



# GEBCO SCUFN Gazetteer and S-100 Universal Hydrographic Model



# Overview

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- S-100 Universal Hydrographic Model
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# Introduction

- The GEBCO Sub-Committee on Undersea Feature Names (SCUFN) works to maintain and update a gazetteer of names of features on the seafloor
- The gazetteer is produced by an international group of experts under the guidance of the IHO-IOC
- The Sub-Committee is tasked to select names that appear on GEBCO products

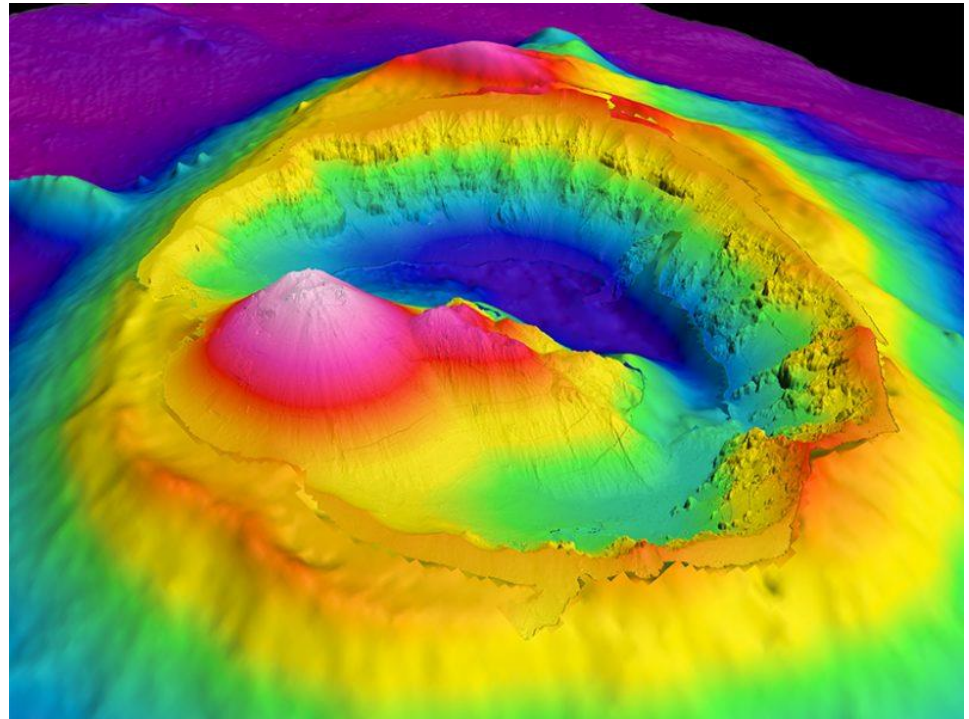


Figure 1- Bathymetry image of Brothers Seamount and caldera, an undersea volcano about 3 kilometers in diameter off the coast of New Zealand. Retrieved from <https://eos.org/project-updates/a-name-directory-for-the-ocean-floor>



# Introduction

- The objectives of SCUFN include:
  - Select UFN and define when appropriate extents of named features
  - Review and address need for additional/revised terms and definitions
  - Provide advice on selection of UFN in international waters, and on request in national waters
  - Prepare and maintain international gazetteers and supplements of UFN
  - Prepare and maintain internationally agreed guidelines for the standardization of UFN and encourage use
  - Encourage establishment of national boards of geographical names and undersea feature names, and assist with naming where boards don't exist
  - Maintain close liaison with UN Group of Experts on Geographical Names

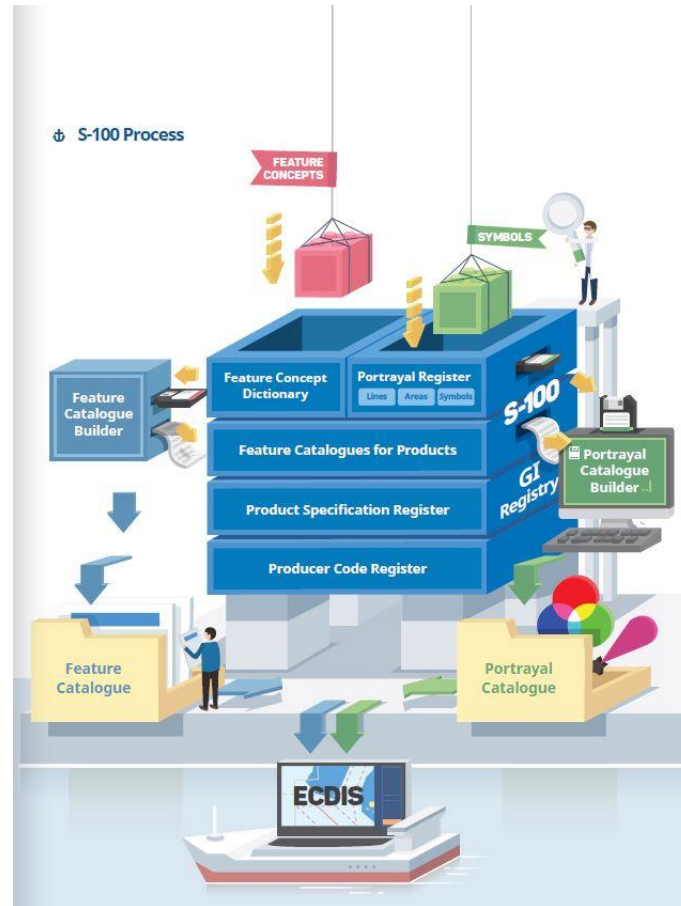


# The Case for Improving the Undersea Feature Names Model

- Definitions for undersea features exist in multiple IHO publications and don't always align:
  - SCUFN online dictionary
  - IHO GI Registry Feature Concept Dictionary
  - S-57 Feature Catalogue
  - S-32 Hydrographic Dictionary
- Current model is “flat” and does not allow for description of unique physical characteristics
- Portrayal of features is simple geometry and no standard symbology exist for features

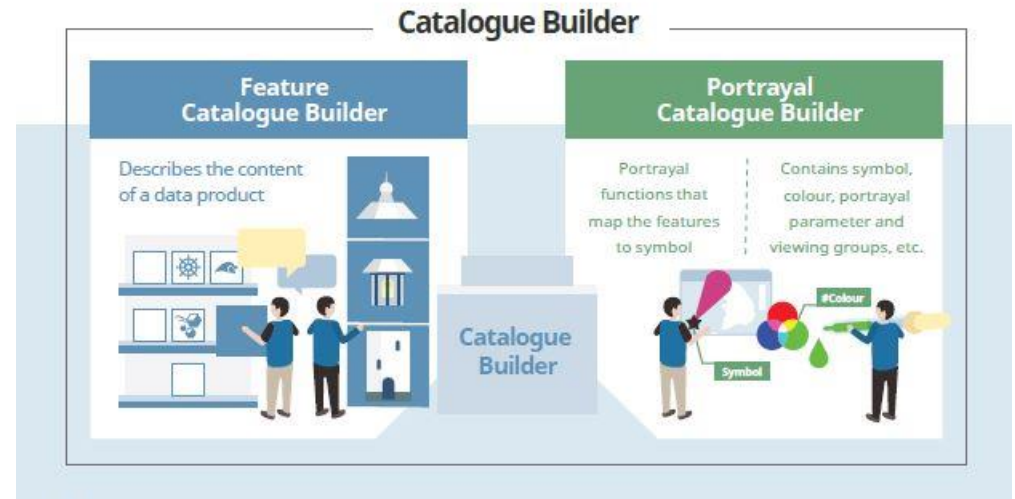
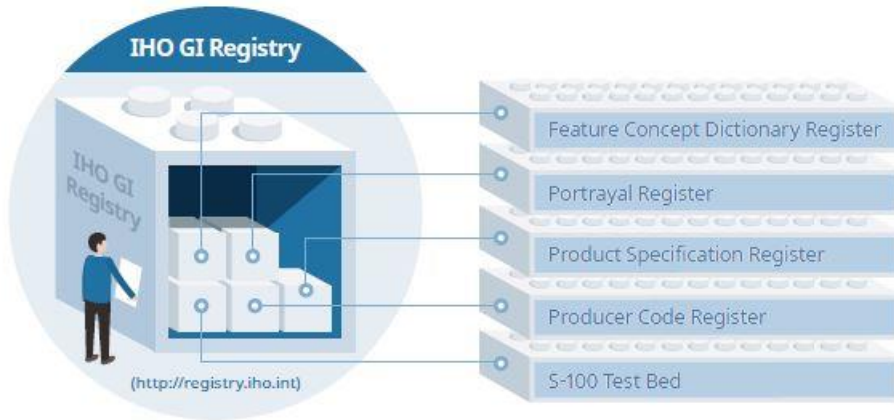


# S-100 Universal Hydrographic Data Model



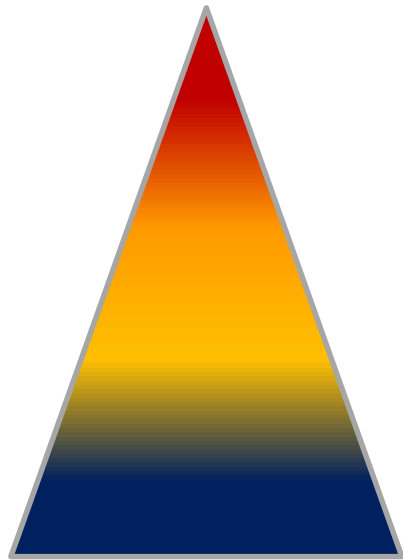


# S-100 Continued



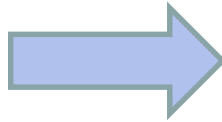


# Example – S-100 Undersea Feature



Seamount

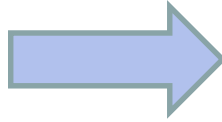
Feature  
Concept  
Dictionary



Defines:

- Features
- Attributes
- Enumerated Values
- Information Types

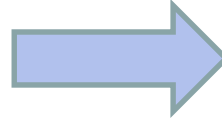
Portrayal  
Register



Defines:

- Point Symbols
- Pattern Symbols
- Complex Line Styles
- Colour Symbols

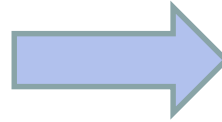
Feature  
Catalogue



Generally:

- Consists of a list of named types
- A list of properties of named types
- Information on how both are linked together
- A list of sources for its definitions

Portrayal  
Catalogue



Contains:

- Portrayal functions that map features to symbology
- Symbol and colour definitions
- Portrayal parameters
- Portrayal management





# Annex A





# History of the GEBCO SCUFN Gazetteer Continued

- First GEBCO Sub-Committee on Geographical Names and Nomenclature of Ocean Bottom Features (SCGN) meeting was held in Dartmouth Nova Scotia in March 1975
- At fifth meeting in 1981, SCGN decided the terminology list and guidelines produced in conjunction with the U.N. Group on Undersea and Maritime Features should be distributed to all IHO-IOC Member States for use by national naming authorities
- 10<sup>th</sup> Meeting SCGN renamed to SCUFN and decision made to include in database “accepted names by appropriate nation organizations”



# History of the GEBCO SCUFN Gazetteer Continued

- 11<sup>th</sup> SCUFN meeting in May 1995, decision made to publish the gazetteer digitally
- Conversion of gazetteer to digital format allowed addition of information about features e.g. historical information
- A web-based map interface prototype was introduced at the 17<sup>th</sup> meeting in 2004
- 2011 GEBCO Undersea Feature Names Gazetteer migrated to geospatially enabled relational Oracle database offering web services
- 27<sup>th</sup> meeting in 2014 first paper for consideration for conversion of GIS database to S-10x product specification