




Maritime Information Systems AS 

# Electronic charts à la carte

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**Content of presentation** 

- About MARIS
- ECDIS
- Electronic charts: standard installation & update.
- Pilot Mate: PRIMAR ENC server.
- MARIS ENC – RNC servers.
- Electronic charts: today and tomorrow

**Products** 

**ECS & ECDIS**



**Pilot Mate**




**PC Radar**

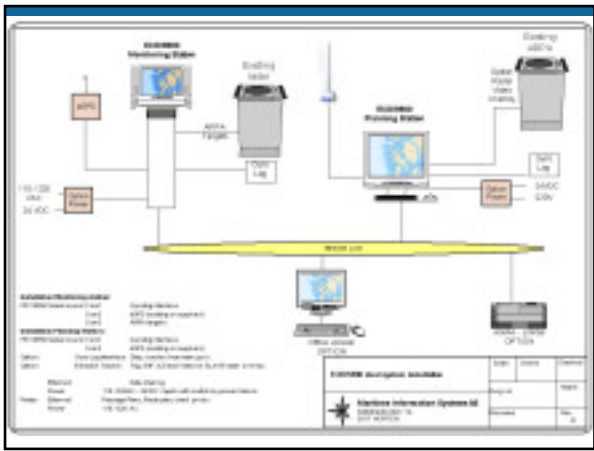


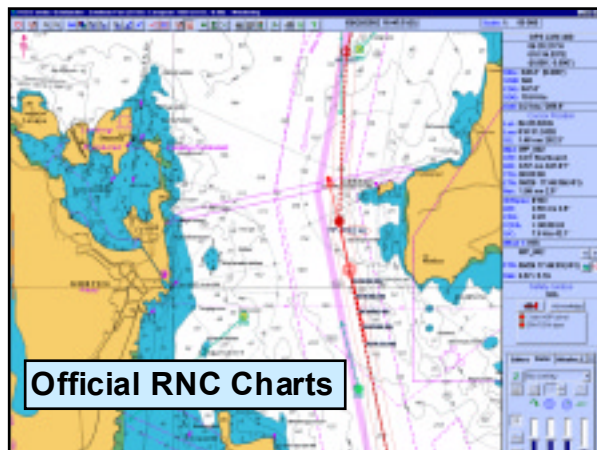
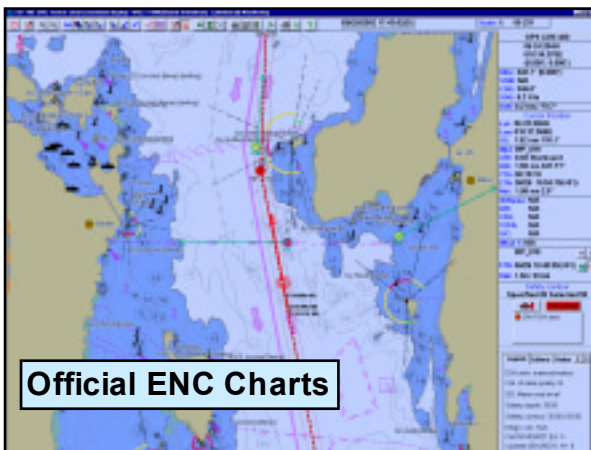
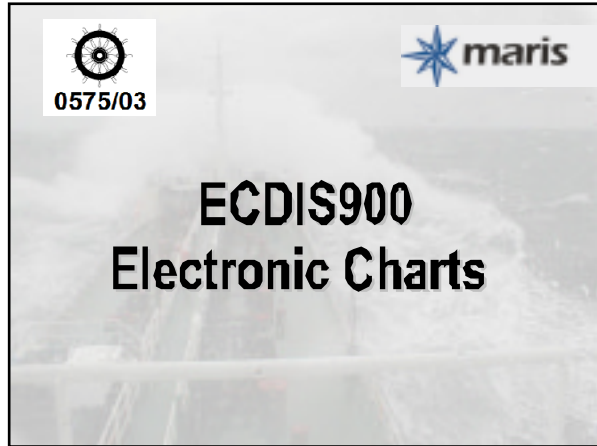
**VDR / S-VDR**



**What is ECDIS?** 

- **ECDIS: Electronic Chart Display and Information System**
  - Electronic Chart system
  - Information System: information stored by layers, possible to call up information on displayed items, calculations on the data...
- **ECDIS components**
  - Hardware: PC with graphics capacity and high performance
  - Software: User Interface and ECDIS kernel
  - Data: ENC vector Charts and RNC raster charts
- **Type Approved ECDIS:** Dual ECDIS, main system + back up.
- **Sailing paperless:** possible with Type Approved ECDIS when sailing in areas covered by official ENC.





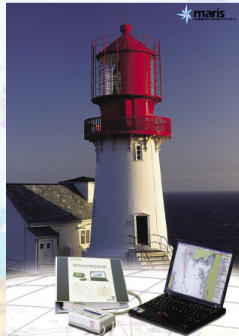
### Chart Installation & Update

- **ENC and RNC installation**
  - Select ENC charts using tools such as online PRIMAR catalogue
  - Select eventually ARCS charts using the paper chart catalogue
  - Order permits which are valid in general for a period of 1 year from UK HO/ PRIMAR \ other HOs...
  - Install permits received by email.
  - Install charts from several CDs (base CDs and update CDs).
- **ENC update**
  - Primar and IC- ENC (UK HO) weekly updates by CD ROM.
  - Japan: monthly by CD ROM
  - Canada: weekly by Internet
- **RNC update:** ARCS weekly update by CD ROM.

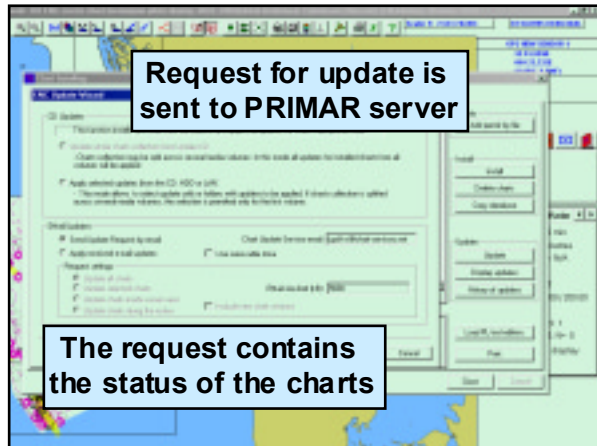
### Chart Installation & Update

- From the user point of view:
  - Selection of charts is a complex procedure requiring the help of dedicated service such as MARIS Chart Service
  - Installation is also a complex process
  - Information about new available charts (updated chart catalogues) is not easily accessible
  - Digital data should be accessible using Internet
  - A more flexible policy regarding the subscription period should be in place: "pay as you sail".
  - Delay in Update CD ROM reception on board.
  - Multi sources of data: different ways of managing updates

## Norwegian Pilot: another ENC management

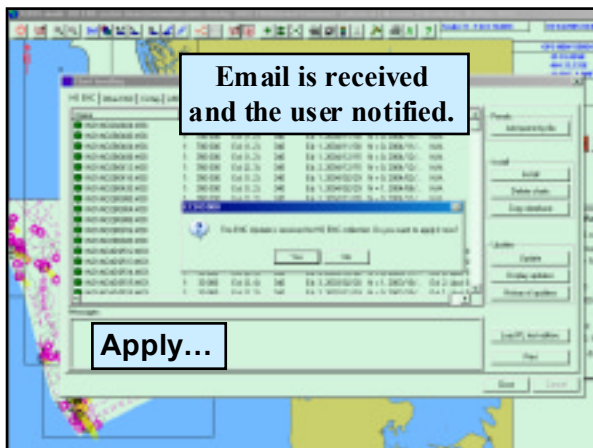


- PRIMAR/ECC & MARIS have set up an ENC's server running in PRIMAR's office
- Each pilot has a dedicated area and gets all ENCs covering this area.
- ECDIS PC connected to Internet the pilot requests and downloads permits, new charts and updates.
- The service is integrated in ECDIS and fully automatic.



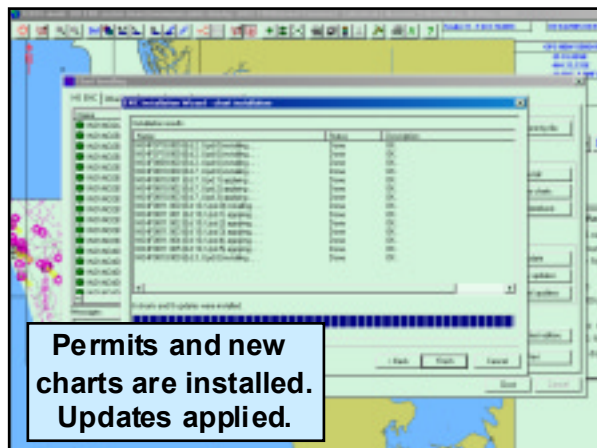
**Request for update is sent to PRIMAR server**

**The request contains the status of the charts**



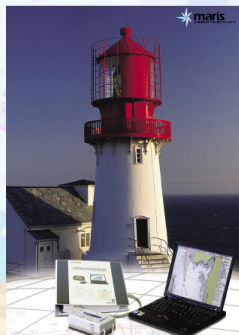
**Email is received and the user notified.**

**Apply...**



**Permits and new charts are installed. Updates applied.**

## Norwegian Pilot: advantages



- One action to install permits, new charts and apply updates.
- The procedure is integrated, very simple and fully automatic.
- New charts or new editions in the area are automatically sent and added to the collection.
- Optimized data transfer: only missing information is sent to ECDIS.
- Authorities can check on the server that ENC collection for all pilots is up-to-date.

## MARIS ENC - RNC On Line Update



- Mariners needs:
  - Instant ENC / RNC update on board
  - Minimise amount of data to be transferred
  - Integrated service in ECDIS - Easy access
- Maris solution:
  - Email service: Servers installed in MARIS office containing the last ENC and ARCS updates.
  - Client integrated in MARIS ECDIS
  - Intelligent service optimising data transfer

## MARIS ENC - RNC On Line Update



### Demonstration

## MARIS ENC - RNC On Line Update



- What is possible in ECDIS900?
  - Create a route on ENC and ARCS charts.
  - Request by email updates for ENC & ARCS charts.
  - Data transfer is minimal because only missing updates are sent.
  - The communication can be direct from the ECDIS if connected to email server or from onboard communication PC using a memory stick.
  - The complete collection of charts can be updated using the email of a port agent.

## MARIS ENC - RNC On Line Update



- Advantages
  - 24 x 7 hours service
  - Instant update service
  - Cost effective data transfer
  - Save transportation and handling costs of the CDs.
  - Solas regulation compliant: charts for the active route are up to date.
- Limitations
  - If along the route a new chart is be ordered it has to be done manually, no chart permit management

## Electronic charts today



- Electronic charts can be purchased and updated in real time when ever needed: PRIMAR already offers ENC subscriptions for 6 month periods. Same option for ARCS will be available soon.
- Routing tools allow the user to check the chart collection along active or future route.
- Email chart servers enable mariners to order updates for the active route.
- There is global coverage using seamless official charts.

## Electronic charts tomorrow



- Easy to handle
  - Advanced chart handling will automatically check the charts along active or future route and list all necessary permits, new charts and updates.
  - Future email or WEB charts servers will enable mariners to order permits, charts and updates in real time.
  - On reception the chart collection is automatically updated.
- Safe
  - Real time update.
- Cost effective
  - Electronic charts will be ordered for a limited period and reactivated when necessary – pay as you sail the route -
  - Internet data transfer will be available at lower cost.

For more information  
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