Inland ENC Workshop

18th of October, 2011
in Chongqing, P.R. China

Inland ENC
Harmonization Group

7Cs
SevenCs

SevenCs Team

- **Mr Eric Rottmann,**

   SDK Product Manager

- **Ms Swetlana Fiedler,**

   Sales Manager

Inland ENC Harmonization Group

SevenCs Products and Services

➜ **ECDIS EC2007 Kernel** – A function library to administrate and display electronic charts. OEMs are using this library for the development of their own applications.

➜ **ENC Tools Software for S-57 Data production** – A suite of tools for an efficient S-57 chart production, e.g. ENCs, Inland ENCs, Port ENCs, bathymetrische ENCs (bENCs).

➜ **Specific Software** – Products for specific requirements like Inland ECDIS, Port ENCs, Portable Pilot Units (bENCs), Workboats ....

➜ **Support, Training and Consulting**

SevenCs ENC Tools

The Complete Electronic Chart Production Software Suite

ENC Tools Software

ENC Tools Software for S-57 Data production – suite of tools for an efficient S-57 chart production, e.g. ENCs, Inland ENCs, Port ENCs, bathymetric ENCs (bENCs).
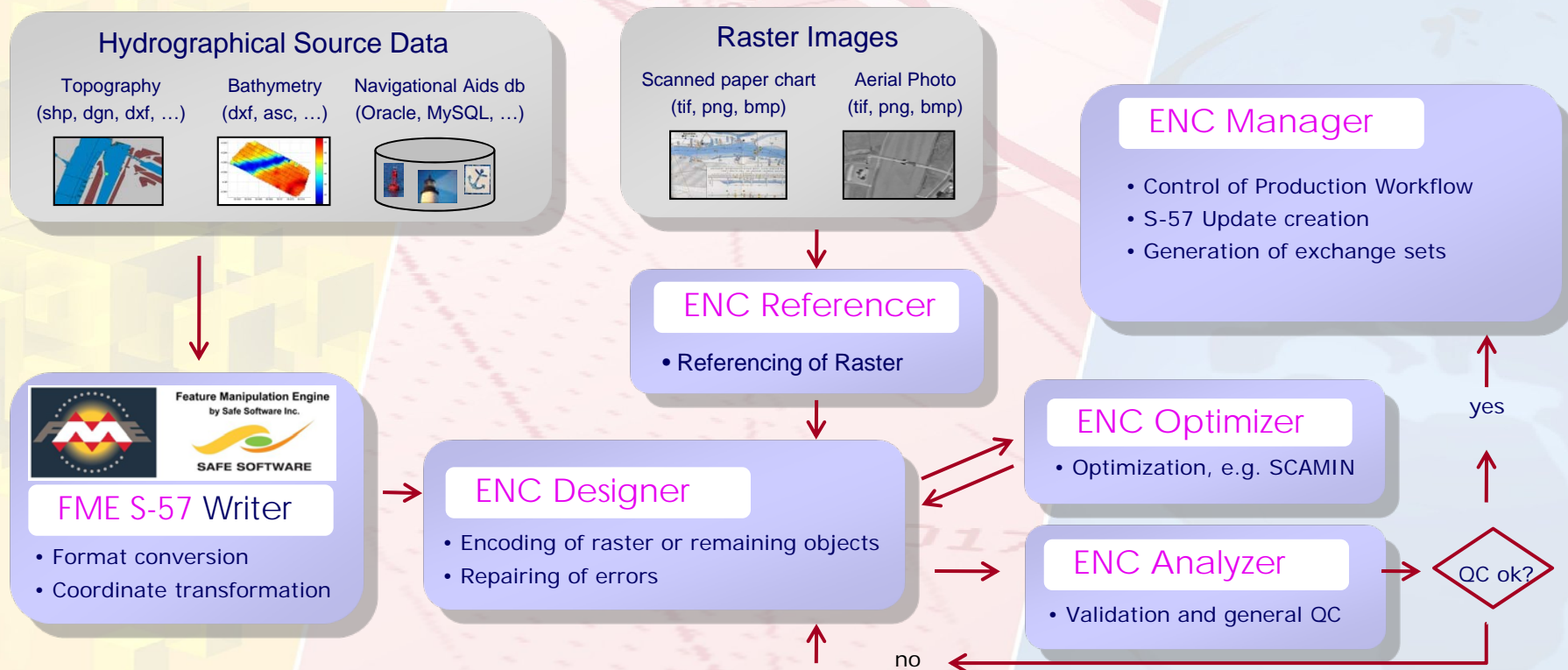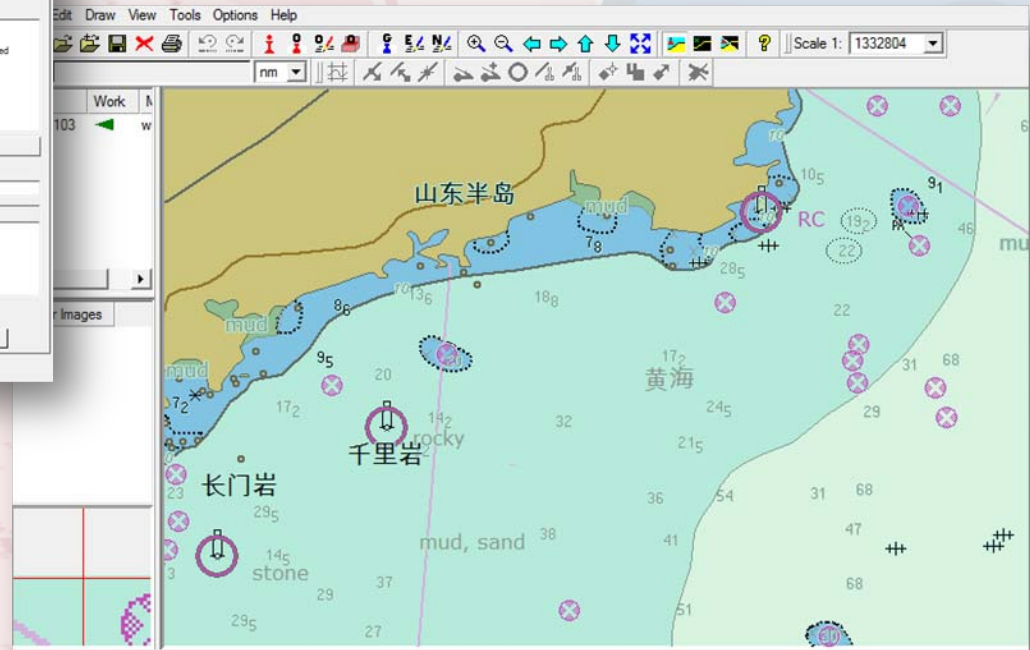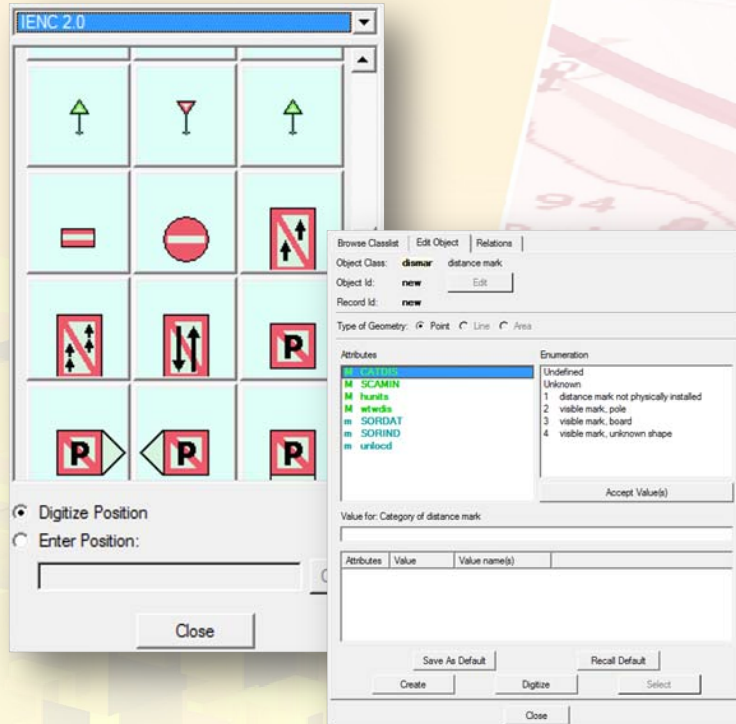
Hydrographical Source Data

Topography (shp, dgn, dxf, …)

Bathymetry (dxf, asc, …)

Navigational Aids db (Oracle, MySQL, …)

Raster Images

Scanned paper chart (tif, png, bmp)

Aerial Photo (tif, png, bmp)

ENC Manager
- Control of Production Workflow
- S-57 Update creation
- Generation of exchange sets

ENC Referencer
- Referencing of Raster

Feature Manipulation Engine by Safe Software Inc.

SAFE SOFTWARE

FME S-57 Writer
- Format conversion
- Coordinate transformation

ENC Designer
- Encoding of raster or remaining objects
- Repairing of errors

ENC Optimizer
- Optimization, e.g. SCAMIN

ENC Analyzer
- Validation and general QC

QC ok?

yes

no

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Chart Production using ENC Designer * Enterprise Pakage
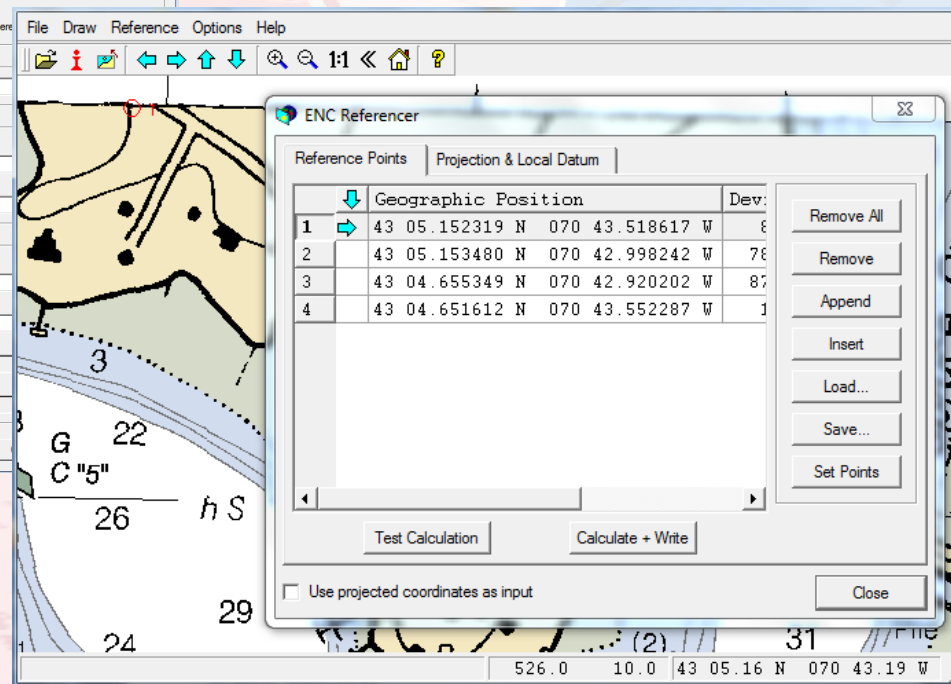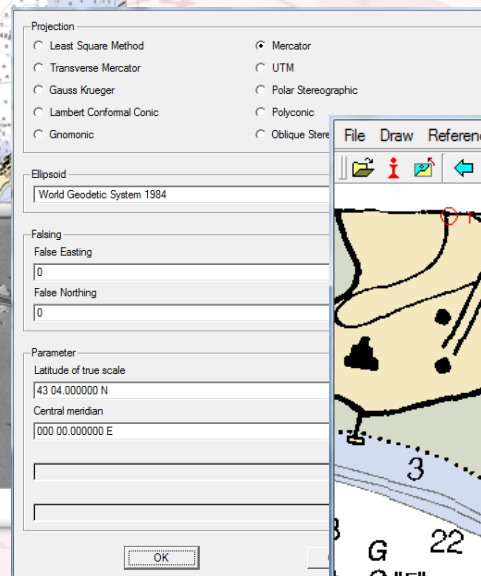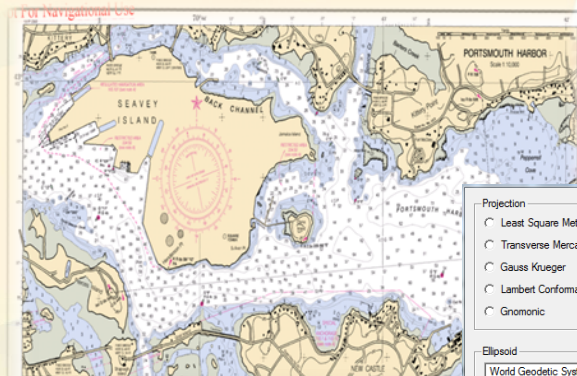

o   Data Capturing and Editing,

o   Object Encoding,

o   Data Review and

    Inspection

ENC Referencer * Enterprise Pakage

- o Coordinate Transformation,
- o Geo-Referencing

✓ prepares raster images for the use as back-drop in ENC Designer

ENC Optimizer

o   Data optimization,

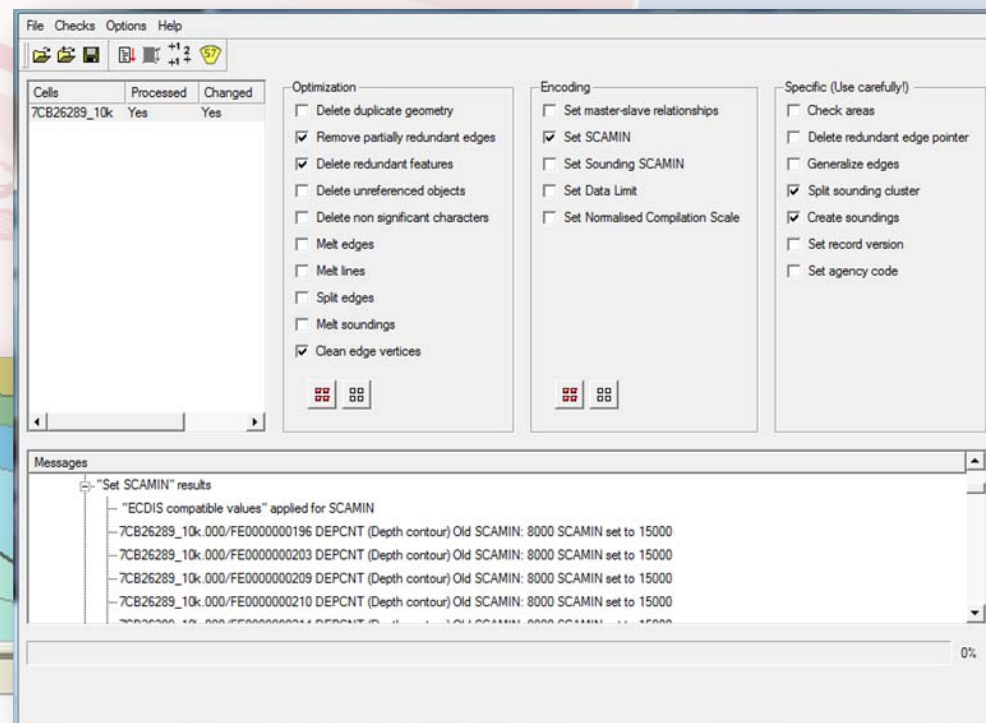o   Error correction and

o   Automatic Encoding

QA using ENC Analyzer
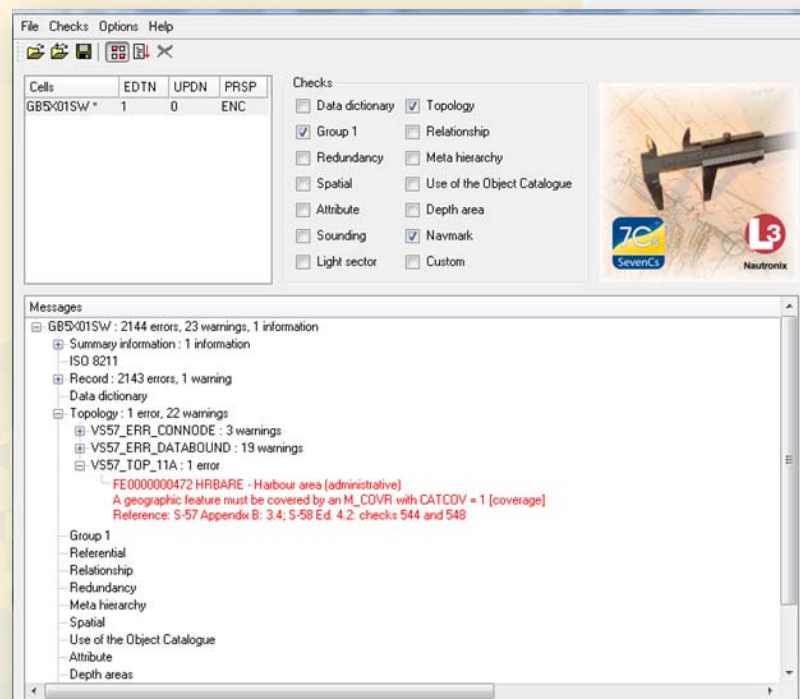
o S-58 Validation checks

o S-57 Compliance tests

o ISO 8211 Encapsulation checks
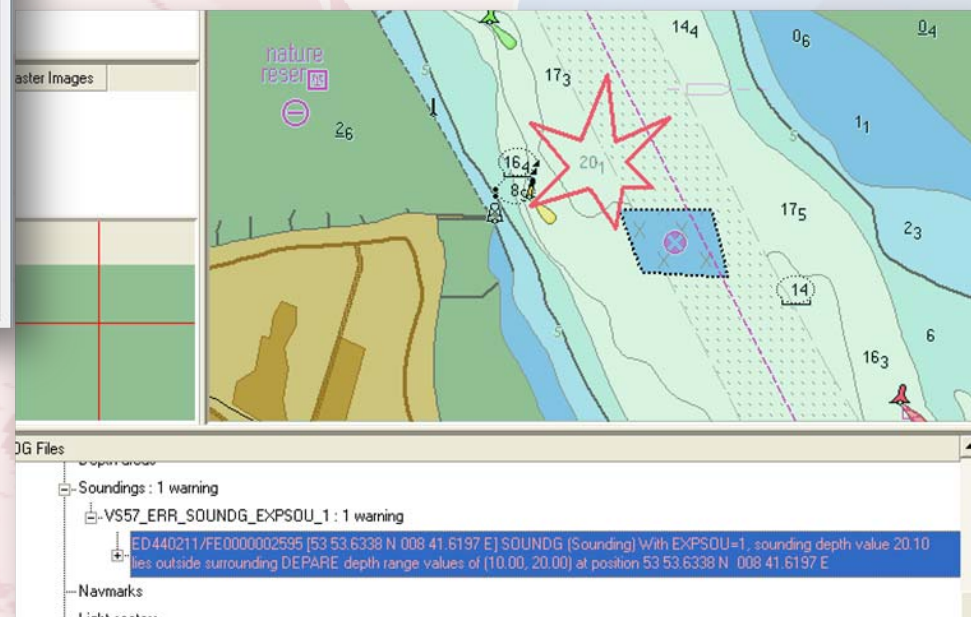
✓ Ensures the quality of the produced ENC data

Data Conversion using FME

FME Environment - Powerful solution to convert digital data in 250+ formats to S-57 and vice versa.

o Coordinate Transformation

o Data Model Transformation

o Feature and spatial modifications

o Batch processing

FME Software from Safe Company

+

FME S-57 Writer Plug-in from SevenCs

Depth Contours Generation
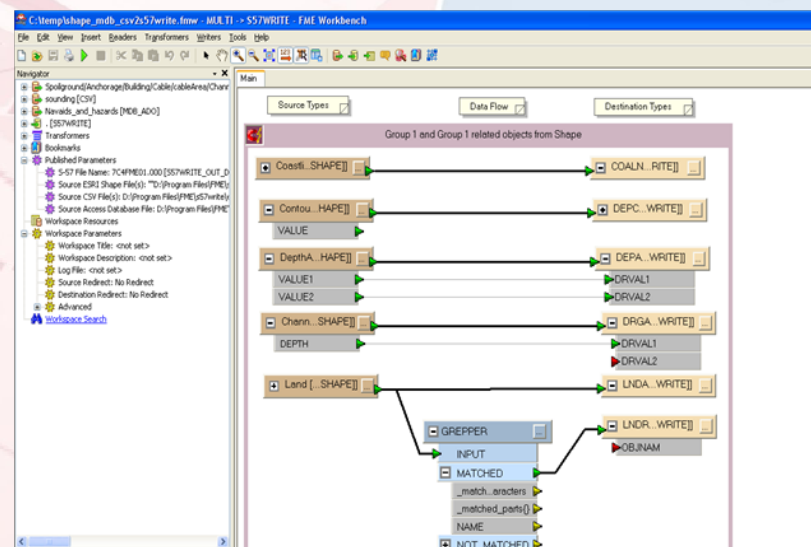
ENC Contour Generator – calculates the contour lines from the XYZ file, cleaned survey data, and automatically creates the S-57 depth contour lines.

o Coordinate Transformation

o Considering hydrographic rules, i.e. Generalization and Smoothing to the safe side

o Export into S-57 and

o SevenCs SENC format
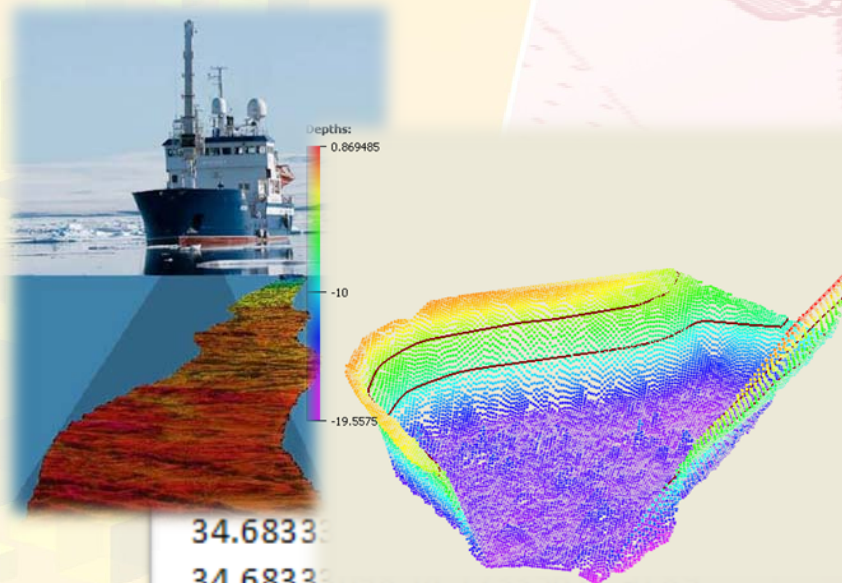
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34.68333
34.68333146,14.123428735,-0.89
34.68333193,14.12350135,4.55
34.6833324,14.123573966,5.72

*Cleaned Bathymetry (Point clouds, xyz)

bENC as S-57 Product…

53 32.722 N 009 51.476 E | to | to | 0.000 nm 000 | COG 286.6 | SOG 00.1 kn | SIM | 08:12

Nienstedten

FOCUS
- ● Chart
- ○ Route
- ○ Monitoring
- ○ Settings

TASK
- ○ Chart Work
- ● Chart Settings
- ○ Chart Colors
- ○ Chart Handling

FUNCTION
- ☐ Two Shades
- ☑ Contour Labels
- ☐ Graticule
- ☑ Traditional
- ☐ Lights   ☐ Sectors
- ☐ Offical Boundary
- ☐ Overscale
- ☑ Symbol Filter
- ☐ Smooth zooming
- ☑ SCAMIN [Auto]
- ☐ Multimedia Overlays
- ☐ Environment Overlays

Set Range<->Usage
Set Water Level
Set Textsize
Safety Values

km. 631

0810
0811

werder Rear

Set | Set | Go Set | Notes | All | Hamburg [Germany]

ECDIS leicht gemacht

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Nienstedten

Attention: Chart display shows bathymetric overlay.

km-631

FOCUS
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Set | Set | Go Set | Notes | All | Hamburg [Germany]

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Navigation Software

Products for specific requirements like Inland ECDIS*, Port ENCs,
Portable Pilot Units (bENCs)**

*Significant fuel savings
navigating in waterways

**Precise manoeuvring based on
customized charts

Many thanks for your attention

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