2nd S100WG Meeting
Note to S100WG on NIPWG Activities

Submitted by:	NIPWG
Executive Summary:	NNPWG issues requiring acknowledgment or action by the S100WG
Related Documents:	S-100, S-101
Related Projects:	NPUB Product Specifications; S-100

1. NIPWG Meetings

Since the last S100WG meeting, the NIPWG held its 2nd meeting in Monaco (March 2016) and its 3rd meeting in Busan, Republic of Korea (Dec 2016).

2. NIPWG tasks

The work of the NIPWG has two main topics. The first topic focuses on the coordination of IHO contributions to the IMO e-navigation initiative and in particular on the contribution to the Maritime Service Portfolios (MSPs) development. The second topic focuses on the development of product specifications to provide nautical publication information to S-100 based ECDIS and other GIS applications.
The latter is of particular interest for the S100WG.

HSSC8 discussed the progress of the various product specifications development. It has been considered that the provision of test products would encourage industry in the development of S-100 based ECDIS prototypes. Consequently, the HSSC charged the NIPWG to prioritise the completion of the S-122 (MPA) and the S-123 (Radio Services) product specifications. During the recent NIPWG meeting the group discussed how to satisfy the HSSC order. Taking into account the discontinuation of the C-Map support to NIPWG works, and further considering the lack of technical expertise in Product Specification development, the WG decided to outsource S-122 and S-123 development. A contract has been established, and work on the S-122 Product Specification will be concluded by the end of March and the work on S-123 by the end of April 2017.
Once these product specifications have been completed, product data sets for each product specification will be established and it is intended to keep these data sets permanently updated.

3. Development of NPUB Product Specifications

S-122 (Marine Protected Area)

The harmonisation work between the S-101 and the S-123 data model is ongoing. It is considered that only a few items are left. Except from those which are affected by the harmonisation work, the data model components have been incorporated into the HYDRO register.
Further development work on the Marine Protected Area Product Specification has been outsourced. The work should be completed by the end of March 2017.

S-123 (Radio Services)

The test data sample is stable. Awaiting the results of the data model harmonisation, the application schema remains unchanged.
Further development work on the Radio Services Product Specification has been outsourced. The work should be completed by the end of April 2017.

S-125 (Navigational Services)

As advised by HSSC8, work on this Product Specification will be put on hold. A work item has been assigned to provide a paper to the S-101WG which addresses gaps between the current S-125 data model and the S-101 data model. If S-101 would be able to fil the gap, the future need of S-125 will be considered.

S-126 (Physical Environment)

As advised by HSSC8, work on this Product Specification will be put on hold. A work item has been assigned to provide a HSSC paper to summarise the current development, to benchmark the existing features of physical characteristics in S-101, S-411 and S-412, to assess the added values of S-126 items, and to collect any other use cases. This is to justify the reason NIPWG is “putting on hold” the work.

S-127 (Traffic Management)

The test data sample is stable. According to the UCKPT request, examples of UKC services will be added to the test data sample. The development of an application schema draft is scheduled for the next couple of months.

S-128 (Catalogue of nautical products)

The development of this product specification is being undertaken by KHOA. The importance of the Meta data harmonization between the S-100 and S-128 has been identified.

4. Data model harmonisation

Data quality model as an extension to the DQWG model

Taking into account that an S-100 based solution for fuzzy areas was rejected by the last S-100WG meeting, the NIPWG developed a Data Quality model for uncertainties which could be universally applied to all NPUB product specifications. This model can be used as an extension to the Quality of non-Bathymetric Data quality model developed by the DQWG.

Proposals to the S-101 DCEG

The development of the S-123 Product Specification raised the question to extend the Information Type "Nautical Information" by adding pictorial information. It was decided to employ the complex attribute "graphics" for that purpose.

The IHO and the ICPC (International Cable Protection Committee) signed a Memorandum of Understanding in 2016. There is a need to provide cable owner information to the mariner in case of the sacrifice of an anchor or fishing gear to prevent cable damage. The data model for cable and cable area has been revised to reflect that request.

Separate papers have been prepared for the S-101PT for further consideration.

Data model harmonization

Taking into account that the HYDRO and NPUB registers have been merged into one HYDRO register, the harmonization work is ongoing and the WG is keeping close contact with the IHO registry manager.

5. Interaction matrix

The NIPWG considered that an increasing number of ProdSpec might require coordination. The matrix in Annex A is the first attempt to check which ProdSpec might interact with another ProdSpec. Additionally, the matrix can be used for further interoperability discussions.

6. Portrayal and visualization workshop

Since 2011, the NIPWG and their predecessor SNPWG have been working on an appropriate portrayal solution for an MPA feature. During NIPWG meetings the need emerged for a workshop to discuss general aspects of the NPUB information presentation on ECDIS and other GIS applications. This workshop is to be held at the University of New Hampshire in May 2017. The workshop is open to anyone interested in exploring visualization options.

7. Request for a DCEG Builder

The development of the S-123 Data Classification and Encoding Guide is an ongoing task for NIPWG and the contractors. The current way to prepare the feature dictionary part has been considered as critical. The NIPWG noted with interest the KHOA initiative to develop a tool which automatically produces the DCEG feature catalogue based on the Feature Catalogue Builder. During the last NIPWG meeting, KHOA informed the meeting that the development has been put on hold until further request. We would be extremely happy to have this tool available for DCEG development of Product Specifications under NIPWG responsibility.

Action Required – S100WG is invited to:

a. note this paper,
b. consider who could attend the visualization workshop;
c. forward the S-101 proposals to the S-101 sub WG;
b. invite KHOA to resume the DCEG Builder development.

Annex A

	s-101	s-102	s-104	s-111	s-112	s-121	**s-122**	**s-123**	**s-124**	**s-125**	**s-126**	**s-127**	**s-128**	**s-1xx ms**	**s-1xx rg**	**s-1xx hi**	s-1xx sp	s-201	s-210	a-230	s-240	s-245	s-246	s-401	s-411	s-412
s-101 ENC																										
s-102 bathy																										
s-104 Tidal																										
s-111 surface curr																										
s-112 DWLD																										
s-121 limits																										
s-122 MPA																										
s-123 radio srvs																										
s-124 nav warn																										
s-125 nav srvs																										
s-126 phys env																										
s-127 traff mgmt																										
s-128 cat of pubs																										
s-1xx marine srvs																										
s-1xx routing guide																										
s-1xx harbor inf																										
s-1xx soc/pol																										
s-201 atn																										
s-210 vts exchg																										
s-230 asm																										
s-240 DGNSS																										
s-245 ASF data																										
s-246 station alm																										
s-401 inland ENC																										
s-411 ice info																										
s-412 weather																										