

## **Guidance Notes on S-100 for SCWG**

Need to decide what want to do and intend to do, create road map for progress.

Create a common data standard acceptable to equipment manufacturers, data providers and software creators.

Need to identify metadata items in file which define reality; how often (time interval for different tidal regimes and content)

How often should data be up-dated in display (time interval for different tidal regimes and content)

Dynamic surface currents – predicted and/or real time  
 what included in model – meteorological effects, surges, etc.  
 rate and time or harmonics (how many)  
 tidal cycles (TWLWG)

Scope out requirements for: Transfer standard/specifications for surface current data  
 S-100 and ENC Product Specification – recommend what to be displayed and how

Format and how data to be transferred between organizations, systems (internal – bridge systems) and systems (external –meters, port monitoring systems)

Scope out the product that SCWG are going to develop – suggest that the WG concentrate on the product that will be used in the ECDIS first and leave the transfer format for later. Once the WG has a clear understanding of the nature of the requirement, it will be in a better position to define components / services that are needed make it happen.

What is required is a type of attributed grid, product that can be used as a layer within an ECDIS (look at S-102). The choice of grid interval would be determined by the quality of the underlying survey data and the intended use; i.e. in a port area where depths are critical and surface current variations significant, a small (fine) grid interval grid would be more appropriate (provided that the underlying survey data can support it) than a course one.

The gridded dataset would effectively become a navigational surface and the next issue to consider would be how to apply the surface current model including the temporal component to the navigational surface in order that indicated rates are adjusted to reflect the tidal / time variables. The adjusted rates at each grid cell would drive the portrayal within the EDCIS. This could simply be as a directional rate surface.

There are a number of issues that may need further discussion such as;

- appropriate metadata for data quality, grid resolution, source surface current data, tidal regime

- portrayal
- what would trigger alarms in the ECDIS

Suggest that the WG should attempt to draft a rough scope for the product and submit it to TSMAD for discussion and feedback. There will be several OEMs at the meeting who will be sure to provide useful comments.

## 'Scoping Document' Dynamic Surface Currents in ECDIS

### Basic Outline Scope and Requirement

Generate a time variable layer which displays the surface current on an ENC in an ECDIS.

Rate variability should be based on the available gridded bathymetric surface or triangulated irregular network (TIN) surface, with surface current predictions or near real-time observations, generated from single point, simple zone model, complex zone model or co-tidal models. Also it should be based on forecast meteorological surge where these are available.

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.

Deliver this information with an ENC, or make it available to be applied to an ENC in an ECDIS.

### Deliverables