



CHRIS18-10.1A

DEVELOPMENT OF A COMPREHENSIVE ONLINE CATALOGUE OF AVAILABLE OFFICIAL CHARTS.

**18th CHRIS Meeting
September 2006**

Anthony Pharaoh - IHB

Requirement to Determine ENC Coverage

6th WEND COMMITTEE MEETING Norfolk, Va, USA, 18-19
May 2001

“Germany recommended that IHB produce a catalogue that accurately shows the actual coverage and availability of ENC data for the shipping community”.

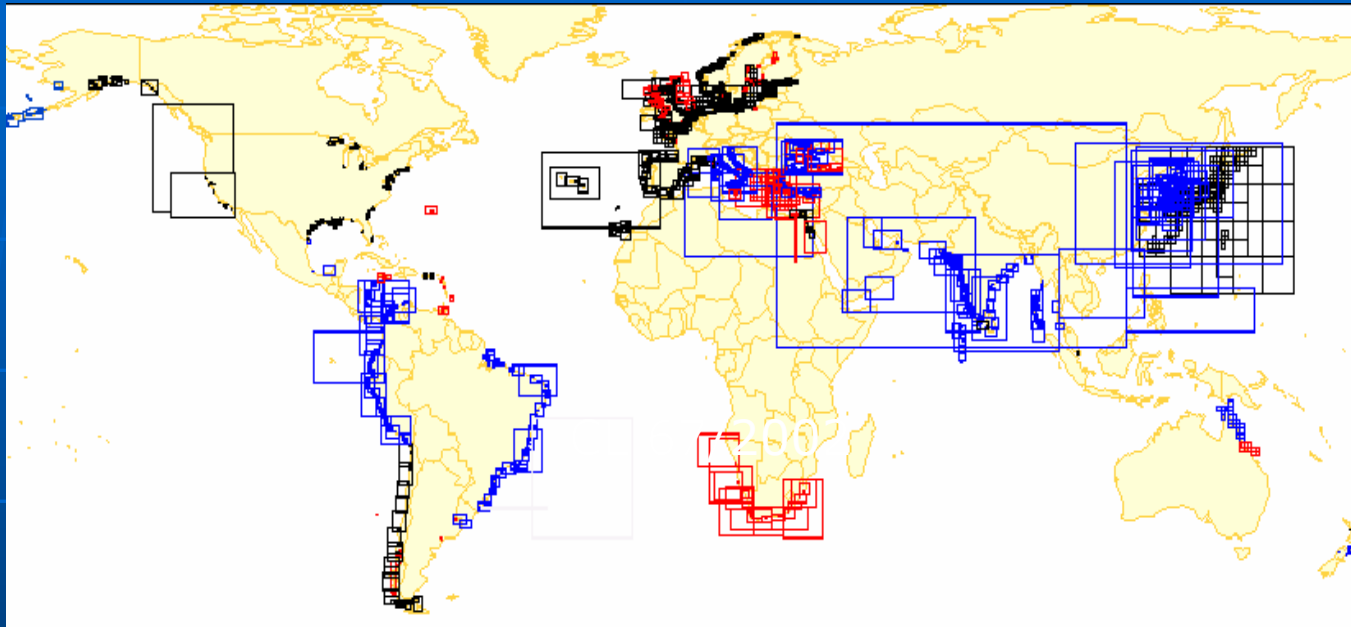
IHB issued CL 67/2002 asking

“.....Member States are requested to **provide the information** below for every ENC cell already **produced, under production or planned**”

- ENC Cell name
- Navigational purpose code,
- **Cell limits**
- S-57 Edition, i.e. 3.0 or 3.1;
- Date of production;
- Date of issuance, i.e. when the ENC cell is on the market;
- **Website and/or e-mail address** where further details on the cell and information on how to obtain the data can be found.

Responses from CL 67/2002

IHB Developed a static catalogue – available on the IHO web site.

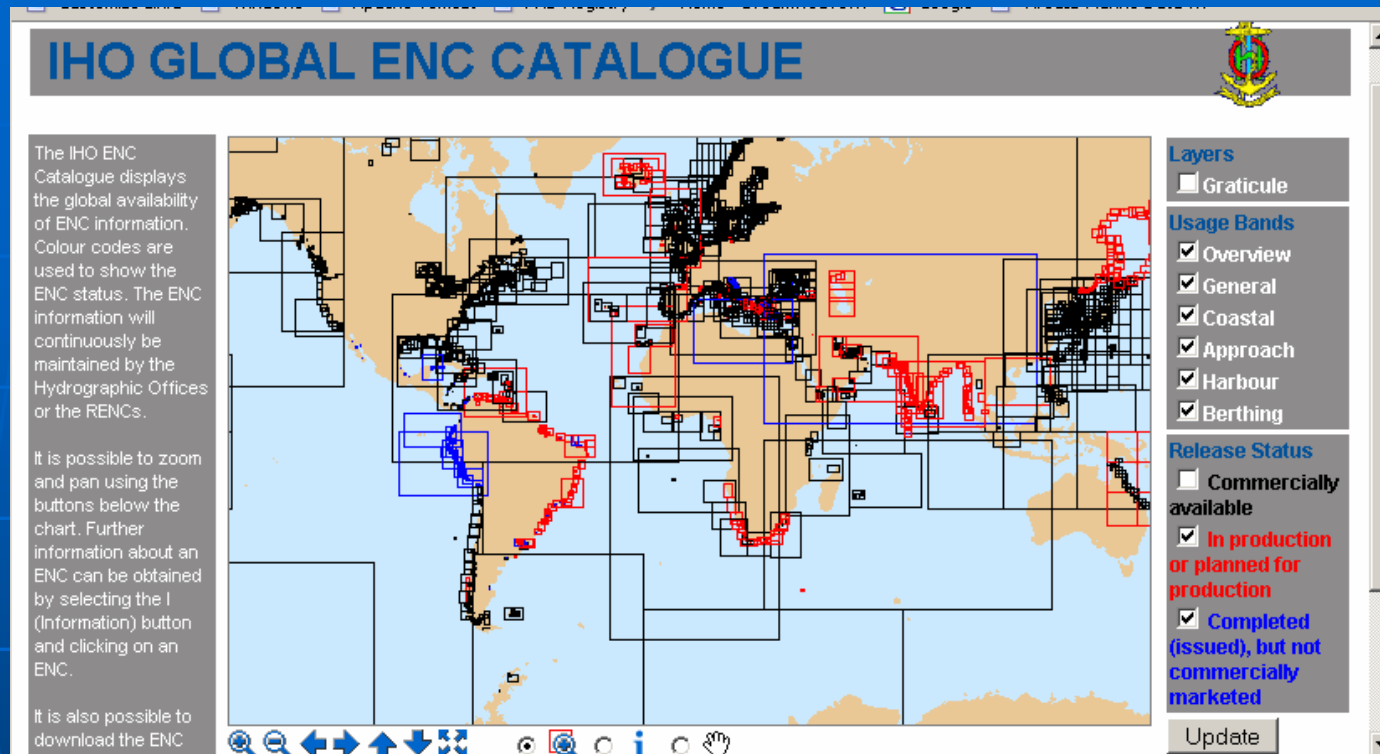


Presented to the:

- **7th WEND Meeting** (Lima, Peru, May 2003)
- **15th CHRIS Meeting** (IHB, June 2003)

Norway offered to assist the IHB in developing an interactive web catalogue

IHO ENC Catalogue



Thematic criteria were to establish what ENCs were;

- planned or in production (**red**)
- released but not yet commercially available (**blue**)
- commercially available (**black**)

Administrative interface developed to enable MS and RENCs to login and update the system.

IHO ENC Catalogue – Administrative Interface

The image displays three overlapping Mozilla Firefox browser windows, each showing a different administrative page of the IHO ENC Catalogue. The windows are titled "ENC Global Coverage - Mozilla Firefox".

- Top-left window:** Shows the "Edit Country" page. The address bar contains "http://services". The page content includes:
 - Code: SG
 - Name: Hydrographic Department, Singapore
 - InfoUrl: http://www.mpa.gov.sg
 - Buttons: Save, Back
- Top-right window:** Shows the "Edit User" page. The address bar contains "http://services.ecc.as/ih". The page content includes:
 - Username: SANHO
 - Full Name: SAN Hydrographic Office
 - Super admin:
 - Options: 0_ - unknown producer, 1A - ARAMCO
- Bottom-left window:** Shows a page with a file upload form. The address bar contains "http://serv". The page content includes:
 - File: [text input] Browse...
 - Buttons: Upload, Back to Map
- Bottom-right window:** Shows a page for "Hydrographic Department, Japan". The address bar contains "http://services.ecc.as/ihocc/admin?". The page content includes:
 - Hydrographic Department, Japan
 - InfoUrl: [text input] .mlit.go.jp

Requirement for a new Catalogue

IMO/IHO Corresponding Group (CG)

- NAV50 established a CG
- CG endorsed a proposal from IHO to develop an online catalogue.
- NAV51 **endorsed** this proposal
- NAV51 prepared a **draft specification**
- NAV51 re-established the CG and tasked it to review the draft specification.

Focus and Scope of the New WEB Catalogue

Focus

Only those **ENCs that are available for use. (i.e. on the shelf).**

Scope

The new catalogue need to show;

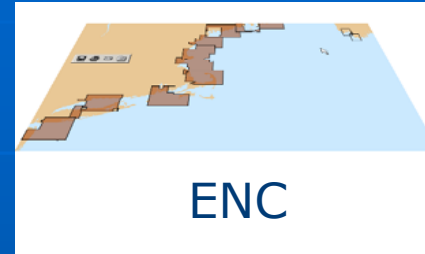
- **ENC** coverage
- **RNCs** coverage for those areas where **no ENC coverage exists**
- A list of **“adequate backup” paper charts.**

Lessons Learned from Previous Catalogue Development

- Requirement for **ENC data limits** – not just cell limit
- Need to keep a **historical record** of coverage **evolution**.
- Need to improve the mechanism for **acquiring coverage and metadata information** (harvesting tools).
- Need for **more detailed metadata**
- Need to be **standards based** – interoperability
- Need to develop **mechanisms to keep the catalogue current**
- As far as possible, **take account of the needs of stakeholders** (RENCs, Data Servers/VARs, Distributors and OEMs).
- Need to make a **coverage (dataset)** and **metadata resource** available for use by all stakeholders.

Sources of Coverage Information and Metadata

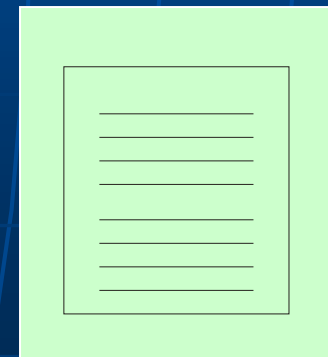
RENC 1
RENC 2
HOs



HO 1
HO 2
HO 3



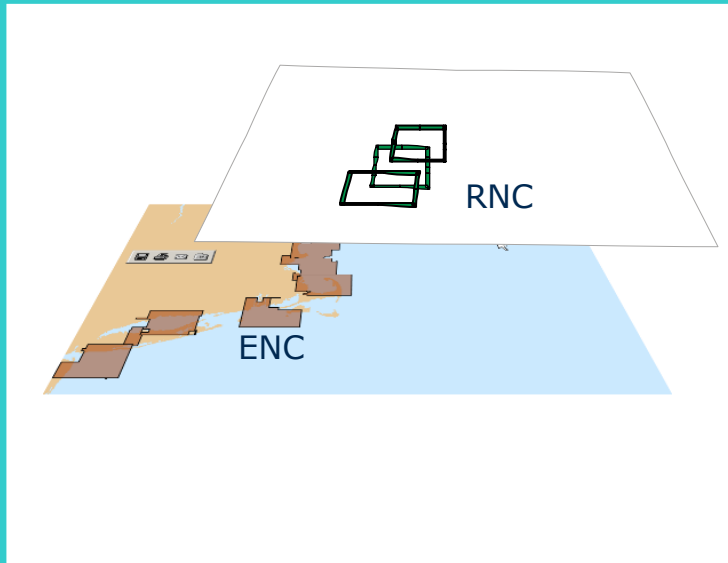
Maritime Authorities
and HOs



“adequate backup” paper charts⁹

Types of Information Required

Coverage Information



Metadata Information

Identifier (ENC Cell name - RNC/Chart number)

Issuing authority (possibly on behalf of another Member State)
Producer Authority

Standard format (e.g. S-57 Edition 3.1, BSB, HCRF)

Distribution Method (e.g. issuing HO, RENC, free download)

Allowance of SENC distribution:
Yes/No

Compilation scale / usage band

Co-ordinates of edges

Edition date

Metadata Resources

IHO S-100 Discovery Metadata Profile

ENC - Stockholm



Data format: S-57

Coordinate system: Geographic

Location: http://Ihb4//www.IHB.Intranet/S-59_AntArctic/SW22564.000

ENC Metadata

- [Metadata Information](#)
- [Resource Identification Information](#)
- [Spatial Representation Information](#)
- [Reference System Information](#)
- [Distribution Information](#)
- [Update Information](#)

Metadata Information

***Metadata language:** English

***Metadata character set:** utf8 - 8 bit [UCS Transfer Format](#)

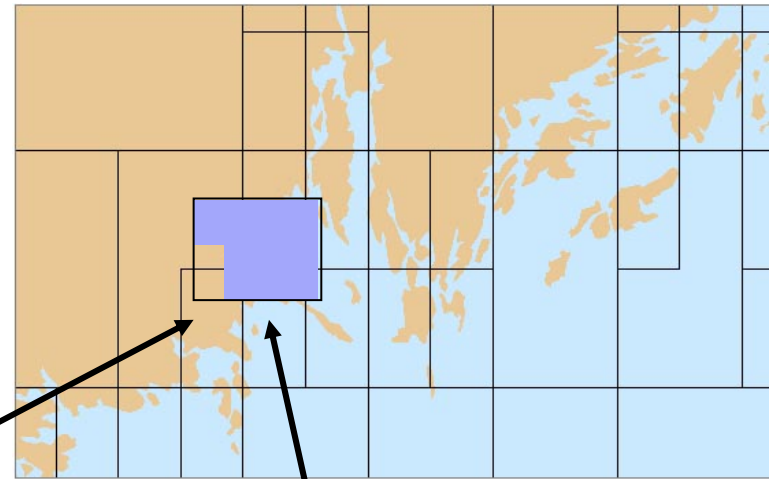
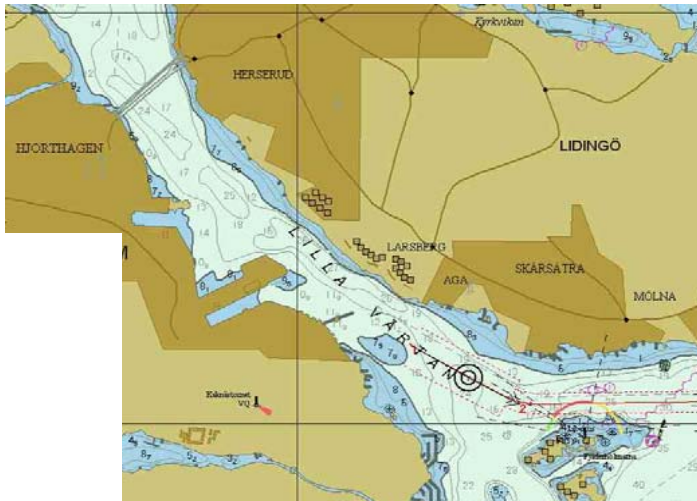
***Last update:** 20060308

***Scope of the data described by the metadata:** dataset

***Scope name:** dataset

***Name of the metadata standard used:** ISO 19115 Geographic Information - Metadata

Coverage Information



Metadata

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<extent>
  <EX_GeographicBoundingBox>
    <westBoundLongitude> -127.46</westBoundLongitude>
    <eastBoundLongitude> -122.48</eastBoundLongitude>
    <southBoundLatitude> 43.71</southBoundLatitude>
    <northBoundLatitude> 49.73</northBoundLatitude>
  </EX_GeographicBoundingBox>
  <EX_BoundingPolygon>
    <polygon> -123.45, 43.71 -123.00, 46.23 -123.00, 48.35 -123.22, 49.23 -123.45, 49.73</polygon>
  </EX_BoundingPolygon>
</extent>
<extension base="double">
  <attribute name="metadata" type=URI "http://www.responsibleRENC.com#sw33492.mta"
  use="required"/>
</extension>
```

Coverage Data Files

The ENC and RNC Coverage Files;

- will be used to generate ENC and RNC coverage limits in the **new catalogue**
- should be **made available** on the IHO web site in a standard format **for all stakeholders to use**
- should be **regularly maintained** through the issue of updates, and new editions
- all **historical versions** of coverage data files should be kept.

Paper Chart Layer

Language: English

Character set: [dropdown]

[input field]

+ Hierarchy level: dataset [dropdown]

dataset [dropdown]

Contact

- owner
- user
- distributor
- originator
- pointOfContact
- principallInvestigator
- processor

Orga: [dropdown]

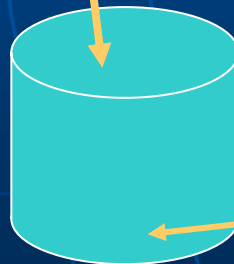
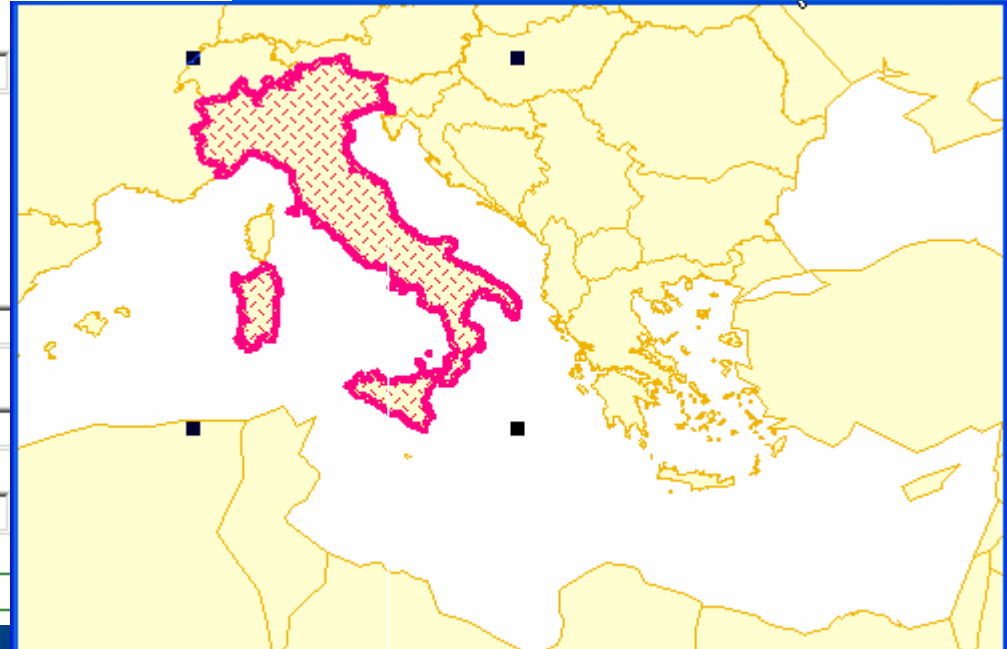
USGS [dropdown] al Informatics

Role: pointOfContact [dropdown]

pointOfContact

Creation date:

20020325

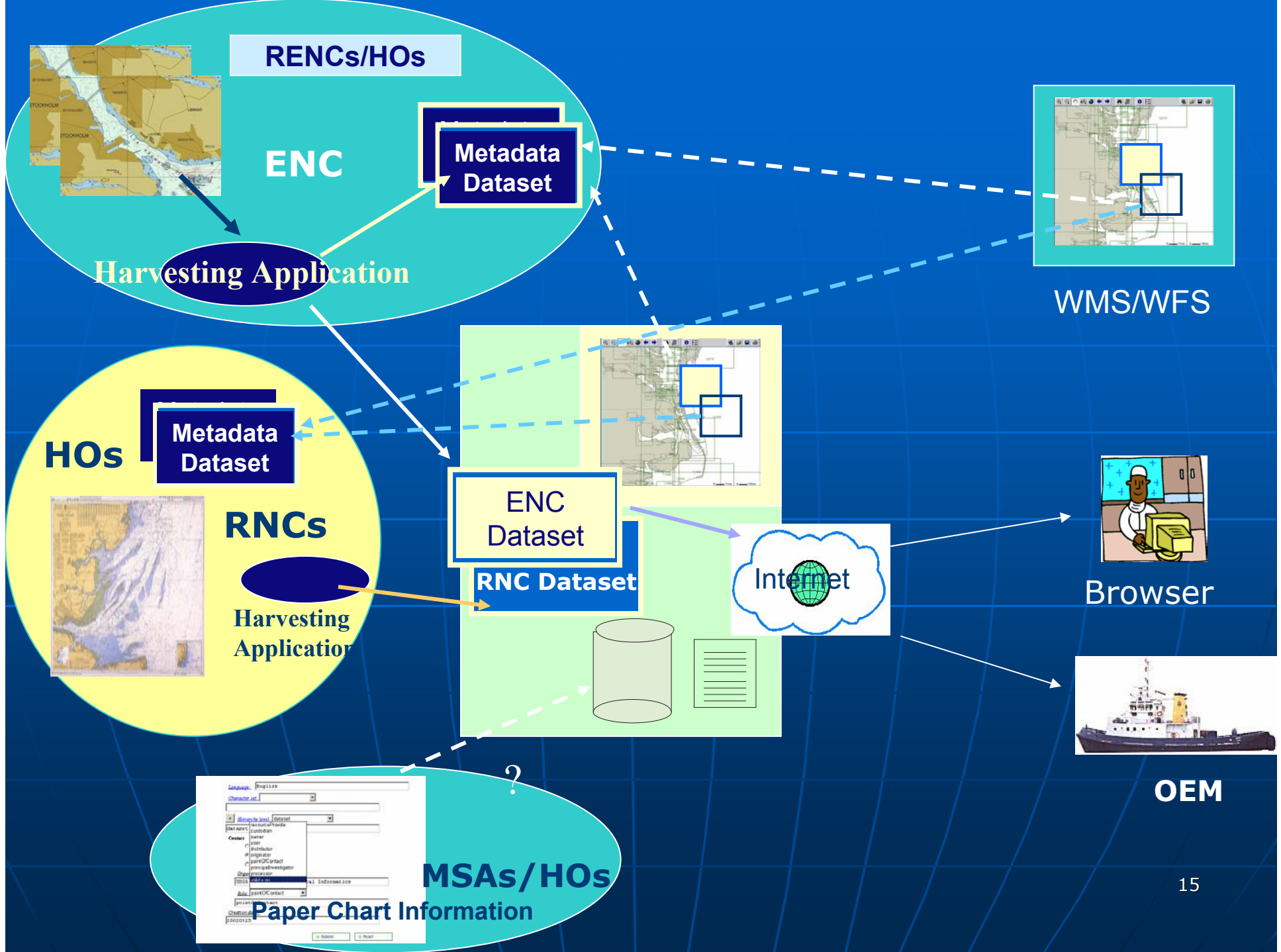


List of paper Charts

CHART12200
TITLE Cape May to Cape Hatteras
SCALE 1/200 000

CHART1521
TITLE Baletto to Punchino
SCALE 1/200 000

Paper Chart lists maintained by Maritime Authorities/HOs via a form interface situated on the IHO catalogue server.



Summary of Key Components

- Needs the cooperation of RENCs HOs and MSA to ensure coverage and metadata information is kept current.
- As far as possible the generation of coverage and metadata information should be automated as output from a database or using harvesting tools.
- It should take into account the needs of Distributors, VARs, OEMs and other stakeholders.
- Should be standards based – ensure interoperability.

Thank You