

**1st IHO-HSSC Meeting
The Regent Hotel, Singapore, 22-24 October 2009**

Digital Nautical Chart (DNC®) INF Report for HSSC1
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1. Digital Nautical Chart Status

NGA continues to produce DNC in support of U.S. Navy operational requirements for worldwide navigation. Production of New Edition hard copy charts is now solely produced from DNC and the Office of Global Navigation no longer has dual production lines, i.e., independent digital and hard copy production processes. The hard copy folio of NGA has been significantly reduced with many of the hard copy charts being withdrawn from public distribution. This in part has been done through cooperation with Hydrographic Offices that provide NGA with their hard copy print files wherein NGA only prints enough charts to satisfy its internal customers. NGA then withdraws from public distribution of those charts, citing the national distribution outlets of that nation as the public source. NGA also has conducted a review with Navy of their usage of certain charts and since hard copy can be produced from DNC in a reasonably short time, a number of charts have been removed from the hard copy folio, including public availability, with agreement that NGA will support Navy upon request for any needed cancelled chart. The entire worldwide folio of NGA is still maintained in DNC so there is maintained source data available at all times for NGA to use for hard copy production. Neither DNC nor the hard copy charts produced from it are made available for public distribution.

NGA is planning to transition DNC from the Vector Product Format to the IHO S-101 format in the post 2012 timeframe. The plan is to initially transition the existing DNC database to S-101 as a way of avoiding problems that have occurred at the junctions between ENC producer nations and eliminating any potential loss of capability for our current users. NGA is beginning to prototype the transition methodology in 2010, which includes development of a feature database that supports production. The long-term goal is to work towards use of ENC as source.

2. DNC Updating

NGA is working with Navy and systems developers to implement machine to machine updating of all Office of Global Navigation maritime products. This will require a number of system changes by NGA and Navy as well as added testing; implementation will not occur until after NGA makes the move to the new headquarters building in Virginia. The first at sea testing of machine to machine updating was conducted earlier this year and was quite successful.

3. Global Shoreline data

NGA currently makes its Global Shoreline data publicly available from the NGA website with a warning that the data have not yet been through quality control and that there are about 10% cloud cover, snow and ice gaps in the shoreline. These data are a global (except for the polar-regions) approximation of the High Water Line derived from satellite imagery. NGA has been working to fill the shoreline gaps in this data set. This work now is nearing completion but the quality control effort will continue. The original intent of this effort was to develop a new World Vector Shoreline product at a larger scale than the current 1:250K, but this is not yet decided.

4. ENC/DNC

One of the user concerns related to NGA transition from DNC in VPF to DNC in S-101 relates to how to support operations without NGA having to develop and maintain dual S-101/VPF coverage or for ships to have to stop and re-boot at the transition boundary. A major step towards resolution of this issue has been made in that the next

generation ECDIS-N system in development for Navy can instantly shift between ENC and DNC and alternatively can provide a navigation mode display of both ENC/DNC in split screen mode.

5. ISO

Both the Aeronautical and Maritime offices within the NGA Office of Global Navigation are certified under ISO 9001 as are all NGA contractors associated with Digital Nautical Chart production. NGA has recently acquired the ECDIS-N system software such that NGA can now review DNC data exactly as it will be displayed on board ship.