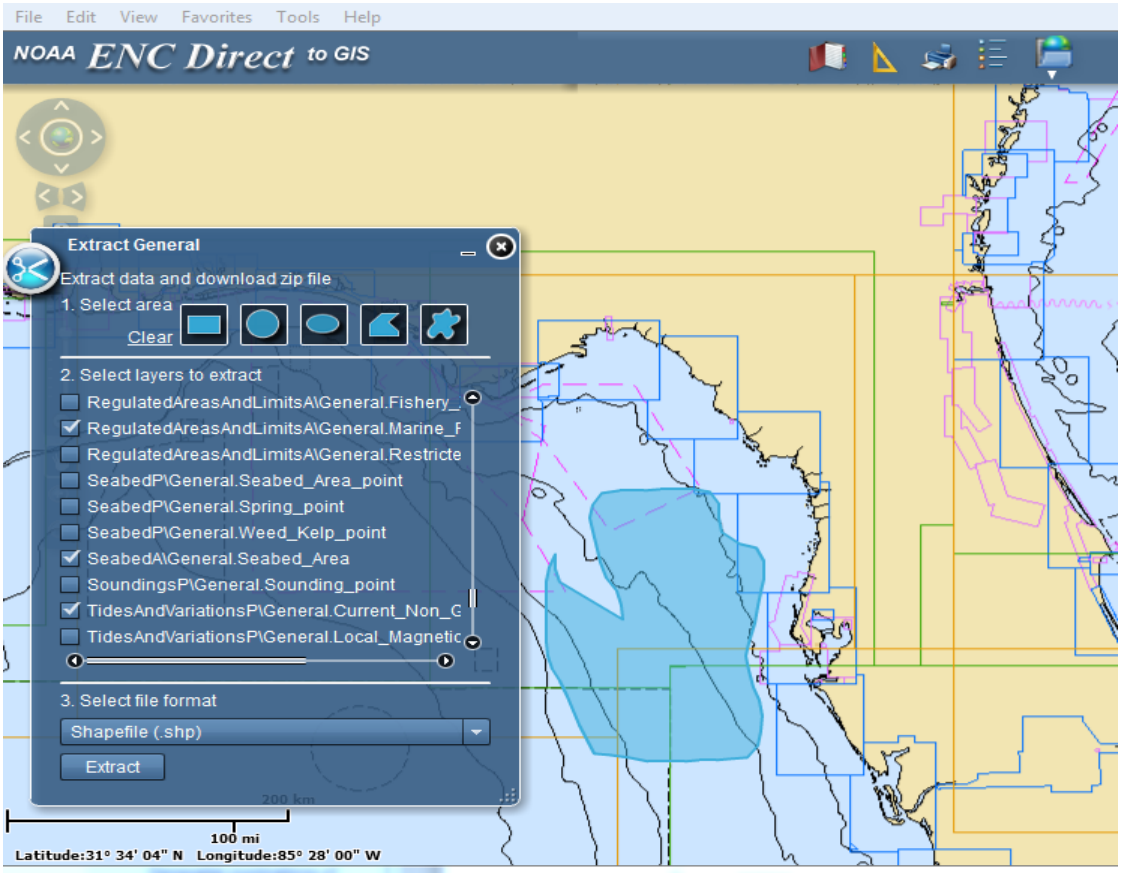
It should be noted that since the data is only provided as a web service it cannot be downloaded and used for other purposes.

For further information regarding the NOAA Maritime Chart Service contact: Julia.Powell@noaa.gov

[1] "NOAA ENC" is a registered trademark of the United States Government.

Topic 2 – ENC Direct

In November 2012, the United States launched an experimental version of ENC Direct to GIS, using ESRI ArcGIS 10.0 technology to improve on the older version of ENC direct. After a period of user review, NOAA made several enhancements and migrated the application to the 10.1 version of ESRI ArcGIS. With these changes, NOAA has removed the "experimental" tag and it has become an official product. As before ENC direct allows users to extract various layers of ENC data into several different formats that are better suited for GIS users.



New features included in this version include:

- Additional scale bands (4 to 6) keep each scale band seamless
- A note on the bottom of the screen reminds viewers that all soundings are in meters
- Improved functionality identifies features when users point and click on the features
- Search functionality is improved
- Measurement tool now includes "nautical miles"
- Improved visualization reduces clutter
- Additional base maps have been added
- Textual extraction form has been updated for easier access
- Metadata records are streamlined, with multiple records for a single item compressed into a single record

For more information regarding ENC direct contact: Meiling.Freeman@noaa.gov

Topic 3 – Elimination of traditional paper nautical charts

NOAA's Office of Coast Survey, which creates and maintains the nation's suite of over a thousand nautical charts of U.S. coastal waters announced that starting April 13 2014, the federal government will no longer print traditional paper nautical charts lithographically.

The decision to eliminate the traditional lithographic product is based on several factors: the declining demand for lithographic charts, the increasing use of digital and electronic charts, and federal budget realities.

NOAA will continue to create and maintain other forms of nautical charts, including the increasingly popular Print on Demand (POD) charts, updated paper charts available from NOAA-certified printers; NOAA electronic navigational charts (NOAA ENC®) and NOAA raster navigational charts (NOAA RNC®), used in a variety of electronic charting systems. NOAA also announced the start of the trail period (22 Oct 2013 – 22 Jan 2014) for a new product, full-scale PDF (Portable Digital Format) nautical charts. NOAA ENC, RNC and PDF charts are all updated weekly and are available for free download from the Coast Survey website.

Conclusions

The Maritime Chart Service and ENC Direct provide two complementary products for users of ENC data. While the MCS is intended solely for an ECDIS-like visualization of the ENC data, ENC Direct provides users with access to NOAA ENCs in a GIS friendly format.

The elimination of the traditional lithographic product will allow NOAA to streamline its processes and provide the mariner with the most up-to-date information in a variety of formats that still comply with SOLAS requirements.

Action Required of HSSC

The HSSC5 is invited to:

note the information provided in this paper.