2nd IHO-HSSC Meeting
BSH, Rostock, Germany, 26-29 October 2010

Digital Nautical Chart (DNC®) INF Report for HSSC2

U.S. NGA Office of Global Navigation – Lead Chris Andreasen

1. Digital Nautical Chart Status

NGA continues to produce DNC in support of U.S. Navy operational requirements for worldwide navigation. The transition to hard copy New Edition production from the DNC vector data using an ESRI system has been very successful and continues to be expanded. During the Haiti earthquake, this process provided for quick turn- around of U.S. Naval Oceanographic Office survey data into digital print files which were then electronically transmitted to U.S. vessels with print-on-demand capability on scene, allowing distribution of updated hard copy charts to vessels bringing in assistance and relief supplies. Several other quick turn-around customer requirements have been met in this way. NGA has recently produced the first 2nd edition hard copy chart using the DNC to print on demand process (EPODS for Enterprise Print on Demand) and because of saved data from the compilation of the 1st edition, the 2nd edition process only took 40 to 50% of the compilation time taken to make the 1st edition. First editions typically take from 8 to 80 man-hours depending on complexity of the chart.

NGA continues to plan for transition of DNC from the Vector Product Format to S-100, particularly the S-101 format, in the post 2012 timeframe. We have been establishing funding support to establish a central feature database and have begun prototyping system capabilities, which will extend over the years leading up to transition. The initial transition will convert the existing DNC data into S-101 to preserve the integrity, updates and datum shifts made by NGA followed by eventual use of ENC as source. It is projected that the NGA database could be converted in the 2014 timeframe.

2. DNC Updating

The Navy has actively engaged the development of machine to machine updating for NGA products and this summer successfully conducted its own at sea test. NGA continues to support this effort and has proposed further testing to implement digital information assurance processes, which are an important part of digital data transmission.

3. Global Shoreline data

NGA currently makes its Global Shoreline data publicly available from the NGA website (www.nga.mil; Products and Services; Nautical-Hydrography and Bathymetry; Littoral Charts; Related Documents, at the bottom of the page). This site has had a warning about gaps in coverage due to cloud cover, snow and ice, but NGA is pleased to inform users that the gaps have been filled between about 60-degrees North and 56-degrees South. To complete the Polar regions will take another approach to data collection. Due to other priorities, NGA will not be compiling an updated

World Vector Shoreline at 1;250,000 scale. NGA will begin work on development and technology insertion of automated shoreline delineation technology to support updating of products .

4. ENC/DNC

As reported to HSSC1, there are ECDIS system issues related to Navy transition to use of ENC and Navy will not be transitioning to use of ENC before the implementation of the Next Generation system upgrade, which will take several years to deploy across the fleet. Currently, over 100 Navy ships are operating on DNC and the U.S. Coast Guard has recently advised that their ships will operate using DNC when beyond NOAA ENC coverage of U.S. waters.

5. Symbology

Within NGA, there is an effort to resolve the conflicts between topographic symbols and navigation symbols, both nautical and aeronautical. The first 100 have been agreed, but with many more to be addressed. This is an element of the move towards common display of features from a database. For maritime, this will eventually provide improvement of the compilation of littoral charts which integrate data from topographic charts compiled by other NGA offices with nautical data compiled within the Office of Global Navigation.

6. ISO

The NGA Office of Global Navigation decided to include the Business Office along with the Aeronautical and Maritime certifications as a single Office certification. This has now been achieved and the entire Office of Global Navigation is now ISO 9001 certified. All of our contractors are similarly certified, which is a contract requirement. Our East Coast offices will be moving to a new NGA headquarters facility in June 2010 and our St Louis, Missouri offices will provide for business continuity during this transition. This involves major shifting of systems and transition of software to new servers, much of which has already transitioned. Our Bethesda, Maryland office will be closed and the new office will be located across from Ft. Belvoir, Virginia.