**4th Nautical Information Provision Working Group (NIPWG) Meeting**

**Visualisation of Nautical Information Workshop (VONI)**

**22 – 26 May 2017 – University of New Hampshire, Durham, USA**

Annex A: List of Action items

Annex B: Agenda

Annex C: List of Attendees

Annex D: Updated NIPWG Work Plan

**1. Opening and administrative arrangements**

***1.1 Opening remarks***

Jens SCHRÖDER-FÜRSTENBERG opened NIPWG4 by welcoming new and returning members and attendees participating only the VONI workshop.

Logistics and building safety were also discussed.

***1.2 Opening address on behalf of the University of New Hampshire***

The NIPWG Chair welcomed the participants and thanked the UNH especially Briana SULLIVAN for organizing the meeting and the workshop

***1.3 Introductions***

Due to the large number of new members, no introductions were made. The decision to merge NIPWG4 and the visualization workshop was made with the hope to improve the technical view of experienced NIPWG members by providing more technical expertise. The VONI and NIPWG4 were also merged in consideration of HO’s budget constraints.

**2. Adoption of VONI and NIPWG4 Agenda**

NIPWG and VONI agreed and adopted the NIPWG4 and VONI Agenda with slight modifications as circulated.

**VONI Workshop**

The workshop agenda focused on seven topics.

**WP1 Introduction**

Introduction to the workshop by Briana and Jens.

**WP2 Demo outline**

S- 122 MPA

* Anthropocene Institute: test bed for MPA display by Virgil ZETTERLIND

Mariner services, routeing guide and harbour infrastructure.

* Web-based presentation of Norwegian Pilot information, NPUB provision and cyber security by Anniken PUNTERVOLD
* Web-based iCPilot by Briana.

S-124 Nav Warnings.

* Canada: Nav Warning system of the future by Eivind MONG.

(S-1XX) NTM Viewers

* KHOA: Service for Safety of Navigation by Inyoung PARK
* Denmark: Nautical information provision in the digital Greenland Port and Bridge Information System ([www.gronlandskehavnelods.dk](http://www.gronlandskehavnelods.dk)) by Allan IDD JENSEN
* UNH: ChUM - Chart Updates Mashup
* JHOD: NTM and NAVAREA viewer by Kenji NAITO
* KHOA: BaRoView for multiple datasets in 3-D

**WP3 Data examples**

* S-111/S-112 current/tide data examples/discussion by Briana
* S-412 weather data examples/discussion by Joe PHILLIPS
* US eMSI group needs/concerns discussion by Brian TETREAULT

Open discussion on the following topics led by Jens

* Description of use cases
* What is needed? (by Hydro Offices)
* What users want to see by OEM’s?

**WP4 Production systems**

Production systems: examples and questionnaire results

* US Coast Pilot Production System and discussion by Scott SHERMAN and Tom LOEPER
* BSH Production System by Jens
* Data provision, level of granularity; pro and cons by Jens
* Tour of the UNH Data Visualization Research Lab by UNH staff

Organized discussion on HO’s current systems by Briana

* Similarities – where are there similarities between the HO’s production systems
* Similarities between the current NIPWG data models and HO’s data

Execution

* How do HO’s make this happen? How to get from the current format(s) to a S-100 structure
* How do the attributes and features discussed in the meetings tie into the final product that is expected from the product specifications developed?

**WP5 Brainstorming**

Brainstorming

* Visual outputs in ECDIS, discussion of graphical solutions and open topics left from previous sessions.

**WP6 Technical Workshop**

Live demonstrations of the various software tools were given. An example was the use of S-122 GML product.

**WP 7 Review of Workshop results**

Comments and suggestions from the group to begin using the new tools which are available:

1. Need to be more “XML aware”
2. Test creating valid MPA products (starting with a standard like MPA’s)
3. S-100 group needs to create a “how to” handbook for how to use S-100, including the process flow for building data models and adding to the registry
4. **Action Item 4/WP1 - Approach the IHO for continuous maintenance of the wiki**
5. Web-based data delivery from demos on day 1 (no harmonization)
   1. How to connect the dots between the web and the pilothouse
   2. What to do with the non-ECDIS world. We need to remember not to only think in ECDIS only terms
6. Excellent Workshop
7. Simplify the process to generate XML files with tools and help in the data generation
8. Need to create and focus on priorities while developing the specifications
9. Our data model should be comprehensive (elaborate), but that does not mean it has to be complicated for the users
10. Check lists are needed for
    1. Use cases (back/front of bridge, mariner and non-mariner, etc.)
    2. Simple output desired
11. Need easier to use production tools for the HO’s and a path on how to transition to using Prod. Specs.
    1. There is a big investment in time and money
    2. There is a lack of common tools and support for leveraging them
12. The Prod Specs developed to this point are not one to one replacements for the publications
13. Clearer view on how to proceed in the future
14. **Action Item 4/WP2 – Agenda item for the NIPWG5 – Develop a roadmap on how to assist HOs to convert their current data into S-10x products**
15. Need to keep in mind interoperability moving forward
16. We are an IHO working group and we have very specific Terms of Reference that can cause problems with expectations but the IHO has a more broad view to provide data to many stakeholders
17. Keep in mind things that are not on the bridge at all such as reports, etc.
18. Wiki use and value for all WG’s
19. Usefulness of prose in NPUBS . . . human reader would benefit as well from a leaner version of the products

**3. Adoption NIPWG3 Minutes**

The meeting approved the Final Minutes of NIPWG3 with no modifications as circulated.

***3.1 Corrections***

None noted.

***3.2 Review of Action Items from NIPWG3***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Planned tasks for this Reporting Period** | | | | | | |
| Action Item | Actor | Task Description | Start Date | Target End Date | Percent Complete | Task Status |
| 0/1 | TP | Complete MPA Product Specification for circulation to HOs | 04/2011 |  | 100 | Completed |
| 0/2 | NIPWG | Circulate the MPA Product Specification inside HOs and obtain comment |  |  | 100 | completed |
| 0/5 | NIPWG | Revisit the test case paper SNPWG 18-8.1 |  |  |  | Closed, to be reopened if necessary |
| 1/10 | NIPWG | First, NIPWG needs to advance the harmonization discussion between S-101 and S-122. After that, we need to update the MPA Application Schema (without context features) according to the harmonization process. Next we need to generate the Feature Catalog. The Application Schema and Feature Catalog will be sent to KHOA for testing. If the Portrayal portion is incomplete, we can use the KHOA portrayal catalog builder for testing. | 07/2015 | 03/2017 |  | Closed |
| 1/15 | YB | Monitor progress of the EAHC e-MIO project and provide an update at NIPWG2 | 07/2015 | 05/2017 |  | Closed, reopened as NIPWG 4/24 |
| 2/04 | BvS, ML | Investigate the gaps of the NIPWG data model by investigating requests when approaching a harbor | 04/2016 | 12/2017 |  | Closed, reopened as NIPWG 4/10 |
| 2/09 | WdT, JS-F | Include relevant Mariners Handbook parts in the Physical Environment test data set and to initiate the first mapping | 04/2016 | 08/2016 | 50 | Closed, reopened as NIPWG 4/25 |
| 2/15 | IP, JS-F | KHOA will collect test data Product Catalog from member states for testing purposes and Jens will prepare a NIPWG letter for the request to member states. | 04/2016 | 07/2016 | 100 | Completed |
| 3/01 | BS | Develop a matrix  which shows the interrelation of various ProdSpecs which are under the HSSC responsibility  (example – currents off the Dutch coast or the classification of winds and storms worldwide).  Develop a running list of examples of how product specifications interact with each other current as well as examples of how they might be shown to support each other at the same time.  This will be an ongoing brief at the beginning of each meeting. | 12/2016 | 05/2017 | 100 | Completed |
| 3/02 | JS-F | Incorporate the request of the completion of the DCEG builder development in the NIPWG report to S-100 WG. | 12/2016 | 03/2017 | 100 | Completed |
| 3/03 | WdT, MK | Compare the current Register entries against the UML diagrams on the Wiki page. | 12/2016 | 02/2017 | 100 | Completed |
| 3/04 | JS-F | Generate a NIPWG letter requesting members to investigate if any of this information is provided in any member state publications if the proposals have an impact on the stakeholders. | 12/2016 | 03/2017 | 100 | Completed |
| 3/05 | JS-F | Generate a NIPWG letter by the end of December requesting members to review and approve the MPA DCEG Part 1, 2, 3 by the end of March 2017. | 12/2016 | 12/2016 | 100 | Completed |
| 3/06 | WdT | Check with his office to see if they can allocate time to finalize the DCEG. Initially, the current version of the DCEG will need to be edited. This includes combining comments from AI 3/05 submitted by NIPWG and to incorporate them into the DCEG draft if appropriate. A timeline will be delivered as part of the letter. | 01/2017 | 03/2017 | 100 | Completed |
| 3/07 | JS-F | Generate a request to contract out the Prod Spec development. | 12/2016 | 01/2017 | 100 | Completed |
| 3/08 | WdT | Create a short status report for HSSC-9’s consideration benchmarking existing features of physical characteristics existing in S-101, S-411 and S-412, assessing the added values of S-126 items and collect any other use cases. This is to justify the reason NIPWG is “putting on hold” the work. | 12/2016 | 05/2017 | 100 | Completed |
| 3/09 | MK, JS-F | Provide Stefan with a schematic diagram of the Traffic Management Prod Spec | 12/2016 | 03/2017 | 100 | Completed |
|  | SE | Create a draft UML diagram. | 03/2017 | 05/2017 | 100 | Completed |
| 3/10 | YG, TL | Investigate using a contract to complete the Prod Spec including items like the UML diagram and DCEG for S-123. | 12/2016 | 12/2016 | 100 | Completed |
|  | JS-F | Circulate a requirements document to the group for feedback before final submission. | 12/2016 | 01/2017 | 100 | Completed |
| 3/11 | SE | Identify the gaps within S-101 and S-201 which S-125 aimed to address. Letters will be written to S-101 project Team and IALA (ENAV committee) requesting that identified gaps are addressed in their respective Prod Specs. This will allow consideration of the future need of S-125 Prod Spec. | 12/2016 | 03/2017 | 100 | Completed |
| 3/12 | SE | Draft a paper for S-100 WG to explain the need for the Marine Resource Name in the S-101 Prod Spec. | 12/2016 | 03/2017 | 100 | Completed |
| 3/13 | IP, AK | Consider developing a common approach of the new PRIMAR online catalog and S-128. | 12/2016 | 05/2017 | 100 | Completed |
| 3/14 | JS-F | Issue a NIPWG letter asking each member state to consider whether S-128 will support the definition of their products. | 12/2016 | 04/2017 | 100 | Completed |
| 3/15 | BS | Include the following examples (from Action Item 3/16 below) of uncertainty in the visualization workshop in May of 2017. | 12/2016 | 04/2017 | 100 | Completed |
| 3/16 | AK, AR, MK | Provide examples of uncertainty. AK will provide examples from the Norwegian Pilot on dangerous wave areas, AR will provide examples for radio service areas and MK will include examples in Traffic Management. For MPA’s, refer to NIPWG 1/21.3. All examples will be submitted by the end of January 2017. | 12/2016 | 01/2017 | 100 | Completed |
| 3/17 | WdT | Implement the Ice Information compiled by Mike and Ludovico into the Physical Environment data set. | 12/2016 | 05/2017 | 100 | Completed |
| 3/18 | JS-F | Report back to TRANSAS on the outcome of the HSSC decision regarding their request for a ProdSpec on regulatory information. | 12/2016 | 01/2017 | 100 | Completed |
| 3/19 | NIPWG | The meeting must complete the “workshop template” and provide examples of what and how they would like to see presented and discussed by the end of March 2017. | 12/2016 | 03/2017 | 100 | Completed |
| 3/20 | AK | Update NIPWG on the Norwegian policy for meeting carriage requirements and data exchange during NIPWG4. | 12/2016 | 05/2017 | 100 | Completed |
| 3/21 | JS-F | Report to HSSC-9 and seek endorsement to combine a workshop with NIPWG-5. | 12/2016 | 08/2017 |  | Closed; no need at the moment |
| 3/22 | JS-F | Report to HSSC-9 the consolidated MSP Hydrographic Services and to the potential assignment of parts of this MSP to HSSC WG’s. | 12/2016 | 08/2017 |  | Closed, reopened as 4/26 |
| 3/23 | NIPWG | NIPWG members will contact their national IMO representatives to seek support for the establishment of the HGDM and report back the Chair that they have done so. | 12/2016 | 03/2017 | 100 | Completed |
| 3/24 | MK | Update the text box using the ICPC recommendations as well as the UKHO comments (done). | 12/2016 | 12/2016 | 100 | Completed |
|  | JS-F | On behalf of NIPWG, Germany will provide the proposal to the M-3 amendment to the IHO Secretariat by 15 December IAW ACL-10. | 12/2016 | 12/2016 | 100 | Completed |
| 3/25 | NIPWG | NIPWG will monitor the work of the UKCM project team. | 12/2016 | 05/2017 | 100 | Completed |
| 3/26 | MK | Incorporate an example of UKCM in the Traffic Management test data set. | 12/2016 | 05/2017 | 100 | Completed |
| 3/27 | IP | Send a note to NIPWG when the English language version of the Special Overlay is available. | 12/2016 | 02/2017 | 100 | Completed |
| 3/28 | NIPWG | Generate and send a letter to members to be prospective candidates for NIPWG office bearers. | 12/2016 | 04/2017 | 100 | Completed |

**4 NIPWG status of work overview**

The Meeting took note of the presentation on the status of the NIPWG work. This overview was initiated to familiarise new members and to refresh experienced members with the main objectives of the group and the current work status.

**6 S-100 related information**

**6.1 Presentation of the outcome of the recent S-100 meeting**

The Meeting took note of the presentation of the results of the recent developments.

Discussion: After the presentation, the group discussed the need for three people to be on the Domain Control Board. The link for GITHUB is:

<https://github.com/IHO-S100WG>

**8 Proposed M-3 amendments**

The meeting welcomed the Assembly adoption of the proposed M-3 amendment on cable protection.

The meeting took note of the summary of investigations on the impact of proposed M-3 amendments discussed at NIPWG3. Future procedures to amend the revised M-3 resolutions were discussed.

Discussion: Sweden does not oppose the proposed deletion of resolution 9/1962.

Malin LILJENBORG suggested the revision of 5/1937 because of the inconsistency of the header and the content.

Yves GUILLAM suggested that, if there is a need, for addressing the future of the maintenance regime of nautical products in general (NtMs, periodicity, etc.), the possibilities offered by new technologies (POD, near-real time updates, etc.) should be taken into account. This should be addressed as a joint work item for several IHO WGs, if the case is submitted to HSSC meetings for being endorsed as a high/medium priority. Any changes would affect the way HOs are working.

**Action Item 4/01 – Stefan ENGSTRÖM will investigate the reference in IHO resolution 7/2009 concerning time and make a recommendation to the S-100WG if needed. Sept. 2017.**

**Action Item 4/02 – Edward HOSKEN will review IHO resolution 5/1937 to consider references to numbering of radio stations to make a proposal which may include deletion of the resolution. Sept 2017.**

**Action Item 4/03 – Jens and Dave LEWALD will consider the NtM entry to propose amendments to HSSC to reflect the digital provision of data updates. Sept 2017.**

**11 Marine Protected Area Product Specification (S-122)**

**11.1 Presentation of the development of the S-122 product specification**

The Meeting took note of the outcome of the S-122 product specification development. The proposed provision of the results on the NIPWG website was appreciated. The meeting further agreed the proposed continuation of the contract schedule to fulfil the contract. It has been noted that, although the portrayal section remains open, the test data are now ready for testing by third parties.

Discussion: Eivind reminded the group that the reason we went to S-100 was to manage changes more effectively and make system changes easier.

**Action Item 4/04 – Eivind MONG/Raphael MALYANKAR will deliver a paper to the S-100 WG about how to effectively handle incremental changes and new versions. (end of Aug).**

**Action Item 4/05 – As part of the acceptance process, HO’s will need to provide comments (by 30 June 2017 to Chair) to complete the contract (by 18 August 2017), set the version number and send it forward to HSSC. Members must use the template as discussed. This is an ongoing item.**

**Action Item 4/06 – Carlo MARCHI will be the point of contact for the group to collect comments for S-122 and S-123 for anything after the contract is completed (end of June). This is an ongoing item.**

**Action Item 4/07 – Julia POWELL will initiate a proposal to extend S-100 to include additional metadata to support S-122 and S-123. October 2017.**

**Action Item 4/08 – NIPWG will check Category of MPA and provide additional suggestions for their nations. 30 June 2017.**

**12 Radio Services Product Specification (S-123)**

**12.1 Presentation of the development of the S-123 product specification**

The Meeting took note of the outcome of the S-123 product specification development. The proposed provision of the results on the NIPWG website was appreciated. The meeting further agreed the proposed continuation of the contract schedule to fulfil the contract. It has been noted that, although the portrayal section remains open, the test data are now ready for testing by third parties.

Discussion: Action Items 4/05 thru 4/07 apply here as well.

**13 Interoperability of S-100 based Product Specifications**

**13.1 Presentation of the current development status**

The Meeting appreciated the presentation of the S-100WG Chair in that regard. It was noted that this is a very complex topic and that many further investigations are needed. Immediate results cannot be expected.

Discussion: None

**14 Navigational Services Product Specification (S-125)**

**14.1 Feedback of the S-101SubWG and IALA ENAV Committee on addressing data model gaps**

Due to the lack of written IALA documents the presenter decided to provide a verbal presentation which was appreciated and noted.

**Action Item 4/11 – Stefan will continue to monitor progress of IALA S-201 and S-101 and report back to the NIPWG. This is an ongoing item.**

**14.2 Feedback of the S-100WG on Marine Resource Name request**

Considering that the S-100WG minutes were available only few days prior NIPWG4, the meeting took note of the presentation provided by the S-100WG Chair.

**15 Physical Environment Product Specification (S-126)**

**15.1 Status report for HSSC9, added values of S-126 items**

The Meeting took note of the work done on the extension of the test data sample. The meeting also appreciated the work conducted on benchmarking of existing features in other Product Specifications. Further development remains on hold.

**Action Item 4/12 – Wilfred DEN TOOM and Briana will create a listing of what has been defined and what items still need to be completed in S-126. This is to be added as a separate tab to Annex A of NIPWG 4.15.1. Nov 2017.**

**17 Traffic Management Product Specification (S-127)**

**17.1 Addition of Under Keel Clearance (UKC) information**

The meeting took note of the addition of UKC information in S-127, reflecting the request of the UKC Management Project Team (UKCMPT) to integrate UKC information in nautical publications.

Discussion: Awareness of the existence of other UKC system was noted. Integrating the UKC management system depends on the national shipping authorities.

**Action Item 4/13 – Jens will check with UKCMPT chair regarding reporting existence of UKCM information in NPUBS. Jul 2017.**

**Action Item 4/14 – Mike KUSHLA will check other Under Keel Clearance systems for differences from the Torres Strait and update the Test Data Set as needed. Aug. 2017.**

**Action Item 4/15 – Jens will check at HSSC9 to see if this is still part of NIPWG’s bailiwick.**

**17.2 Result of the Application Schema (UML) development**

The meeting recognised and appreciated the work done on the generic UML development.

**17.3 Further development of Prod Spec.**

The meeting recognised and appreciated the work done for the development of S-122 and S-123 by Portolan Sciences and supported the idea to outsource the S-127 completion.

**Action Item 4/16 – Jens will seek endorsement of HSSC9 to outsource the completion of S-127. Nov. 2017.**

**19 Catalog of Nautical Products Product Specification (S-128)**

**19.1 Presentation of content**

The Meeting took note and discussed the development of the Catalog of Nautical Products ProdSpec.

**Action Item 4/17 – Inyoung PARK will provide an updated data model to NGA. Sept. 2017.**

**Action Item 4/18 – Josh CLAYTON will a conduct the UML check and forward it to the chair. Nov. 2017.**

**Action Item 4/19 – Jens will distribute a letter to the NIPWG to check if all the comments have been incorporated in the updated model. Dec 2017.**

**41 MSC/NCSR**

**41.1 Presentation of the results related to NIPWG work**

The Meeting agrees with the principles of NIPWG 4 41.1.

Discussion: Provisions were discussed and data can be provided in various ways. NIPWG considers that the IHO supports MSP development through the delivery of data standards rather than driving service delivery requirements.

**Action Item 4/20 – NIPWG will continue to monitor the developments of S-124 and will consider the outcome of MSC 98 and the outcome of the meeting of Harmonization Group on Data Modelling (HGDM). Ongoing.**

**Action Item 4/21 – Dave will attend the initial HGDM meeting as a NIPWG observer and report back to the NIPWG5. Mar 2018.**

**43 IMO’s e-Navigation Maritime Service Portfolio Discussion**

**43.1 Presentation of the status**

The Meeting took notice of the status report.

**Action Item 4/22 – Jens will update the NIPWG 43.1 paper and circulate for review prior to posting on the NIPWG website in the misc. section. Aug 2017**

**45 IMO’s e-Navigation strategy**

**45.1 Summary of the recent IALA eNAV meeting(s)**

The meeting took note of the presentation.

**45.2 Status of the e-Navigation services (MSPs) developments**

The meeting took note of the presentation.

**45.3 Tentative Overview on the IMO’s Maritime Service Portfolio Program**

The meeting took note of the presentation.

**45.4 Discussion of the potential NIPWG contributions**

The NIPWG decided to stand ready and support the development of the guidance on definition and harmonization of the format and structure of MSPs which will be addressed by MSC in 2018 – 2019. We remain confident that NIPWG’s development of Prod.Specs. is convergent with the IMO eNAV implementation strategy.

**50 ToR review**

The Meeting reviewed and discussed the current ToR.

Discussion: No substantial amendments needed.

**Action Item 4/23 – Yves will make editorial changes to the TOR to remove references to Secretariat, etc. Jun.2017**

**53 Work plan for the NIPWG**

The Meeting reviewed and completed the NIPWG work plan.

**55 Election of NIPWG Office bearers**

Since NIPWG4 was the first meeting after the Assembly, the election of office bearers was conducted.

The new NIPWG officers are:

Chair: Jens

Vice Chair: Edward

Tom Loeper (NOAA) will support the NIPWG as secretary.

**57 Any other business**

**57.1 Review of IHO NIPWG website (Miscellaneous / Divers table)**

The meeting took note and agreed on the proposed information provision on the miscellaneous section.

**57.2 Review of the IHMA Port Call Standards**

The meeting took note of the development done by the IHMA on port information provision and the recommendation made at HSSC8 on this matter.

**Action Item 4/09 – Malin will provide a request to the IHMA to provide references to the sources of the definitions where possible. June 2017.**

**Action Item 4/10 – Malin will cross check the IHMA paper with the NPUB data model and provide the gap analysis. Dec 2017.**

**57.3 Review of draft minutes**

The Meeting reviewed and adopted the draft Minutes of NIPWG4. The final Minutes will be prepared by the Secretary servicing this Meeting in close co-operation with all participants.

The meeting renewed the request to deliver the meeting papers at least 3 weeks before the meeting. Papers submitted after that deadline will be handled as Information (INF) papers. The meeting agreed that submitters of INF papers could not expect that the submitted topic will be discussed. Exceptions due to papers which are discussing urgent matters are on Chair group’s decision.

**57.4 Assembly decisions and review of relevant HSSC actions**

The meeting took note of the presentation by Yves.

**57.5 Farewell to Alain ROUAULT**

The Chair as well as the rest of the NIPWG thanked Alain ROUAULT for his many years of service and contributions to the WG and wishes him all the best in retirement.

**59 Date and place of next meeting**

The NIPWG5 meeting will be held in Genoa (Italy) 12-16 March 2018.

The next meetings are proposed to be held:  
NIPWG6 in Rostock, Germany in January of 2019  
NIPWG7 in St. Petersburg (tbc – Monaco as an alternate) in November 2019

**Annex A: List of Action Items**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Planned tasks for this Reporting Period** | | | | | | |
| Action Item | Actor | Task Description | Start Date | Target End Date | Percent Complete | Task Status |
| 4/WP1 | JS-F | Approach the IHO for continuous maintenance of the wiki | 05/2017 | 07/2017 |  |  |
| 4/WP2 | JS-F | Agenda item for the NIPWG5 – Develop a roadmap on how to assist HOs to convert their current data into S-10x products | 05/2017 | 03/2018 |  |  |
| 4/01 | SE | investigate the reference in IHO resolution 7/2009 concerning time and make a recommendation to the S-100WG if needed. | 05/2017 | 09/2017 |  |  |
| 4/02 | EH | review IHO resolution 5/1937 to consider references to numbering of radio stations to make a proposal which may include deletion of the resolution. | 05/2017 | 09/2017 |  |  |
| 4/03 | JS-F  DL | consider the NtM entry to propose amendments to HSSC to reflect the digital provision of data updates. | 05/2017 | 09/2017 |  |  |
| 4/04 | EM, RM | deliver a paper to the S-100 WG about how to effectively handle incremental changes and new versions. | 05/2017 | 08/2017 |  |  |
| 4/05 | NIPWG | to provide comments (by 30 June 2017 to Chair) to complete the contract (by 18 August 2017), set the version number and send it forward to HSSC. Members must use the template as discussed. | 05/2017 | Ongoing |  |  |
| 4/06 | CM | will be the point of contact for the group to collect comments for S-122 & S-123 for anything after the contract is completed (end of June). This is an ongoing item. | 05/2017 | Ongoing |  |  |
| 4/07 | Mrs. JP | will initiate a proposal to extend S-100 to include additional metadata to support S-122 and S-123. October 2017. | 05/2017 | 10/2017 |  |  |
| 4/08 | NIPWG | will check Category of MPA and provide additional suggestions for their nations. | 05/2017 | 06/2017 |  |  |
| 4/09 | ML | provide a request to the IHMA to provide references to the sources of the definitions where possible. | 05/2017 | 06/2017 |  |  |
| 4/10 | ML | cross check the IHMA paper with the NPUB data model and provide the gap analysis. | 05/2017 | 12/2017 |  |  |
| 4/11 | SE | will continue to monitor progress of IALA S-201and S-101 and report back to the NIPWG. | 05/2017 | Ongoing |  |  |
| 4/12 | WdT, BS | will create a listing of what has been defined and what items still need to be completed in S-126. This is to be added as a separate tab to Annex A of NIPWG 4.15.1. | 05/2017 | 11/2017 |  |  |
| 4/13 | JS-F | will check with UKCMPT chair regarding reporting existence of UKCM information in NPUBS. | 05/2017 | 07/2017 |  |  |
| 4/14 | MK | will check other Under Keel Clearance systems for differences from the Torres Strait and update TDS as needed. | 05/2017 | 08/2017 |  |  |
| 4/15 | JS-F | will check at HSSC9 to see if this is still part of NIPWG’s bailiwick. | 05/2017 | 11/2017 |  |  |
| 4/16 | JS-F | to seek endorsement of HSSC9 to outsource the completion of S-127. Nov. 2017. | 05/2017 | 11/2017 |  |  |
| 4/17 | IP | will provide an updated data model to NGA | 05/2017 | 09/2017 |  |  |
| 4/18 | JC | will a conduct an UML check and forward it to the chair. | 05/2017 | 11/2017 |  |  |
| 4/19 | JS-F | will distribute a letter to the NIPWG to check if all the comments have been incorporated in the updated model | 05/2017 | 12/2017 |  |  |
| 4/20 | NIPWG | will continue to monitor the developments of S-124 and will consider the outcome of MSC 98 and the outcome of the meeting of Harmonization Group on Data Modelling (HGDM). | 05/2017 |  |  | ongoing |
| 4/21 | DL | will attend the initial HGDM meeting as a NIPWG observer and report back to the NIPWG5 | 05/2017 | 03/2018 |  |  |
| 4/22 | JS-F | will update the NIPWG 43.1 paper and circulate for review prior to posting on the NIPWG website in the misc. section. | 05/2017 | 08/2017 |  |  |
| 4/23 | YG | will make editorial changes to the TOR to remove references to Secretariat, etc | 05/2017 | 07/2017 |  |  |
| 4/24 | IP | Monitor progress of the EAHC e-MIO project and provide an update at NIPWG if appropriate | 07/2015 |  |  | ex 1/15  Ongoing |
| 4/25 | WdT | Include relevant Mariners Handbook parts in the Physical Environment test data set and to initiate the first mapping | 04/2016 |  | 50 | ex 2/09  On hold |
| 4/26 | JS-F | Report to HSSC-9 the consolidated MSP Hydrographic Services and to the potential assignment of parts of this MSP to HSSC WG’s. | 12/2016 | 08/2017 |  | ex 3/22 |

**Variance Details:**

|  |
| --- |
| Xxxxx |

**Corrective Actions:**

|  |
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| Xxxxx |

**Annex B: Agenda**

**Agenda (as conducted)**

|  |
| --- |
| **4th Meeting of the Nautical Information Provision Working Group (NIPWG)**  **In conjunction with the visualisation of nautical information workshop**  **22–26 May 2017, Durham (New Hampshire), USA** |

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| --- | --- | --- | --- | --- |
| **No.** | **Agenda Item** | **Lead** | **Time** | **Docs** |
|  | **Monday, 22 May Forenoon (Visualisation Workshop)** |  |  |  |
| 1. | Opening and administrative arrangements | JS-F | 9 am |  |
|  | Opening address on behalf of the UNH |  |  |  |
| 2. | Adoption of the Agenda | JS-F |  | 4-2 |
|  | Interaction of HSSC/IRCC ProdSpec |  |  |  |
| **W1** | Introduction to the workshop and Demos | BS | 9:20 am |  |
| **W2** | Demo Outline |  |  |  |
| S-122 MPA | Anthropocene Institute: test-bed for MPA display | VZ | 9:25 am | WP2-1 |
| S-126 (phys. env), mariner services, routing guide, harbour infrastructure | NO: 1. Web-based presentation of Norwegian Pilot information  2. Web-based NPUB provision and (Cyber) Security | AP | 09:45 am | WP2-3 |
| UNH: iCPilot | BS | 10:00 am |  |
| S-124  Nav Warnings | Canada: Nav Warning system of the future | EM | 10:05 am | WP2-5 |
|  | *BREAK* |  | 10:20 am |  |
| NTM Viewers  (S-1xx) | KHOA - Service for Safety navigation | IP | 10:35 am | WP2-6 |
| DK: „Nautical information provision in the digital Danish Port and Bridge Information System ([www.danskehavnelods.dk](http://www.danskehavnelods.dk))” | AJ | 11:00 am | WP2-7 |
| UNH - ChUM - Chart Updates Mashup | BS | 11:20 am |  |
| (JHOD) - NTM and NAVAREA viewer | KN | 11.40 am | WP2-9 |
| Multiple products viewed together | BaRoView (KHOA) multiple datasets in 3D | IP | 12:00 pm | WP2-10 |
|  | *LUNCH – Holloway Commons Meal Hall UNH MUB* |  | 12:30 pm |  |
|  | **Monday, 22 May Afternoon (Visualisation Workshop)** |  |  |  |
| **W3** | S-111/S-126 current/tide data examples/discussion | BS | 1:30 pm | WP3-1 |
|  | S-412 weather data examples/discussion | JP | 2:00 pm | WP3-2 |
|  | US eMSI group needs/concerns discussion | BT | 2:30 pm | WP3-3 |
|  | *BREAK – Group Pictures* |  | 3pm |  |
|  | Open Discussion on following topics   * description of use cases of the data, * what is needed? (by HOs) * what users want to see (by OEM) | JS-F | 3:20 pm |  |
| User requirements | * *END OF DAY 1* |  | 5 pm |  |
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| **No.** | **Agenda Item** | **Lead** | **Time** | **Docs** |
|  | **Tuesday, 23 May Forenoon (Visualisation Workshop)** |  |  |  |
| **W4** | Production systems: Examples and Questionnaire Results | JS-F | 9 am |  |
|  | US Coast Pilot system | TL | 9:15 am |  |
|  | US Production system | TL | 9:45 am |  |
|  | *BREAK tour of the Data Visualization Research Lab* |  | 10:15 am |  |
|  | BSH Publication system | JS-F | 10:30 am |  |
|  | Data provision (level of granularity pro/cons) | JS-F | 10:45 am |  |
|  | Organized Discussion on HO’s current systems   * Similarities   + Where are there similarities between the HO’s production systems?   + Similarities between the current NIPWG data models and HO’s data. | JS-F/  BS | 11:00 am |  |
|  | * Needs   + What are the specific data elements requested by HOs which must be provided to the mariner?   + Identification of gaps between the outline and the request of HOs | JS-F | 11:40 am |  |
|  | *LUNCH – Memorial Union Building Dining Hall* |  | 12:00 pm |  |
|  | **Tuesday, 23 May Afternoon (Visualisation Workshop)** |  |  |  |
|  | * Execution   + How do HO’s make it happen? *how to get from the current format(s) to a S-100 conformant structure*   + How do the attributes and features discussed in the meetings tie into the final product that is expected from the product specifications developed? | JS-F | 1:00 pm | WP4-3  Annex A  Annex B  Annex C |
|  | Workshop interrupted |  |  |  |
| 13 | Interoperability of S-100 based Product Specifications |  |  |  |
| 13.1 | Update on the development status | Mrs. JP+  EM | 1:40 pm | 4-13.1 |
| 13.2 | Discussion on the paper | JS-F |  |  |
|  | Workshop resumed |  |  |  |
| **W5** | Brainstorming   * Visual outputs in ECDIS, Discussion of graphical solutions and open topics left from previous sessions | JS-F | 3:00 pm |  |
|  | *END OF DAY 2* |  | 4:00 pm |  |
|  | Evening Excursion UNH facilities (survey/research boat) and Group Dinner (attendee’s expense and shared transport costs) |  |  |  |

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| **No.** | **Agenda Item** | **Lead** | **Time** | **Docs** |
|  | **Wednesday, 24 May Forenoon (Visualisation Workshop)** |  |  |  |
|  | Summary of the lessons learned from M-T | JS-F | 9 am |  |
| **W6** | Technical Workshop  Objective: each HO leaves with their MPA data mapped to current S-122 data structure.   * Introduce the NIPWG Wiki site * Introduce the IHO registry * Show how NIPWG Wiki and IHO registry work together | JS-F/  BS | 9:20 am |  |
|  | *BREAK* |  | 10:25 am |  |
|  | * Walk through the S-122 XSD file to create S-122 GML (product) * open discussion about the mappings and questions about the data structure, verify that all needs are met | BS/  VZ | 10:45 am | WP6-2 |
| **W7** | Review of the Workshop results   * Results achieved * Items which have not been discussed | JS-F | 11:35 am |  |
|  | *END OF WORKSHOP* |  |  |  |
|  | *LUNCH – Thai Smile* |  | 12:30 pm |  |

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|  | **Wednesday, 24 May Afternoon (NIPWG general issues)** |  |  |
| 3. | Minutes of NIPWG3 | TL | 4-3 |
| 3.1 | Amendments to the minutes | TL |  |
| 3.2 | Review of Action Items from NIPWG3 | TL |  |
|  |  |  |  |
| 4 | NIPWG status of work (overview) | JS-F | 4-4 |
|  |  |  |  |
| 6 | S-100 related information |  |  |
| 6.1 | Outcome of the S-100WG meeting | Mrs. JP | 4-6.1 |
|  |  |  |  |
| 7 | Assembly related information |  |  |
| 7.1 | Overview of Assembly decisions affecting NIPWG | YG | verbal |
|  |  |  |  |
| 8 | M-3 |  |  |
| 8.1 | Outcome of the impact paper | JS-F | 4-8.1 |
| 8.2 | Discussion on the paper | JS-F |  |
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| **No.** | **Agenda Item** | **Lead** | | **Documents** |
|  | **Thursday, 25 May Forenoon (NIPWG ProdSpecs)** |  | |  |
|  |  |  | |  |
| 11 | Marine Protected Area Product Specification (S-122) |  | |  |
| 11.1 | Presentation of the Product Specification (contracted) | EM+RM | | 4-11.1+12.1  Annex A  Annex B |
| 11.2 | Discussion on the paper | JS-F | |  |
|  |  |  | |  |
| 12 | ProdSpec Radio Services (S-123) |  | |  |
| 12.1 | Presentation of the Product Specification (contracted) | EM+RM | | 4-11.1+12.1  Annex A  Annex B |
| 12.2 | Discussion on the paper | JS-F | |  |
|  |  |  | |  |
| 57 | Any other business |  | |  |
| 57.1 | Review of IHO NIPWG website (Miscellaneous / Divers table) | JS-F | | 4-57.1 |
| 57.2 | Review of the IHMA Port Call Standards | ML | | 4.57.2  Annex |
|  |  |  | |  |
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|  | **Thursday, 25 May Afternoon (NIPWG ProdSpecs)** |  | |  |
| 14 | ProdSpec Navigational Services (S-125) |  | |  |
| 14.1 | Feedback of the S-101SubWG and IALA ENAV Committee on addresses data model gaps | SE | | 4-14.1 |
| 14.2 | Feedback of the S-100WG on Marine Resource Name request | Mrs. JP | | 4-14.2 |
| 14.3 | Discussion on the paper | JS-F | |  |
|  |  |  | |  |
| 15 | ProdSpec Physical Environment (S-126) |  | |  |
| 15.1 | Status report for HSSC9, added values of S-126 items | WdT | | 4-15.1  Annex A |
| 15.2 | Discussion on the paper | JS-F | |  |
|  |  |  | |  |
| 17 | ProdSpec Traffic Management (S-127) |  | |  |
| 17.1 | Addition of UKC information | MK | | 4-17.1  Annex A  Annex B  Presentation |
| 17.2 | Result of the Application Schema (UML) development | MK+  SE+  JS-F | | 4-17.2 |
| 17.3 | Discussion on the paper | JS-F | |  |
|  |  |  | |  |
| 19 | ProdSpec Catalogue of Nautical Products (S-128) |  | |  |
| 19.1 | Presentation of the work status | IP | | 4-19.1 |
| 19.2 | Discussion on the paper | JS-F | |  |
|  |  |  | |  |
| 50 | ToR review | | MK;  J S-F | See NIPWG website |
|  |  | |  |  |
| 53 | Work plan for the NIPWG (status of HSSC8 action items) | | JS-F | See NIPWG and HSSC websites |
| 59 | Dates and places of next meeting(s) | | JS-F |  |
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| **No.** | **Agenda Item** | **Lead** | **Documents** |
|  | **Friday, 25 May (NIPWG e-nav)** |  |  |
| 55 | Election of the new office bearer |  |  |
| 55.1 | Nominees and election procedure | JS-F | 4-55.1 |
|  |  |  |  |
| 41 | MSC/ NCSR |  |  |
| 41.1 | Presentation of the results related to NIPWG work | JS-F | 4-41.1 |
| 41.2 | Discussion of what is relevant for NIPWG work | JS-F |  |
|  |  |  |  |
| 43 | IMO’s e-Navigation Maritime Service Portfolio Discussion |  |  |
| 43.1 | Presentation of the status | JS-F | 4-43.1 |
| 43.2 | Discussion of the development coordination | JS-F |  |
|  |  |  |  |
| 45 | IMO’s e-Navigation strategy |  |  |
| 45.1 | Summary of the recent IALA eNAV meeting(s) | JE | 4-45.1 |
| 45.2 | Status of the e-Navigation services (MSPs) developments | JE | 4-45.2 |
| 45.3 | Tentative Overview on the IMO’s Maritime Service Portfolio Program | JS-F | 4-45.3  Annex |
| 45.4 | Discussion of the potential NIPWG contributions | J S-F |  |
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| AJ | Allan Jensen (DK) |
| AP | Anniken Puntervold (NO/ NHS) |
| BS | Briana Sullivan (U.S./ UNH) |
| BT | Brian Tetreault (U.S./ USACE) |
| DL | Dave Lewald (U.S./ USCG) |
| EM | Eivind Mong (Portolan Sciences) |
| IP | Inyoung Park(KHOA/ ROK) |
| JC | Joshua Clayton (U.S./ NGA) |
| JE | Jon Leon Ervik, (NO, IALA rep) |
| Mr. JP | Joe Phillips (U.S./ NOAA) |
| Mrs. JP | Julia Powell (U.S./NOAA) |
| JS-F | Jens Schröder-Fürstenberg (GE) |
| KN | Kenji Naito (JP) |
| MK | Mike Kushla (U.S./ NGA) |
| ML | Malin Liljenborg (SE) |
| RM | Raphael Malyankar (Portolan Sciences) |
| SE | Stefan Engström (FI) |
| TL | Thomas Loeper (U.S./ NOAA) |
| VZ | Virgil Zetterlind (U.S./ Anthropocene Institute) |
| WdT | Wilfred den Toom (NL) |
| YG | Yves Guillam (IHO Sec.) |

Work sessions:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Monday | Tuesday | Wednesday | Thursday | Friday |
| 0900–1030 | 0900–1030 | 0900–1030 | 0900–1030 | 0900–1030 |
| 1045–1240 | 1045–1220 | 1045–1200 | 1045–1200 | 1045–1400 |
| 1340–1500 | 1330–1500 | 1330–1500 | 1330–1500 |  |
| 1515–1800 | 1515–1600 | 1515–1900 | 1515–1900 |  |

**Annex C: List of Attendees**

NAUTICAL INFORMATION PROVISION  
WORKING GROUP (NIPWG)

\* Visualisation of nautical information workshop

[A Working Group of the Hydrographic Services and Standards Committee (HSSC)]

Durham, 22 – 26 May 2017

List of Participants

|  |  |  |
| --- | --- | --- |
| **IHO MS** | **Name** | **email** |
| Brazil | Ana Emilia de Souza Silva | anaemiliasouza@yahoo.com.br |
| Denmark | Allan Idd Jensen | alije@gst.dk |
|  | Pelle Aagaard | petar@gst.dk |
| Finland | Stefan Engström | stefan.engstrom@fta.fi |
|  | \* Mikko Hovi | mikko.hovi@liikennevirasto.fi |
| France | Alain Rouault | alain.rouault@shom.fr |
| Germany | Jens Schröder-Fürstenberg | jens.schroeder-fuerstenberg@bsh.de |
| Italy | Carlo Marchi | carlo.marchi@marina.difesa.it |
|  | Elena Armanino | elena\_armanino@marina.difesa.it |
| Japan | Kenji Naito | ico@jodc.go.jp |
| Netherland | Wilfred den Toom | WF.d.Toom@mindef.nl |
| Norway | Jon Leon Ervik | jon.leon.ervik@kystverket.no |
|  | Anniken Puntervold | kveann@kartverket.no |
|  | Bente Berggraf | bente.berggraf@kartverket.no |
| Republic of Korea | Inyoung Park | piyocean@korea.kr |
| Spain | Alejandro Herrero Pita | ihmesp@fn.mde.es |
| Sweden | Malin Liljenborg | Malin.Liljenborg@Sjofartsverket.se |
| UK | Edward Hosken | edward.hosken@ukho.gov.uk |
| US | Joshua Clayton | joshua.r.clayton@nga.mil |
|  | Brian Tetreault | brian.j.tetreault@usace.army.mil |
|  | Michael Kushla | Michael.S.Kushla@nga.mil |
|  | \* Julia Powell | Julia.Powell@noaa.gov |
|  | \* Colby Harmon | colby.harmon@noaa.gov |
|  | Jason Strom | stromjd1@nga.mil |
|  | R. David Lewald | Robert.D.Lewald@USCG.MIL |
|  | Tom Loeper | thomas.loeper@noaa.gov |
| IHO | Yves Guillam | adcs@iho.int |
| **Technical Experts** |  |  |
| US (SPAWAR) | Seairth Jacobs | sjacobs@wrsystems.com |
| US (NOAA Weather) | \* Joseph Phillips | joseph.t.phillips@noaa.gov |
| US (Antrophocene Institute) | Virgil Zetterlind | virgil@anthinst.org |
| US (UNH) | Briana Sullivan | briana@ccom.unh.edu |
|  | Steven Johnson | overcooked.lobster@ccom.unh.edu |
| US (Portolan Sciences) | Raphael Malyankar | raphaelm@portolansciences.com |
|  | Eivind Mong | eivind@mail4mong.name |
| CA (IIC Technologies)) | Christopher Hudson | Chris.Hudson@iictechnologies.com |
|  | Gerd Glang | gerd.glang@iictechnologies.com |
| GE (SevenCs) | Holger Bothien | bo@sevencs.com |

Annex D: U**pdated NIPWG Work Plan**

# NIPWG WORK PLAN 2017-18 *(approved by HSSC8 and revised at NIPWG4)*

**Tasks**

|  |  |
| --- | --- |
| D | Maintain Publication S-12 “Standardization of List of Lights and Fog Signals” (IHO Task 2.6.3.2) |
| E | Maintain Publication S-49 “Recommendations concerning Mariners’ Routeing Guides” (IHO Task 2.6.3.3) |
| F | Establish and monitor, in liaison with the S-100WG, the project teams required to specify and develop nautical information layers for use in ECDIS (IHO Task 2.6.2) |
| G | Develop high level specifications for a combined Marine Service Portfolio (MSP) covering the provision of hydrographic services to mariners in accordance with the IMO e-navigation strategy implementation plan |
| H | Develop a test and implementation plan for the development of the MSP “hydrographic services” |
| I | Maintain IHO Resolutions in M-3 relating to Nautical Publications as required (IHO Task 2.6.3.1) |
| J | Liaise with other HSSC WG’s and other IHO and international bodies |
| K | Conduct the 2017 and 2018 meetings of the NIPWG and its sub-group(s) and project team(s) (IHO Task 2.6.1) |

**Work items**

| **Work item** | **Title** | **Priority**  H-high M-medium  L-low | **Next Milestone** | **Start Date** | **End Date** | **Status**  P-Planned  O-Ongoing  C-Completed S-superseded | **Contact Person(s)** | **Related Pubs / Standard** | **Remarks** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| D.1 | Monitor and assess proposals for amending S- 12 | M | Next meeting | 2014 | Permanent | O |  | S-12 | In close liaison with IALA; see J.4 |
| F.1 | Assess the progress and perspectives of developing specifications for NP data layers in ECDIS and propose the way forward for consideration by HSSC | H |  | 2015 | Permanent | O |  |  | To be considered in the context of the IMO e-navigation strategy implementation.  NIPWG to consider establishing one or more project team(s) in liaison with S-100WG as required (see J.2), in particular to continue the development of Product Specifications currently assigned to the NIPWG. |
| F.2 | Investigate the interaction between Marine Protected Area Product and ENC in ECDIS | H | Draft Product Specification for Marine Protected Areas (S-122) released in 2018 | 2015 | Permanent | O | Chair/Sec |  | In close liaison with the S-100 WG. On target for endorsement by Council - 2. |
| F.3 | Model the NP data where required. | H | Next meeting | 2004 | Permanent | O | Chair/Sec |  | S-100 related. To be included in Hydro domain of the FCD Register. |
| F.4 | Review of objects and attributes | H | Next meeting | 2004 | Permanent | O | Chair/Sec |  | S-100 related. |
| F.5 | Propose amendments to HYDRO domain of the FCD Register | H |  | 2005 | Permanent | O | Chair/Sec |  | S-100 related. To be included in the FCD register |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| F.8.1 | Develop S-12n - Nautical Information Product Specification |  |  |  |  |  |  |  |  |
| F.8.1.1 | For Radio Services | H | NIPWG 4 | 2012 | 2019 | O | Chair/Sec | S-123 |  |
| F.8.1.2 | For Navigational services | L | NIPWG 4 | 2013 |  | P | Chair/Sec | S-125 | On Hold |
| F.8.1.3 | For Traffic management | H | NIPWG 4 | 2013 | 2021 | O | Chair/Sec | S-127 |  |
| F.8.1.3.1 | For Marine Protected Areas | H | NIPWG 4 | 2011 | 2019 | O | Chair/Sec | S-122 |  |
| F.8.1.4 | For Physical environment | L | NIPWG 4 | 2013 |  | P | Chair/Sec | S-126 | On Hold |
| F.8.1.5 | Catalog of nautical products | H | NIPWG 4 | 2016 | 2021 | O | Chair/Sec | S-128 |  |
| G.1 | Monitor the requirements for and provision of nautical information in e-navigation test-beds  Produce NP1 sample data sets |  |  |  |  |  |  |  | According to the tasks assigned by HSSC4. Collection of information to be modelled |
| G.1.1 | For Radio Services | H | NIPWG3 | 2012 | 2017 | C | Chair/Sec | S-123 |  |
| G.1.2 | For Navigational services | H | NIPWG3 | 2012 | 2017 | C | Chair/Sec | S-125 |  |
| G.1.3 | For Traffic management | H | NIPWG3 | 2012 | 2018 | O | Chair/Sec | S-127 |  |
| G.1.4 | For Physical environment | L | NIPWG3 | 2013 |  | O | Chair/Sec | S-126 |  |
| G.1.5 | For Marine Protected Areas | H | NIPWG3 | 2013 | 2016 | C | Chair/Sec | S-122 | Action HSSC8/04 |
|  |  |  |  |  |  |  |  |  |  |
| G.3 | Rules and guidelines for displaying nautical information in ECDIS and in combined Marine Service Portfolios |  |  |  |  |  |  |  |  |
| G.3.1 | Develop basic display principles for NP data intended for use in ECDIS (NP3) | H |  | 2008 |  | O | Chair/Sec | S-52 | Close co-operation with NCWG and S-100WG required. Interoperability Spec to be considered. |
| G.3.2 | Monitor and contribute to the development of IMO guidelines showing how navigation information received by communications equipment can be displayed in a harmonized way and what equipment functionality is necessary. | M |  | 2015 | 2019 | O |  | S-52 | e-nav IMO Strategy Implementation Plan, Task T13 (HSSC6-07.1A refers)  Output number 5.2.6.2 of NCSR biennial agenda 2016-17 |
| G.4 | Initiate consideration of the architecture of the MSP “hydrographic services” | M |  | 2013 |  | C | Chair NIPWG |  | To be considered in the context of the IMO e-navigation strategy implementation plan  e-nav IMO Strategy Implementation Plan, Task T17 (HSSC6-07.1A refers). |
| G.5 | Contribute to considering the future of paper charts in the perspective of the establishment of MSPs | M |  | 2014 |  | O |  |  | Subject to request from NCWG |
| I.1 | Maintain and extend resolutions in M-3 relating to Nautical Publications | M | Next meeting | 2012 | Permanent | O | Chair/Sec NIPWG | M-3 | A review is required due for the harmonization of M-3 information and potential ProdSpecs content |
| J.0 | Liaise with the NCWG | M |  |  | Permanent | O | Chair/Sec NIPWG |  | Establish joint project teams as required and endorsed by HSSC. |
| J.1 | Liaise with the ENCWG | M |  |  | Permanent | O | Chair/Sec NIPWG |  |  |
| J.2 | Liaise with the S-100WG | H |  |  | Permanent | O | Chair/Sec NIPWG |  | Establish joint project teams as required and endorsed by HSSC. |
| J.2.1 | Draft Data Classification and Encoding Guides |  |  |  |  |  |  |  | Document for NPs similar to Use of the Object Catalog |
| J.2.1.1 | For Marine Protected Areas | H | Next meeting | 2011 | 2017 | C | Chair/Sec | S-122 |  |
| J.2.1.2 | For Radio Services | H | Next meeting | 2015 | 2017 | C | Chair/Sec | S-123 |  |
| J.2.3 | Draft Product Specification |  |  |  |  |  |  |  |  |
| J.2.3.1 | For Radio Services | H | NIPWG4 | 2014 | 2017 | C | Chair/Sec | S-123 |  |
| J.2.3.2 | For Navigational services | L |  | - |  | P | Chair/Sec | S-125 |  |
| J.2.3.3 | For Traffic management | H |  | 2011 | 2021 | O | Chair/Sec | S-127 | Depends on contract award |
| J.2.3.4 | For Marine Protected Areas | H | Next meeting | 2011 | 2017 | C | Chair/Sec | S-122 |  |
| J.2.3.5 | For Physical environment | L |  | - | - | P | Chair/Sec | S-126 |  |
| J.2.3.6 | For Digital Catalog of Nautical Products | H | Next meeting | 2016 | 2021 | O | Chair/Sec | S-128 |  |
| J.3 | Liaise with other HSSC WG | M |  | 2004 | Permanent | O | Chair/Sec NIPWG |  |  |
| J.4 | Liaise with IRCC |  |  |  |  |  |  |  |  |
| J.4.1 | Liaise with WWNWS Sub-Committee |  |  |  |  |  |  | S-124 | Monitor developments of S-124 Correspondence Group |
| J.5 | Liaise with other international bodies which contribute to nautical information | H |  | 2015 | Permanent | O | Chair/Sec NIPWG |  |  |
| J.5.1 | Liaise with IALA e-Nav Committee | H |  | 2013 | Permanent | O | Chair/Sec NIPWG |  |  |
| J.5.2 | Liaise with International Harbor Masters’ Association | L |  | 2015 | Permanent | O | Chair/Sec NIPWG |  | See outcome HSSC8 Section 7.10 of the minutes |
| J.5.3 | Liaise with International Cable Protection Committee (ICPC) | M | Dec. 2016 | 2016 | 2017 | O | Chair/Sec NIPWG |  | MOU signed between IHO and ICPC. |

**Meetings** (Task K)

|  |  |  |
| --- | --- | --- |
| **Date** | **Location** | **Activity** |
| 12–16 March 2018 | Genoa, Italy | NIPWG5 |
| Jan 2019 | Rostock, Germany | NIPWG6 |
| Nov 2019 | St. Petersburg, Russian Federation – tbc (fallback Monaco) | NIPWG7 |
| Sept 2020 | Brest (tbc), France | NIPWG8 |

Chair: Jens Schröder-Fürstenberg, BSH, GE Email: jens.schroeder-fuerstenberg@bsh.de  
Vice Chair: Edward Hosken, UKHO, UK Email: Edward.Hosken@UKHO.gov.uk  
Secretary: Tom Loeper, NOAA, USA Email: [thomas.loeper@noaa.gov](mailto:thomas.loeper@noaa.gov)