
Name: ENC Data coverage checks in ECDIS**Category: ECDIS and ENC Service.****Description:**

Regulations V/19 and V/27 of the International Convention for the Safety of Life at Sea (SOLAS), 1974 requires all ships to carry adequate and up-to-date charts, sailing directions, lists of lights, notices to mariners, tide tables and all other nautical publications necessary for the intended voyage.

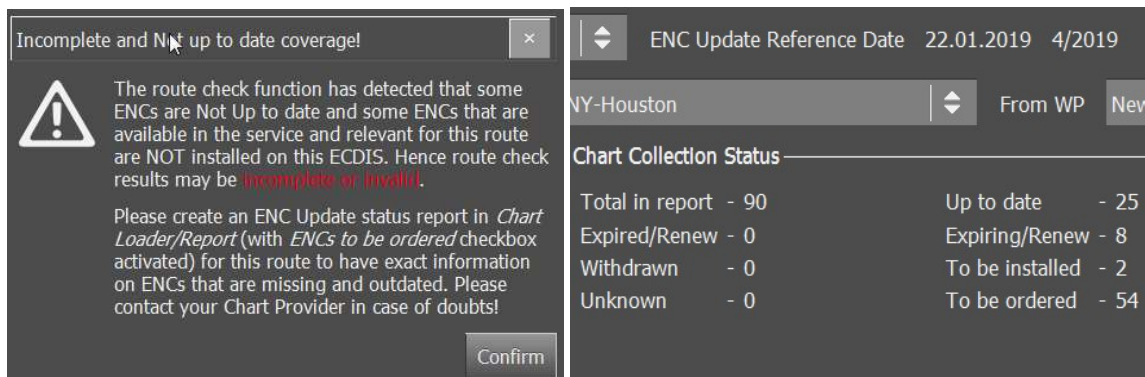
The latest edition of IHO S-63 standard requires ECDIS to generate ENC Update status reports, that should also include a check of adequate ENC coverage, on base of PRODUCTS.TXT file, that include cell limits of all ENC available in the service.

The ECDIS route checks has been enhanced with a check for completeness and update status of the chart coverage on the route in question.

A detection of an outdated chart coverage is calling the Navigation officers attention to the fact that the route is planned over outdated charts and is calling to take an action by updating the chart collection of the planned route.

A detection of an insufficient coverage is alerting the Navigation officer of the fact, that there are cells available from ENC Service, which are touching the route, and which are not in the ECDIS collection.

The ChartWorld eGlobe G2 ECDIS shows warning if missing or outdated ENC are found during the route check. Detailed ENC Status report is also provided in eGlobe in accordance with IHO S-63 requirements.



The screenshot displays two components of the ECDIS interface. On the left, a warning dialog box titled 'Incomplete and Not up to date coverage!' features a yellow triangle icon and text stating: 'The route check function has detected that some ENCs are Not Up to date and some ENCs that are available in the service and relevant for this route are NOT installed on this ECDIS. Hence route check results may be incomplete or invalid. Please create an ENC Update status report in Chart Loader/Report (with ENCs to be ordered checkbox activated) for this route to have exact information on ENCs that are missing and outdated. Please contact your Chart Provider in case of doubts!'. A 'Confirm' button is at the bottom. On the right, a panel shows the 'ENC Update Reference Date' as '22.01.2019 4/2019'. Below this, a 'Chart Collection Status' table provides a breakdown of ENC data.

Chart Collection Status	
Total in report	- 90
Expired/Renew	- 0
Withdrawn	- 0
Unknown	- 0
Up to date	- 25
Expiring/Renew	- 8
To be installed	- 2
To be ordered	- 54

ECDIS of other manufacturers provide similar functionality. The Navigation officer should check the ENC Service provider if ENC data is adequate and up to date.

Details and solution:

In case of ECDIS has generated warning saying “some ENC that are available in the service <...> are not installed in this ECDIS”, Navigation officer should refer to detailed ENC status report and check ENC indicated in the column “Action” as “Order”.

US4TX71M	ENC/US		35		0		-	No		Order
US5NJ11M	ENC/US		39		2		-	No		Order
US5NJ13M	ENC/US		46		4		-	No		Order
US5NJ14M	ENC/US		24		3		-	No		Order

The following should be taken into account:

1. The cell limits defined in the PRODUCTS.TXT for the data service are used by ECDIS to establish intersection with the route. This file includes only rectangular boundaries of ENC cell, and the route might cross the rectangular boundary but not the actual ENC data coverage.
2. The action indication “Order” has an “advisory” nature of as there may be many small-scale charts which intersect a particular route, not all of which the mariner considers necessary and not adequate for the voyage.

ChartWorld, as an ENC Data provider, checks every ENC order and optimise the order to ensure the relevant and adequate ENC data is provided. During this process our trained nautical officers will ensure all required data for the current port-rotation are supplied if not already in the vessels inventory. We will also check for overlapping scales, data duplication, and that no unnecessary ENC's are included.

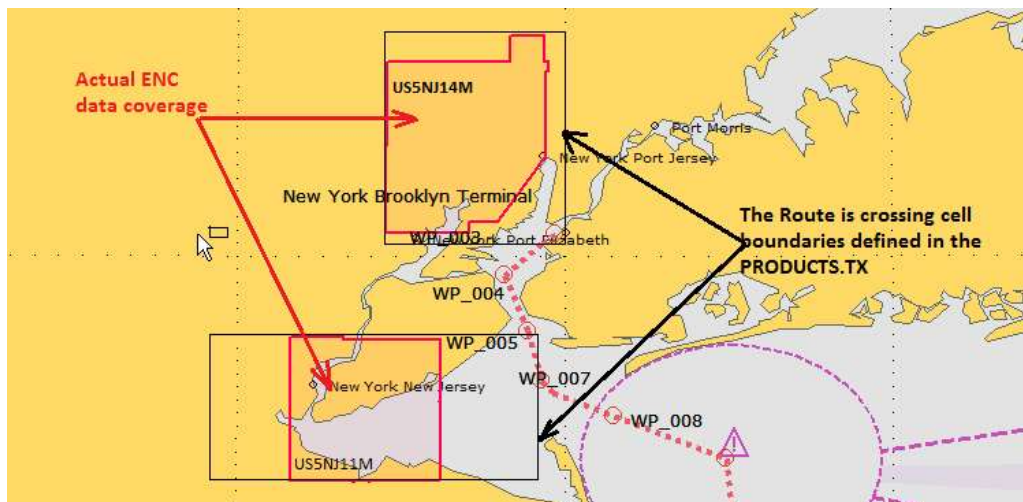
Process:

- Vessel creates route for intended voyage in ChartBrowser
- Vessel sends request to ChartWorld
- ChartWorld optimise and send back permits in return

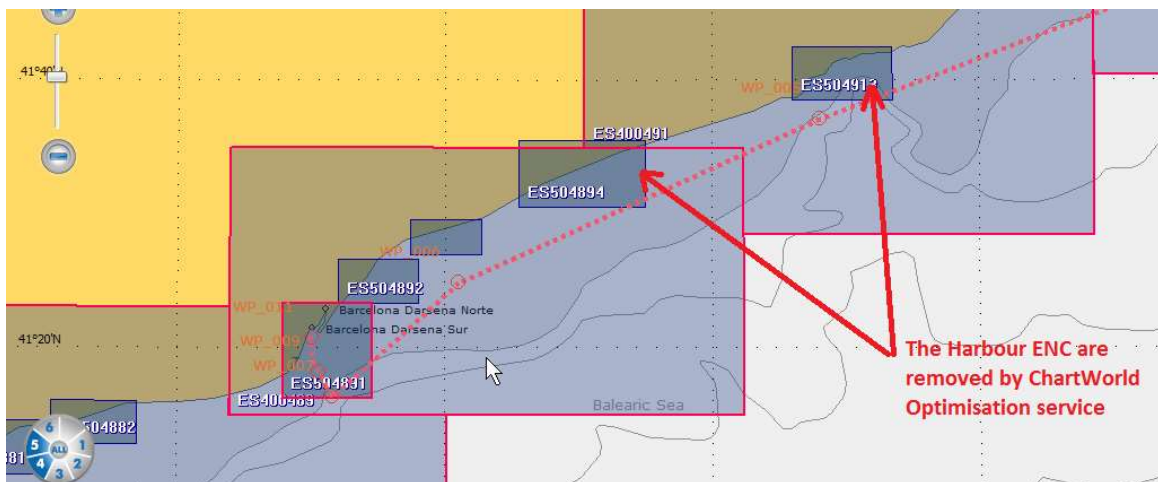
Navigation officer should follow the process and order ENC Data by route in ChartBrowser, as described in the user guide.

Examples of ENC Charts, indicated in the ECDIS as “Order” but not actually required for the voyage.

1. Rectangular cell limits in the PRODUCTS.TXT are not the same as actual ENC Data coverage



2. Some not necessary ENC charts are removed by ChartWorld Optimisation Service. Charts removed would be for example overlapping ENCs, harbour and berthing charts to ports when a vessel is not calling there, overview charts of areas already included by other overview charts.



It is our duty as your service provider to of course ensure your vessel has all the data required for their voyage, up to date, and supplied in good time. Of course, we also want to try and do this in a cost-effective manner.

In the case of any special need for e.g. harbour or berthing ENC of a harbour which will not be called, please select in ChartBrowser the charts indicated in the ECDIS report as "Order" send an extra confirmation and ChartWorld will provide the needed permit files and chart data accordingly.