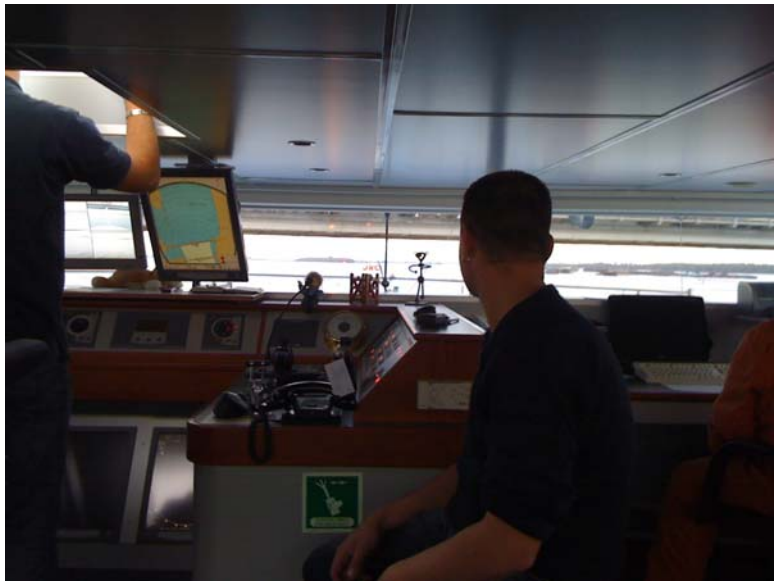


Usage and SCAMIN in IENC

Inland ENC Harmonization Group

Usage: introduction

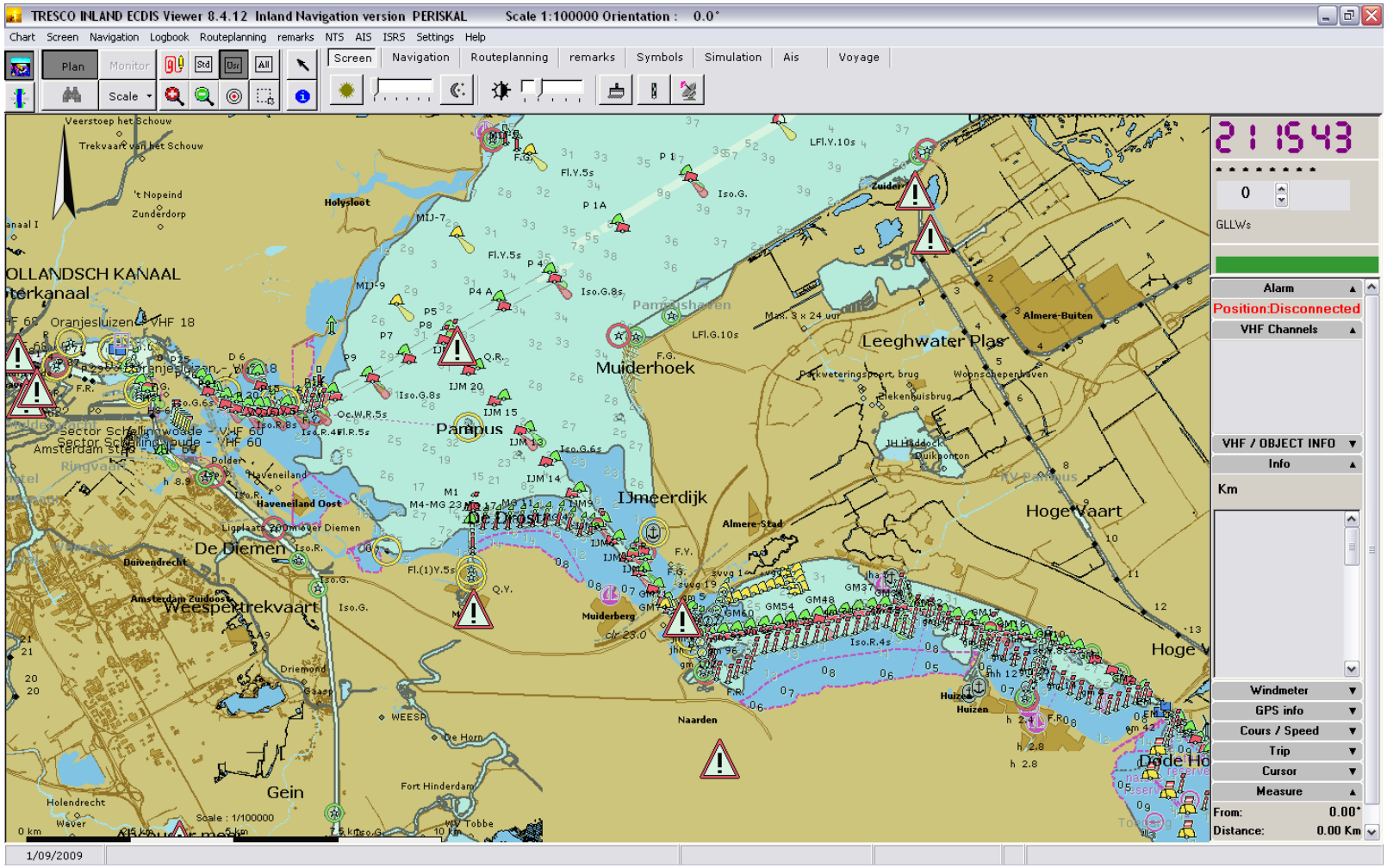
- Similar to paper charts with different scales of same area
- In open waters longer look-ahead distance:
  - smaller scale
  - less detail
- In narrow waters shorter look-ahead distance:
  - larger scale
  - more detail
- Maritime: usage 1 - 6
- IENC: usage 6 - 9 + L

SCAMIN: introduction

- decides at which display scale a feature is shown by the application
- value is critical to:
  - avoid clutter
  - not too miss important features
- presently one recommended(?) value

Usage/SCAMIN: considerations

- Display drawing: SCAMIN tested for all features in IENC
- Not all on-board applications use latest hardware
  - side effect of type-approval
  - users refraining from switching scale or panning
- SCAMIN too high: features missed due to clutter
- SCAMIN too low: features missed due to not being displayed



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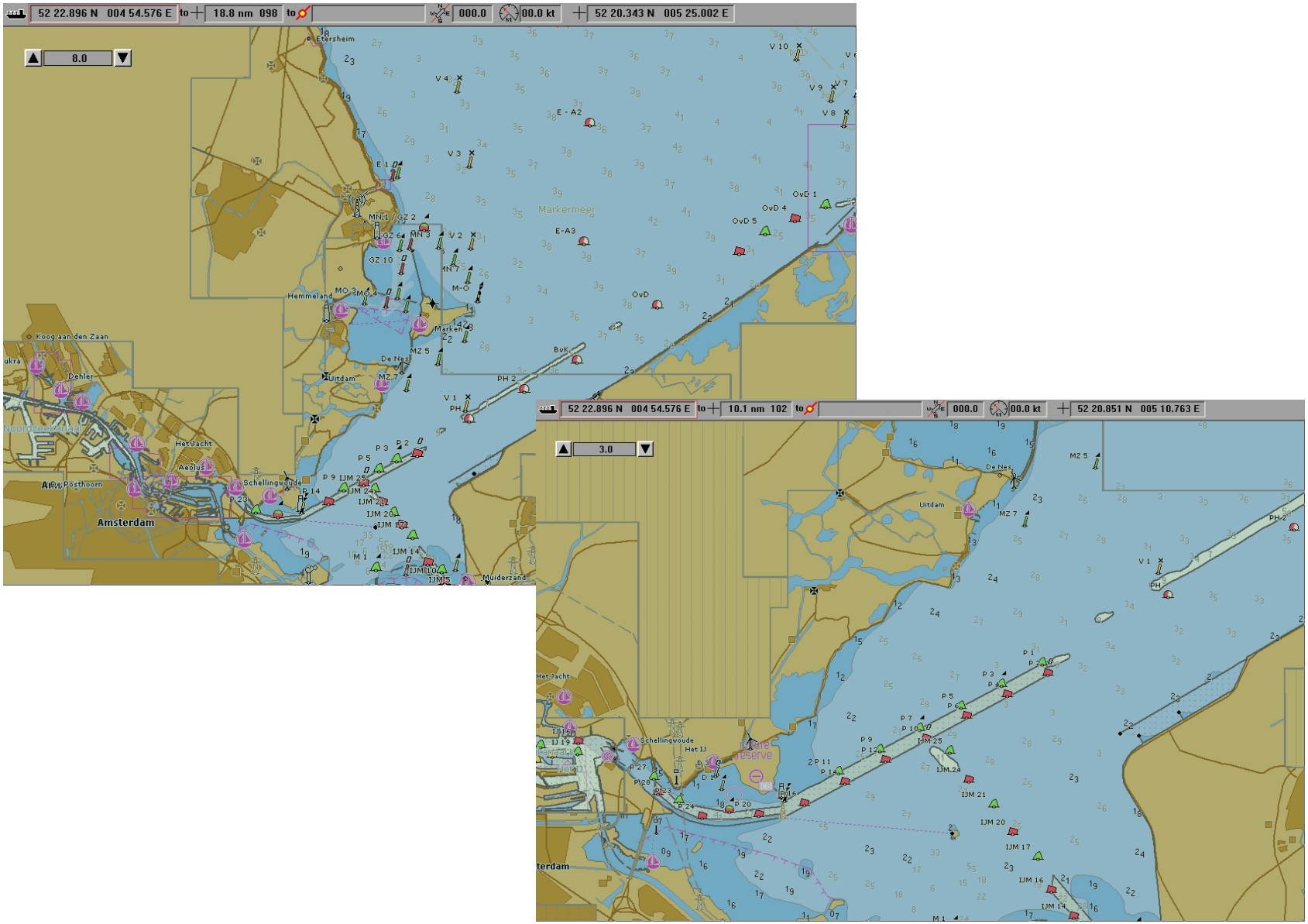

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Display scale in practice

- Information mode scale ~ 1.5 x Navigation mode scale
- Information mode:
  - Big lakes: 1:40.000
  - Estuaries, wide rivers: 1:25.000 - 1:20:000
  - Rivers: 1:15.000 - 1:10.000
  - Narrower canals: 1:2.500
  - Locks: 1:500 - 1:250
- Planning: 1:150.000+ - 1:75.000-

Proposal to Dutch RWS: Usage

- Usage 4: IJsselmeer, Markermeer, Randmeren, Waddenzee, Zeeland waterways, open Zuid-Hollands waterways, all including the harbour approaches
- Usage 7: Rivers, canals and ports
- Usage 8: harbour basins, in case of greater detail

- Need to reconsider when including detailed depth information (experience on River Scheldt)

Proposal to Dutch RWS: SCAMIN

- Usage 4: multiply EG values by:
  - factor 12: Mid fairway buoys, individual special purpose buoys, cardinal buoys, lights on beacons, leading lights, sector lights
  - factor 2.5: Lateral recreational buoys ‘behind’ standard lateral buoys
  - pattern (see below): lateral buoys, lateral recreational buoys not ‘behind’ standard lateral buoys and special purpose buoys that are part of a group for example to mark an area

‘sea’ 12 1 8 4 12 1 8 4 ... ‘land’

4 12 1 8 4 12 1 8 ...