

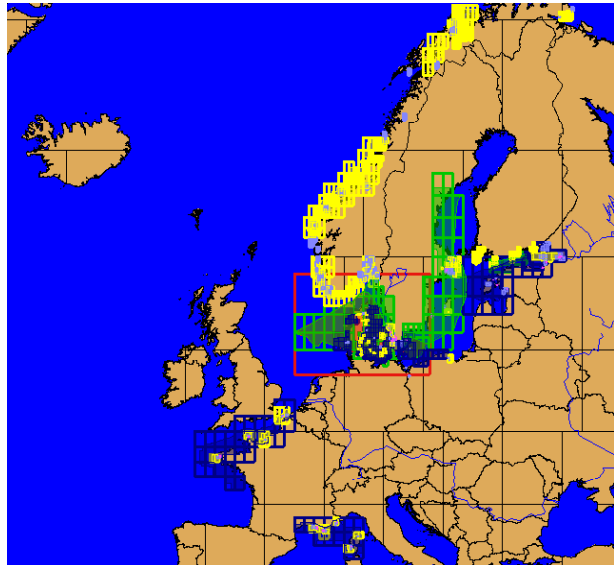
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STATUS OF RENCs - PRIMAR STAVANGER

The Primar Stavanger international ENC coordinating centre has been in full operation ever since 1st April 2002. The service, a straight successor of Primar, is aligned consistent with the RENC concept formulated by the IHO's Worldwide ENC Database (WEND) model, and operated by the Norwegian Hydrographic Service on behalf of a group of European nations.

Operation

The partnership today ranks as the largest single source of official electronic navigational charts (ENCs), delivering in all 1.150 such charts from *Denmark, Estonia, Finland, France, Norway, Poland, Russia and Sweden*. The coverage is particularly good from the North Sea into and within the Baltic Sea, and continues to expand steadily. The average rate of growth has been 40 new ENCs per month. A number of other Hydrographic Offices within Europe as well as from non-European nations have evinced interest to join, and some of these offices likely to associate in soon.



Primar Stavanger currently provides a pure ENC service. Today the ENCs and updates are sold and distributed through a network of 14 leading charts agents and distributors, steadily increasing. These include Kelvin Hughes, C-Map, Marine Press of Canada, Troil Marine, GeoLink, Bade & Horning, Datema, Advenco, Bogerd Martin Navigation Systems, Maris and NaviCharts. These companies can also sell the official ENCs together with vector charts, raster charts and complementary information from other suppliers by downloading the ENC data on-line and produce their own branded CD service.

The recommended retail price for yearly subscription of an ENC equivalent in size to one paper chart is now 24 USD, including all new editions as well as updates released on a weekly basis. This charge is more than 70 % lower than the previous rate from the Primar. The price reduction has been attainable due to improved financial and organisational models that render possible a more cost-effective operation. As a consequence there is now a growing interest of using ENCs also on non-type approved equipment (ECS) like onboard fishing vessels and pleasure crafts.

Security and Industry

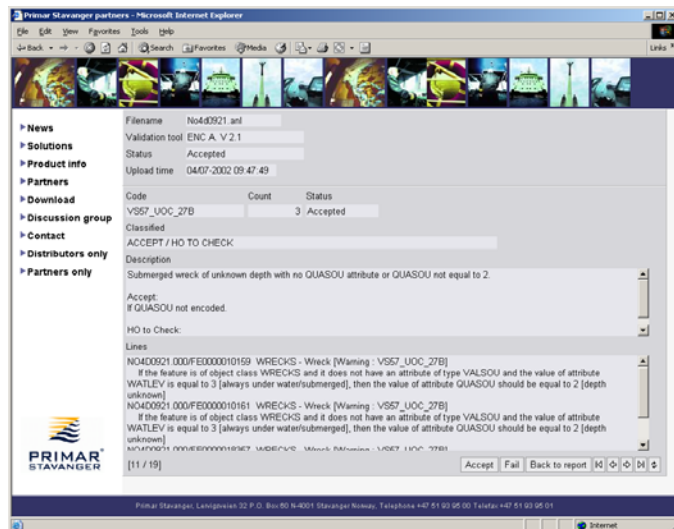
The service is distributed securely using the Primar Security Scheme identical to that used within Primar. Together 23 equipment manufacturers, covering the majority of type approved ECDIS, are supporting the Primar-Stavanger ENC service. Additionally 78 manufacturers have received information to adjust their systems for using it. By the end of 2002 Primar Stavanger intends to introduce SENC distribution as a service option where approved by the national authorities. The scheme, which is in the process of being developed in cooperation with type approval authorities, will be offered on conditions that the suppliers comply with IHO requirements and fulfil predetermined operational and technical criterions. This will give the users a considerable larger assortment of systems to chose between, widening the distribution

network and make the national authorised ENC useful on a number of currently installed systems.

Primar Stavanger will continue to offer support to all RENCs, based on an understanding and agreement on a common way forward with the Primar security scheme under the guidance of the IHO Data Protection Scheme Advisory Group (DPSAG). Plans have been prepared to ensure a careful and consistent transition of the security responsibilities to IHO to enable a quick uptake of the security standard by other ENC providers without affecting the ECS/ECDIS industry or end-users. Primar Stavanger will during the interim transition period provide support to the UKHO VAR secured ENC service to its customer base. The two parties have also agreed to exchange and integrate information of each other's ENC coverage to present the collected availability of ENCs from the two services.

Supporting Tools

Primar Stavanger has introduced a new validation tool for its partners, which will considerably reduce the resources required for validation and ensure a consistent processing of all possible S57 deviations. The *Validation Report Checker (VRC)* provides an on-line automatic evaluation of the ENC validation reports from the recent versions of the most popular S57 validation tools. The VRC is automatically reviewing all the validation responses and guarantees a consistent classification of all identified issues with a possible



identification of the source of the problem and recommended corrective measures from our S57 Advisor expert database system. The VRC does also supports the complete on-line quality management of all supplied ENC data with validation logs, reports and approvals. This will ensure a consistent and high quality on all ENC data from the Primar Stavanger partners since the S57 Advisor database is continuously kept updated with the inclusion of more experiences.

The *Virtual Primar Stavanger Network (VPN)* is used by the Hydrographic Offices to manage all their ENC information available in the Primar Stavanger service. It enables the hydrographic offices to securely and interactively control and manage their national ENC database, and release new data to be incorporated the ENC service, using a secure internet interface. Further functionality has been made available on request to enable the hydrographic offices to provide a national ENC service with the automated creation of base and update ENC exchange sets.

The *Graphical Chart Catalogue* is becoming the major tool to access ENC services from Primar Stavanger. It provides a dynamic interface for the access to and download of ENC information for the Primar Stavanger distributors, the national Navy suppliers, future SENC service providers and derived product suppliers using the ENCs as source for their products. The new version of the Chart Catalogue supports these user groups with intuitive and flexible, automated functions for ENC selection and customised chart folio management for vessels or fleets.

Some hydrographic offices are also in the process of establishing national licensing agreements for the use of ENC as basis for derived products in ECS applications. These nations will use the available interactive tools for the ENC services to provide the ECS manufacturers an on-line access to their national ENC datasets.

Contact Point

Should you have any comments or questions concerning the report, please contact the Norwegian Hydrographic Service directly or Primar Stavanger.

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