Transas ECDIS Data Services
Navi-Planner 4000
Data Services

- SENC / ENC
- AIO
- ADP
- Weather Service
- Port Data
- Notices to Mariners
- Additional DATA
- Support / availability

**Annex** | **Title** | **Entry into force** | **Amendments**
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I | Prevention of pollution by OIL & oily water | 2 October 1983 | MEPC.1.117(52), Adopted on 15 OCTOBER 2004
| | | | MEPC.154(55), Adopted on 13 OCTOBER 2006

**IMPORTANT:** Annex III, which is about HARMFUL SUBSTANCES IN PACKAGED FORM is not available in Navi-Planner since the rules of the annex are applied to the whole marine environment world.

- V | Pollution by GARBAGE from ships | 31 December 1988 | MEPC.219(63), Adopted on 2 MARCH 2012
- VI | Prevention of AIR pollution from ships | 19 May 2005 | MEPC.202(62), Adopted on 15 JULY 2011
### Navigation and Integrated Onboard Solutions

**One Supplier, All the Answers**

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<tr>
<th>DATA</th>
<th>Transas Admiralty Data Service</th>
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<tr>
<td>AVCS</td>
<td>ADMIRALTY Vector Chart Service</td>
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<td>Online correction service for paper charts and publications</td>
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<td>MARPOL</td>
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<td>Routeing Charts</td>
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Navi-Planner 4000 is a tool in ECDIS for voyage planning. It can be used both on board as a back of the bridge and ashore as a management tool. Developed based on IMO A.893(21) Guidelines for Voyage Planning and user needs.

**Basic Configuration**
- Route planning
- Route Import / Export
- Charts handling
- Additional layers

**Advanced Planning**
- Passage plan creation
- Printing reports

**Additional services**
- Weather (two different sources)
- Admiralty Digital Publications
- Auto Routing
- Notice to Mariners
- MARPOL
- Routeing Charts
Navi-Planner 4000

...passage plan creation in 7 steps...

1. Route creation

2. Weather routing

3. Chart admin

4. Fine tune & adjust

5. Check route & Schedule

6. Add information & Data collection

7. Print reports

- Go thru the completed passage plan and print the report, sign it and you are ready for departure

...steps and the passage plan has been created and the journey can begin
Chart Management in the office

- **New chart orders**
  - Approve or cancel new orders for TADS or AVCS made by the crew

- **Control chart budget**
  - View history of chart orders, weekly and monthly cost for charts

- **Control chart status**
  - See license expiration dates
  - Charts status (Up-to-dated / Not up-to-dated)
  - PAYS tracks and PAYS reports
Changes in IEC & IHO Standards for ECDIS

Information on changes for Transas Navi-Sailor ECDIS users
Introduction

CHANGES IN IHO AND IEC STANDARDS

ECDIS users provided feedback on various issues, such as:

- Anomalies in ENC chart display
- Differences in display of alarms and warnings
- Increased degree of alarm fatigue due to continuous alarm sounds
- No standards for display of symbols and abbreviations among different manufacturers

New editions of IHO and IEC standards will increase safety and usability of ECDIS

- IHO and IEC revised standards to reflect the feedback given by current users of ECDIS
- Standards have been published August 2015 and old standards will be withdrawn August 2017
- There will be no grandfather clause allowing old systems to remain in place like in the past
Introduction

CHANGES IN IHO AND IEC STANDARDS

The new standards will replace the old editions completely in August 2017

Following **IHO standards** have been updated and implemented:

- **S-52** «Specifications for Chart Content & Display Aspects of ECDIS» (Ed. 6.1)
- **S-52 Annex A** «Presentation Library» (Ed. 4.0)
- **S-63** «Data Protection Scheme» (Ed. 1.2)
- **S-64** «Test Data Sets for ECDIS» (Ed. 3.0)

Following **IEC standards** have been changed:

- **IEC 61174** «ECDIS – Operational and performance requirements, methods of testing and required test results» (Ed. 4.0)
- **IEC 62288** «Presentation of navigation-related information on shipborne navigational displays – General requirements, methods of testing and required test results“ (Ed. 2.0)
Introduction

CHANGES IN IHO AND IEC STANDARDS

Installation dates of current systems decide on mandatory upgrades

- Changes have been comprehensive and not all of them will be visible to the user directly, especially where IEC standards are concerned
- Transas combined the changes necessary with implementation of new and improved functions to add user value

Those changes and new functions have effects on:

- Alert management
- Display of charts
- Chart management
- Route planning
- Safety parameters
- Source of information for chart data

- The new version of Navi-Sailor (Marine Navigation Software 34 – MNS 34) is fully compliant with the standards and available from February 2016 onwards
- Rule of thumb: systems with installation dates after 1st January 2009 will need software updates only, while older installations might need hardware exchange as well
Changes in Detail

More Safety for You
Changes in Detail

FUNCTIONS

«Pick Report» - Information Cursor now with standardized information and shape

- Improved explanations with pictures for visualization of objects
- Listing is sorted by drawing priority
- Units of measurement for all values listed
- When „unknown objects“ are interrogated their values will be shown
- Information easier to read for mariners
- Information given similar on all ECDIS systems

![Image of chart and cursor](image-url)
Changes in Detail

FUNCTIONS

Default Control Settings – A standardized and minimized chart display with one click

- **Standardized chart display mode acc. to IEC 61174**
- Affects settings for chart display of:
  - Chart information
  - AIS information
  - Radar information
- Systems of all ECDIS manufacturers display the same information in this mode
- Provide «familiar» display with one click
Changes in Detail

**ALERT MANAGEMENT**

New categories for alerts – less alarm sounds lead to reduced risk of alarm fatigue

- Categorization of alerts based on principles defined in performance standards for Bridge Alert Management (MSC.302/A)
- Isolated Dangers and floating aids to navigation objects combined to «Navigational Hazards», which create an indication but no audible alarms anymore
- Warnings will be re-categorized as alarms if not acknowledged or reappear as warnings after given time, e.g. 5mins
- Less alarms due to re-arranging categories and objects in
- Areas with special conditions will only be indicated - no more alarms

<table>
<thead>
<tr>
<th>Type</th>
<th>Colour</th>
<th>Meaning</th>
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<tbody>
<tr>
<td>Alarm</td>
<td>Red</td>
<td>Immediate attention and action required</td>
</tr>
<tr>
<td>Warning</td>
<td>Orange</td>
<td>Immediate attention but not necessarily action required</td>
</tr>
<tr>
<td>Caution</td>
<td>Yellow</td>
<td>Immediate attention but no action required</td>
</tr>
<tr>
<td>Imp. Indication</td>
<td>Yellow</td>
<td>Attention required</td>
</tr>
<tr>
<td>Indication</td>
<td>White</td>
<td>No attention/action required</td>
</tr>
</tbody>
</table>

Example for highlighting of Navigational Hazards
(Source: (S-52 PresLib Ed. 4.0.0)
Changes in Detail

ALERT MANAGEMENT

New definition of alarms – alarms and warnings are located in more locations than before

With new alert categorization the alarms and warnings are more closely connected to the affected data, e.g. highlighting speed data

- Alarm sounds occur less frequently than before
- Meanings of alarms and warnings more comprehensible
Changes in Detail

ALERT MANAGEMENT

Highlighting of Safety Contour & Navigational Hazards during Route Monitoring

- **Alarms** appear when own ship will cross safety contour after given time or distance
- **Cautions** will be created when a special conditions area or object occurs after a given time or distance

**Cautions** will also be created when a navigational hazard is about to be passed, e.g.:

- Underwater danger shallower than safety contour
- Aid to navigation

Less alarms due to new categorization
Area Alerts have been regrouped to better reflect IMO defined alarms and additional ones

- Newly created group of «IMO Areas» contains areas to provide an indication when:
  - Planning a route through respective areas or
  - Safety frame crossing such an area while under-way

- «IMO Areas» are defined in MSC.232(82) Appendix 4
- In MNS 33 and before the «IMO Areas» were part of the «Basic Areas»
- Improved usability for users interested especially in IMO defined areas for planning and monitoring of routes
Changes in Detail

Display options for date dependent objects have been improved

- Navtex symbol replaced by **MSI symbol**
- Symbol for message from:
  - Navtex
  - SafetyNet
  - AIS
- So far only Navtex messages as part of MSI are being processed by Navi-Sailor

- Navi-Sailor interface for SafetyNet receivers (I-Sat C) to receive „All Ships/Nav Area“ and „Coastal Warning Area“ to be expected end of 2016
- Navtex task as important tool for voyage planning and safety will be supported by new SafetyNet interface to be more comprehensive with regards to automatic processing of MSI messages

Display options for date dependent objects have been improved
Display options for date dependent objects have been improved

- **Specific dates** can be selected to activate the display of objects only visible during this specific time
- Date-dependent objects can be highlighted in the chart in addition to their display
- Permanent display of «Not Real Time» warning to inform users about selective date display
- Former Navi-Sailor versions could only display date dependent objects without a specific timeframe
Changes in Detail

DISPLAY

Display options for date dependent objects have been improved

- **Viewing groups** for display of chart objects have been redefined
- Standard display categories (base, standard and all) have been reconfigured
- Introduction of an update review function allows to highlight chart updates displayed up to a selected date
- Chart object display can be adjusted more detailed than before
- Display of chart updates now based on date selected by the user instead of «update week» number
New route format RTZ allows route exchange between different equipment and manufacturers

- **RTZ route exchange format** defined in new IEC 61174 ed. 4.0
- Exchange format determines minimum content and format in which data needs to be delivered
- Exchange format to be used when transmitting routes between different equipment or manufacturers (Advanced Planning)

- Minimum information to be provided for waypoints
- Additional information may be provided for XTDs, schedules etc.
- Standard format eases interchange of information and prepares implementation of e-Navigation
Changes in Detail

CHART MANAGEMENT

S-63 standard defines ENC status report formats for all charts and those in planned routes

- **ENC Update Status Report** provides information on all installed charts
- **Route Filtered ENC Status Report** informs about charts for a planned route
- Report table provides information on:
  - Cell Name (e.g. DK4KATGN)
  - ENC edition
  - Update no.
  - Issue Date
  - ENC Status (e.g. «Outdated»)
  - Expiry Date
  - Action (e.g. «To Be Ordered»)

Route related reports provide better focus on users informational needs
Improved Functionalities

Your Transas Plus in Usability
Improved Functionalities

MAPS TASK

Better alarm and display options through more forms, fill patterns and object attributes

- **New forms** available:
  - Rectangle
  - Sector
  - Ellipse
- New fill options like «hatch-filled»
- «Start» & «End» time attributes enabled

- «Danger» attribute available
- **Up to 25 user maps** can be loaded simultaneously
- Timeframes for objects enable automatic deletion of objects if not valid any longer
- Danger attribute enhances safety by alerting user when colliding with safety frame
Improved Functionalities

ROUTE PLANNING

Safety Parameters can now be pre-planned for route legs or have defined values as usual

- Safety Contour and Safety Depth can be pre-planned for every leg of a route when using Advanced Planning
- Upon loading a route, changes to current settings will be highlighted and may be accepted or reclined (Fig. 1)

If changes in pre-planned parameters occur, user will be asked to confirm before passing the next waypoint (Fig. 2)

No more manual changes necessary when stage of navigation changes, e.g. from coastal to open water navigation
Improved Functionalities

ROUTE PLANNING

Advanced Planning functionality has been extended to increase convenience in planning

- **Routes can be protected** in order to avoid changes after having planned and checked a route
- **Calculation of the following astronomical values:**
  - Rises/sets for Sun & Moon
  - Beginning/end of nautical twilight
- «Advanced Planning» becomes even more powerful than before and is well ahead of the basic functionalities provided by default
Additional New Features

More Transas ECDIS Experience
Additional New Features

DISPLAY

Areas according to the MARPOL Convention’s annexes can be displayed in the chart panel

- «Overlays» task with additional tab to activate display of special MARPOL areas
  - Oil (Annex I)
  - Bulk chemicals (Annex II)
  - Garbage (Annex V)
  - Air pollution (Annex VI)

- Additional button for display of «Particularly Sensitive Sea Areas» (PSSA) according to A.982(24)
- Function is not mandatory and available as an optional feature
- It will increase awareness and helps to stay clear of respective areas and discharging while crossing them
Additional New Features

ROUTE PLANNING

Alternative route segments allow to plan more than one way to reach a destination

- Alternative routes may be used in situations where high traffic or weather conditions demand for alternatives
- Planning can be done either by
  - extending an existing route or
  - linking a segment to it
- Navi-Sailor will ask the user to select one of the segments before reaching the parting of the routes
- Flexibility in planning is improved and allows multiple routeing options to be considered in the same waypoint plan
- **Function will be made available with MNS 34 patch 1**
Additional New Features

ANCHORAGE PLANNING

Increased voyage plan quality due to enhanced anchorage planning and monitoring options

- Calculation of swing circles based on vessel and anchor chain characteristics
- Checking for navigational hazards inside planned anchorages
- Link of anchorage to waypoints
- Monitoring of anchorage approach
- Anchor watch alerts
- Anchor planning (incl. contingencies) becomes a full part of the route planning
- Included to “Advanced Planning” functionality
Thank you!