

**6th Meeting of the Hydrographic Services and Standards Committee
11-14 November 2014 Viña del Mar, Chile**

**Report of DPSWG to HSSC6
Data Protection and Security Working Group**

Submitted by: Chairman, DPSWG

Related Documents: Not applicable.

Related Projects: Not applicable

Chair: Jonathan Pritchard, UK

Vice Chair: Robert Sandvik, Norway

Secretary: Tony Pharaoh, IHB

Member States: Australia, France, UK, Japan, Germany

Organisations: Chartworld/7Cs, Furuno Finland, Transas, IC-ENC, IIC Technologies, JRC, Kelvin Hughes, PRIMAR, SAM Electronics

See Annex A for full details of membership

1. Meetings and Membership

1.1 DPSWG10, IHB Monaco, 13th-15th May 2014.

1.2 No sub working group meetings were held but a recommendation for a subgroup meeting to commence drafting of a new edition of S-63 was suggested during DPSWG10. It is hoped to schedule such a meeting between HSSC6 and the next DPSWG meeting in 2015.

1.3 This year Michel Huet retired from the IHB. DPSWG would like to acknowledge his contribution, support and patience over the lifetime of the group.

2. Work Programme

The programme is based on the priorities assigned within the detailed Work Plan (Annex B refers). Since HSSC6, the principal activities have been:

2.1 Maintenance and Support to existing data protection scheme.:

2.1.1 The Current Data Protection Scheme stands at 254 members, an increase of 17 from the total reported to HSSC5. The trend appears to continue from last year with the new members split between navigation systems manufacturers and other stakeholders such as VTS and other associated sectors.

2.1.2 The migration to S-63 edition 1.1, reported extensively last year appears to have now taken place with little or no ongoing support required from DPSWG members. The migration itself resulted in a small number of users still on S-63 1.0, mainly those with very old ECDIS systems and, due to the intensive efforts of the data servers within the scheme these are in the process of being migrated to S-63 1.1. Additionally, many users who have been migrated since the deadline have opted to receive data on DVD rather than the older CD-ROMs. In terms of DPSWG's responsibilities there is little to do with this task except to provide expert assistance and guidance to IHB staff in their administration of the data protection scheme. Work done by France on testing systems for compatibility also resulted in a representative test for a particular S-63 error message (the SSE-27 message) which has been included in the revised S-64.

2.1.3 In order to support the new revision of IEC61174 several activities requiring support from DPSWG have been accomplished this year. Australia provided a complete review and update of the S-64 encrypted test dataset and members have assisted in the updating of the documentation for these tests. Additional tests for completeness of S-63 testing have been added and dates changed to bring the entire test dataset up to date. The reviewed documentation has then been incorporated into the S-64 Instruction manual (the TIM) and a refresh of this document produced. Additional tests for error codes not previously checked have been added (with data provided by France) and coordination between TSMAD and DPSWG has produced the combined instruction manual to support future type approval testing. In order to support the ENC status report defined by the new edition of IEC61174 a new edition of S-63 (1.2) has been created containing an annex defining the report content and definitions. This will be the normative reference for a key element of ECDIS functionality within IEC61174. This new version of S-63 has now been drafted and reviewed by DPSWG members and IEC representatives. This will be submitted for HSSC and member state approval in 2015.

2.1.4 The group continues to provide ongoing help and support to member states, RENCs and potential OEMs in their implementation of S-63 (and their upgrade to S-63 edition 1.1). This is a reasonably constant workload for group members and results in better understanding amongst stakeholders. DPSWG chair wishes to acknowledge the help provided by the IHB in the past year with these enquiries. Notable this year have been enquiries relating to S-63 1.1 by RENCs and member states and enquiries regarding web distribution of official ENC and whether S-63 can support these more flexible models of data distribution.

2.2 New Edition of S-63:

Much of the activity at this year's DPSWG10 meeting was concerned with the authoring of a new edition of the standard for S-10x data products. The main achievement of this meeting was to agree the form of content for S-100 describing digital signatures and the division of responsibility between S-63, S-100 and S-100 product specifications. This has entailed defining the structure of the new edition and also the formats and underlying algorithms of some of the core elements. This is a good step forward for the new standard as the main algorithms and approaches were defined at DPSWG9. The new edition of the standard is in a position where drafting can commence and it is hoped to hold a sub-working group meeting to do this for submission to the main DPSWG meeting in 2015. Agreeing in advance the form of the standard for S-100 ensures the two standards will be much more tightly integrated than S-57/S-63 and will reduce duplication of functionality.

2.3 Input to other HSSC working groups and standards:

2.3.1 Submissions to TSMAD have been produced which detail the future structure of S-63 and also updates to the sections of S-100 dealing with digital signatures and for the actual detail of digital signatures within S-101. Now that these have been submitted the main business of drafting the main document can take place.

3. Problems Encountered

Lack of resource amongst member states continues to be a challenge for DPSWG. A candidate standard for use with S-100 is now the highest priority as the S-63 edition 1.1 migration and S-64 refresh is complete. The main data protection scheme is now well established and should allow the group to continue development of the new edition without too much distraction. The priorities within the work plan are now to get a new version of the standard drafted to complement S-100.

4. Any other Items of Note.

The main work plan for DPSWG (Annex B) still reflects the goals of the group. The main contributors towards the new edition of the standard are the outputs to TSMAD achieved this year setting out the framework for the new edition structure and the format of the key elements of the scheme (the keys, signatures and copy protection together with their underlying algorithms). A small subgroup to develop a candidate standard should meet before DPSWG11 to agree a draft for review and further development based on the outputs of DPSWG10.

5. Conclusions and Recommended Actions

HSSC6 is invited to endorse the continued activity of the WG under its current Terms of Reference.

6. Justification and Impacts

6.1 Justification for the continued activity of the WG is to fulfill the remit of its Terms of Reference which includes:

1. Support to member states and the ENC/ECDIS community.
2. Protection and authentication for member state data in the distribution chain and on ECDIS.
3. Assurance to end users that ENC data derives from an official source.
4. Development of standards to underpin future protection and distribution of ENC (and other S-100 based data) along similar lines to S-63.

6.2 The principal impact is the resource commitment of participating HOs.

7. Action Required of HSSC6

The HSSC is invited to:

- Note this report
- Endorse the continued activity of the WG
- Approve the Work Plan at Annex B

Annexes:

A. Membership of DPSWG (at 2 October 2014)

B. DPSWG Work Plan. This work plan still reflects the main priorities and activities of DPSWG. Some tasks are now largely complete (C and E) but will remain ongoing as the new edition of the standard develops. Priorities have been adjusted to reflect the emphasis on drafting of the new edition.

Annex A

**Membership of DPSWG
(at October 2014)**

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DPSWG Work Plan
October 2014

- Objectives, Tasks and Work Items are pursued in accordance with IHO Work Programme 2013-2017, Programme 2 (Services and Standards):
- The focus is
 - Development of new standard
 - Support for existing scheme including upgrade to latest version
- As a Plan it will and should evolve; accordingly, contributions from WG members and others are welcomed at any time.

Task	Priority	Status	Completion date	Affected Pubs.
A Maintain and extend Publication S-63	M	Ongoing	-	S-63 S-64
B Provide S-63 technical and operational support to Data Servers and OEMs	M	Ongoing	-	-
C Develop a more detailed work plan for future standards relating to Data Protection and Security of ENC data.	H	Ongoing	Feb 2014 (DPSWG10)	S-63
D Engage stakeholders in drafting of new edition of S-63 to support S-101 development	H	Ongoing	Feb 2014 (DPSWG10)	DPSWG Workplan
E Support transition to latest edition of S-63 (1.1)	M	Ongoing	1 Jan 2014	-