TSMAD24/DIPWG4 MEETING
7th to 11th May 2012 (Monaco)

Paper for Consideration by TSMAD/DIPWG

Ice Information

Submitted by:	Germany (BSH)
Executive Summary:	Some steps are proposed within the TSMAD/ DIPWG and ETSI co-operation to advance the combination of ENC and ice information in the framework of E-Navigation.
Related Documents:	
Related Projects:	S-100 / S-101

Introduction / Background:

In view of the increasing E-Navigation it is important to integrate all relevant information into one bridge system (which can consist of one or several ECDIS/ENC, etc.). As basis the information of hydrographic charts will continue to be of uttermost importance, but the overlay of time varying meteorological and oceanographic parameters will become increasingly important.

Analysis / Discussion:

The world wide sea ice community has developed a comprehensive compilation of sea ice objects, which are compiled into the S-100 sea ice objects catalogue. Version 4 of the catalogue was finished in 2007 and is available as PDF at http://nsidc.org/noaa/iicwg/docs/IICWG_2009/Ice_Objects_Catalogue_V4-0.pdf. The actual version is available at the IHO registry at http://registry.iho.int. The work on the ice objects catalogue already has been presented at previous TSMAD meetings (e.G. TSMAD21-4.2.7). The sea ice related object included in the main IHO Hydro-registry (S57 and S52) is ice area (ICEARE), defined as an area of ice over land or water. From the sea ice perspective this object is not suitable for representing the ice parameters important to marine shipping.
It is therefore proposed to strip the S-101 standard from all sea ice related objects. This could mean total removal of the ICEARE objects, or redefine this object to represent only land ice (glaciers, ice shelfs), respective make a new object for land ice. In exchange the sea ice community (via the Expert Team on Sea Ice) will develop a S-10x standard for sea ice using the sea ice objects catalogue and an appropriate portrayal. Within the E-Navigation the actual sea information then is an overlay over the S-101 electronic hydrographic chart. To have a pleasantly viable and

uncluttered display when overlaying the basic ice information certain co-operation between TSMAD/DIPWG and ETSI regarding portrayal is desirable.
Another topic for co-operation are objects and portrayal of climatological sea ice information, for example mean ice extent of mean iceberg limit for different months. At the moment there are no specific objects of this type included in the ice objects catalogue, it would be work of ETSI to make such objects available in the ice catalogue. The production of content would lie with the global sea ice community, as they have the data needed for such a task. Being more static, the most relevant climatological ice information have been displayed for a long time in some paper hydrographic charts as well as in some ENCs and therefore the development of a portrayal would be a task more for TSMAD/DIPWG.