

Welcome and Introduction





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Welcome and Introduction

Björn Röhlich

Positions:

-  **Navy Officer**
-  **Training Manager Transas Marine**
-  **Managing Director MSG MarineServe**
-  **Sales Director SevenCs**

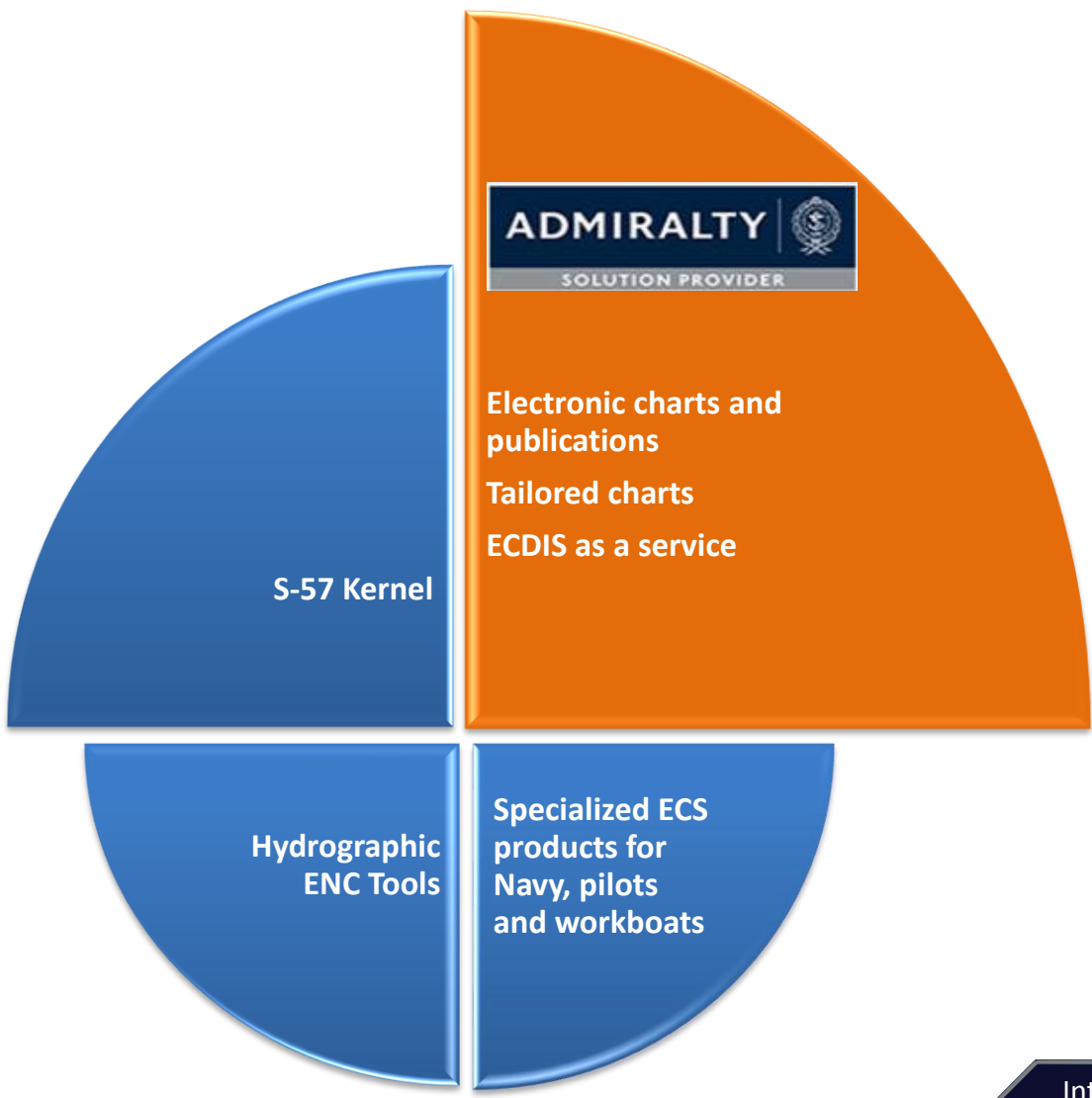


Company presentation SevenCs und ChartWorld

Founded: 1992
Staff: 70+
Offices:

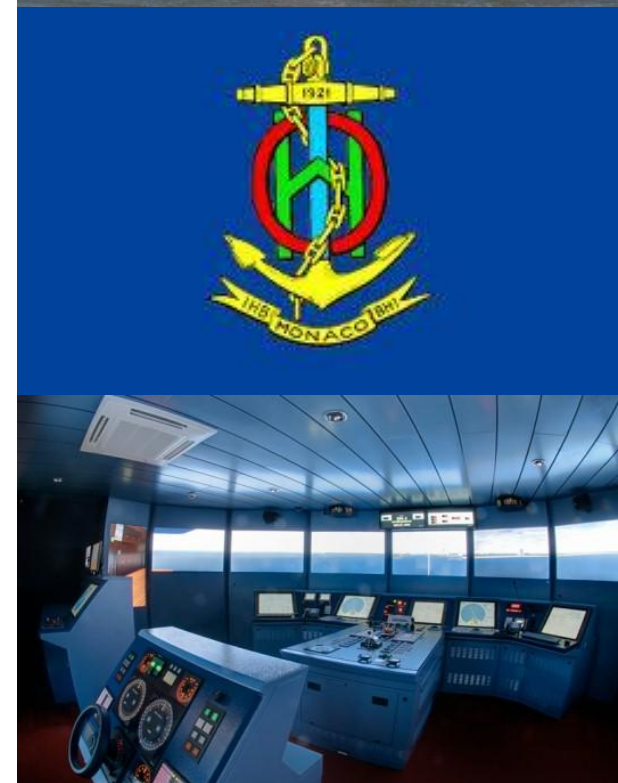


Company presentation SevenCs und ChartWorld



History

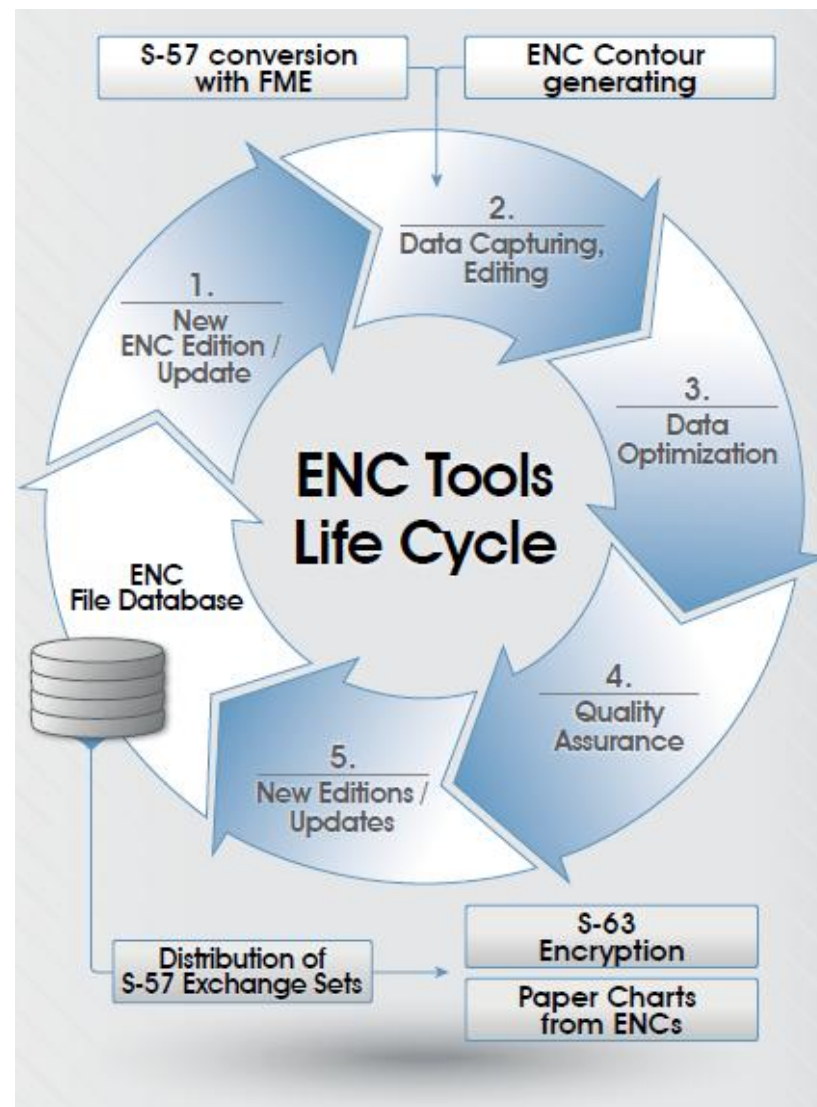
- **Founded in 1992**
- **Ex UKHO owned company**
- **Created S-57 and S-52 Standard for IHO**
- **Part of the core team for S-100**
- **Experience along the entire value chain of ENC's – Production Software, Production and Encryption, Data Management, Distribution and Navigation**
- **More than 100 chart producing clients in various fields such as Hydrographic Offices, Waterway Authorities, Ports, Pilots, private ENC producers, Simulators and Universities.**





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Products

ENC Designer with ENC Manager



ENC Contour Generator



ENC Optimizer



ENC Analyzer



ENC Cartographer



ENC Encryptor



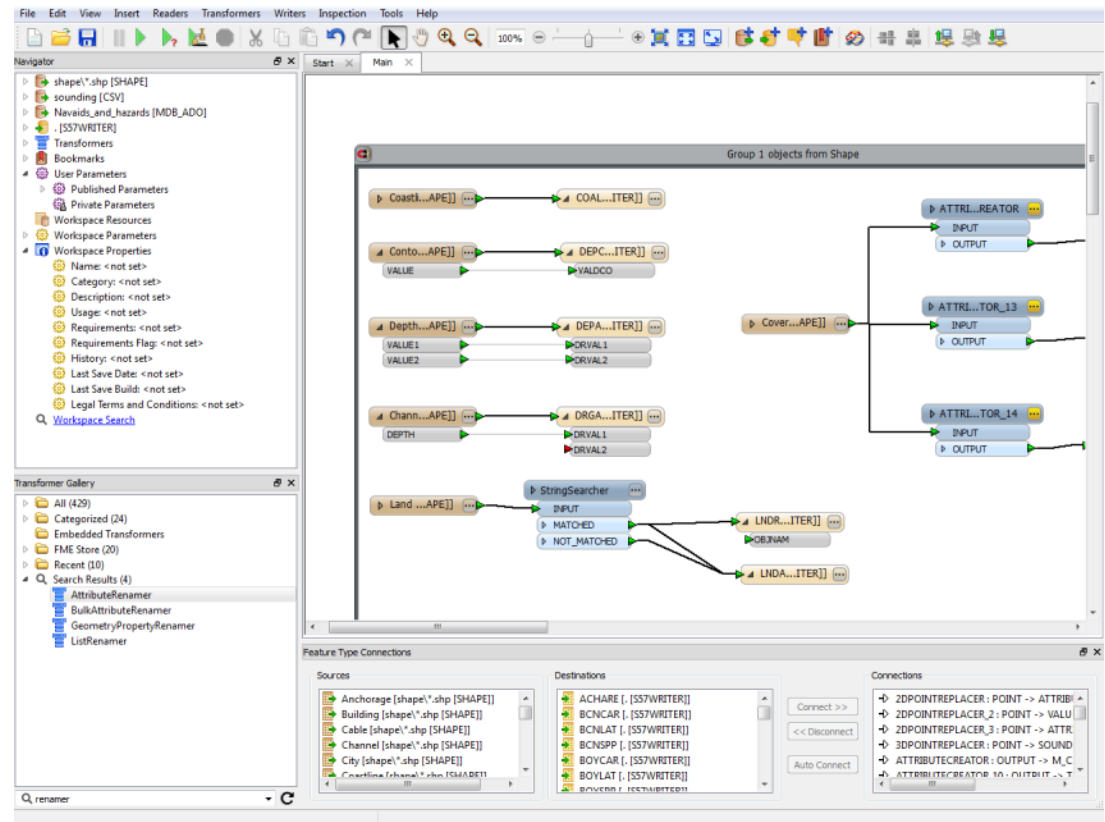


Products

Safe Software FME including S-57 Writer Plug-In



allows you to convert any Geo-Information into S-57 format.



ENC Designer with ENC Manager

- **ENC Designer is a graphical tool which allows you to create, edit and update ENC, IENCs and AMLs.**
- **The powerful software allows to utilize existing S-57 data or geo-referenced raster data while providing a plot function for visual data verification.**
- **ENC Manager is a workflow environment for the maintenance of S-57 data.**
- **It can be used in the production of new ENC, IENCs, AMLs, updates, new editions and S-57 Exchange Sets.**





ENC Designer with ENC Manager

ENC Manager

File Options Help

Name	Type	UPDN	Status
Demo_DB	Database		
7C	Agency		
Coastal	Usage		
7C380001	Dataset	0	OK
Edition 2	Edition	0	OK
7C380002	Dataset	0	OK
Edition 2	Edition	0	OK
7C380003	Dataset	0	OK
Edition 2	Edition	0	OK
7C380004	Dataset	0	OK
Edition 2	Edition	0	OK
7C380005	Dataset	0	OK
Edition 2	Edition	0	OK
7C380006	Dataset	0	OK
Edition 2	Edition	0	OK
Approach	Usage		
7C480001	Dataset	0	OK
Edition 2	Edition	0	OK
7C480002	Dataset	0	OK
Edition 2	Edition	0	OK
7C480003	Dataset	0	OK
Edition 2	Edition	0	OK
7C480004	Dataset	0	OK
Edition 2	Edition	0	OK
7C480005	Dataset	0	OK
Edition 2	Edition	0	OK
7C480006	Dataset	0	OK
Edition 2	Edition	0	OK

Timestamp Level Message

2012-11-21 15:05:40 INFO 7C380001 EDTN 2 UPDN 0 copied to Workspace

2012-11-21 15:05:10 INFO Added Database: Demo_DB

2012-11-21 15:03:40 INFO Start ENC Manager.

ENC Manager

File Options Help

Edition UPDN Status

Demo_DB/7C/Coastal/7C380001/Edition_2 0 OK

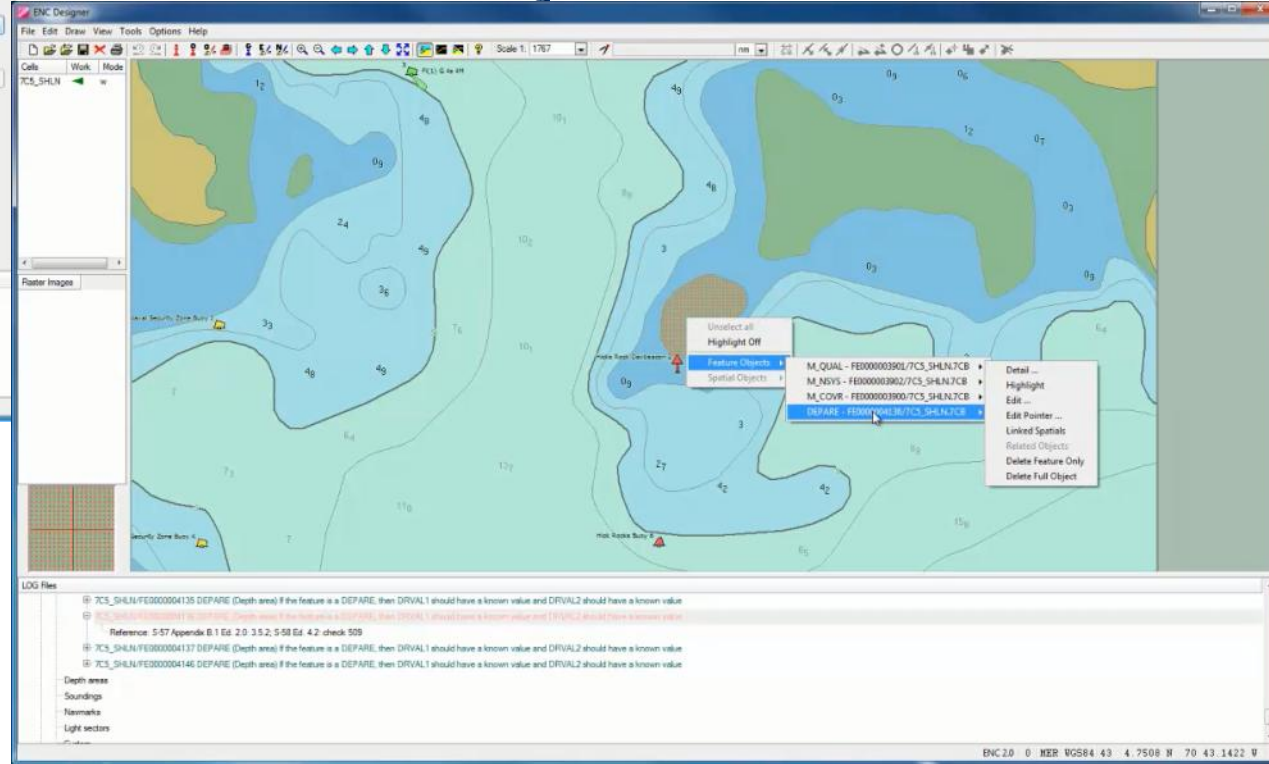
ENC Designer

File Edit Draw View Tools Options Help

Scale 1: 1767

Cells Work Mode

7C3_SHLN



Feature Objects

- M_QUAL - FED000003901/7C3_SHLN/7CB
- M_NSYS - FED000003902/7C3_SHLN/7CB
- M_COVR - FED000003900/7C3_SHLN/7CB
- DEPART - FED000004136/7C3_SHLN/7CB

Detail ...

Highlight

Edit ...

Edit Pointer ...

Linked Spatial

Related Objects

Delete Feature Only

Delete Full Object

LOG Files

7C3_SHLN/FED000004136 DEPART (Depth area) If the feature is a DEPART, then DRVAL1 should have a known value and DRVAL2 should have a known value

7C3_SHLN/FED000004137 DEPART (Depth area) If the feature is a DEPART, then DRVAL1 should have a known value and DRVAL2 should have a known value

Reference: 5-57 Appendix B.1 Ed. 2.0 3.5.2; 5-58 Ed. 4.2; check 505

7C3_SHLN/FED000004137 DEPART (Depth area) If the feature is a DEPART, then DRVAL1 should have a known value and DRVAL2 should have a known value

7C3_SHLN/FED000004146 DEPART (Depth area) If the feature is a DEPART, then DRVAL1 should have a known value and DRVAL2 should have a known value

Depth areas

Soundings

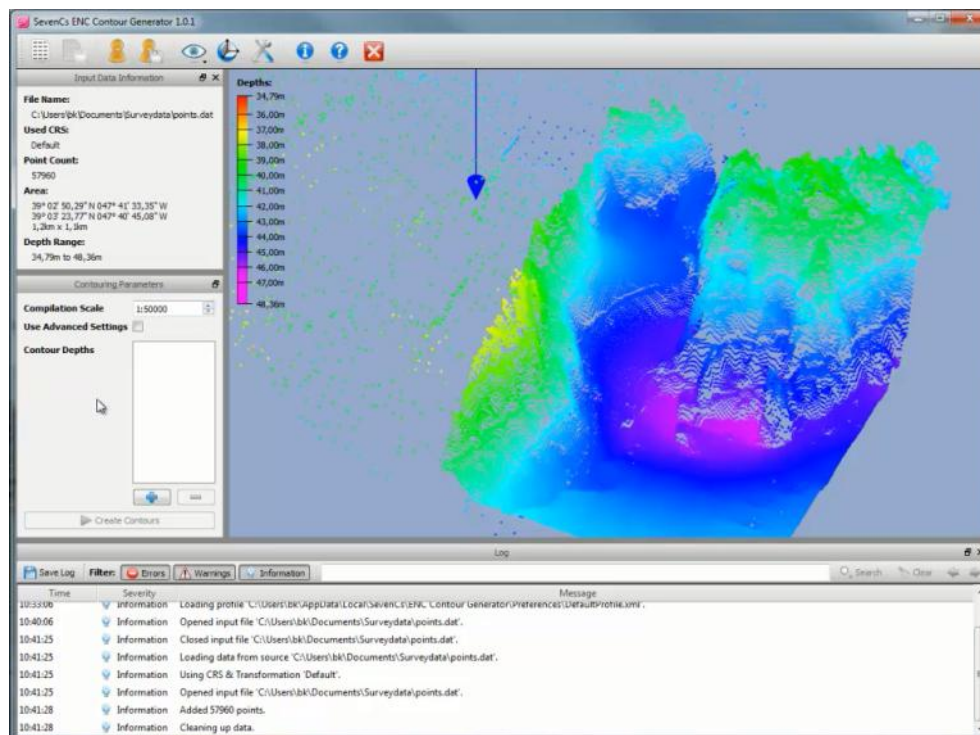
Remarks

Light sectors

ENC 2.0 0 KEP WGS84 43 4.7508 N 70 43.1422 W

ENC Contour Generator

- ENC Contour Generator allows automatic generation of depth contours at user defined intervals from xyz data
- 3D visualisation of source data and contouring results
- Includes a comprehensive Coordinate Reference System (CRS) Manager
- Supports “safeside” contour smoothing and contour generalization



ENC Optimizer

- 🌐 **RENC recommended tool to reduce data volume and maximize display performance**
- 🌐 **Automatic setting of official or user defined SCAMIN values**
- 🌐 **Automatic correction of digitizing errors, e.g. duplicate geometry, non significant characters etc.**
- 🌐 **Logfile allows to step through the single optimizations in ENC Designer**
- 🌐 **Filter function allows to apply single optimization functions to particular objects**



ENC Optimizer



ENC Optimizer

File Checks Options Help

Cells	Processed	Changed	EDTN	UPDN
7C5_SHLN			5	0

Optimization

- Delete duplicate geometry
- Remove partially redundant edges
- Delete redundant features
- Delete unreferenced objects
- Delete non significant characters
- Melt edges
- Melt lines
- Split edges
- Melt soundings
- Clean edge vertices

Encoding

- Set master-slave relationships
- Set SCAMIN
- Set Sounding SCAMIN
- Set Data Limit
- Set Compilation Scale

Specific (Use carefully!)

- Check areas
- Delete redundant edge pointer
- Generalize edges
- Split sounding cluster
- Create soundings
- Set record version
- Set agency code

Messages

- 7C5_SHLN
 - Optimization run no: 1

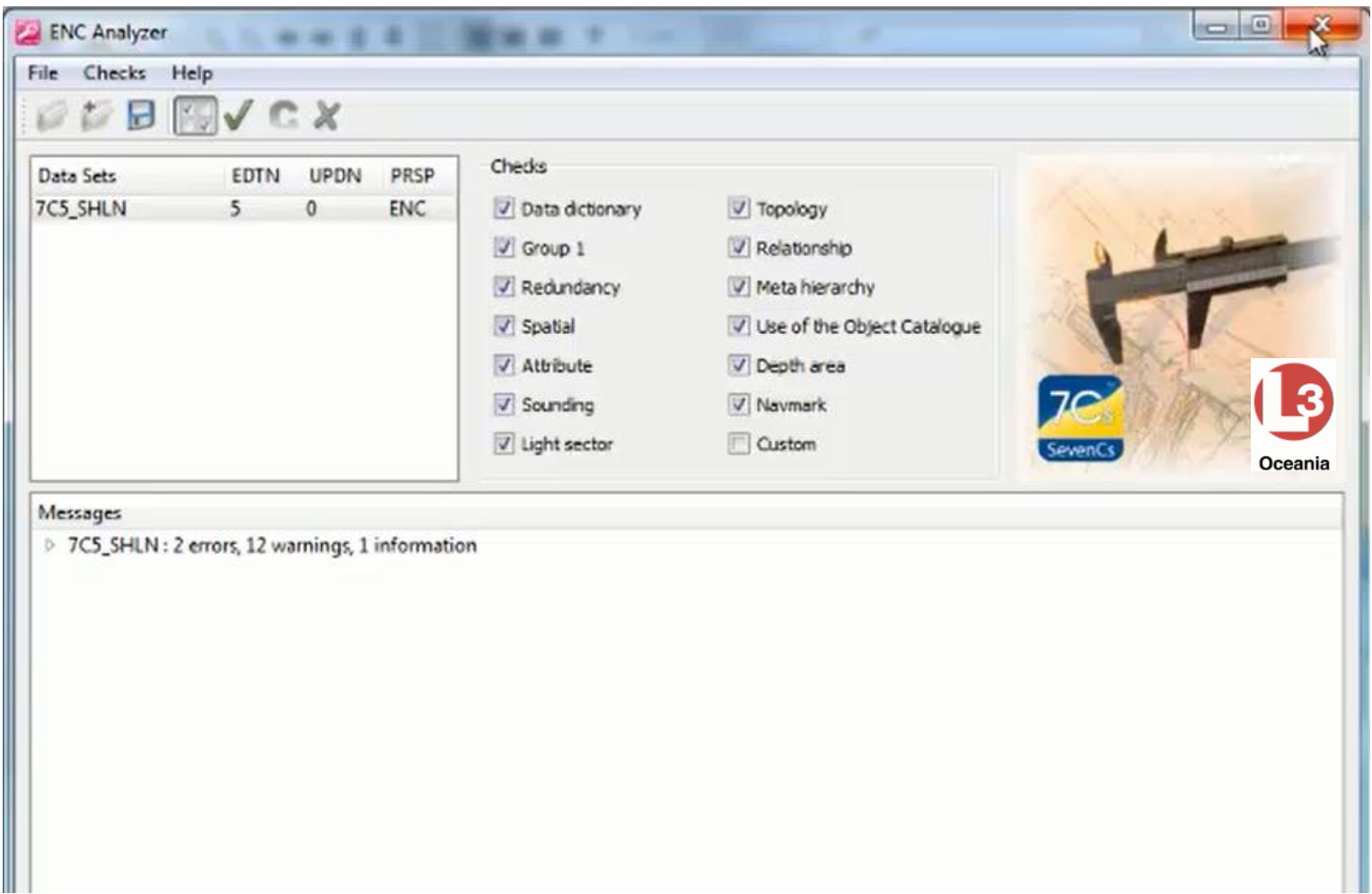
ENC Analyzer

- **ENC Analyzer is a joint development of L-3 Oceania and SevenCs**
- **Powerful data validation tool which performs over 600 checks according to IHO S-58 (Recommended ENC validation checks)**
- **Works as a stand alone tool or in combination with ENC Designer**
- **Individual results can be check via the log file and highlighted in ENC Designer**



Oceania

ENC Analyzer



The screenshot shows the ENC Analyzer application window. The title bar reads "ENC Analyzer". The menu bar includes "File", "Checks", and "Help". Below the menu bar is a toolbar with icons for file operations and status indicators. The main interface is divided into several sections:

- Data Sets:** A table with columns "EDTN", "UPDN", and "PRSP". The row for "7CS_SHLN" shows values "5", "0", and "ENC".
- Checks:** A list of 11 checkboxes, all of which are checked:
 - Data dictionary
 - Group 1
 - Redundancy
 - Spatial
 - Attribute
 - Sounding
 - Light sector
 - Topology
 - Relationship
 - Meta hierarchy
 - Use of the Object Catalogue
 - Depth area
 - Navmark
 - Custom
- Messages:** A section at the bottom containing the text: "7CS_SHLN : 2 errors, 12 warnings, 1 information".

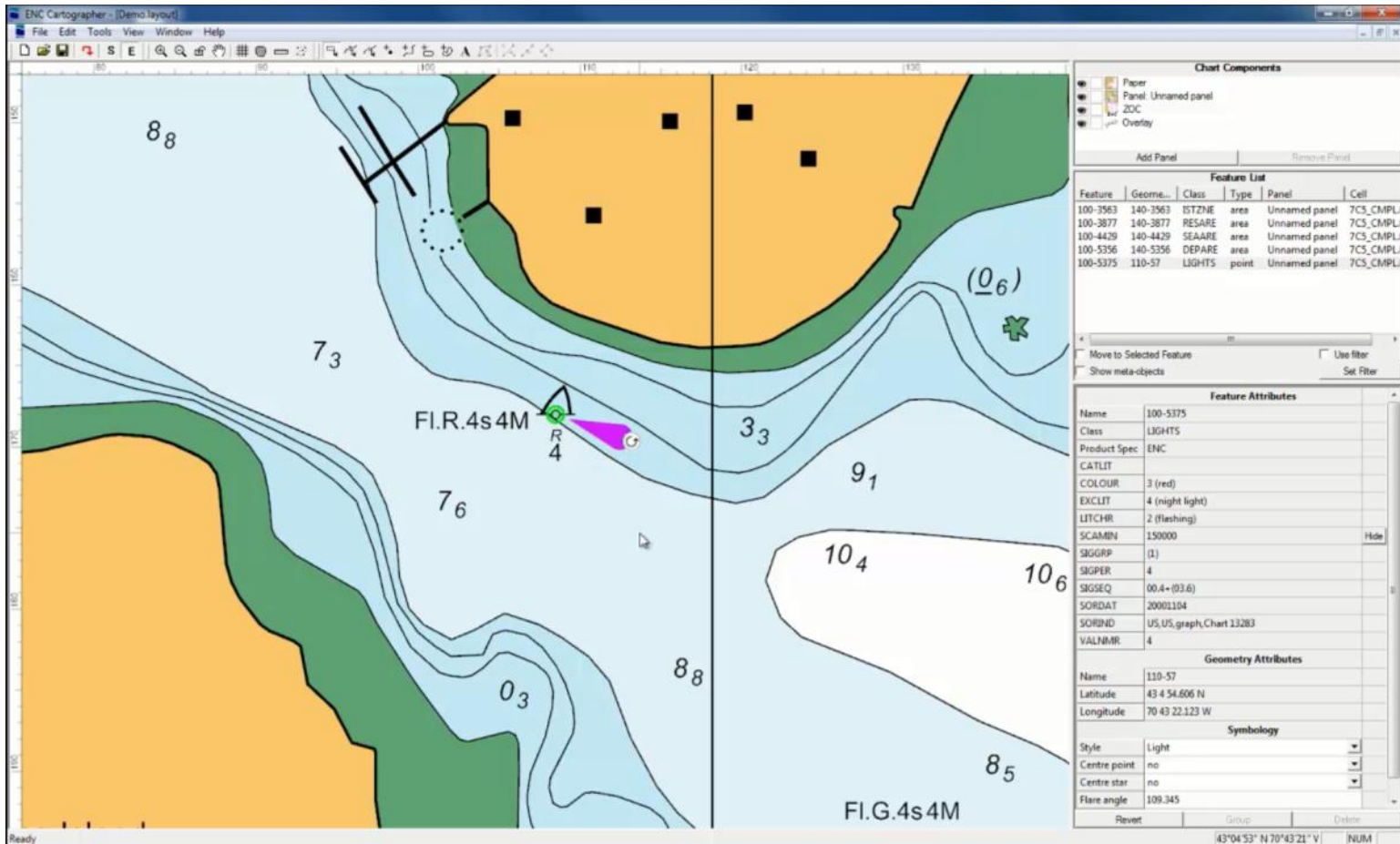
On the right side of the interface, there is a graphic showing a pair of calipers over a technical drawing, with the 7Cs SevenCs logo and the Oceania logo (a red circle with a white 'L' and a '3') positioned below it.

ENC Cartographer

- **ENC Cartographer allows to derive INT1/INT2 paper charts from one or more S-57 ENC cells**
- **Creation of Zones of Confidence (ZOC) diagrams using S-57 quality objects**
- **Support of INT2 borders and graticules**
- **Generation of marginalia and text**
- **Tidal Stream and Compass Rose paper symbols derived from S-57 objects**
- **Spatial Vector Graphics (SVG) generated file for cartographic editing**
- **Support of non-latin characters**



ENC Cartographer

The screenshot displays the ENC Cartographer software interface. The main window shows a nautical chart with various depth contours (e.g., 88, 73, 76, 33, 91, 104, 106, 03, 88, 85) and navigational features. A specific feature, a light, is highlighted with a green circle and labeled 'FI.R.4s4M'. The right-hand panel contains the 'Chart Components' and 'Feature List' sections. The 'Feature List' table is as follows:

Feature	Geom...	Class	Type	Panel	Cell
100-3563	140-3563	ISTZNE	area	Unnamed panel	7CS_CMPLE
100-3877	140-3877	RESARE	area	Unnamed panel	7CS_CMPLE
100-4429	140-4429	SEAARE	area	Unnamed panel	7CS_CMPLE
100-5356	140-5356	DEPARE	area	Unnamed panel	7CS_CMPLE
100-5375	110-57	LIGHTS	point	Unnamed panel	7CS_CMPLE

Below the table is the 'Feature Attributes' section for the selected feature (Name: 100-5375):

Feature Attributes	
Name	100-5375
Class	LIGHTS
Product Spec	ENC
CATLIT	
COLOUR	3 (red)
EXCLIT	4 (night light)
LITCHR	2 (flashing)
SCAMBN	150000
SIGGRP	(1)
SIGPER	4
SIGSEQ	00.4+(03.6)
SORDAT	20001104
SORIND	US,US_graph,Chart 13283
VALNMR	4

The 'Geometry Attributes' section shows:

Geometry Attributes	
Name	110-57
Latitude	43 4 54.606 N
Longitude	70 43 22.123 W

The 'Symbology' section shows:

Symbology	
Style	Light
Centre point	no
Centre star	no
Flare angle	109.345

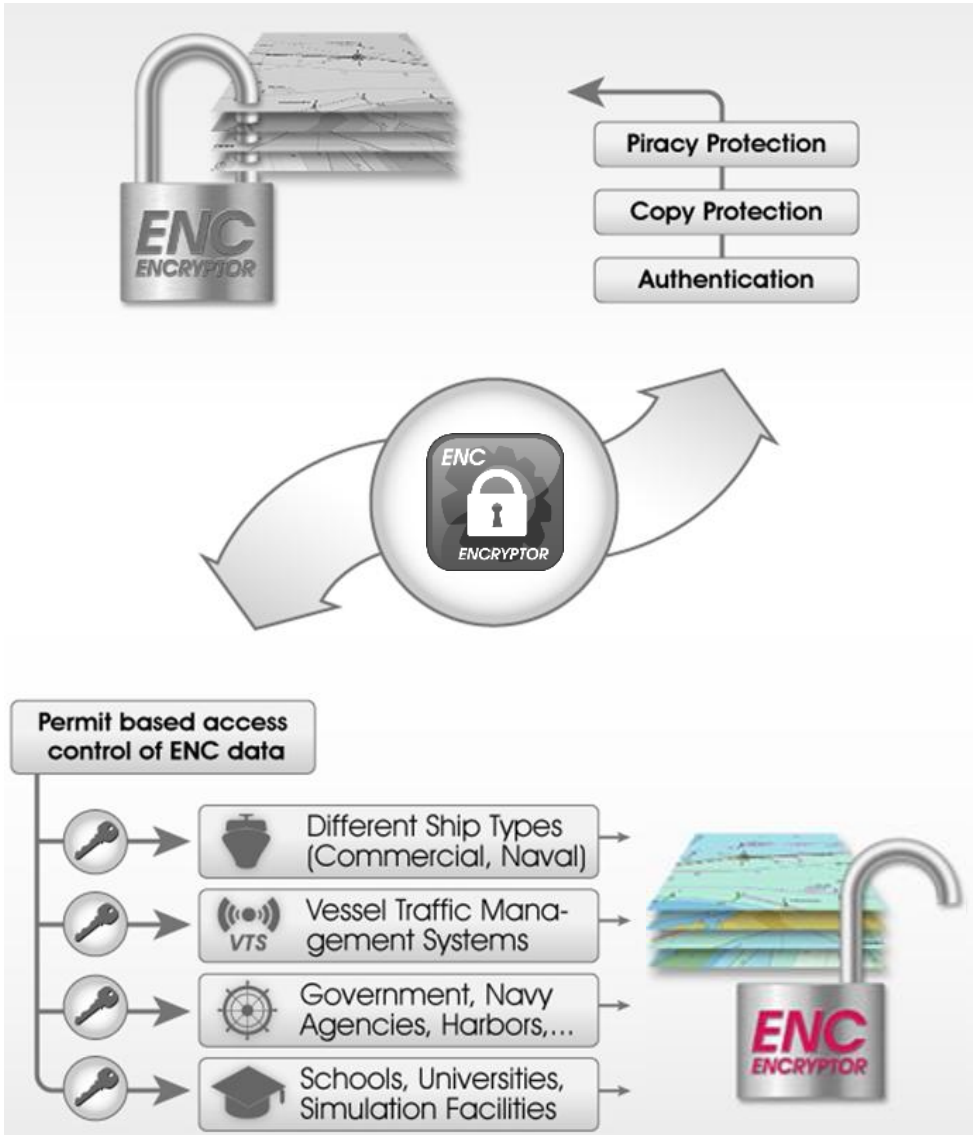
At the bottom of the interface, the coordinates are displayed as 43°04'53" N 70°43'21" W.

ENC Encryptor

- **ENC Encryptor allows S-57 ENC producers to encrypt and sign their data according to the IHO S-63 Data Protection Scheme.**
- **ENC Encryptor is delivered together with the ENC Permit Generator**
- **ENC Permit Generator generates the respective chart keys needed by the data users to access the data. Furthermore a Data client database is created.**
- **Supports S-63 1.0 and 1.1**



ENC Encryptor



Commercial aspect

- ④ **SevenCs is supporting emerging countries and their hydrographic offices with its easy to use and cost efficient ENC Tools**
- ④ **Software support based purchase programs**
- ④ **Web-based and cost efficient one-on-one ENC production training**



Questions

🌐 How can we assist you and your team?

