

Paper for Consideration by HSSC7

[S-11 INT chart Web service and Management]

Submitted by:	Republic of Korea and IHB
Executive Summary:	This paper introduces a development of INT chart web service and management system.
Related Documents:	S-11 Part B
Related Projects:	INToGIS project

Introduction / Background

1. S-11 Part B - Catalogue of INT Charts is an MS Word showing INT chart coverage in diagram format and metadata in table format. The publication is maintained by the IHB in liaison with all regional INT chart coordinators. Some of the shortcomings with the existing publication are included below:

- Metadata can only be made available in MS Word or PDF document format.
- Correlating information between the graphical maps (showing INT chart limits) and the metadata tables is not easy.
- Maintenance of the publication using the present production methods and document formats is time consuming.
- It is difficult to extract analytical information from the current publication.
- It is difficult to compare INT chart coverage limits with other types of spatial data such as ENC limits.

2. As can be seen in the diagram below, making a correlation between the tables and the graphics can be quite difficult and it is not possible to carry out any type of queries on the data. It is therefore proposed to transfer the contents of the MS Word tables into a spatially enabled database so that the limits (bounding boxes) of all INT charts can be loaded into a GIS system, or displayed as a Web Map Service. In order to achieve this, the metadata in the INT chart tables needs to be modelled so that the content is consistent with a normalized database structure.

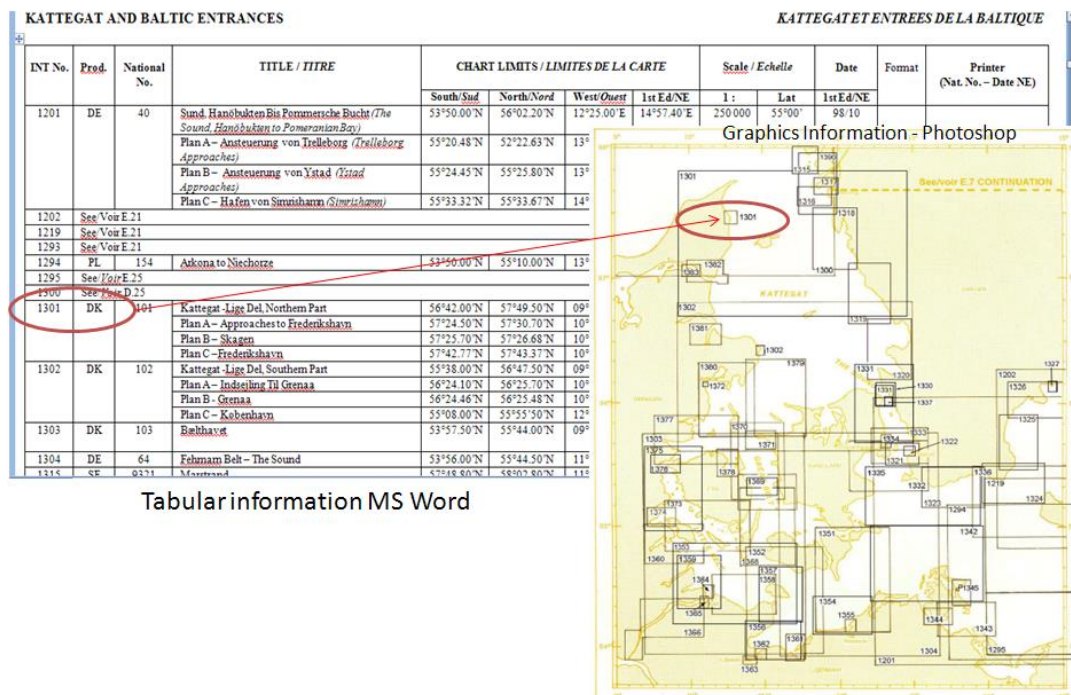


Figure 1 – Current format of S-11 Part B.

3. KHOA/IHB started a joint technical project to transfer the S-11 Part B into a GIS system in 2014, and developed web manager and test ran the system in 2015, and is planning to officially open early 2016.

4. This paper introduces the INToGIS project run by KHOA/IHB and the procedure for the IHO Member States to update the INT chart metadata in the future.

Data model of S-11 Part B GIS Database

5. Many INT charts can have multiple charts plans and each of these plans will usually have a unique coverage area, and characteristics such as scale, title, limits etc. This implies a one-to-many relationship will be required between main INT chart metadata (e.g. number, producer nation, printer nation) and the chart plan metadata. This needs to be reflected in the database design. For those INT charts that do not have multiple plans will be considered as having a single plan.

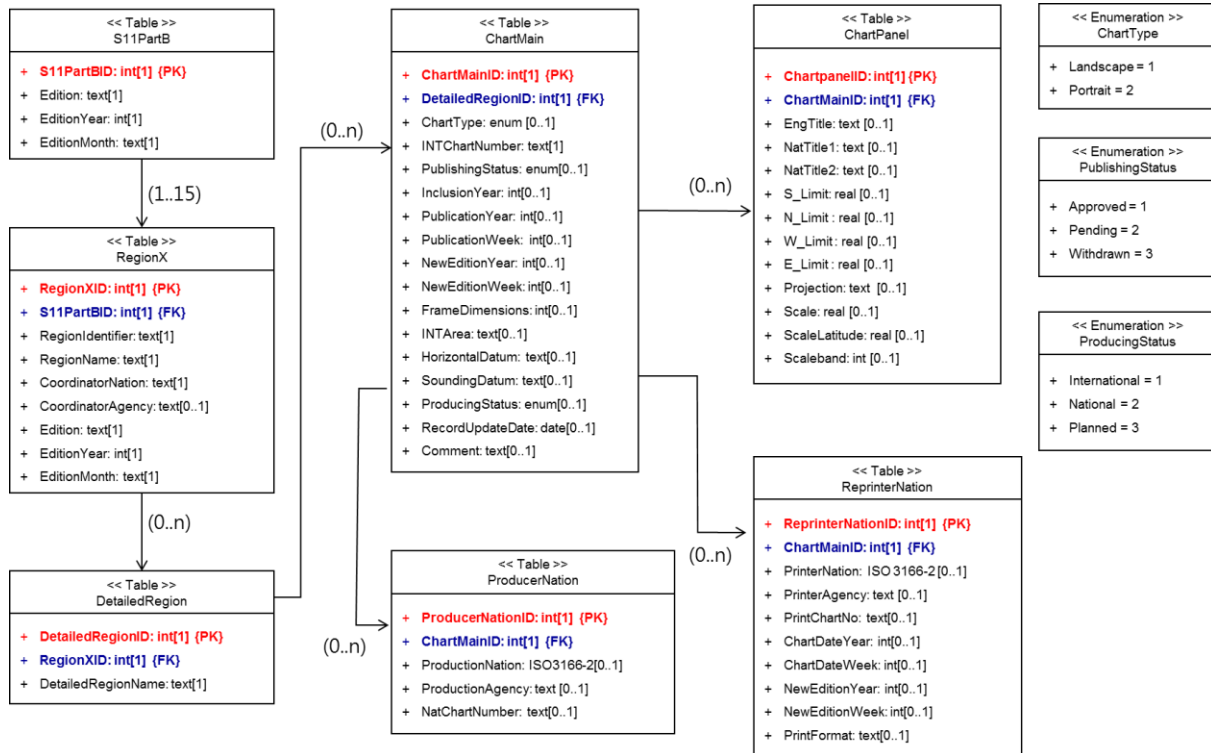


Figure 2 - Draft model of S-11 Part B DB.

6. The S-11 Part B Data Model is being developed as an S-100 compliant product specification and will be made available as an S-100 based service in the future.

INT Chart Web System

7. The INT Chart web system is divided into two types of service – general users and managers.

- 1) **General user service:** Includes functions to easily search INT charts and to download the search results in various formats, making exchange of data with other systems easy.

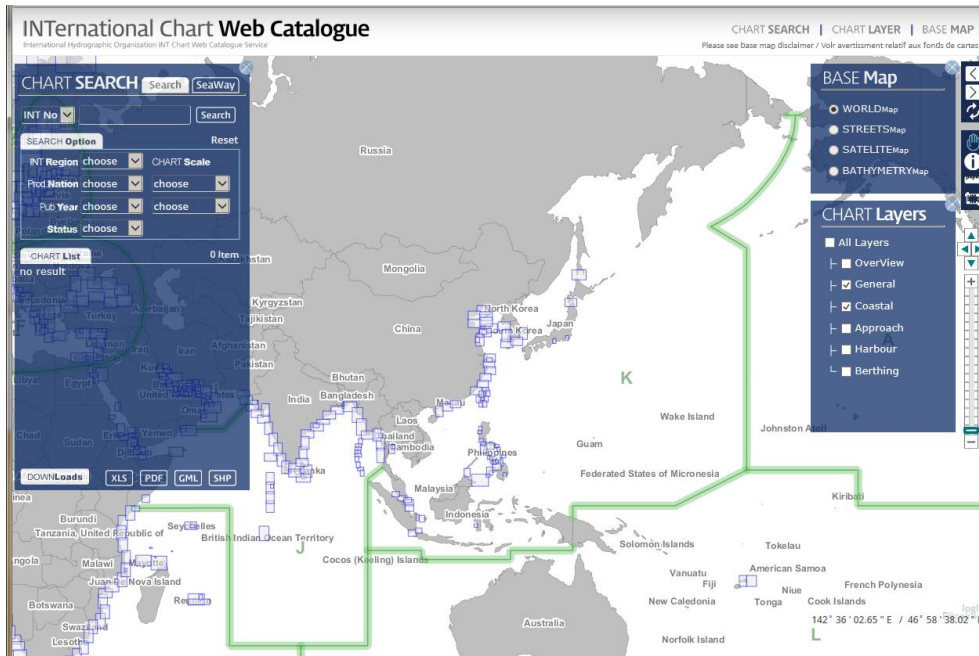


Figure 3 – Screen shot on INT chart web service.

- 2) **INT Chart Web Manager:** Includes functions to apply relevant procedures for the management and updating of INT chart data and to check progress and history.

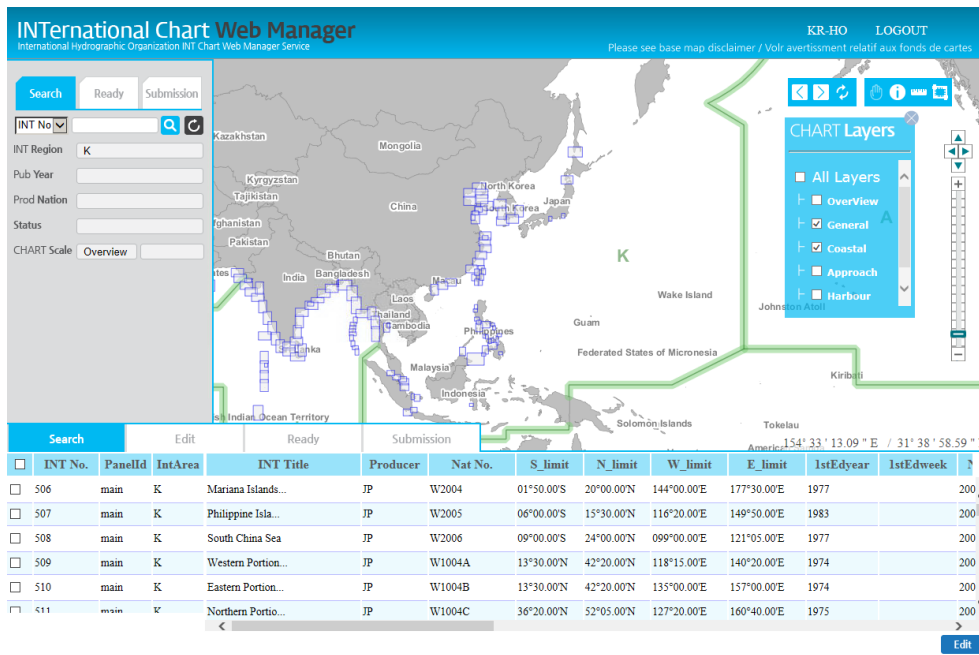
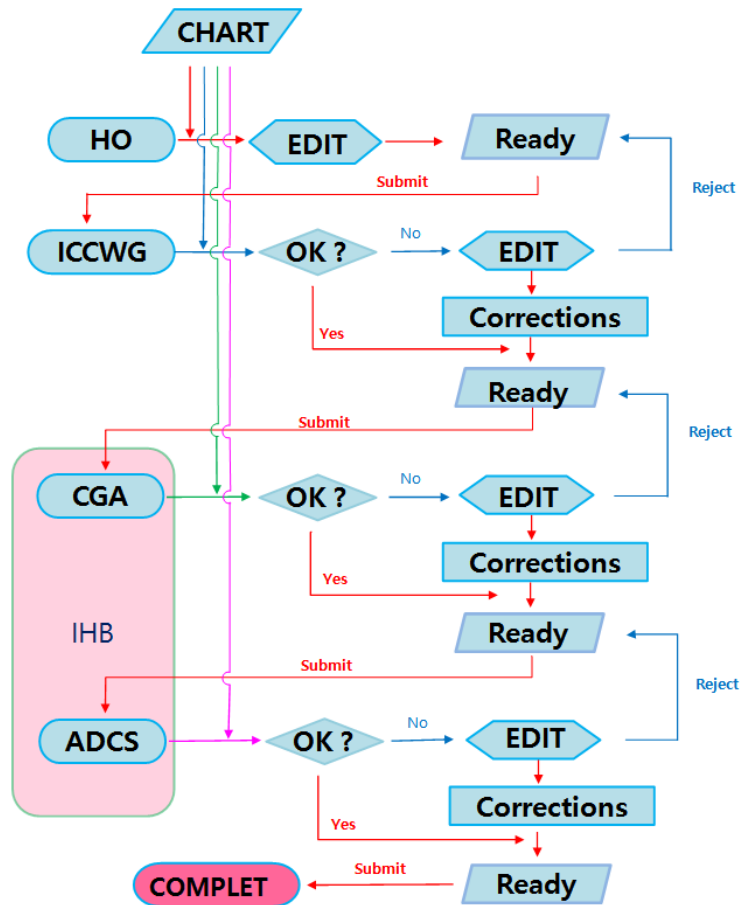


Figure 4 – Screen shot on INT chart web Manager.

8. Where there were to be three groups of users – Hydrographic Offices, regional INT chart coordinators and IHB – the relevant procedure would look like the diagram below.



Justification and Impacts

10. INT chart web service is expected to improve the exchange of data online and the efficiency of management. Therefore, the IHO MSs are invited to update the INT chart data using the web manager system running from 2016.

The HSSC is invited to:

- a. note this report