

Maritime Industry Experience of the ENC/ECDIS Environment

NAV08/ILA37

Church House Conference Centre

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ECDIS Positives

Route planning

Chart updating

Continuous monitoring of safety contours

OOW aware of position at all times

Entering busy navigational areas – all information readily available



ECDIS negatives

Too much information on screen

Sub menus confusing

Maintaining the chart database

Screen size

Symbology



System Stability

Most ECDIS are stable

Vary significantly between manufacturers

“Don't blame the equipment, blame the owner for not putting the best available equipment on board”



Design

Poorly located controls

People with little experience can lead to problems

Training – teaching “knobology”



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Software

Not 'seafarer friendly'

“Very often the manuals are confusing and not applicable to the specific model”

Occam's Razor principle – *one should not increase beyond what is necessary the number of entities required to explain anything – i.e. keep it simple*



Chart overview

“The loss of the paper chart spread wide on the chart table is one of the disadvantages of the progress towards electronic navigation”

Scrolling around and zooming in and out on a small screen can be tedious



Chart Overview (ctd)

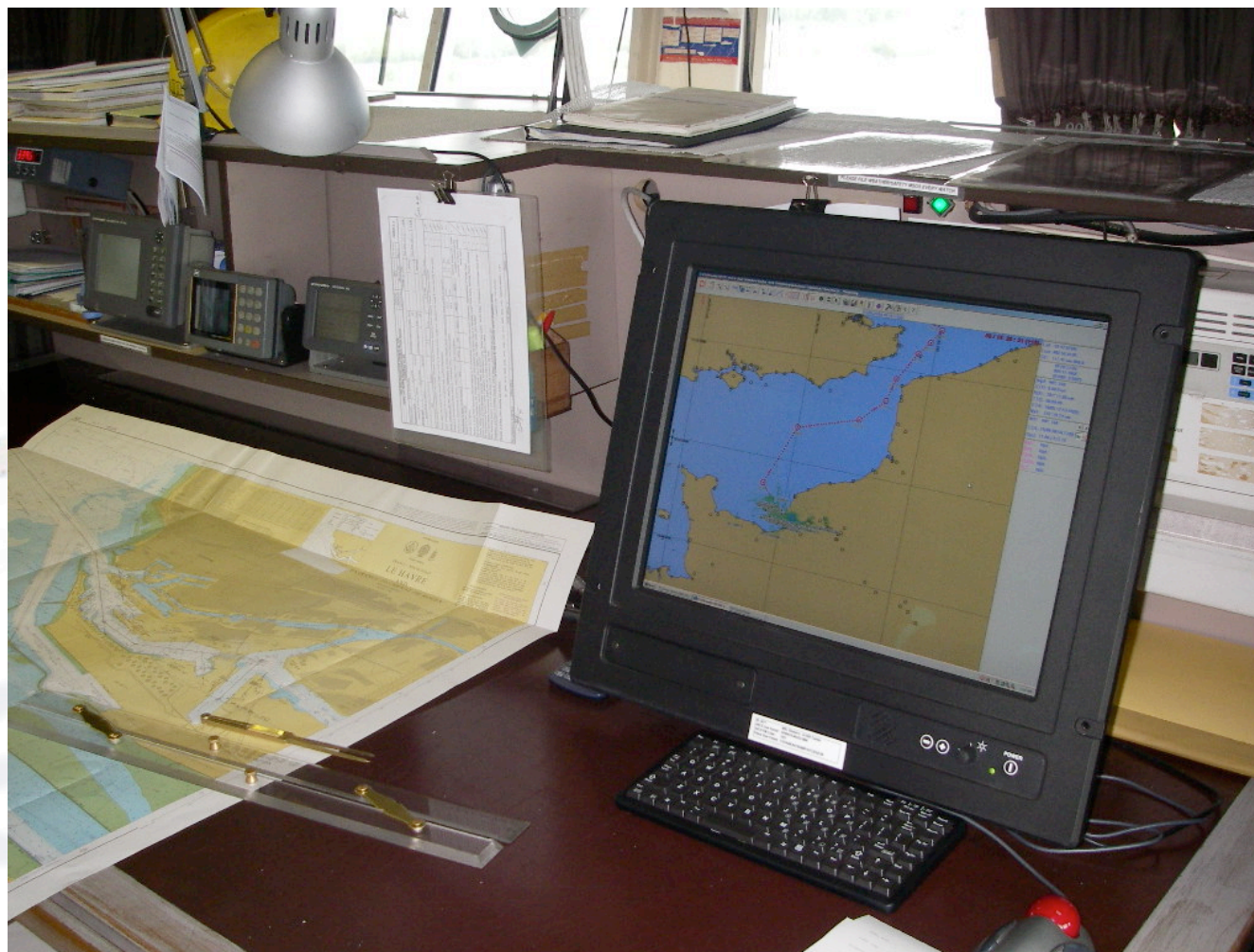


Chart Overview (ctd)

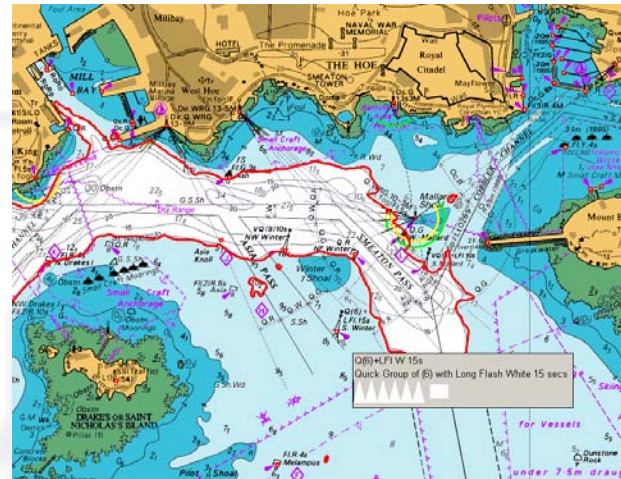
“On transit charts I can zoom out and see the whole of the Eastern Mediterranean, or on port charts I can zoom in to the extent that I could manoeuvre the ship right onto the berth”

ECDIS warning on overscale often goes unnoticed



Chart Overview (ctd)

“I still prefer the Raster representation.
Surely this was the original
intention of having an electronic
chart”



Training issue

Voyage Planning

ENCs don't do 'look ahead' very well

Difficulties in transferring traditional passage planning techniques from paper to electronic systems.

Complete voyage plan on several screens

Validation – too many alarms for warnings



Chart Database

Critical steps to be taken to have an up-to-date ECDIS database

Loading and updating charts vary in complexity between manufacturers

Title fields of cells are not user friendly



Graphics

Graphics need to be clearer

Large diversity of GUI

Symbology

Colours



Training

No mandatory refresher training

“Before ECDIS becomes mandatory, the training issue will have to be addressed”

“The feedback from our navigation team on board has been that training is required to operate the system correctly”



Training (ctd)

“ECDIS is a good tool if we know what we are doing with it”

“Fear of navigators to use the ECDIS to its full potential”

Type training on different models when changing ships

S-mode



ECDIS is just a tool

“I think we do automatically use a fair bit of intuition all the time at sea, and this is to a large extent removed when one comes to rely on ECDIS”

“Most young officers are of the computer generation.”



ECDIS is just a tool

“The Master has to make an assessment (risk assessment) of the quality and reliability of the ship's equipment, the capabilities of the bridge team and the navigating environment and then decide how to keep the ship safe”

ECDIS concept is a total change to using paper charts



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