

S-100

NEW PRODUCTS. NEW POSSIBILITIES.



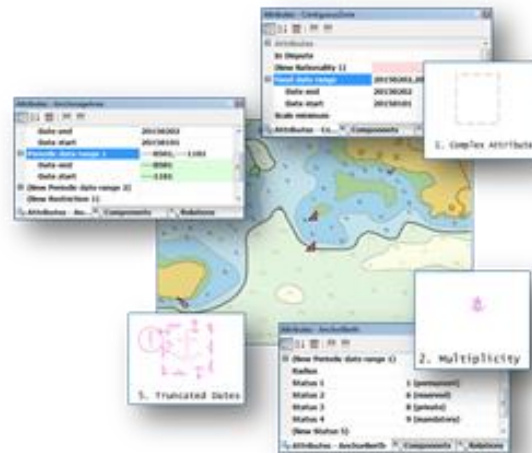
S-100 Capability within the CARIS Product Suite

Content

- CARIS HPD S-100 capability's
- ENC S-101 production workflows with CARIS HPD
- S-102 support
- Training, Consultancy and test environment
- Conclusions and Questions

Overview of S-100 Functionality in HPD

- A guide though S-101 functionality
 - Mapping Data
 - Working with the S-101 product
 - Feature maintenance
 - Data holding migration



All enabled by the S-100 Module for HPD/S57 Composer

S-100 Module

- S-100 support in HPD & Composer 4 is **available now**
- Add S-101 production line
- **No risk for existing production lines**
- Batch tooling
 - Define HPD S-101 ENC products
 - Bulk Conversion



S-100

Tools for creating and exporting standalone S-100 products. Add-on to S-57 Composer

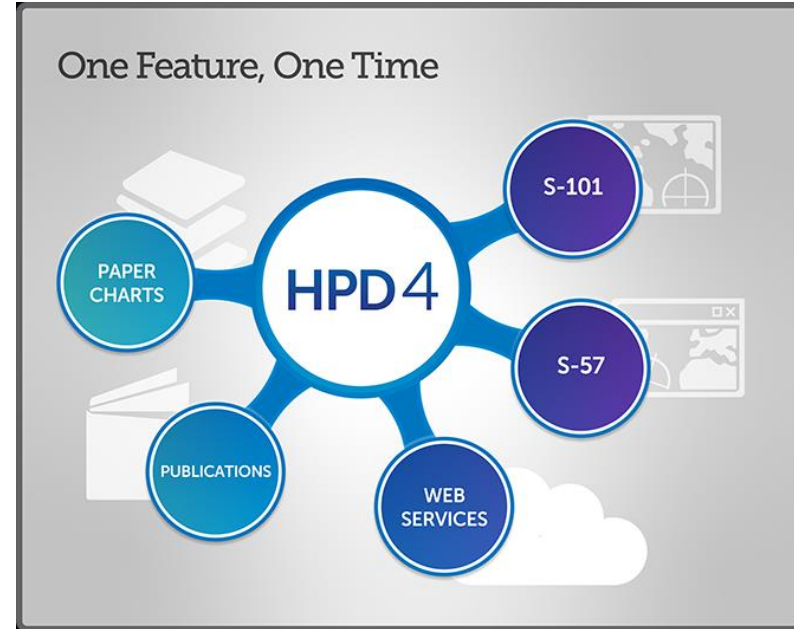
[licensed module]

Disable

S-100 Module

S-100 module provides functionality to:

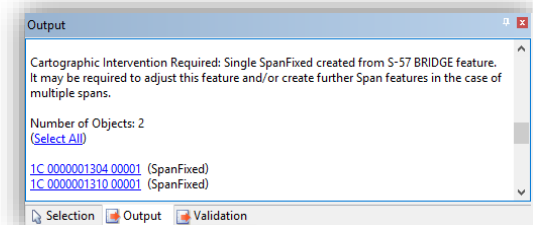
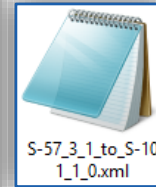
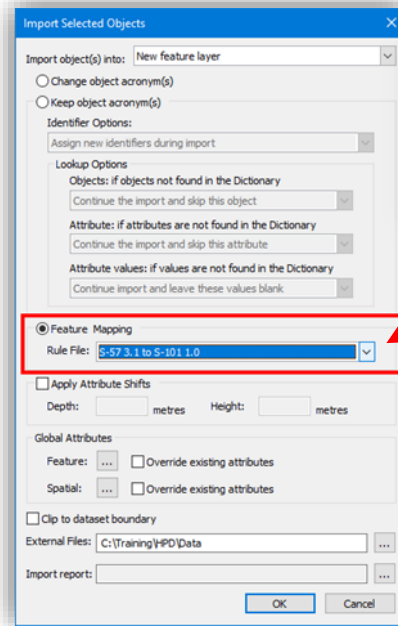
- Edit S-100 vector features
- Convert S-57 ENC <-> S-101 ENC
- Dual fuel S-57 & S-101 ENC production
- S-100 vector HPD Source database
- Export S-101 new editions and updates
- Create, edit and maintain S-100 exchange sets



- Open S-100 in all CARIS desktop applications

Feature Conversion

- S-57 features to S-101 layer or product
 - Automatic on-the-fly feature mapping to S-101 Edition 1.0
 - Over 90% Conversion out of the box
 - Editable Mapping



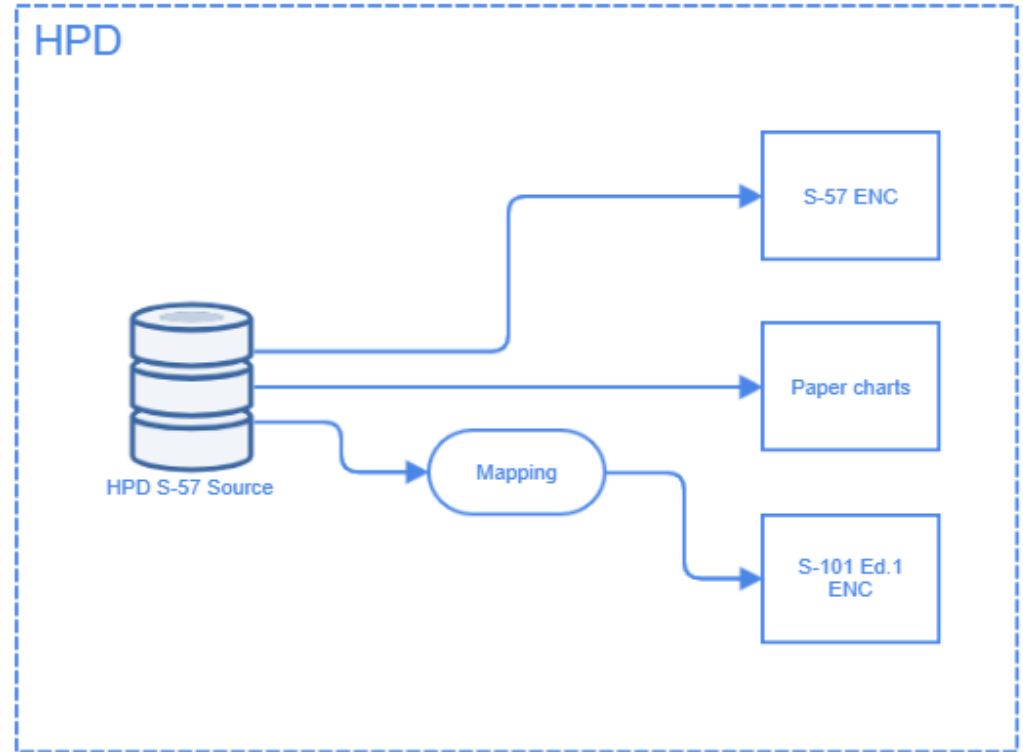
Lets Go! S-100 time



- Automated S-57 to S-101 data conversion with customizable feature mapping rules
- Creation new S-101 ENC database products from the same HPD S-57 source features, using S-57 to S-101 feature mapping and export to create S-101 ENC Exchange Sets
- Update S-101 ENC database products using Compare Product to Source with S-57 to S-101 feature mapping and export S-101 ENC Updates or New Editions

Workflow 1: HPD 4 series - HPD S-57 Source

- Producer Goals
 - Build in-house S-101 knowledge
 - Identify value-added information to encode in S-101
 - Provide feedback to IHO
 - Fine tune S-57 to S-101 mapping
- Deployment
 - **Available Now**
 - No risk
 - Automation to define S-101 ENCs from existing S-57 ENCs



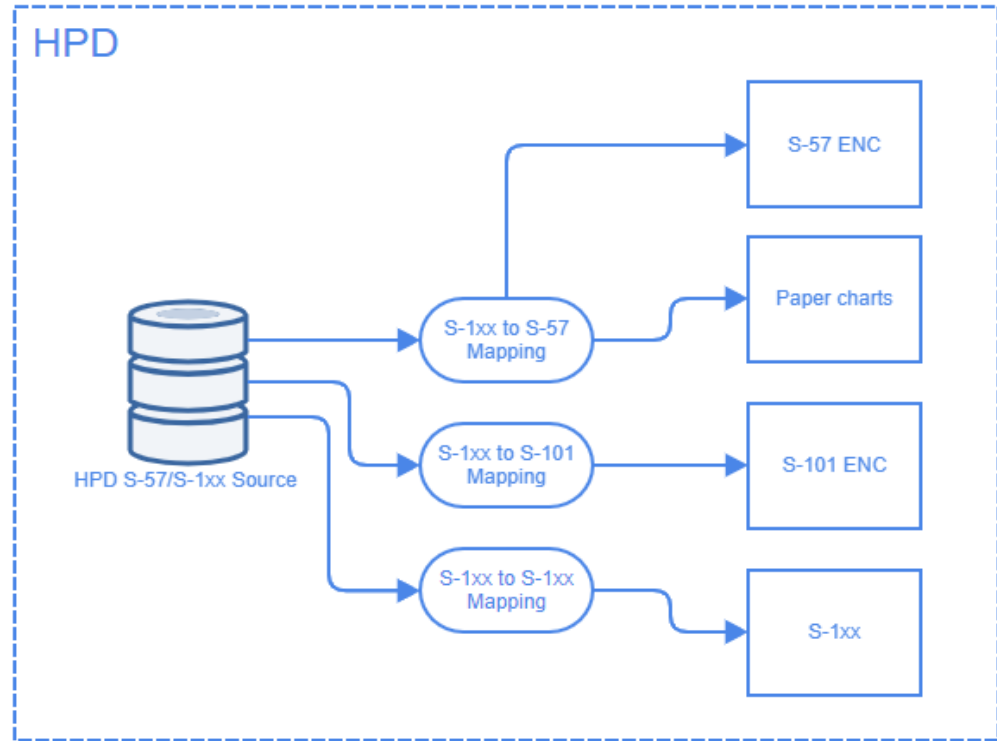
Workflow 2: HPD Hybrid Source

– Producer Goals

- Encode value-added information in S-100 source while keeping S-57 features
- Migrate selected geographic areas/usages to S-100
- Fine tune S-100 to S-57 mapping
- New S-100 production lines

– Deployment

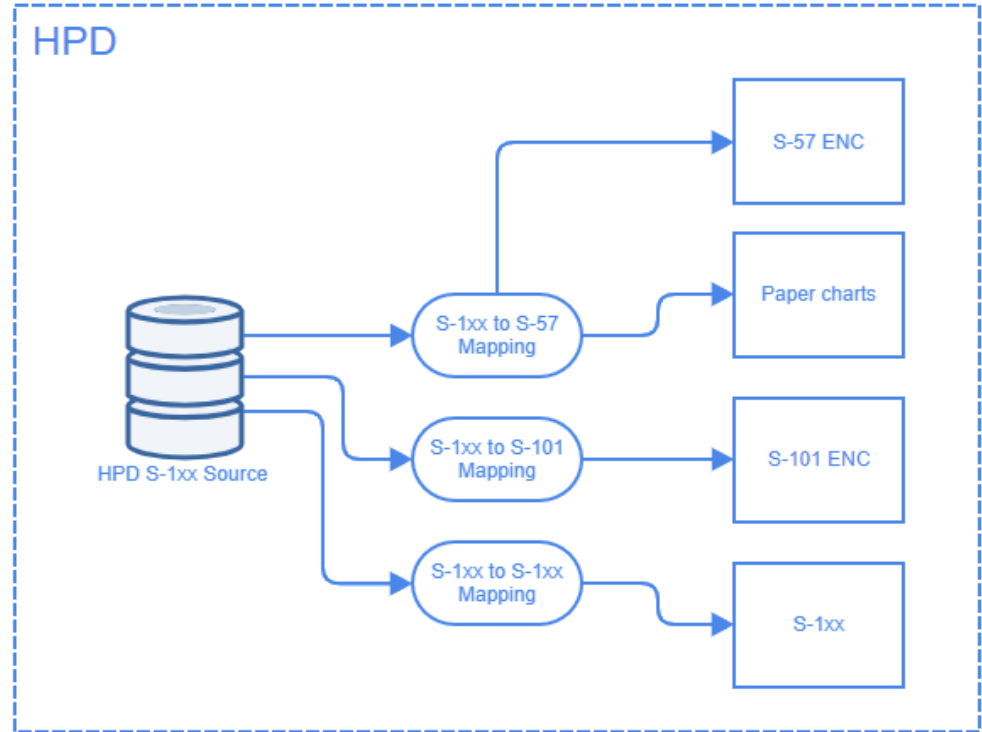
- Limit risk by transitioning gradually



Workflow 3: HPD S-100 Source

– Producer Goals

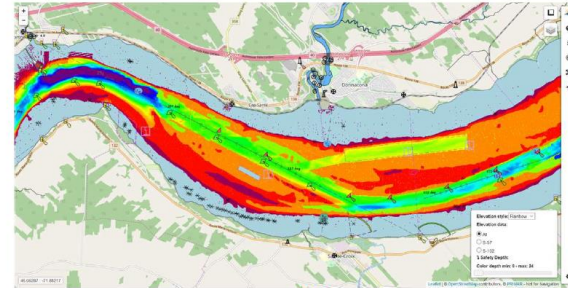
- All HPD Source in S-100 data model
- Encode value-added information in S-1xx source
- S-1xx production lines



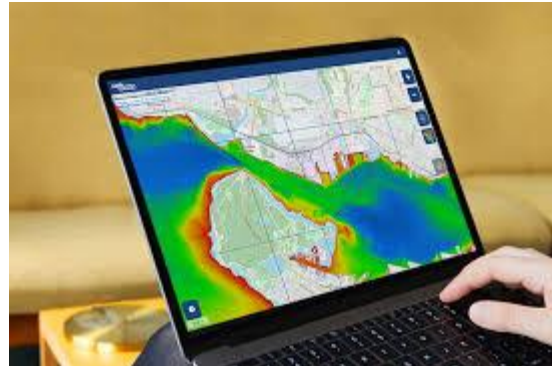
S-102 Bathymetric Surface

- Version 2.1.
- Raster Bathymetry in HDF5 format, with accompanying metadata.
- Supported in Bathy DataBASE and HIPS and SIPS

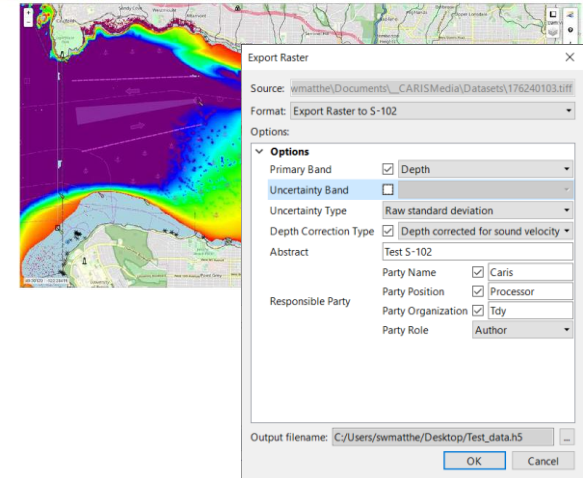
CHS S-102 data in PRIMAR Viewer:



St. Lawrence River

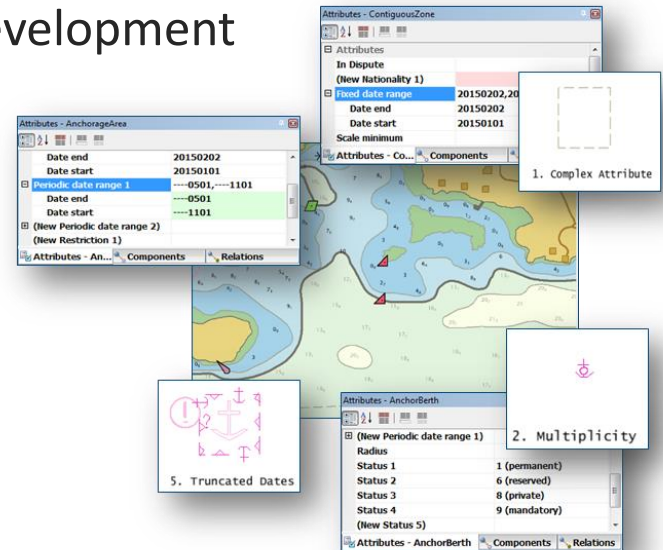
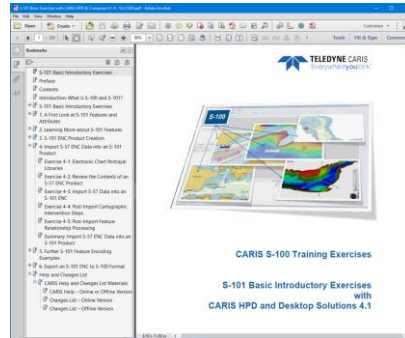


Vancouver



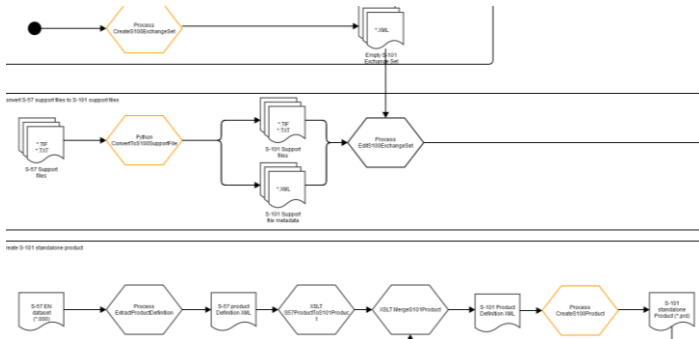
Expert Instructor Led Training

- World Class Training staff
 - Actively participating in IHOs development of the S100 standard
 - Assisting organizations on S-100 product development
- Onsite (not at present)
- Remote Training
- Also via AWS



Expert Led Consultancy

- Data model Assessment
- Migration planning/Assistance
- Workflow and Automation Services
- Best Practice analysis



E-learning

CARIS S-100 Online Workshop

CARIS S-100 Online Workshop with CARIS S-57 Composer

Teledyne CARIS is pleased to present this short online training program which looks at the International Hydrographic Organization (IHO) S-100 Standard, and the related S-101 Electronic Navigational Chart (ENC) Product Specification which is being developed to support the creation of next generation ENC products.

This workshop shows examples of creating and processing S-100 products in [CARIS S-57 Composer](#) but no software is required in order to participate.

- Information: workshop [description and requirements](#)
- Length: 8 hours (estimated - completion time will vary)
- Cost: \$300 USD** for 90 days access to the course - [registration information](#)
- **The cost is currently waived for CARIS software users who are part of the [CARIS Subscription Program](#).

Register

Login

CARIS S-100 Workshop

- Overview of S-100 and S-101
- Theory
- Concepts
- Expert background theory.
- No practical element

CARIS S-101 Production Course

- Learn about S-101 in general, and to learn about creating S-101 ENCs in Composer, using hands-on exercises

Available now

An Introduction to IHO S-101 ENC Production with CARIS S-57 Composer

E-learning Course Description

This self-paced online training course introduces the new IHO S-101 format Electronic Navigational Chart (ENC) product specification as it is used to produce next generation S-101 ENCs using the latest CARIS S-57 Composer software. The course covers the same topics and uses the same hands-on practical exercises as the equivalent classroom training course. However, it lets you go through the materials at your own pace, using your own computer with internet access, from your desktop, and without having to attend a classroom-training course in another location.

Length
24 hours (estimated – completion time may vary based on experience).

Audience

Anyone involved in ENC production who wants to be introduced to S-101 ENC Production using CARIS S-57 Composer software. This includes people who will be managing, compiling, checking, exporting and updating S-101 ENC datasets within a hydrographic department or other organization or company. It is also of interest to students and others wanting to learn about S-101 and Composer.

Topics

- ✓ What is S-100, why is it needed, and what are its benefits?
- ✓ What is an S-101 ENC and how does it relate to S-100?
- ✓ How will S-100, S-101 impact hydrographic organizations, users?
- ✓ The S-101 ENC Product Spec. and the related Encoding Guide
- ✓ A quick overview of the CARIS user interface and basic operations
- ✓ Introducing basic S-101 concepts and terminology
- ✓ Complex attributes, multiplicity, information types, system attributes
- ✓ Comparing S-57 and S-101 feature encoding
- ✓ Learning more about S-101 similarities and differences with S-57
- ✓ S-101 ENC product creation workflow starting with S-57 ENC data
- ✓ Defining new S-101 ENC products and new metadata values
- ✓ Automated S-57 to S-101 feature mapping and conversion steps
- ✓ How to customize the default S-57 to S-101 feature mapping process
- ✓ Post-import processing and possible cartographic intervention steps
- ✓ Further S-101 feature coding examples
- ✓ New S-101 nautical information, spatial quality, text, update features
- ✓ S-101 minimum scale attributes, grouped soundings and validation
- ✓ Exporting S-101 ENC products to the official S-100 file format
- ✓ Updating S-101 ENC products with new information
- ✓ Additional discussion about implementing S-101 ENC production
- ✓ A brief look at of some other new and planned S-100 based products



AWS S-100 Sandbox

explore, evaluate and understand the prospect of S-100 production

- A secure environment in AWS for S-100 enabled HPD (and Oracle)
- A customizable environment
 - With relevant to your HPD system files
 - Your test data and data model
- Along with the environment you'll be assigned a Subject matter expert guide to facilitate your S-100 aims
- Single or multi use environments based on your requirements
- An intermediary step in adoption of S-100 production

Conclusions

- CARIS allows user to produce ENC S-101 from the existing S-57 HPD database
 - No risk on the existing production lines
 - ENCs S-57, ENCs S-101 and paper chart can be produced from the same existing source data.
- S-102 Bathymetric Surface can be produced from Bathy DataBase
- S-100 training and expert lead consultancy available to help users with the transition and implementation
- S-100 Sandbox test environments available

