

**8th Meeting of the Hydrographic Services and Standards Committee  
12-14th November 2016, Monaco**

**Report of DPSWG to HSSC8  
Data Protection and Security Working Group (DPSWG)**

<b>Submitted by:</b>	Chairman, DPSWG
<b>Related Documents:</b>	IHO Circular Letter 31/2016 (8th Meeting of the HSSC)
<b>Related Projects:</b>	not applicable

<b>Chair:</b>	Jonathan Pritchard, UK
<b>Vice Chair:</b>	Robert Sandvik, Norway
<b>Secretary:</b>	Tony Pharaoh, IHB
<b>Member States:</b>	Australia, France, UK, Japan, Germany
<b>Organisations:</b>	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

1.1 *DPSWG11, Tokyo, 15th March 2016.*

## 2. Work Programme Developments.

The programme is based on the priorities assigned within the detailed Work Plan (Annex B refers). Since HSSC7, the principal activities have been:

The Data Protection Scheme now stands at 293 members.

### 2.1 Maintenance and Support to existing data protection scheme.

The Working Group (WG) continues to support the IHB in the maintenance of the scheme including advice to new participants and those already in the scheme who are looking for guidance in the standard's application. There is a reasonably constant stream of questions requiring support and DPSWG acknowledges the efforts of the IHB staff charged with responding to these. Many requests concern the provisions of the IHB OEM agreement vs individual data servers' End User Licence Agreements which DPSWG has advised the IHB Scheme Administrator on throughout the year.

### 2.2 New Edition of S-63.

DPSWG10 at the meeting collocated with the S-100WG, further considered a new version of S-63 in 2016. For some time DPSWG has gathered feedback on the existing scheme and requirements for a new version of the publication. In particular the individual sections of the S-63 scheme have been clarified and

locations within IHO component standards found for them. Much work has been done drafting the new edition of the standard. This includes the addition of a new compact encoding to be used within the catalogue metadata the integration of S-63 and S-100 which is considered to be achievable. The new edition is currently at a pre-draft stage.

### 2.3 Location of the new S-63 and the future of DPSWG.

Much of the meeting's discussion centred around a proposal from the group members (and those attending from the S-100WG) to incorporate a large proportion of S-63s content into a new part of the S-100 standard. This would be done by taking the current draft, completing its content (still some way off) and inserting it as a new part to S-100. This proposal gained much approval from the WG meeting members. After due consideration a structured proposal was presented to the S-100WG meeting by the DPSWG Chair which gained broad acceptance.

The proposal to move the S-63WG activities under the S-100WG gained wide support at the co-located meeting. The Chairs of the S-100 and ENC Standards Maintenance Working Groups have both been consulted on this issue. The S-100WG supports the proposed new section within S-100 carrying S-63 content.

Subsequently DPSWG Chair has submitted both to the DPSWG members and the IHO Scheme Administrators, the options for the future of DPSWG in the light of this proposed move. The detailed proposal is reproduced as Annex C, a summary of the proposals is reproduced below:

#### **Options for DPSWG future:**

**Option 1:** Dissolve the DPSWG completely. Move the development of the new edition of S-63 into S-100WG as a new project team. Move the maintenance of the existing S-63 and its relationship with other IHO standards (primarily S-64) into S-57WG. Member states and expert contributors continue to advise IHB as required. Provide support to new and existing users as required.

**Option 2:** Retain DPSWG in some form.

Option 2(a): Retain DPSWG as the working group responsible for all S-63 input to both S-100 and to the ENCWG. The only difference from the current arrangement is the output of the work plan related to the new edition of the standard is moved from IHO S-63 to IHO S-100.

Option 2(b): Retain DPSWG only to provide support and maintenance for the existing S-63 standard, moving responsibility for the new edition of the standard to the S-100WG.

Option 2(c): Retain DPSWG only in order to advise IHB on the running of the data protection scheme.

**Option 3:** Do Nothing. DPSWG continues as today and S-63 remains a separate standard.

### 3. Progress on HSSC Action Items

**HSSC 7/25 - DQWG and DPSWG to develop their views on Data Supply Chain Certification (Jeppesen's presentation at HSSC-7 refers) at their next meetings.** This action was raised at the DPSWG meeting in Tokyo, March 2016. The group received little input prior to the meeting on the subject and a general discussion concluded that although data chain certification had raised some valid points, data integrity as a general concept is dealt with in the current standard through the use of digital signatures. The concept of the "data chain" allowing tracking of data from source to destination is still to be defined within the new edition of S-63 and the quality elements of data chain certification should be taken into account by DQWG. This work will be ongoing as the new edition develops but the aim is to give visibility of the data chain in the new standard.

**HSSC 7/39 - DPSWG to monitor the development of the industry guidance on maritime cybersecurity and to advice on possible future actions.** DPSWG received input from industry stakeholders at the meeting on the general subject of maritime cybersecurity, mainly from the IEC representative. The observation from the DPSWG meeting was the requirement to consider security and integrity across the data chain and to consider the bridge system as a whole. Closer integration with S-100 will help to achieve this and DPSWG continues to monitor the area as the new standard develops.

No outstanding actions on the existing standard were identified as a result of these two actions and the areas of security and data integrity continue to be monitored for developments which may affect member states.

### 4. Problems Encountered

- 4.1 **Lack of Resources.** As per previous input to HSSC there is always an issue of a lack of resources within DPSWG. Support from HOs is very welcome and many are now actively engaged in their own local distribution services. The two main problems are finding dedicated time for drafting of a new version of the scheme (for participating HOs) and also getting access to the over-stretched resources within the manufacturer and ENC distribution community to review and provide input to the design of the new standard.
- 4.2 In order to address this problem it may be possible to outsource to external contractors some of the documentation and test data preparation for the next edition of S-63 (within S-100). It is suggested that the next meeting of the DPSWG group (in whatever form it is in) defines the scope and content of this work and provides a substantiated request to HSSC9 for inclusion in the 2018 budget. If funds are required for 2017 an approach will be made to member states through IHB following the next meeting of the DPSWG group (in March 2017 at the S-100 working group meeting).

### 5. Any Other Items of Note

Minor changes to the IHO S-64 standard have been identified during its initial testing with ECDIS manufacturers. DPSWG are updating the encrypted test datasets to ensure compliance with the standards' expected results.

### 6. Conclusions and Recommended Actions

- 6.1 HSSC8 is invited to approve the content of the Work Plan as submitted at Annex B. ***This Work Plan was reviewed during the DPSWG10 meeting,***

***Feb 2016 but the proposal to move the standard into the S-100WG may mean a redraft of the detail within the work plan as part of the migration. Under any options listed in the previous section the need to produce a new standard for S-100, support the existing standard and other related IHO standards and support its implementation with stakeholders remain.***

- 6.2 HSSC8 is invited to consider the options for the continuation of the DPSWG. The chair of DPSWG, having sought feedback from the group and its contributors, recommends Option 1 – the reorganisation of the DPSWG into the S-100WG and the ENCWG whilst acknowledging that expert contributors and experienced stakeholders will continue to support the IHB as required in their running of the data protection scheme.

## **7. Justification and Impacts**

- 7.1 The justification for the discontinuation of the WG is to help fulfil the scope of the workplan.
- It is felt that this course of action maximises the efficiency of the member state community in defining and maintaining data protection and authentication within the distribution chain. It is felt that the work of drafting a new edition of the standard can be completely achieved within an S-100PT.
  - Better integration within co-located meetings as the new standard develops and the ability to integrate with test beds if S-63 becomes an integral part of S-100 for the future.
  - The proposed S-100PT and ENCWG team can provide all the necessary reporting requirements to IHO member states and will continue to assist the IHB in their running of the data protection scheme as is currently the case.
- 7.2 The principal impact is the resource commitment of participating HOs and expert contributors. The DPSWG will need to spend some time reformulating its terms of reference and working with the other IHO groups to ensure all responsibilities are covered in the new structure.

## **8. Action Required of HSSC**

The HSSC is invited to:

- Note this report;
- Approve the scope of the Work Plan at Annex B;
- Endorse an option for the future of the DPSWG.

### **Annexes:**

- A. Membership of DPSWG (at 2 September 2016)
- B. Current DPSWG Work Plan
- C. C. DPSWG organisation options for the future

## ANNEX A

**MEMBERSHIP OF DPSWG**  
(at 2 September 2016)

<b>Member States</b>	<b>Name</b>	<b>E-mail</b>
Australia	Paul Woollard	<a href="mailto:paul.woollard@defence.gov.au">paul.woollard@defence.gov.au</a>
France	Geoffroy SCRIVE	<a href="mailto:geoffroy.scrive@shom.fr">geoffroy.scrive@shom.fr</a>
Germany	Mathias JONAS	<a href="mailto:mathias.jonas@bsh.de">mathias.jonas@bsh.de</a>
Japan	Tatsuo KOMORI	<a href="mailto:tatsuo-komori@kaiho.mlit.go.jp">tatsuo-komori@kaiho.mlit.go.jp</a>
Norway	Robert SANDVIK ( <b>Vice Chair</b> )	<a href="mailto:robert.sandvik@ecc.no">robert.sandvik@ecc.no</a>
United Kingdom	Jonathan PRITCHARD ( <b>Chair</b> )	<a href="mailto:jonathan.pritchard@ukho.gov.uk">jonathan.pritchard@ukho.gov.uk</a>
IHB	Tony PHARAOH ( <b>Secretary</b> )	<a href="mailto:addt@iho.int">addt@iho.int</a>
<b>Expert contributors</b>	<b>Name</b>	<b>E-mail</b>
ChartWorld	Juergen A. KUTERNOGA	<a href="mailto:ku@chartworld.com">ku@chartworld.com</a>
Furuno Finland	Hannu PEIPONEN	<a href="mailto:hannu.peiponen@furuno.fi">hannu.peiponen@furuno.fi</a>
IC-ENC	Kevin BLACK	<a href="mailto:kevin.black@ic-enc.org">kevin.black@ic-enc.org</a>
IIC Technologies	Raj ALLA	<a href="mailto:rajalla@iictechnologies.com">rajalla@iictechnologies.com</a>
Japan Radio Company	Takeshi TOKOI	<a href="mailto:tokoi.takeshi@jrc.co.jp">tokoi.takeshi@jrc.co.jp</a>
Kelvin Hughes	Martin TAYLOR Andy FROMINGS	<a href="mailto:martin.s.taylor@kelvinhughes.co.uk">martin.s.taylor@kelvinhughes.co.uk</a> <a href="mailto:andy.fromings@kelvinhughes.co.uk">andy.fromings@kelvinhughes.co.uk</a>
PRIMAR	Tore HALSET	<a href="mailto:halset@ecc.no">halset@ecc.no</a>
SAM Electronics	Bernhard NOEGGERATH Wolfgang PIEPER	<a href="mailto:bernhard.noeggerath@sam-electronics.de">bernhard.noeggerath@sam-electronics.de</a> <a href="mailto:wolfgang.pieper@sam-electronics.de">wolfgang.pieper@sam-electronics.de</a>
Transas	Konstantin IVANOV	<a href="mailto:konstantin.ivanov@transas.com">konstantin.ivanov@transas.com</a>
(Contractor to AHS)	Paul BUCK	<a href="mailto:pb@madzebra.com">pb@madzebra.com</a>

DPSWG Work Plan

October 2016

(updated following DPSWG10 and subsequent activities)

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

**DPSWG Tasks**

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

**DPSWG organisation options for the future. – full text of options.**

1. Discontinue DPSWG completely. The development of S-63 2.0 moves into S-100WG completely, as S-100 Part 13, and the maintenance and support of the existing S-63 standard moves into a sub-working group of the ENCWG with a dedicated representative in each. HSSC input is delivered via S-100WG and ENCWG and the IHB provides a readout at HSSC on the operation of the data protection scheme. This allows for tighter integration of S-63 with S-57/S-64 and S-58 and gives clear separation between resources dedicated to the development of the new standard and those involved in the legacy standards. If required some parts of S-63 are moved to “The running of the data protection scheme” – aimed at IHB personnel, and possibly to S-128 catalogue currently under development by the S-100WG.
2. Retain DPSWG in some form:
  - a. DPSWG supplies all input to S-100WG including drafting and meetings for preparation of the new S-63 (S-100 Part 13) as well as support for the existing standard and any support necessary to the ENCWG. Support to the IHB for the running of the data protection scheme is given by the S-63 team leader within the ENCWG.
  - b. Standards + Support. DPSWG still exists as a working group but only to provide support and maintenance of the existing S-63 standard. New development is within the S-100WG. Support to the IHB for maintenance of the data protection scheme continues to be provided by DPSWG. DPSWG holds meetings as and when required. HSSC input is limited to commentary on the yearly operation of the scheme and any significant developments within the standard.
  - c. DPSWG continues to operate solely with the remit of assistance/support to members of the data protection scheme and its operation under the IHB. No meetings would be required and all standards development would take place as detailed in option (1) above (implying a dialog between S-100WG/ENCWG based on market developments). HSSC input is limited to commentary on the yearly operation of the scheme.
3. Do Nothing. DPSWG continues as today and S-63 remains a separate standard.