

Paper for Consideration by NIPWG

S-126 Physical Environment: status of development

Submitted by:	The Netherlands
Executive Summary:	To investigate the needs of the S-126 product specification and begin the discussion of the interoperability of the S-126 with other related S-100 products.
Related Documents:	Annex A
Related Projects:	S-101, S411, S412 and S-111

Introduction / Background

In NIPWG 3 the question was raised if there was a need for the S-126 product specification. The Netherlands was given the task to see where the various product specifications overlapped to make sure that the S-126 was not unnecessarily repeating data.

Analysis/Discussion

The consensus is that the S-126 product specification will be a textual description of the physical environment extracted primarily from the Sailing Directions publication. Back when NIPWG was SNPWG a list of possible missing items were compiled and put on the working group's wiki page. This list served as the foundation for comparison. In order to better understand how the data in this list might work with other data, verify if there is "overlap" between the data and other products as well as make sure that nothing else important was missing the following steps were taken.

First, the list from the wiki website was matched up with possible related items from the S-101 (ENC), the S-111 (Surface Currents), the S-112 (Tides and water levels), the S-411 (Ice) and the S-412 (MetOcean). Since each of the products which belong to a specific category that would contain a description of the physical environment an ontology was created grouping the items according to their category.

These categories can be summarized in the following list:

- S-101: can be used for the terrestrial and maritime topography.
- S-111/S-112: tidal and current information
- S-411: ice related information
- S-412: sea and atmospheric conditions

After this initial organization occurred the next step was to find actual data from the US Coast Pilot and the German Sailing Directions and match them up with the features in the list. This was hugely beneficial to see what kind of data was available that would ultimately need to be represented in the S-126.

It was clear, after the exercise was complete, that the information in the ENC needed to be expanded with the S-126 physical descriptions of the matching features, and that the other 4 products were designed to carry actual data to depict situational conditions and lacked the local and general knowledge that was housed within the Sailing Directions/Coast Pilot.

It was also discovered that there were items not covered in any of the other products such as volcanic/seismic activities among many others.

Conclusions

There are gaps between S-101/S-126/S-411/S-412 product specifications. Especially since the purpose of S-411 and S-412 is to provide the user with actual situational data, rather than information that can be used in the planning stage. S-101 is also not suitable for replacing S-126, because extensive use of the attribute "SupplementaryInformation" is needed.

There are two possible options moving forward. The first is to expand the appropriate product specifications with attributes that would cover descriptive elements for the data, however, it could disrupt the simplicity of products that typically just carry numerical values and are produced from mathematical models or automated systems. This could also lead to combining planning data with real-time data, which could be good or bad depending on your point of view. The second is to further develop the S-126 product specification with an eye to correlating it with the associated product from other domains.

Recommendations

A S-126 dataset is not required in the view of the SOLAS Carriage requirements, so NIPWG can postpone the development of the S-126 product specification.

There are enough reasons to start the development of the S-126 Product Specification when there are enough resources available. The table in annex A can then be used as a starting point.

Action Required of NIPWG

The NIPWG is invited to:

- a. endorse actions
- b. agree with the conclusions and recommendations