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27 September 2010

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FINAL MINUTES

12th Standardization of Nautical Publications Working Group (SNPWG) Meeting
21 - 25 June 2010 - Tokyo, Japan

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Annex A: Agenda
Annex B: List of Attendees
Annex C: SNPWG Work Plan

Item

1. Opening and administrative arrangements

1.1 Opening remarks

David Acland opened the meeting by welcoming the group to the 12th meeting of the SNPWG. He thanked the JHOD for their warm welcome to the country and to the capital. Particular thanks were extended to Mr. Teruo Kanazawa and Mr. Seiji Suzuki for all the arrangements made to date. He said that Finland, represented by Mr. Jan Nyholm from the Finnish Transport Agency, had joined the group but unfortunately could not attend this meeting. David Acland, however, was pleased to see another member from the Baltic Sea area.

David Acland also welcomed new representatives from Japan, Mr. Yasuo MATSUDA, and from Korea, Mr. Gi Jun KIM.

1.2 Introduction round

The group members each made a short presentation of organization and professional background.

1.3 Host welcome and administrative arrangements

Mr. Satoshi Sato Director, Chart and Navigational Information Division, JHOD, welcomed everyone on behalf of the JHOD and said that JHOD was honoured to host the SNPWG 12. He stated his hopes that information from nautical publications would soon be made available in ECDIS. Promised to participate actively in discussions, and hoped for a fruitful meeting.

Teruo Kanazawa informed on the administrative arrangements for the week.

1.4 SNPWG progress

DA reviewed SNPWG work since the last meeting in Monaco. Good progress has been made with the production of 4 useful sample data sets: Sailing Directions, Radio Signals, Marine Protected Area and Natural Conditions.

The next step, mapping, was a challenge. David Acland said that this showed the complexity of the work and he congratulated all concerned.

He said that the wider community is beginning to pay attention to SNPWG work. The ENC Stakeholders Workshop in March 2010 spent quite a lot of time on our questions. Also the joint TSMAD/DIPWG meeting in Rostock opened up to our work.

David Acland drew attention to the work of BLAST (Bringing Land and Sea Together), a project funded by the European Commission with a strong lead from the Norwegian Government. He said that a few SNPWG members participate in WP4 (Navigate the North Sea), that John Parrot is a key member of that group and that we should pay attention to what they were doing.

He encouraged everyone to join the discussions this week; SNPWG needed to make progress and would be discussing what should be reported to the HSSC2 which meets at Rostock in October.

Attention should also be given to Eivind Mong's 6 questions for consideration by SNPWG 12. The questions were passed around, and David Acland asked the group to give them some thought.

2. Approval of Agenda

David Acland reviewed the agenda for the meeting; 'Report to the HSSC2' was added for Friday and 'Use case discussions' added as a new item 13. The Agenda was then approved.

3. Minutes of SNPWG 11

The Minutes of SNPWG 11 were approved as circulated.

3.1 Corrections

No corrections for the Minutes of SNPWG 11 were proposed.

3.2 Review of Action Items from SNPWG 11

Action Item Acland
Arrange meeting with the TSMAD and the DIPWG in 2010.

Complete. *Jens Schröder-Fürstenberg attended the TSMAD/DIPWG meeting. For practical reasons it will be difficult to arrange a joint TSMAD/DIPWG/SNPWG meeting. Tony Pharaoh suggested that, should the occasion arise, only key members from the groups attend.*

Action Item SNPWG
Examine the quality of data in existing publications. Is there really a need for the mariner to be provided with measurements to state the quality of individual items of information?

Still ongoing. *Tony Pharaoh pointed to the DQWG - 2 ISO documents on data quality exist.*

David Acland stated that a key point of going from S-57 to S-101 was to comply with ISO standards. We should look at what the ISO 19113 and 19114 have to offer on the matter - do they apply to our work? The SNPWG should define the quality parameters and then we can ask the DQWG to add these to their ToR.

Pelle Aagaard gave as example the data quality in the Arctic waters. Eivind Mong suggested that Jeppesen and KMS make a presentation on that issue at the SNPWG 13 in Stavanger, Norway.

Action Item SNPWG
David Acland encouraged members to take a block of text from their own nautical publications and play around with it like JHOD has done in order to get a better grip of the problems we are likely to encounter.

Complete. *Jens Schröder-Fürstenberg's experience with this exercise is posted on the Wiki - it is obvious that structuring is a 'manual' task, and it is going to take a lot of hard work.*

Action Item SNPWG
- Look through NPUBS for data like fog, swell, wind conditions, Regulations (known geometry)
- Look through NPUBS for general statements like information on military exercises, fishing methods (fuzzy or imprecise geometry)
- Look through NPUBS for general reference material (no geometry)

Complete. *Has been done during the process of mapping for the Micklefirth exercise.*

Action Item SNPWG

David Acland strongly recommended members to familiarize themselves with the IHO registry. He stressed that we must start working with it.

Closed. *Consent that the IHO-registry definitely needed work; it seemed outdated. Tony Pharaoh indicated that the interface has been changed and improved.*

Action Item SNPWG
Write the Nautical documents that apply within the space of the Micklefirth data set.

Complete.
- *Sailing Directions (David Acland) - done.*
- *Pilotage, radio signals (Alain Rouault) - done.*
- *Regulated area (Marine Protected Area) sample (Tom Loeper/Craig Winn/Holly Johnson) - done.*
- *Write natural conditions (currents/weather) sample (Mike Kushla) - done.*
- *Write List of Lights (Pelle Aagaard/David Acland) – No longer required. Most information is in the ENC data set; the only missing data is Column 8 and whilst valuable it should be given a lower priority in our work; limited additional value in Sailing Directions.*
- *Share samples, review and agree (SNPWG) - partially done.*

Action Item SNPWG
Make use cases from the text, Micklefirth and input from the NPUBS text authors.

Complete.

New Action: SNPWG 12/1.

Design a questionnaire to refine use cases of NPUBs data for possible use at an ECDIS Stakeholders Forum, maritime training institutions and in contacts with the shipping industry*.*

Action Item SNPWG
Prioritize subjects.

Still ongoing.
- *Mapping to feature/info types*
  - *Use existing SNPWG model*
  - *Fix where it breaks (extend, redefine, etc.)*
- *UML*
- *Link NPUBS to ENC*
- *Mock-up display*
- *XML/GML data sets*
  - *Application Schema*

Action Item SNPWG
Consider updating mechanism for NPUBS and updating of data.

Still ongoing.

4. Report on other IHO work

4.1 S-101 ENC Stakeholders Workshop March 2010

David Acland reported on the S-101 ENC Stakeholders Workshop in Taunton 9-11 March 2010. The outcome document can be found at the SNPWG 12 page on the IHO website.

2 discussion groups in particular proved relevant for the SNPWG:

> *e. Digital Nautical Publications and the Mariner*

David Acland summed up on the conclusions and recommendations, several of which were debated in the group.

> *g. Breakout Group A, topics including technical aspects of MIOs (NPUBS etc.) and Feature Catalogues*

David Acland summed up on the conclusions and recommendations, several of which were debated in the group.

4.2 TSMAD meeting May 2010

Jens Schröder-Fürstenberg gave his presentation from the TSMAD 20/DIPWG 2 meeting in Rostock 3-7 March 2010. Report on SNPWG12 page of IHO Website.

Tony Pharaoh suggested the group study the paper from this meeting on auxiliary layers – Document 18A, Requirements for the Integration of S-100 compliant Auxiliary Navigational Information with S-101 ENC data – that can be found at the TSMAD 20 page on the IHO website.

Problems concerning the S-mode in an ECDIS were debated. The issue has been raised at both this meeting and the S-101 ENC Stakeholders meeting.

A note on support files was brought up by Tony Pharaoh – textual description and picture representation need to be discussed with the TSMAD to avoid content duplication.

Scale dependant vs. Scale independent data was discussed. It will eventually be tested in S-101 before a final decision is made.

Eivind Mong pointed out that the question of virtual aids to navigation was also eagerly debated at the TSMAD meeting.

5. Report of progress with sample Datasets

David Acland started off reviewing the task SNPWG has set for itself.

5.1 Problems encountered during sample Dataset production

Paper specimen product

- Sailing Directions – David Acland gave a brief introduction to the 'new' versus the 'old' way of writing Sailing Directions.
- Radio Signals – Alain Rouault has included almost every imaginable type of radio service.
- Marine Protected Area – Tom Loeper gave a thorough description of MPAs in general and explained the reasons for choosing the specific MPA details in Micklefirth – some 20 pages of text can be expected.
- Natural Conditions – Mike Kushla summed up his conclusions.

6. Report of progress with Mapping

John Parrott opened this item by explaining mapping in this context as reading content and trying to interpret it into the SNPWG object model – geographic objects and information objects containing several different attributes.

6.1 Problems encountered during Mapping

John Parrott went on by observing that certainly a lot of hard work has been done by a lot of people – what is on the Wiki is very useful material. He added that some aspects of the mapping process seem to be satisfactory, while others still seem to generate new problems.

Jens Schröder-Fürstenberg proceeded with his presentation on his progress with the mapping process. The presentation can be found at the SNPWG 12 page on the IHO website.

Jens Schröder-Fürstenberg went on by acknowledging that different people have very different approaches to mapping. An example from the SNPWG Wiki is Waterways – lines are numbered and mapped to features and attributes. Jens Schröder-Fürstenberg further encountered problems with for instance Category of vessel.

Discussion ensued on the differentiation between the harbour and the port feature – definitions may have to be looked into.

Holly Johnson then made her presentation of the Marine Protected Area document on the Wiki.

7. Report on Status of Feature Concept Dictionary

David Acland reported that not all the Jeppesen proposals from Monaco have been handled yet, but a few changes have been made.

The use of the SNPWG Wiki as the de-facto NPUBS Feature Concept Dictionary for the mapping process has been in the words of John Parrott – more or less flawless – (though Jens Schröder-Fürstenberg is the one who has used it the most).

Both David Acland and Jens Schröder-Fürstenberg once again urged the group to use the Wiki – any contribution, any opinion is very much appreciated, and approving items is better done in the Wiki than in the IHO Feature Concept Dictionary.

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Discussion on CATRXN (Category of regulation/restriction/recommendation/nautical information) – which regulations do we have?

New categories added:

- Natural Resources/Exploitation
- Health

We may need to review the definitions to make them bijective.

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Eivind Mong commented on the S-57 attribute Restriction: "Removal of artefacts" and "Construction prohibited" are mentioned.

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WKHRDY (Working hours of day) and WKDYWK (Working days of week) were briefly discussed, but proved not to pose a problem after all. Jens Schröder-Fürstenberg, however, stated that TIMZON (Time zone) definition needs to be checked.

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David Acland posed the question of FRQPAR (Frequency pair), e.g. ship to shore on one frequency and shore to ship on another; do we know what to do about them?

One approach is to simplify towards a table approach, but more work needs to be done. Simplex vs. duplex needs to be considered.

Once again David Acland pointed the attention of the working group to the discussion page on the Wiki – it is an excellent forum for just this sort of topic.

Review data model for Frequency Pair. Decide how to handle current footnotes.

Action SNPWG 12/2 - Alain R and Jens J/S

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UKCLRN (Underkeel clearance) – we need to cross check the definition for this one. Eivind Mong mentioned that the Canadian Hydrographic Service perhaps have got a usable definition

Action SNPWG12/3 - Eivind M and Jens J/S

In the OPERAT attribute we must revise definition to include the language "**numerically** larger" or "numerically smaller".

Action SNPWG12/4 – David A and Jens J/S

8. Report on Status of example Product Specification

An opening observation to this item was given by John Parrott – the conclusions drawn from the example Product Specification are still valid.

Tony Pharaoh enquired whether we will need one or more product specifications for separate NPUBS. See 14 below.

On this subject Eivind Mong, too, pointed the working groups' attention to the TSMAD 18A document, Requirements for the Integration of S-100 compliant Auxiliary Navigational Information with S-101 ENC data. See 4.2 above.

9. Report on UML Diagrams

Jens Schröder-Fürstenberg and Raphael Malyankar have tried modelling *Restrictions/Regulations/Recommendations/Nautical Information* – the discussion on their efforts is open on the Wiki.

10. Actions received

10.1 New Work Item from HSSC 1 – Develop Marine Environment Protection Programme based on S-100

We need a feature for Marine Environment Protection Programme – It was agreed that NOAA should continue to lead in the group as they have done to date.

We can report to the HSSC that we have started work on the new Work Item.

10.2 Circular Letter 32/10 – Nomination of WG Member to work with Hydrographic Dictionary Working Group

A nomination is required to act as the SNPWG liaison member for the HDWG. Tom Loeper agreed to fulfil this task until the next meeting.

Action SNPWG 12/5 – Tom Loeper

11. Nautical Information Overlay Production ideas

11.1 ESRI Japan presentation: GIS and SNPWG; ArcGIS Demonstration

Junji Shiraishi gave a presentation on some of the possibilities for a Nautical Information Overlay using ESRI's ArcGIS. This can be found at the SNPWG 12 page on the IHO website. The ESRI International User Conference in San Diego in July 2011 was also mentioned.

The recommendation to the SNPWG was to use XML during the preliminary steps towards a Nautical Information Overlay.

11.2 Nautical Information Overlay simulation

Jens Schröder-Fürstenberg gave his presentation 'Nautical Information Overlay Simulation'. The presentation can be found at the SNPWG 12 page on the IHO website.

12. Harmonization of data sets – redundancy, overlaps, miss-interpretations

During discussion on harmonization of data sets, Eivind Mong pointed out that there will be problems if we do not harmonize – user confidence will drop and it will become harder to generate products. Furthermore, strict consistency is needed to secure user uptake.

As Jens Schröder-Fürstenberg's presentation shows, we may also find that certain features may not yet exist in the current S-64 ENC dataset; for example the delayed implementation in S-57 of Archipelagic Sea Lane.

Tony Pharaoh emphasized the necessity for different data sets to point correctly to one another.

An Encoding Guide for mapping, production and harmonization will definitely be required.

An Encoding Guide Drafting Group was formed.

Action SNPWG 12/6 - Jens Schröder-Fürstenberg, Tony Pharaoh, Holly Johnson, Olav Haugen and Eivind Mong

Assess whether the TSMAD Encoding Guide, S-57 Appendix B.1, Annex D, can serve as an outline for a SNPWG draft.

The TSMAD Encoding Guide can be found at the TSMAD page on the IHO website.

13. Portrayal

13.1 DIPWG paper

Based on the DIPWG Paper: *Considerations for Symbolizing Nautical Pub Information in ECDIS* examples of images created for SNPWG purposes were discussed. The DIPWG Paper can be found at the SNPWG 12 page on the IHO website.

It is imperative that we understand the IMO ECDIS Performance Standard.

Different display modes discussed:

- Monitoring
- Planning
- Search and Rescue (Man Overboard)

The SNPWG should be stating the minimum requirements - the ECDIS manufacturers will have to go above and beyond; as long as cluttering is avoided, individual functionalities should not be specified by the working group.

Eivind Mong said that Dr. Lee Alexander, University of New Hampshire, may already have an answer as to which restraints we have to operate under from his work with Marine Information Overlays

SNPWG must draft a framework paper to put to the DIPWG at their next meeting in May 2011.

Action SNPWG 12/7 - SNPWG

13.2 Portrayal discussion (what/where/when/how)

Jens Schröder-Fürstenberg made his presentation on Portrayal Discussions.

SNPWG should approach the DIPWG chairman to discuss the portrayal aspects of the MPA. See 16 below.

Action SNPWG 12/8 – David Acland

14. Questions for consideration at SNPWG 12

Based on the proposition from the TSMAD 20 meeting for SNPWG to develop its own product specifications to carry NPUB information, Eivind Mong presented 6 questions to be considered by the working group before taking on this task (the answers to the questions were developed over the period of the SNPWG 12):

1.   *What is the intended use for Navigational Information Overlays?*

      Answer: The intended primary use is route planning in the ECDIS system. However there will be strong secondary uses. Encapsulation in ISO/IEC 8211 could constrain the secondary uses in ways that an XML encapsulation would not. The products are intended to be functionally equivalent to paper books.

2.   *Will there be one or many product specifications?*

      Answer: Many.
      If everything is in one dataset, associations will be easier but the data will be more complex.
      If there is one large product specification, that will be unwieldy.
      Two further considerations:
            Updating frequency
            Distribution of products of different data types

3.   *How will the data interact with ENC and other types of data in the ECDIS? Will NPub data be additional information or is a more integrated interaction intended?*

      Answer: Both. Integrated interactions which generate prompts or warnings when necessary based on the vessel characteristics and route. There will also almost certainly be additional information in the form of text, diagrams and non feature data in gridded form.

4.   *Will there be data duplication?*

Answer: ENCs and NPUBS must be used together. SNPWG data model requests full utilisation of all S-100 functionalities. Adhering to S-100, data duplication is not requested. That means not the possibility of multiple use of the data. If NIO data is duplicated, there will be problems when the ENC is updated or removed, but the duplicated data is not. Difficulties with maintaining data in multiple scales; best to link NIO data to ENC feature; next best to put it on its own independent layer.

5. *How will updating be done considering the decisions from question 2 and 4?*

   Answer: The HOs will still be responsible for maintaining the different datasets – as it is done today.

6. *Encoding rules, how strict will the rules be?*

   Answer: Difficult to answer. First steps taken to developing an Encoding Guide.

15. Use Case discussions

John Parrott presented his use case analysis for the Micklefirth exercise. Discussion ensued.

Compile taxonomy of NPUBS topics. David Acland asked members to suggest subject matter and pass it to Pelle A to combine and compile a consolidated list which could be used in a Questionnaire.

SNPWG Action 12/8 - Pelle A

David Acland briefed the group on the Characteristics of Vessels which Cause Limitations (CHALIM) object and 'Applicability' (APPLIC), a new object proposed by Jeppesen.

In the Micklefirth Use Case Analysis, John Parrott showed that trying to use CHALIM to convert restrictions/limitations prose into human and machine-readable data elements can result in un-interpretable or seriously misleading results for the mariner.

CHALIM as defined has an inherent bias toward 'exclusion' of vessels from something, while in the real world, regulations define what is included as often as what is excluded. Also, regulations/restrictions in nautical information often involve multiple, related conditions (e.g. vessels greater than X meters LOA or Y gross tons must report….), which is difficult to encode effectively with CHALIM.

Applicability (APPLIC) provides a neutral way to encode regulations/restrictions/recommendations/nautical information whether they have one or multiple related conditions. APPLIC can also serve a wider range of situations than vessels and cargoes only. CHALIM may still have uses, but it was decided to add the APPLIC object to the SNPWG Feature Concept Dictionary for consideration.

Develop model for APPLIC and post it on the wiki. Check if CHALIM can be suspended when APPLIC fulfils all requests.

Action SNPWG 12/9 – David A and Jens S/F

16. Next steps

David Acland gave an overview of the principles and procedures for making changes to IHO technical standards and specifications. He also explained the process of the governance life-cycle for IHO standards.

Tony Pharaoh proposed to start by focusing on one dataset, for instance Sailing Directions for a specific area.

However it was agreed, that Sailing Directions were probably too complex as a first product.

John Parrott suggested writing a 'Vision Document' that perhaps goes a bit beyond the scope of the ToR.

Jens Schröder-Fürstenberg then recommended using Marine Protected Area as our first product.

It was then agreed that SNPWG draft a product specification for Marine Protected Area.

Timeline and scope were then discussed - the scope should be drafted by June 2010 and a first draft should be ready by October 2010. The product specification must be completed for the SNPWG 13 in Stavanger, Norway, and ready to be put to the TSMAD for comment by October 2011.

For the test dataset, we should start with 1 area and then expand the population to 10-15. Eivind Mong will find out if it is possible for Jeppesen to do the testing.

Action SNPWG 12/10 Eivind Mong

It was discussed whether to aim to display against S-57 or S-101. S-57 was acknowledged as the way to go because it is widely available.

Product specification drafting and testing will be carried out by a Marine Protected Area Development Team. This team is made up of:

- Ricardo Freire
- Tony Pharaoh
- Jens Schröder-Fürstenberg
- Eivind Mong
- Holly Johnson

On David Acland's suggestion it was accepted to use the Micklefirth MPA as our phase 1 test data area.

Tony Pharaoh reported on a few resources which may prove useful when beginning work on the MPA product specification:

- NOAA site describing MPAs
- World Database on Protected Areas

Tony Pharaoh will post both sites on the IHO SNPWG page and/or the Wiki.

Discuss with Tony Pharaoh whether a formal approach to the World Database on Protected Areas is needed.

Action SNPWG12/11 David A

Present draft Product Specification for MPA to SNPWG 13.

Action SNPWG12/12 MPA Development Team

17. Work plan for the SNPWG

The SNPWG work plan was revised.

18. Any other business

Jens Schröder-Fürstenberg suggested a review of the SNPWG Terms of Reference.

Amendments to the ToR - if any - should be presented at the SNPWG 13 meeting in Stavanger.

Action SNPWG12/13 - Jens J/S

19. Date and place of the next meeting

SNPWG 13 will be hosted by STATKART in Stavanger, Norway, in the week of 4 - 8 April 2011.

Provisionally, SNPWG 14 will be held in Monaco in January 2012.

20. Meeting Closure

The Chairman thanked the Members for their contributions during the week. Very special thanks were due to Yasuo Matsuda (JHOD), Teruo Kanazawa (JHA) and Mr Seiji Suzuki (JHOD) for the excellent arrangements, attention to detail and great kindness shown to the visitors throughout the week.

David Acland wished everyone a safe journey home.

12th Meeting of the Standardization of Nautical Publications Working Group (SNPWG)
21 - 25 June 2010, JHOD, Tokyo

Agenda Draft 6

No.	Agenda Item	Lead	Documents
	Monday		
1.	Opening and administrative arrangements		
2.	Approval of Agenda		
3.	Minutes of SNPWG 11		
3.1	Corrections		
3.2	Review of Action Items from SNPWG 11		
4	Report on other IHO work		
4.1	S-101 ENC Stakeholders Workshop March 2010	DA	Workshop report
4.2	TSMAD meeting May 2010	J S-F	
5.	Report of progress with sample Datasets	DA, AR, MK, TL	
5.1	Problems encountered during sample Dataset production		
	Show DVD Martha		
	Tuesday		
6.	Report of progress with Mapping	JP, J S-F, TL	
6.1	Problems encountered during Mapping		
7.	Report on Status of Feature Concept Dictionary	DA	
8.	Report on Status of example Product Specification		
9.	Report on UML Diagrams		
10.	Actions received		
	New task from HSSC 1 - Develop Marine Environment Protection Programme based on S-100		
	Circular Letter 32/10 - Nomination of WG Member to work with Hydrographic Dictionary Working Group		IHO CL 32/10
	No Host Reception		

	Wednesday		
11.	Nautical Information Overlay Production ideas		
11.1	ESRI Japan presentation: GIS and SNPWG; ArcGIS Demonstration	J Shiraishi	
11.2	Nautical Information Overlay simulation	J S-F	
12	Harmonization of data sets - redundancy, overlaps, miss-interpretations		
13	Portrayal		
	DIPWG paper	DA	DIPWG Paper
	Portrayal discussion (what/where/when/how)	J S-F	
14	Break-out groups [Place holder in case the need arises]		
	Thursday		
15.	Next steps		
16.	Break out groups [Place holder in case the need arises]		
17	Visit JHOD facilities	TK	
17.1	Visit to JHOD survey vessel		
17.2	Tour JHOD office (ENC and NP sections)		
	Reception hosted by JHOD		
	Friday		
18.	Work plan for the SNPWG		
19.	Any other business		
20.	Date and place of next meeting		

12th Meeting of the Standardization of Nautical Publications Working Group (SNPWG)
21 – 25 June 2010, JHOD, Tokyo

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SNPWG Work Plan

SNPWG Tasks

A.   Decide on the Data Structure of NPs-Data intended for use in ECDIS (NP3)

B.   Define the content requirements of NP data intended for use in ECDIS (NP3)

C.   Test data

D.   Develop basic display rules for NP data intended for use in ECDIS (NP3)

E.   Draft guidance documents

F.   Revise technical resolutions as required

G.   Liaise with other HSSC WG's and other IHO and international bodies

H.   Develop Marine Environmental Protection Programme based on S-100

SNPWG Workplan

Task	Work Item	Priority H-high M-medium L-low	Start Date	End Date	Status P-Planned O-Ongoing C-Completed	Contact Person	Affected Pubs /Standard	Remarks
B2	Model the data where required.	H	2004	Open	O	Chair/Sec SNPWG	S-100	To be included in NPUBS register
B3	Review of objects and attributes	H	2004	Open	O	Chair/Sec SNPWG	S-100	
B4	Propose amendments for Hydro register to TSMAD	H	2005	Open	O	Chair/Sec SNPWG	S-100	To be included in S-100 registry
B6	Populate the NPUBS Register	H	2006	Open	O	Chair/Sec SNPWG	S-100	

C1	Produce test data set	H	2009	2011	O	Chair/Sec SNPWG		
C2	Set up a test bed ECDIS	M	2009	2012	P	Chair/Sec SNPWG		
D1	Develop basic display rules for NP data intended for use in ECDIS (NP3)	M	2008	Open	O	Chair/Sec SNPWG	S-52	Close co-operation with DIPWG required
E1	Data Capture Guidance	H	2008	Open	O	Chair/Sec SNPWG		Document for NPs similar to Use of the Object Catalog
E2	Draft Sample Product Specification	H	2008	2009	C	Chair/Sec SNPWG	S-10X	Issues remain to be addressed
E3 H1	Draft MPA Product Specification	H	2010	2011	O	Vice Chair SNPWG		Drafted in phases
G1	Liaise with the DIPWG for the development of the display rules	H	2005	Open	O	Chair/Sec SNPWG		
G2	Liaise with the TSMAD	H	2004	Open	O	Chair/Sec SNPWG		
G3	Liaise with other groups	H	2004	Open	O	Chair/Sec SNPWG		Including DPSWG, DQWG, TWLWG, MIO's, AML, ICE, Inland ECDIS