Paper for Consideration by the
Joint TSMAD26 and DIPWG5 Meeting.
Silver Spring, Maryland, USA (10-14 June 2013)

Report from the Surface Current Working Group

Submitted by:	SCWG Report
Executive Summary:	Report on the activities of the SCWG, and discussion and outcomes of the last meeting that took place in Silver Spring, Maryland, USA from the 29th to 31st May 2013.
Related Documents:	HSSC4-05.1F
Related Projects:	S-101, S-102, and e-Navigation

Introduction / Background
The Surface Current Working Group held its 1st meeting in Silver Spring, Maryland, USA from the 29th to the 31st of May 2013. The meeting was hosted by the Office of Coast Survey (OCS), NOAA, and chaired by OCS's Kurt Hess

SCWG discussed how surface current information could be provided such that it could be used in ECDIS. The meeting discussed the production of a separate surface product specification that could be used as an additional information layer. It concluded that both single point and gridded (regular or triangulated irregular network TIN surface) would allow current variations (based on observations and/or a tidal or hydrodynamic modal) to be incorporated. These values could be used to generate a time variable layer for display of directions and speeds. The proposed scope for the product is copied below.

Proposed Scope of a standard for the data transfer and display on ENCs of navigationally significant surface currents

Basic Outline Scope and Requirement
Create a standard that supports a user interactive display of a spatial and temporal variability of surface currents on navigational charts in an electronic display environment (ECDIS or ECS).

The display should be capable of showing predicted surface currents for voyage planning and near real-time surface currents for voyage execution.

The metadata associated with the display should be available with the delivered surface current data.

Support the delivery of this information with an ENC, or make it available to be applied as an overlay to an ENC in an ECDIS.

Analysis/Discussion
SCWG has been tasked by HSSC to develop a Product Specification for the display of navigational significant surface currents on an ENC in an ECDIS and develop the transfer standard/specifications for surface current data. This is a new task for the IHO work programme and has been endorsed by Member States as presently there are no equivalent existing industry standards. This task has been identified as a significant step towards greater acceptance of S-100 based ENCs. The task is closely aligned to the work being undertaken by TWLWG and it is anticipated a close liaison will be established between them.

Conclusions
It was agreed that all user groups should be canvassed to glean a broad picture of user needs and product requirements. It is understood that most information will be gained from direct questioning and demonstration of capabilities to the user. It was noted that often the user does not know or understand, generally due to a lack of subject knowledge or experience.

It has been agreed there may be a need to consider a wider community other than solely navigation; the requirements for SAR, Environmental monitoring, Anti-pollution operations and Recreational users may need to be considered, either at the outset or in the future.

It has also been recognized the need to consider a broad geographic spread of users (i.e., oceanic, coastal, estuarine, and riverine). However, initially it has been decided that the primary purpose of the Product Specification would be for use in an ECDIS with ENCs to support primarily ocean and coastal navigation.

Engagement with appropriate industry expertise will be essential for the development of this Product Specification.

Recommendations
Development of a S-10x Product Specification should commence with a User Requirements Survey whilst developing an initial Product Specification outline and prototype to demonstrate present capabilities and presentation options (streamlines, vectors and/or point data). TSMAD is requested to encourage appropriate industry experts to engage with SCWG at this early stage.

Justification and Impacts
SCWG will need to work closely with TSMAD and DIPWG, whilst maintaining a close liaison with TWLWG. Target completion year is 2017.

Action Required of TSMAD and DIPWG
The TSMAD is invited to:

a. note report
b. provide advice on the next stage of development
c. take other actions as appropriate