

6th IHO-HSSC Meeting

Report of the Surface Currents Working Group

Submitted by:	Chairman, SCWG
Related Documents:	Report of SCWG 2 meeting (available from IHO web site).
Related Projects:	None

Chair:	Kurt Hess, USA
Vice-Chair:	Louis Maltais, Canada
Secretary:	David Wyatt, IHB
Member States:	Canada, France, Japan, Republic of Korea, Netherlands, Spain, USA
Expert Contributor Organisations:	Briana Sullivan (Center for Coastal and Ocean Mapping, University of New Hampshire, Durham, NH, USA), Edward Weaver (SPAWAR Atlantic), Eivind Mong (Jeppesen), David Brodie (Caris)
<i>see Annex A for full details</i>	

Meetings Held During Reporting Period

SCWG2 28 - 30 June 2014, Québec City, Canada

Next Meeting

SCWG3 13-15 May 2015, Tokyo, Japan

Work Program

The 2st meeting of the SCWG took place at the Office of the Department of Oceans and Fisheries (DOF), Québec City, Canada from 28 to 30 May 2014 and was hosted by the Canadian Hydrographic Service (CHS). The meeting was attended by 12 representatives from 5 IHO Member States, and included the IHB and expert contributors from the Center for Coastal and Ocean Mapping at University of New Hampshire (UNH), SPAWAR Atlantic, Jeppesen and Caris.

The SCWG received presentations covering the analysis of a Surface Currents design survey and results from UNH, CO-OPS current data telemetry and formatting from NOAA, Raster Surface Currents from Caris and a prototype model for Surface Currents from Canadian Hydrographic Service (CHS) respectively. The SCWG then received an analysis of the responses to the User Survey questionnaire prepared by the Netherlands and Spain. A potential list of Features and Attributes was presented and revised, and it was agreed that test data sets would be reviewed and displayed by SPAWAR Atlantic in preparation for creating an S-111 test portrayal capability.

The SCWG devoted time to undertake a thorough review of the draft S-111 Product Specification, achieving significant progress towards development of an initial complete first version. At least two additional complete review and update cycles were planned. The SCWG revised their Work Plan for the period 2015-2016, which will be submitted to HSSC 6 for endorsement.

It was agreed a meeting would be beneficial once the initial complete version of the S-111 Product Specification had been circulated and the test portrayal capability had been developed. SCWG 3 is tentatively planned for the period 13-15 May 2015 in Tokyo, Japan.

The SCWG then developed a draft Work Plan (WP) covering the period 2013-2017 for submission to HSSC 6 for endorsement, see Annex B.

SCWG Chair and TWLWG Chair began ongoing discussions on both technical items and merger strategies. It has been decided to hold the SC Working Group/Project Team meeting as scheduled in 2015, and invite TWLWG members, and likewise, to hold the TWLWG meeting and invite SCWG members, with at least SC Chair and Vice Chair to attend. Full integration would occur in 2016.

Progress on HSSC Action Items

N/A

Problems Encountered

N/A

Any Other Items of Note

N/A

Conclusions and Recommended Actions

N/A

Justification and Impacts

N/A

Action Required of HSSC

The HSSC is invited to:

- a. note this report
- b. re-appoint the SCWG to continue its work under its current Terms of Reference
- c. endorse the draft Work Plan at Annex B

IHO Surface Current Working Group (SCWG)

MEMBERSHIP and CONTACTS

Member State	Organization	Name	E-mail
Canada	Canadian Hydrographic Service	Bodo de Lange Boom	Bodo.deLangeBoom@dfo-mpo.gc.ca
Canada	Canadian Hydrographic Service	Louis Maltais (Vice-chair)	Louis.maltais@dfo-mpo.gc.ca
France	Coastal Hydrodynamic Department – SHOM	Ronan Pronost	ronan.pronost@shom.fr
France	Coastal Hydrodynamic Department – SHOM	Gwenaële Jan	gwenaele.jan@shom.fr
Japan	Japan Hydrographic and Oceanographic Dept.	Tatsuo Komori	ico@jodc.go.jp
Netherlands	Netherlands Hydrographic Service	Ronald Kuilman	RB.Kuilman@mindef.nl
Republic of Korea	Korea Hydrographic and Oceanographic Administration	Do-Seong Byun	dsbyun@korea.kr
Spain	Oceanography Division, Instituto Hidrográfico de la Marina (IHM),	Salvador Moreno Soba	smorenos@fn.mde.es
USA	National Oceanic and Atmospheric Administration	Dave Enabnit	Dave.enabnit@noaa.gov
USA	National Oceanic and Atmospheric Administration	Carl Kammerer	carl.kammerer@noaa.gov

USA	National Oceanic and Atmospheric Administration	Kurt Hess (Chair)	kurt.hess@noaa.gov
USA	National Geospatial-Intelligence Agency	Mark Opdyke	Mark.R.Opdyke@nga.mil
IHB	IHB	David Wyatt (Secretary)	david.wyatt@iho.int
Expert Contributor	Center for Coastal and Ocean Mapping, University of New Hampshire, Durham, NH, USA	Briana Sullivan	Briana@ccom.unh.edu
Expert Contributor	SPAWAR Atlantic	Edward Weaver	eweaver@wrssystems.com
Expert Contributor	Jeppesen	Eivind Mong	eivind.mong@jeppesen.com
Expert Contributor	Caris	David Brodie	david.brodie@caris.com

10 SCWG Work Plan 2014-2015

10.1 SCWG Tasks

A	Maintain and extend the relevant IHO standards, specifications and publications (IHO Task 2.13.2 refers)
B	Develop, maintain and extend a Product Specification for the transmission of real-time surface current data (IHO Task 2.13.3 refers)
C	Develop, maintain and extend a Product Specification for dynamic surface currents in ECDIS (IHO Task 2.13.4 refers)
D	Conduct the 2014 and 2015 meetings of SCWG (IHO Task 2.13.1 refers)

Task	Work item	Priority H-high M-medium L-low	Milestones	Start Date	End Date	Status P-planned O-ongoing C-completed	Contact Person(s) * indicates leader	Related Pubs/Standard
A.1	Relevant IHO Resolutions in M-3	H	Keep the Resolutions fit for purpose	Continuous		O		
A.2	S-60 User's Handbook on Datum Transformations involving WGS 84	M		Continuous		O		
B.1	Develop, maintain and extend a Product Specification for the transmission of real-time surface current data	H	Include section on real-time data in the PS Liaise with TWLWG on standards and methods	2014 2014	2017 2017	O O	Maltais*, Kammerer Hess*, Jan, Pronost	
B.2	Establish formats for the transmission and display of real-time current data	H	Prepare test data sets for transmission Test the portrayal of real-time current data	2014 2014	2017 2017	O O	Kammerer*, Maltais Weaver*, Sullivan, Kammerer	

Annex B to SCWG Report to HSSC 6

Task	Work item	Priority H-high M-medium L-low	Milestones	Start Date	End Date	Status P-planned O-ongoing C-completed	Contact Person(s) * indicates leader	Related Pubs/Standard
C.1	Develop, maintain and extend a Product Specification for dynamic surface currents in ECDIS	H	Develop and review the initial outline of the PS	2013	2014	C	Maltais*, All	
			Revise initial outline of PS	2013	2014/2015	O	Maltais*, All	
			Develop initial draft of PS that includes portrayal, schema, and encoding	2014	2015	O	Maltais*, Sullivan, Hess, Mong, All	
C.2	Establish formats for the transmission and display of data from historical observations, astronomical predictions, and forecasts of total surface current	M	Prepare test data sets for transmission	2014	2015	O	Kammerer*, Maltais, Pronost, Kuilman, Byun	
			Test the portrayal of surface current vectors	2014	2015	O	Weaver*, Opdyke, Sullivan, Kammerer	
C.3	Liaise with industry experts	M	Contact appropriate product developers	2014	2017	O	All	
			Receive feedback on the specifics of portrayal and data transmission	2014	2017	O	Hess*, Sullivan, Kammerer, Weaver, Opdyke	
			Revise standards according to feasibility	2014	2017	P	Maltais*, Hess, Weaver, Sullivan, Anderson, All	

Task	Work item	Priority H-high M-medium L-low	Milestones	Start Date	End Date	Status P-planned O-ongoing C-completed	Contact Person(s) * indicates leader	Related Pubs/Standard
C.4	Liaise with TSMAD, DIPWG and TWLWG on surface current matters relevant to the Dynamic Application of Surface Currents in ECDIS	H	Prepare and discuss scoping and technical requirements Prepare Product Specification (S111) for surface current data in S-100 for review and acceptance	2013 2014	2014 2015 2016	O P	Hess*, All Hess*, All	

10.2 SCWG Meetings (IHO Task C)

Date	Location	Activity
29 – 31 May 2013	Silver Spring, USA	1 st Meeting
28 - 30 May 2014	Quebec City, Canada	2 nd Meeting
21 – 24 April 2015	Silver Spring, USA	Chair, Vice Chair at TWLWG (Planned)
13 – 15 May 2015	Tokyo, Japan	3 rd Meeting (Planned)

Chair: Kurt Hess Email: kurt.hess@noaa.gov

Vice-Chair: Louis Maltais Email: Louis.maltais@dfo-mpo.gc.ca

Secretary: David Wyatt Email: adso@iho.int

SURFACE CURRENTS WORKING GROUP

Terms of Reference (ToR)

1. Objective

To develop standards for the delivery and presentation of navigationally significant surface current information. This information will be used with Electronic Navigational Charts (ENCs) in an Electronic Chart Display and Information Systems (ECDIS) or in an Electronic Charting System (ECS) as an aid to navigation.

2. Authority

The Working Group (WG) is a subsidiary of the Hydrographic Services and Standards Committee (HSSC) and its work is subject to HSSC approval.

3. Procedures

The WG should:

- (1) develop S-100 based product specifications for navigationally significant currents, including definitions and content, and display requirements with technical characteristics;
- (2) advise IHO on matters concerning the exchange, distribution, display, and use of navigationally significant current data;
- (3) liaise with relevant IHO WG's to ensure technical feasibility and compatibility of relevant developed proposals.

b. The WG should work primarily by correspondence, although face to face meetings at the project start is desirable, and thereafter may be convenient when held in conjunction with another convenient IHO forum.

c. The WG should liaise with other international bodies as appropriate.

Rules of Procedure (RoP)

4. **Composition and Chairmanship**

- a. The WG shall be comprised of representatives of IHO Member States (MS), Expert Contributors and accredited Non-Governmental International Organization (NGIO) Observers, all of whom have expressed their willingness to participate, and a representative of the IHB.
- b. Member States, Expert Contributors and accredited NGIO Observers may indicate their willingness to participate at any time. A membership list shall be maintained and confirmed annually.
- c. Expert Contributor membership is open to entities and organizations that can provide a relevant and constructive contribution to the work of the WG.
- d. The Chair and Vice Chair shall be a representative of a Member State. The election of the Chair and Vice-Chair should normally be decided at the first meeting following each ordinary session of the Conference (Conference to be replaced by Assembly when the revised IHO Convention enters force) and, in such case, shall be determined by vote of the Member States present and voting.
- e. Decisions should generally be made by consensus. If votes are required on issues or to endorse proposals presented to the WG, only MS may cast a vote. Votes shall be on the basis of one vote per MS represented. In the event that votes are required between meetings or in the absence of meetings, including for elections of the Chair and Vice-Chair, this shall be achieved through a postal ballot of those MS on the current membership list.
- f. If a secretary is required it should normally be drawn from a member of the WG.
- g. If the Chair is unable to carry out the duties of the office, the Vice-Chair shall act as the Chair with the same powers and duties.

- h. Expert Contributors shall seek approval of membership from the Chair.

- i. Expert Contributor membership may be withdrawn in the event that a majority of the MS represented in the WG agree that an Expert Contributor's continued participation is irrelevant or unconstructive to the work of the WG.

- j. All members shall inform the Chair in advance of their intention to attend meetings of the WG.

- k. In the event that a large number of Expert Contributor members seek to attend a meeting, the Chair may restrict attendance by inviting Expert Contributors to act through one or more collective representatives.