

Hydrographic Services and Standards Committee

Paper for consideration by HSSC9

Submitted by France (Shom)

Some perspectives for Additional Bathymetry Layer Standard



About the end user needs

- An increasing demand on higher resolution seabed topography based on the most recent survey available is requested
 - from mariners for specific navigational tasks like pilotage and vessel traffic services at seaward harbour approaches and port area
 - for other activities in deeper water like fishery, sea bottom research, AUV navigation
- ENC is compiled for a variety of navigational purposes, it cannot cover all the needs at the same time



Analysis

- S-57 ENC PS standard allows the encoding of high density bathymetry **BUT**
 - The limit of 5 Mb for a dataset is not consistent with mass production
 - The standard production and distribution schema is not adequate to deal with urgent need for recent bathymetry
 - The encoding of densified depth contours (every 0.1 m) is likely to be not consistent with the true data resolution, and lead the mariner to wrong decision
- The bENC, as a merge of an ENC and an Additive Bathymetry Layer (ABL), based on IENC specification, appears as an effective solution to provide dense bathymetry (see HSSC8-05.3C Rev 1 and ENCWG2-6.6B)



Outstanding issues

- ENC means “S-57 ENC PS compliant product which is assumed by an official HO”, whereas bENC would result from the fusion of ENC with ABL
- ➔ using bENC term in a different meaning may be confusing for the ENC baseline, it seems important to clarify terminology



Justification and impact

- A standard for detailed bathymetric information to complement the bathymetry embedded in ENCs is a core issue of IHO, as an international standardization body and as a major actor of the development of e-navigation
- bENC is indeed a chance:
 - to build a bridge between maritime and inland navigation
 - to export the concept in the maritime domain for other communities (fisheries, AUV navigation, ...)



Action requested of HSSC

- HSSC is invited to
 - Note this paper
 - Agree with HSSC8-05.3C Rev1 recommendations and course of actions
 - Require [S-100WG](#) and/or [ENCWG](#) to set-up a bENC project team, with S-101/S-102 considerations



Thank you for your attention