

## **Report of the WG on Standardisation of Digital Exchange of Notices to Mariners**

The NSHC 26<sup>th</sup> Conference held in Cardiff in September 2004 adopted Germany's proposal to promote the standardisation of a common exchange format for digital NtM produced by different HOs. Germany was nominated as task leader for the working group. France, the Netherlands and the United Kingdom volunteered to join the working group.

The working group investigated the following work items:

### *Technical methods in use to produce digital NtM*

- Some HOs already distribute digital versions of their NtM, either
  - in the form of PDF files, and/or
  - extracted from a data base (XML).

### *Current status of exchange of NtM between NSHC members*

- The digital versions in use differ in format and structure similar to the different structure and appearance of the printed NtMs of NSHC members.
- The HO receiving a digital NtM to be re-produced in its own products, has employ laborious and time-consuming methods to make use of the NtM information.
- The digital NtM in XML format provided by the UKHO is the only digital version of NtM distributed at the moment which allows further digital processing.

Recently Germany successfully tested a filter software which extracts selected items from the XML version of the UKHO NtM and stores them in a way suitable for further digital processing. Germany offers to provide this filter software on request.

### *Conclusions:*

The findings of the working group confirmed the general validity of the approach to develop common XML structures and tags for digital NtM. But it should be noted that the implementation status of digital workflows for NtM production as well as the requirements for the exchange of digital NtMs vary considerably among NSHC members.

Because of its advanced status, the existing XML solution of the UKHO appears a suitable standard for a common exchange format between NSHC members for the interim. The UKHO should provide guidance for implementation. Germany has developed software solution to extract selected items.

The style sheets required to visualise and reproduce XML-based NtM data must be developed to the needs of NSHC MS which is considered beyond the scope of the working group.

HOs contributing to the work of the WG have already started to model production data bases which will facilitate the full digital workflow for NtM production.

The most promising approach to model digital NtM articles, appears to use the XML derivative GML for geographic representation, linked to S-100 objects which in turn may be linked to the symbolisation like the Presentation Library of S-52. Netherlands offers to present the work already done for the modelling of digital NtM articles by means of GML.

*Recommendations for the exchange of digital NtM*

- XML/GML should be adopted as the carrier to be used for further harmonisation of digital NtMs.
- The XML version provided by the UKHO should be accepted as the common standard for the interim and the UKHO should provide guidance on how to implement this format.
- To match the style of printed NtMs, style sheets have to be developed individually by MS for the visualisation and reproduction of XML data. This development should include the unified coding for the cartographic symbolisation of the NtM messages.
- The modelling of digital NtM articles by means of GML, linked to S-100 and S-52 should be continued to become the final standard once the affected HOs have upgraded their production systems to the appropriate technical level.

*It is proposed to endorse the recommendations of the working group and to task it to complete its work accordingly.*