



# International Hydrographic Organization



## The S-100 Geospatial Information Registry

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# Why S-100

- Broad, contemporary geospatial framework standard
  - Not specific to ECDIS or charting
  - Enables use of hydro data in other products and services
- Will replace S-57 over time
- Based on ISO 19100 series of geographic standards
  - interoperable with other ISO data profiles
- Standards are never "*frozen*"
- "*Plug and play*" updating



# What is S-100 ?

- a framework standard – an *implementation guide* describes components for
  - a registry for managing
    - feature concept dictionaries, and
    - feature portrayal
  - product specifications



## product specification

- the detailed specification for a standardised data input/output
  - content, arrangement, portrayal, carrier, etc .....
- = the "plans" , the "recipe", the "data product template"
- examples: S-101 - ENC prod spec

## registry

- a database that contains the essential elements required to establish and define product specifications

## feature

- the codification that describes a real-world entity
  - *a buoy, a sounding, a building,*
  - *a cargo, a legal regulation, a pilot service, a marine service, inland locks, waterway signage, a ship report, (voyage plan, position, etc), ...*



## Organizational Guidelines and Principles

**S-100**



**... to create a "store"**

**Registry**



**... to build things**

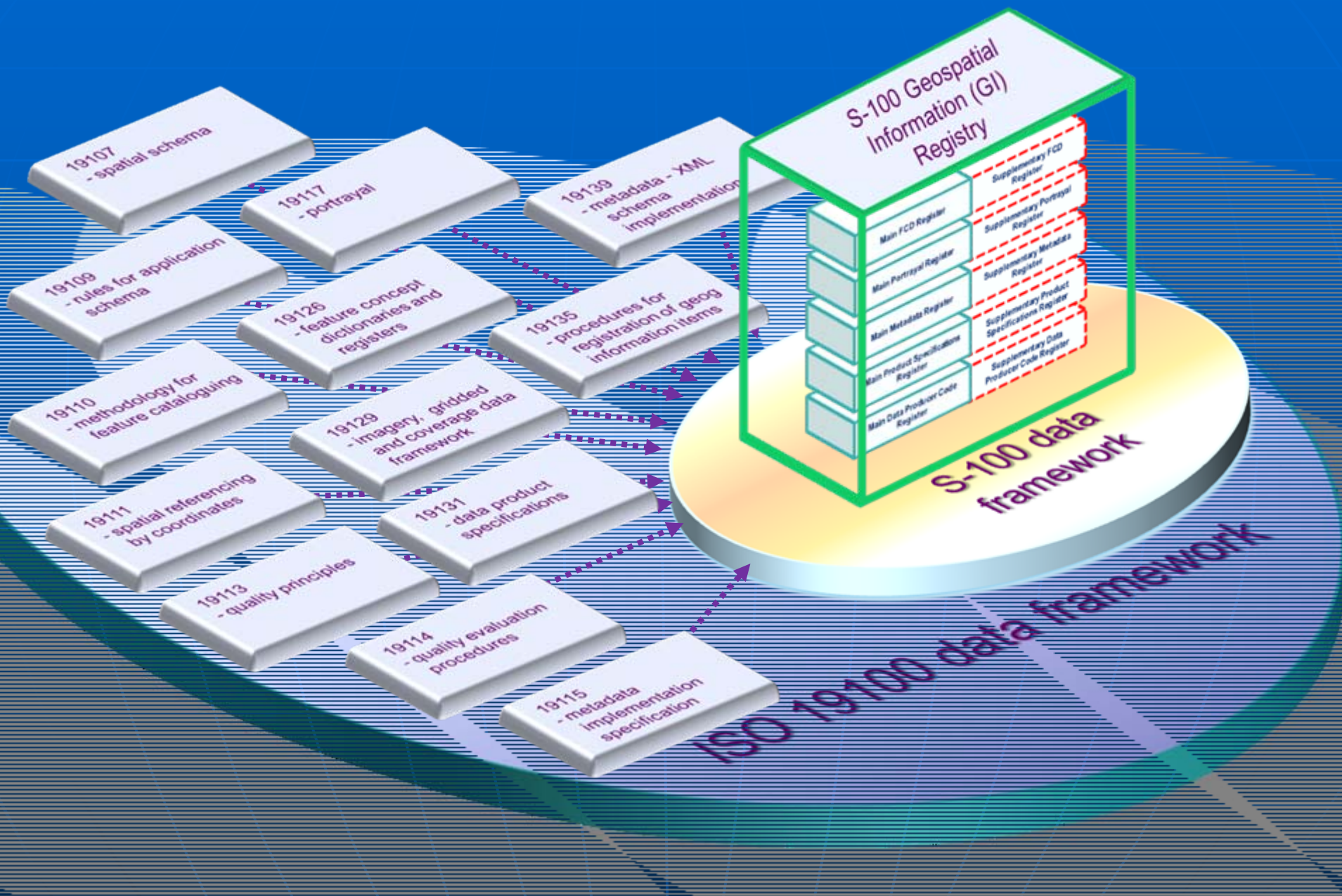
**Product  
Specifications**

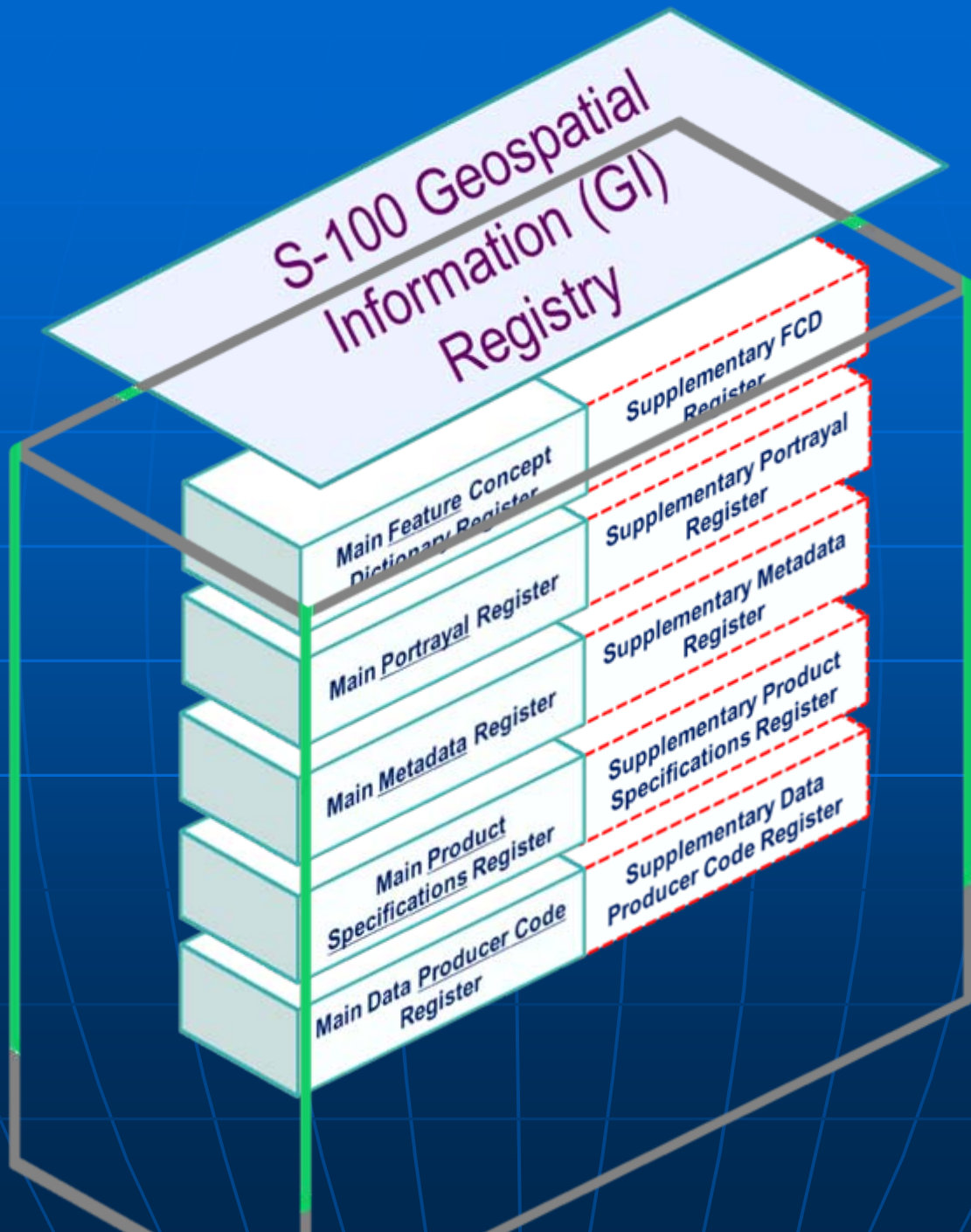


# S-100 and the Registry



# S-100 : based on ISO 19100 series









# S-100 Registry

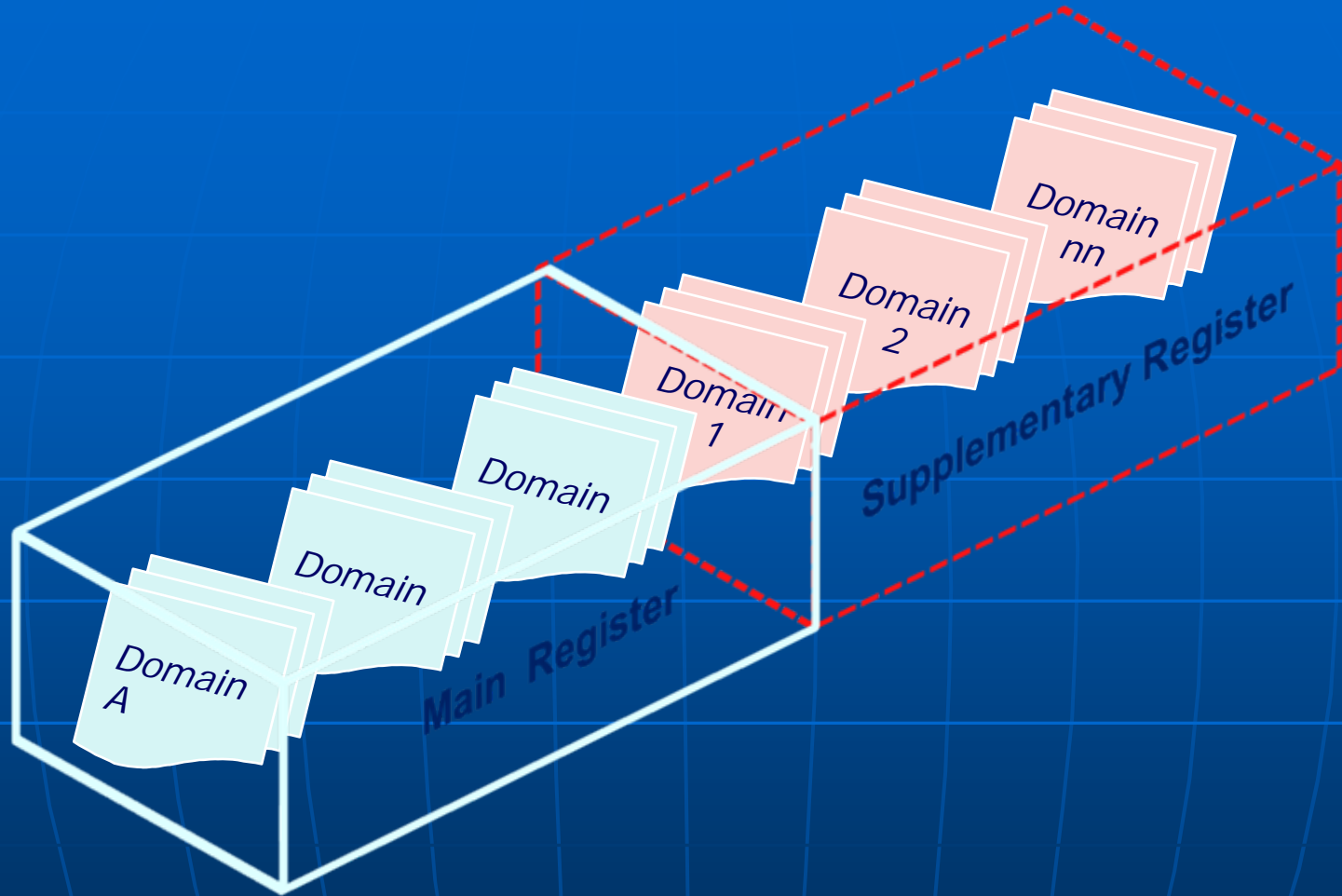
[http://195.217.61.120/iho\\_registry/](http://195.217.61.120/iho_registry/)

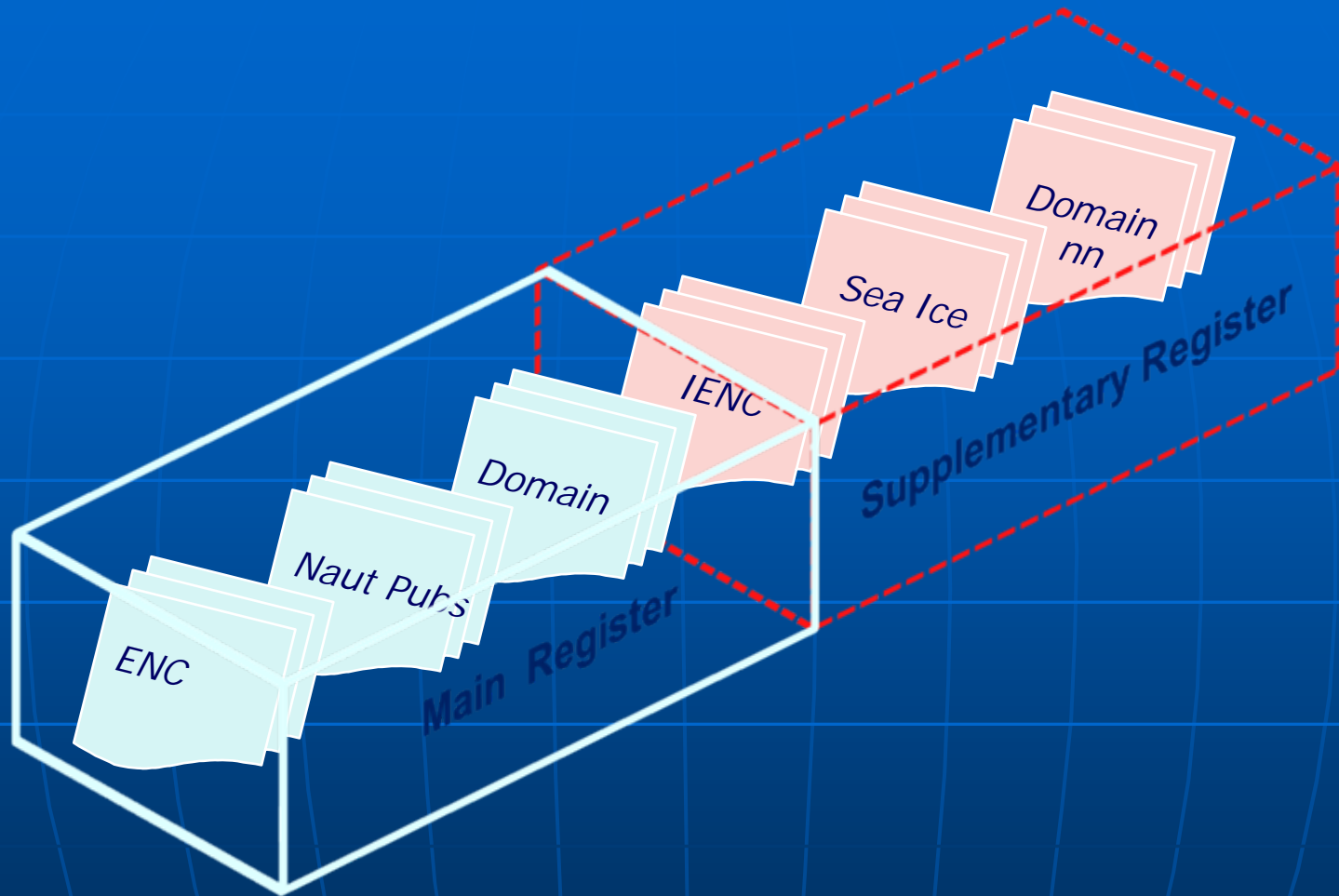
The screenshot shows a web browser window with the address bar displaying "IHO GI Registry". The page header features the IHO logo and the text "INTERNATIONAL HYDROGRAPHIC ORGANIZATION ORGANIZATION HYDROGRAPHIC INTERNATIONAL IHO Geospatial Information Registry". A left-hand navigation menu lists: Home, Main GI Registers (selected), Feature Concept Dictionaries, Portrayal, Meta Data, Producer Agency Codes, Product Specifications, Supplementary GI Register, Registry Administration, Sign In, Sign Out, User Account, and Help. The main content area is titled "Welcome to the IHO Geospatial Information Registry" and contains the following text: "This registry is owned by the International Hydrographic Organization (IHO) and is managed by the International Hydrographic Bureau (IHB). The site contains many registers of hydrographic information together with registers of supplementary information owned by specialist domain experts. Each register type is further sub-divided into domains e.g. hydrographic, nautical publications, ice, inland ENC etc. The administration of this registry conforms to IHO S-99 () a copy of which can be downloaded [here](#)." Below this, it states: "You are free to view this geospatial information registry without registering, but if you wish to apply for submitting organization status an application form can be found [here](#)." Further down, it says: "Once accepted as a submitting organization you are free to submit proposals to any register." A red note follows: "Note - Submitting Organizations registered with the previous version of this interface must re-register." On the right side, there are four sections: "Registry Owner" (International Hydrographic Organization, [contact details](#)), "Registry Manager" (UKHO on behalf of the International Hydrographic Bureau, [contact details](#)), "Submitting Organizations" (A list of current Submitting Organization members can be viewed [here](#)), and "Domain Control Body" (A list of current Domain Control Body members can be viewed [here](#)). The "Executive Control Body" section (A list of current Executive Control Body members can be viewed [here](#)) is partially visible at the bottom. The browser's status bar at the bottom shows "Internet" and "100%".

Public access: 1 January 2011



- register entries organised under “domains”  
(so far: hydrography, sea ice, nautical publications, inland ENC’s, .....)
- registry open to extension and use by other  
*Submitting Organizations* and for new domains
  - Submitting Organizations (such as IEHG) propose then regulate their domain data - via the unified executive control body
  - all features tagged with domain “owner” (IEHG for IENC)
- registry operating rules in IHO S-99







# No end-date

- register entries stay in register, even after supersession

*"valid"*

latest version (use for new prod specs)

*"superseded"*

previous version/s (referenced by existing prod specs)

*"retired"*

no longer recommended for use

∴ any feature, or any product spec, can be changed by its owner - as and when required





# Using the S-100 Registry

- Is what you want already in the S-100 registry?
  - Then use it !
- Not in the registry ?
  - Then, become a *submitting organization* and :
    - propose a revision
    - propose something new
    - propose to establish a new domain
- Registry operating rules in S-99 (active 1 Jan 2011)



# Timetable

1984	S-57 development begins
2000	S-100 development begins
2006	Registry development begins
1 Jan 2010	S-100 in force Registry in use
1 Jan 2011	S-99 - <i>Registry Operating Rules</i> in force S-100 Registry public access
2012 +	S-101 - <i>ENC Product Specification</i> released IMO e-nav strategy completed
2014 + + +	First S-101 ENCs available
2014 + + +	IENC ed 3.0 [?]



# Summary

- S-100 Registry is available for more than hydrography and charting
- relevant bodies act as submitting organizations
  - such as "*competent international technical groups*"
- Submitting Organizations stay in control !



S-100 will support a variety of data sources, products and services



