Hydro -12, Rotterdam

Maritime Source Data Collection, Management and Integration

Author: John K Klippen, Product Manager
Source data...

Source data to a Hydrographic office today originates from a variety of different entities, organizations, departments and offices.

The source quality, content, purpose and impact on product compilation also plays a significant role.

It is challenging to administer and ensure correct sources are used to its best and that the highest possible quality output is achieved.
Source data providers...

RIVER Administrations

HARBOR Administrations
Source data collection…

Remote Location

Central Location (may be the HO)

Local Source Database

Local Source Database

Local Source Database

Web User

Central Source Database

Production Environment

Remote Location

Central Location (may be the HO)
Product Maintenance

Nautical products are mainly maintained based on Notice to Mariners information and other prepared/derived publications. This has been sufficient for keeping paper charts maintained and up-to-date.

This approach was established to provide mariners with corrective information so that they could keep their (paper) products updated.

The same information is also used by the HO themselves for their own product maintenance.
Product Maintenance

This process is sufficient, and required, for the mariner to keep their cartographic/nautical product portfolio updated.

For a Hydrographic office, with e.g. introduction of ”Print on Demand” services (paper charts), Electronic Navigational Charts and other digital products and services there is a much higher demand for more accurate and detailed information at an earlier stage then what the NtM publication can provide.

With today’s technology the time from source receipt to the products are updated is expected to be considerable quicker than what the conventional NtM route provide.
Maritime Source Data based process

To improve the product maintenance, and at the same time streamline the NtM production, Jeppesen, have introduced Source Data Collection Management system.

Which is fully integrated with NtM Booklet production.

The source data, with all affiliated information, are the basic sources for not only the NtM production by is also used for the actual product maintenance.
The conventional procedure

NtM Production

Source receipt → Source/NM Processing → Booklet Compilation → NtM Booklet release

Product Maintenance

Paper chart maintenance → ENC Maintenance → Product updated
The preferred and integrated procedure
The Source to NtM process can be described as follows:

**Source processing**

- **Registering**
  - Record incoming messages
  - Process metadata
  - Attach source data files
  - Status (Permanent, T or P)
  - QC/QA of source message

- **Dispatching**
  - Propagate message to:
    - Relevant NtM section(s)
    - Dispatch to production line
    - QC/QA

- **Notice Editing**
  - Editing NM item
    - Format the textual notice
    - Verify geo info.
    - Cancellation instructions
    - Product linking
    - QC/QA of the NM

- **NtM Booklet processing**
  - Booklet structure/meta data
  - Sectioning
  - QC/QA of NtM booklet (Pre print)
  - Publication

- **ENC Updating**
  - SM Received
    - SM displayed
    - Geo referenced
    - Access to originals
    - QC/QA

- **PC Updating**
  - SM Received
    - SM Displayed
    - Geo referenced
    - ENC ER used
    - QA/QC
The integrated NtM Production system

- Provide a full NtM production environment, from source to publication
- Support all NtM sections and versions
- Pre-defined and approved templates for NM publications
- Source handling and archiving system
- Sources processed to NM items
- Digital tracing/block production integrated
- Fully automated NtM booklet compilation
- Pre Quality checks and final Publication
The integrated NtM Production system

- Minimize the editorial work required
- Digital storage of Notice’s (draft and published)
- Digital storage and integration of NtM booklets
- Fully integrated with digital product catalogue
- Sources and other materials may be loaded and views simultaneously
- Full integration with production lines (ENC and Paper chart)
- Ready to be setup as Web and internet service
NtM Production flow line

Source data register

NtM Publishing

Dispatching

Production & Maintenance
ENC & Paper chart

Tracing/Block production

NtM Editing
# NtM Production processes & roles

The NtM production is completed by following 3 roles:

<table>
<thead>
<tr>
<th>Roles/Profiles</th>
<th>Process</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispatcher</td>
<td>Source Message processing</td>
<td>This role is responsible for the Source Message database, metadata collection and have full editing ability for the SM. Only this role can add/edit, QC and Dispatch a SM. This role have Read rights to Draft NtM database and NtM database.</td>
</tr>
<tr>
<td>Notice Editor</td>
<td>Notice compilation and preparation</td>
<td>This role is holding all rights for Notice processing, editing, QC and finalizing. This role have Read access to SM’s and published Notice to Mariners booklets with its notices. This is utilizing and improving the quality for the editorial work and the QC phase.</td>
</tr>
<tr>
<td>NtM Booklet Publisher</td>
<td>NtM Booklet preparation and completion</td>
<td>This role create the NtM booklet, compile the booklet by including ready notices, setting order and layout and creating Pre-printing. When Pre-print is accepted and approved, NtM Booklet is created. This role have Read rights to SM’s and the draft NtM database.</td>
</tr>
</tbody>
</table>
Product Generation and Updating
NtM Production system setup

centralized storage/retrieval of source messages, Notices to Mariners and NtM booklets;

Stored data are also used by dKart Office for automated chart updating

Source message
NtM Dispatcher
Draft Notice
NtM Editor
Notice
NtM Publisher
NtM booklet

Tracings and Chart blocks

dKart Catalogue  dKart Archive
Dispatching
Source revision handling
Product Updating
Integrated maintenance and product update processes
NtM Editing

Notice Composer

Notice to Mariners

Area, Sub Area: Test SM
Insert F1 3s R in position 44°47'27.42"N - 13°55'00.56"E

enter text of Notice in international (English) language here

Karta (pošljednji ispravak) - Chart (Last correction): HR3C0016; HR4A0003.

Blocks and Tracings Preview

1:4000 43°30'22.28"N; 16°25'13.23"E
When a NtM Booklet is to be released, the NtM Publisher collects all processed NM Items, for each NtM booklet section.

The NtM Publisher organize each NM item and section and allow a pre-publish of the NtM booklet for QC and approval purposes (MS Word and PDF format).

Blocks and/or Tracings are collected and included automatically with the pre-publish document.

When accepted, the NtM booklet is released when the booklet is published.

All ”Draft” NM items are then flagged with a ”Released” flag
Integrated Tracings production
Integrate Block production
Thank you for your attention

For further information or questions, please contact:

John K Klippen
john.klippen@jeppesen.com