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S100NW CG

This paper proposes an overview of what we have to do. It is a basis for discussion to develop our work plan.

We have to submit a draft product specification S-100 NW to the approval of WWNWS and HSSC.

This PS must allow the development of solutions, by the operators and by the industry, which meet the needs and the gaps on ships and in organizations on shore, in compliance with the architecture of the e-navigation such as defines by the IMO.

So, we have to review needs and gaps: examine the IMO gap analysis and complete it with needs and gaps from on shore organizations (producers and broadcasters of NW).

The key documents on the e-navigation (eg Report of the e-navigation correspondence group to NAV59) have to be examined.

Documents will be available on S100NW CG web pages.

It will be necessary to make sure that PS answers well the objectives and it will be necessary to demonstrate it. It is an important condition so that our project of standard reaches a consensus. For that purpose, the resolution 2/2007 (see publication M3 of IHO) gives some rules.

In particular, we'll have to supply elements of assessment of the impact on the stakeholders (IHO and no IHO) which will estimate our project of a technical and commercial point of view.
The stakeholders should be involved in our works. To a certain extent, stakeholders should be represented in our group.
Stakeholders and their representative bodies must be identified and we must consider how to involve them.

The main thing of our work is to define the product specification, thus to fill in completely the S10n Product Specification Template (doc. TSMAD27-4.3.9B). We will need the support of the experts S-100 of the TSMAD. How to work with this group is to organize.

The core of our job is to model NW (described in publication IHO S-53) in a correct and organized manner. For this, we will have to use the S-100 framework, using UML class diagram as modelling language with the different objects the UML proposes (class, lists, attributes, etc. and relationships between them).

In this way, in order to work and elaborate our diagrams, the S-100 – Part 1 Conceptual Schema Language gives knowledge about this language. It is important to read this first part of the S-100 to be able to understand and improve the UML class diagram we will work on.

The goal is to elaborate a model for NW, allowing designing the solutions answering to the identified needs and requirements.

It means that our model must be designed to enhance (automate) functionalities related to NW in compliance with the requirements attached to NW. The main areas of functionality are:

- the production of RN
- the management of the RN by the producer
- the broadcast to the clients (ships, ashore services)
- the management of the RN on board
- the management of the RN in ashore services
- the use of RN on board
- the use of RN in ashore services

So, we'll have to imagine some scenarios to model NW and to explain the value of the proposed PS. These scenarios could become some draft performance standards for systems using S-100 NW.

We'll start with a first UML model and we will work through successive rounds. Each version or modification proposed will be explained in particular from the point of view of its added value (e.g. scenario, allowable solutions) keeping in mind that simple models are the best models. S100NW CG members will be invited to correct the diagram in case of mistakes, to precise it if there are questions or if it shows vagueness, to make comments and new proposals with explanations.

Note that it will be likely necessary to model some parts of the environment in which NW are created, sent, and used.

It would be convenient that the relevant studies already made on digital NW by other entities converge toward our group for continuation. It is a point to be considered for the membership of our group and its relations with other entities (for example IALA).

We will also ensure the compatibility or consistency with other PS developed for similar needs in e-navigation framework (TSMAD and IALA could inform us).

When the specification will be rather mature, we'll proceed to tests of production to continue the development.
When the specification will be rather robust, it will be appropriate to practise a test-bed to prove its technical value and refine it still so necessary before approval and implementation.

Note that the PS should be design to facilitate the implementation and the transition period.

From these considerations, a (very) draft work plan could be:

Work Item		Date start	Date end	
Define a work program		January 2014	March 2014	

Review needs and requirements		February 2014	June 2014	
Identify stakeholders		February 2014	June 2014	
Liaise with relevant other bodies – Improve the membership		April 2014	December 2014	
Model NW in concordance with S-100		March 2014	2015	
Develop scenarios using S100 NW		October 2014	2015	
Assess impact on stakeholder		October 2014	2015-2016	
Test-bed		2015	2016	
Submit of S100 NW PS for approval			2016	