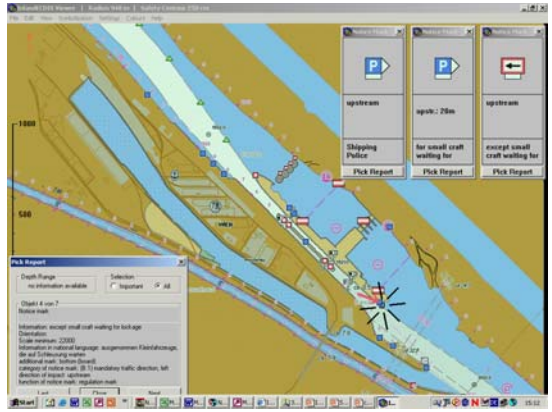


Inland ECDIS

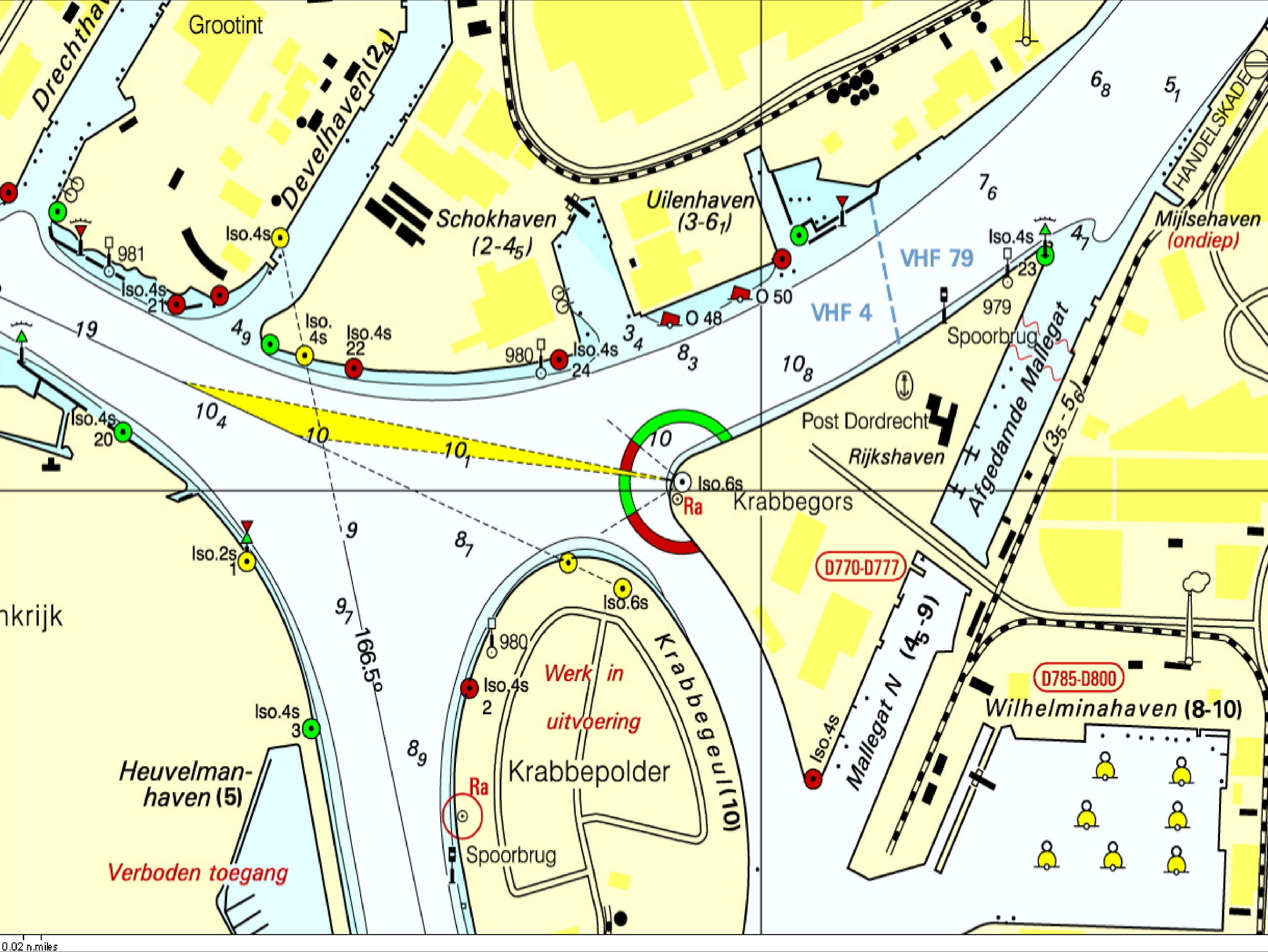
RIS workshop, 13 Nov. 2008

Content

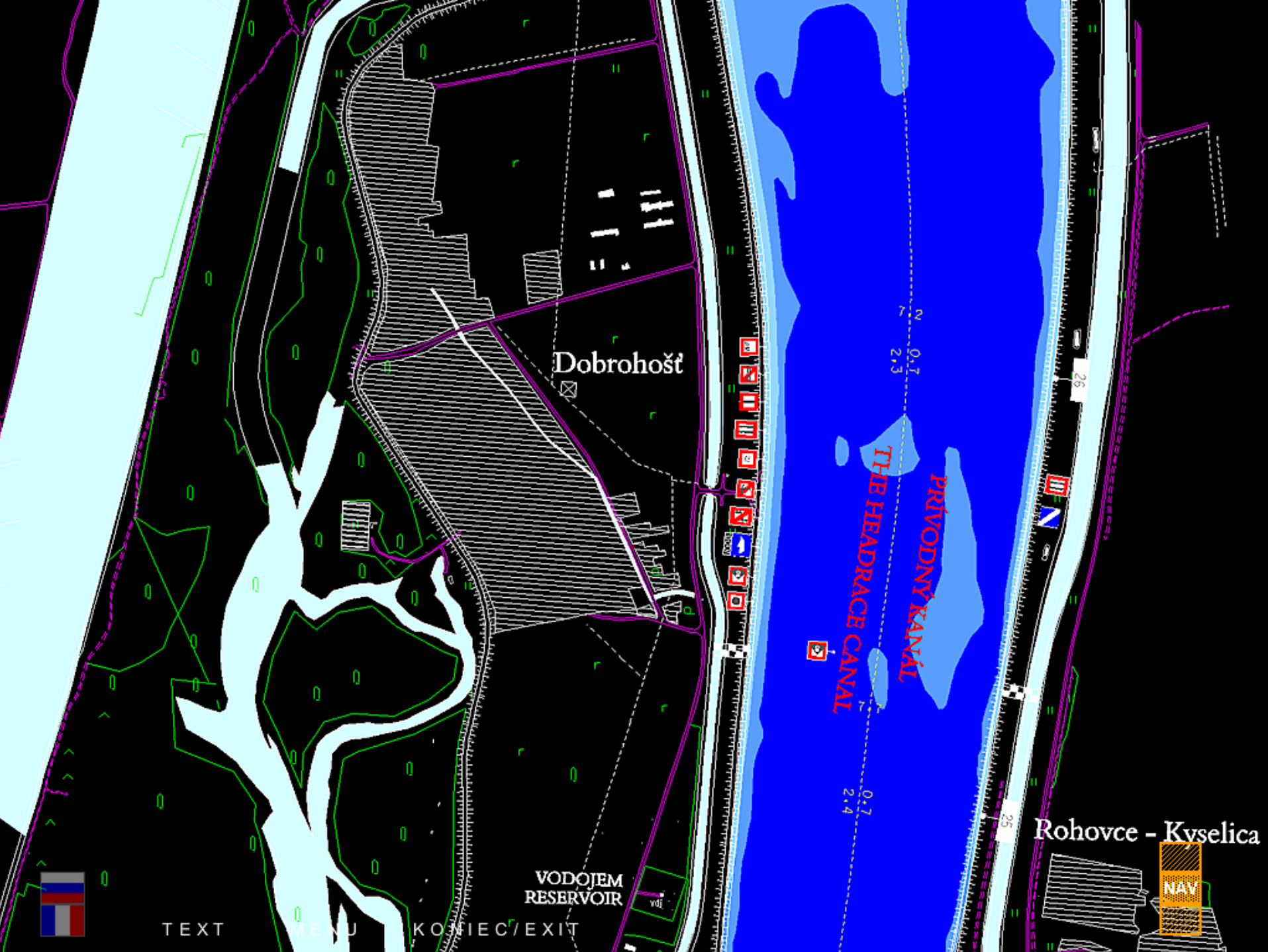
1. What is Inland ECDIS?
2. Legal status
3. IHO and compatibility
4. Implementation
5. RIS
6. Water level and velocity information

What is Inland ECDIS?

- **E**lectronic **C**hart **D**isplay and **I**nformation **S**ystem (**ECDIS**) for Inland Waterways
- Inland ECDIS is a system for the display of electronic inland navigation charts (Inland ENCs) and additional information
- Its purpose is to contribute to safety and efficiency of inland navigation and thus also to protection of the environment
- Simultaneously Inland ECDIS is to reduce the workload when navigating the ship as compared to traditional navigation and information methods
- Inland ECDIS provides also the basis for other River Information Services (RIS), e.g. NtS and Inland-AIS

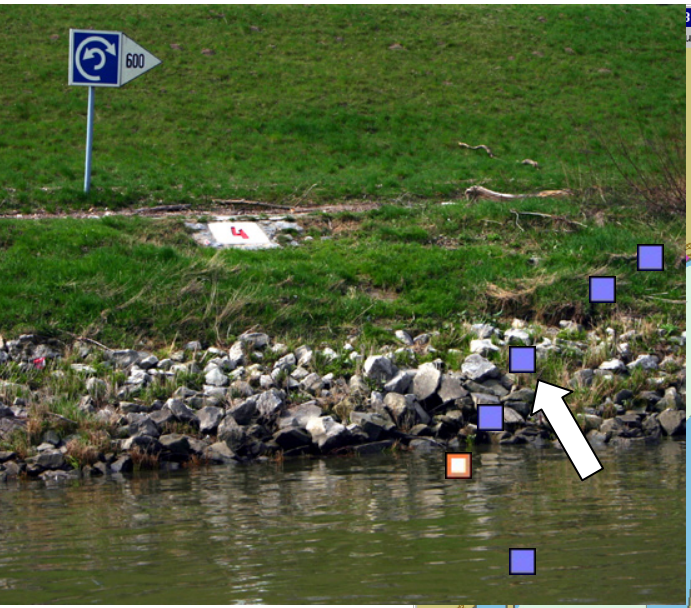


Grootint
Drechthaven
Develhaven (2_4)
Schokhaven
($2-4_5$)
Uilenhaven
($3-6_1$)
6_8
5_1
HANDELSKADE
7_6
Mijlsehaven
(ondiep)
Iso.4s
23
4_7
979
VHF 79
VHF 4
O 50
O 48
Spoorbrug
Afgedamde Mallegat
(3_5-5_6)
Post Dordrecht
Rijkshaven
Iso.4s
981
Iso.4s
21
4_9
19
Iso.
4s
Iso.4s
22
980
Iso.4s
24
3_4
8_3
10_8
Iso.4s
20
10_4
10
10_1
10
Iso.6s
Ra
Krabbegors
9
8_7
Iso.2s
1
Iso.6s
D770-D777
Mallegat N (4_5-9)
nkrijk
9_7
166.5°
980
Krabbegeul (10)
Werk in
uitvoering
Iso.4s
2
Iso.4s
3
D785-D800
Wilhelminahaven (8-10)
Iso.4s
Heuvelman-
haven (5)
8_9
Ra
Krabbepolder
Spoorbrug
Verboden toegang
0.02 n.miles


Dobrohošť
PRÍVODNÝ KANÁL
THE HEADRACE CANAL
VODOJEM
RESERVOIR
Rohovce - Kyselica
NAV
TEXT
MENU
KONIEC/EXIT

ECDIS
of IHO and IMO

Additional objects
for Inland Navigation



Inland ECDIS

Inland ENC
Harmonization Group

Legal status of Inland ECDIS

- The European Inland ECDIS standard has been developed in several Transport Research Projects of the EU
- It has been adopted by
  - the Central Commission for Navigation on the Rhine (CCNR)
  - the Economic Commission for Europe of the United Nations (UNECE)
  - the Danube Commission
- It has also been adopted as a technical specification under the RIS directive of the EU; publication pending

International harmonization

- Since 2001 cooperation with North America to ensure more influence of inland navigation within IHO
- The Russian Federation and Brazil have joined the Inland ENC Harmonization Group (IEHG) in the meantime
- International harmonization is only dealing with charts (inland ENCs), not with applications
- The harmonized latest edition of the Inland ENC standard is used in Europe, Russia, North- and South America. Egypt, China and Vietnam are already interested to use it, too

IHO and compatibility

- Inland ENCs will be formally recognized as “special profile” in the next edition of the maritime standards
- IHO has made a clear statement, that the compatibility of maritime applications with Inland ENCs is possible and does not endanger the certification of maritime applications
- The next edition of the standards for Electronic Chart Systems (ECS) will also take into account Inland ENCs
- The Harmonization Group will apply to become an accredited Non-Governmental Organisation at IHO to ensure future compatibility of maritime and inland waterway standards

Implementation

- 3 Inland ECDIS applications certified for navigation mode (with radar overlay)
- Several other applications for information mode
- 3500 vessels in Europe equipped with Inland ECDIS
- Member states of the EU have to produce Inland ENCs in accordance with the technical specification of the EU for all waterways of class Va and higher within 30 months after the publication of the specification
  (Va: suited for vessels and convoys with a length of 85 m)

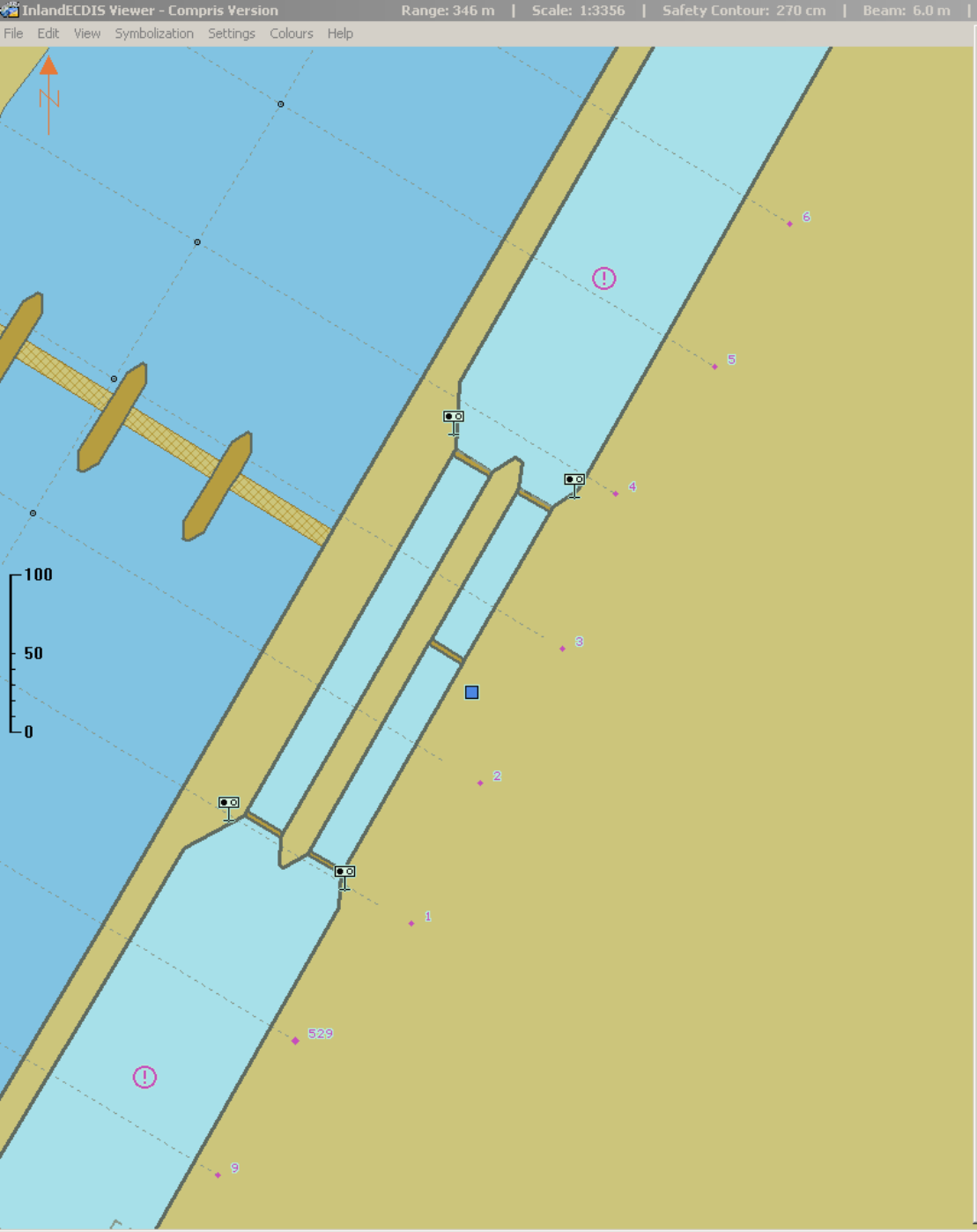
Implementation of Inland ENCs

Country	class	coverage	published	available for free	used version of standard
AT	Va +	full	yes	www.doris.bmvit.gv.at	1.02, 2.0 in 2008
BE (FL)	Va +		1/2009	www.vlaamsewaterwegen.be ?	2.0
BG	Va +	full	no	yes	1.02
CH	Va +	full	yes	www.portofbasel.ch	
CZ	IV	full	yes	www.lavdis.cz	1.02
DE	Va +	2300/4000 rkm	yes	www.elwis.de	1.02, 2.0 in 2008, depth info. free
FR	Va +	30 km Garonne		www.vnf.fr	1.02
HR	IV +	full	yes	www.crup.hr	1.02, 2.0 in 2008
HU	Va +	full	planned 08	planned (free for skippers only)	1.02, 2.0 in 2009
LU	Va +				
NL	IV +	full	yes	www.risserver.nl	1.02, 2.0 in 2008
PL	Va +				
RO	Va +	full	yes/no (Black Sea Canal)	www.afdj.ro/not free for Black Sea Canal	1.01
RS	Va +	full	yes	www.plovput.co.yu	1.02
SK	Va +	90/172 rkm	no	yes	1.01
UA	Va +	full	yes	yes ?	1.02

Inland ENC Harmonization Group

Inland ENCs and RIS

- The Inland ENCs, that are currently available, are based on older versions of the Inland ECDIS standard
- They do not provide full support of RIS
- The next edition of the Inland ENCs should be optimized for RIS:



Facility Information - Microsoft Internet Explorer

Datei Bearbeiten Ansicht Favoriten Extras ?

Zurück Suchen Favoriten Medien

Adresse C:\Programme\SevenCs\InlandECDISViewer-Compris\data\extFiles\xml\copy_of_LOCK_COMPRIS.XML

Google Search Web Search Site 206 blocked Options

Facility Information

Schleuse Brunsbüttel

Meta Information

- Facility Identification Number: **123**
- Version: **2**
- Last changes: **2004-08-02 @ 13:28**
- Type of Facility: **Lock**
- Short Description: **Schleusen zum Nord-Ostsee-Kanal und zum Brunsbüttel-Binnenhafen**
- Operator: **VKZ-Verkehrszentrale Brunsbüttel**
- Owner: **n/a**

Time Schedule

Type of Schedule (e.g. Times of Operation, Times of no Operation)

Operation

Validity of Time Schedule

From **2004-01-01** To **2004-01-01**

Exceptions from Regular Time Schedule

2004-01-01

Times: 00:00 - 00:00

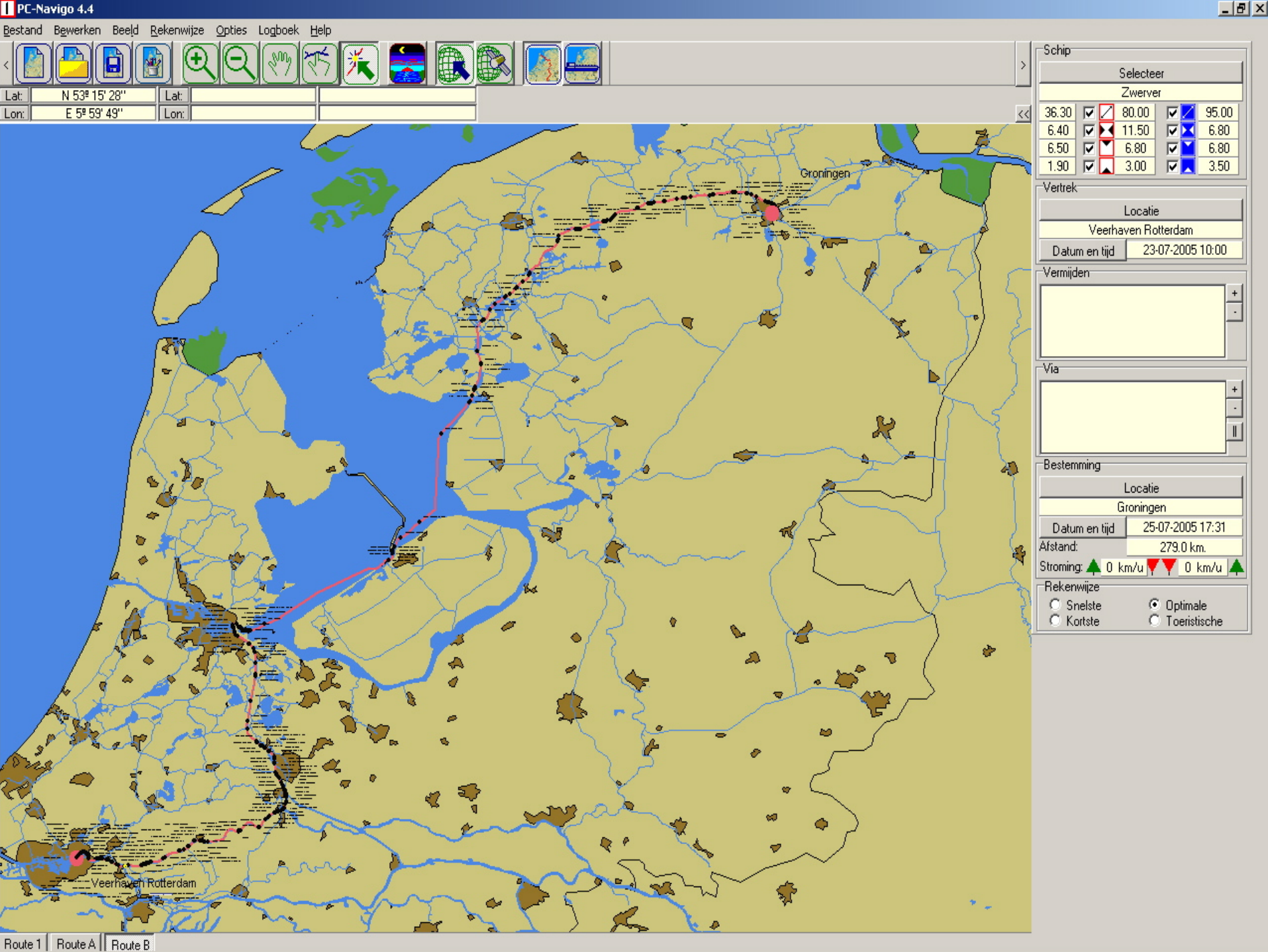
Regular Time Schedule

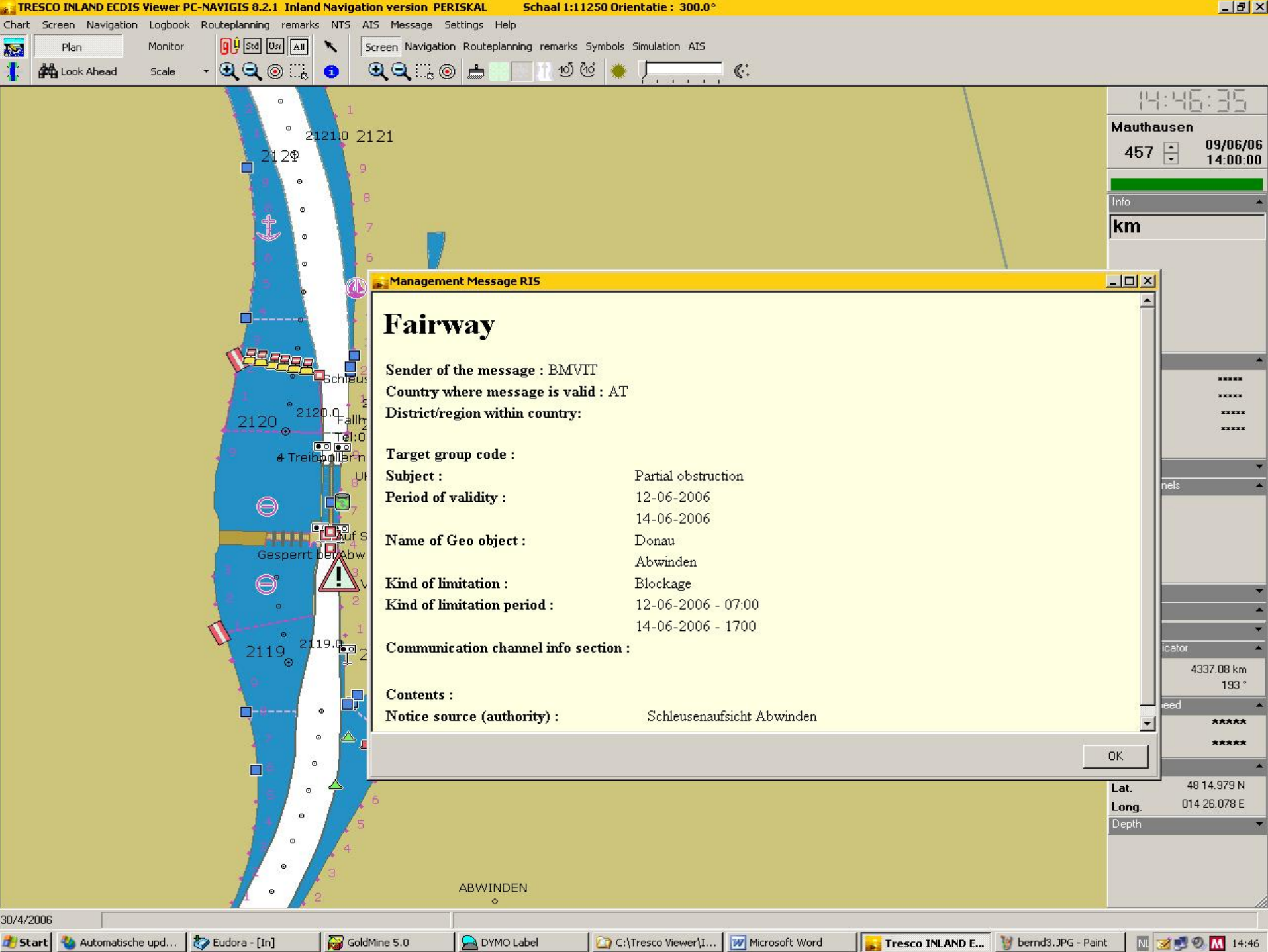
From **2004-01-01** To **2004-01-01**

Days with common schedule:

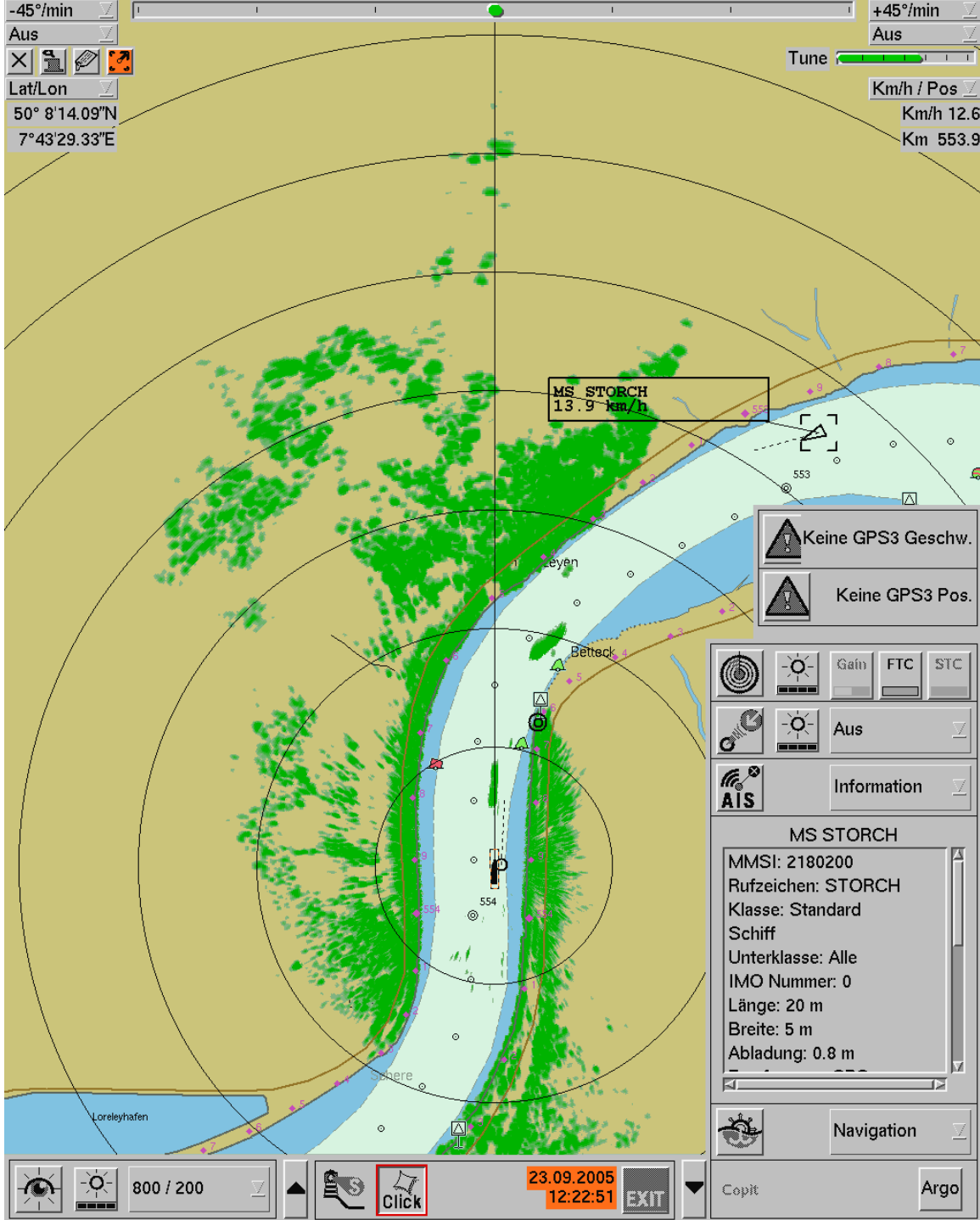
Times: 00:00 - 00:00

Start Novell-... Micros... Novell ... Arbeits... RIS_RL RTCM ... Facilit... Adobe ... Mail vo... RTCM I... Inland... 15:45


PC-Navigo 4.4
Bestand Bewerken Beeld Rekenwijze Opties Logboek Help
Lat: N 53º 15' 28"
Lon: E 5º 59' 49"
Lat:
Lon:
Schip
Selecteer
Zwerver
36.30 80.00 95.00
6.40 11.50 6.80
6.50 6.80 6.80
1.90 3.00 3.50
Vertrek
Locatie
Veerhaven Rotterdam
Datum en tijd 23-07-2005 10:00
Vermijden
Via
Bestemming
Locatie
Groningen
Datum en tijd 25-07-2005 17:31
Afstand: 279.0 km.
Stroming: 0 km/u 0 km/u
Rekenwijze
Snelste
Kortste
Optimale
Toeristische
Groningen
Veerhaven Rotterdam
Route 1
Route A
Route B

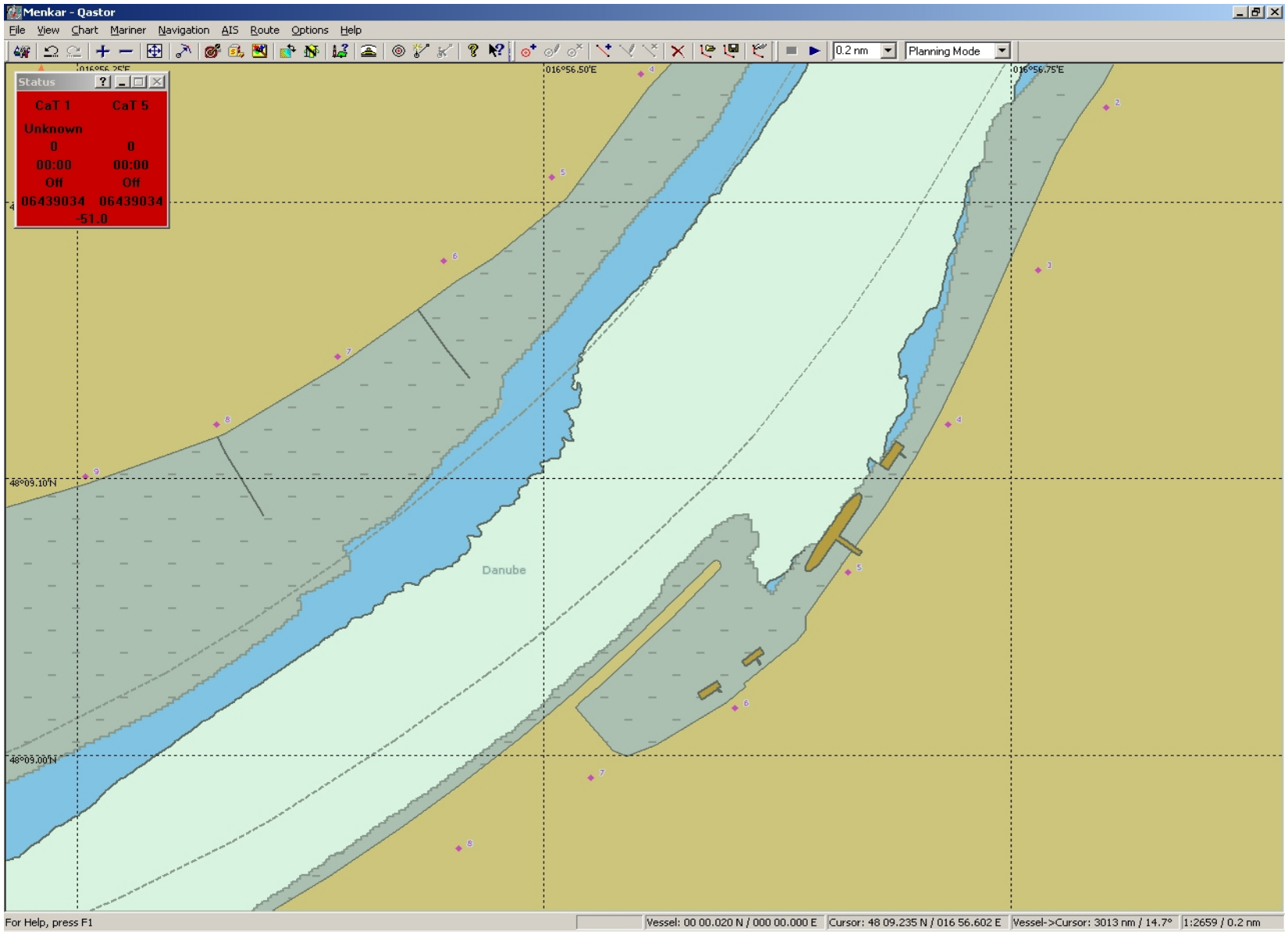

TRESCO INLAND ECDIS Viewer PC-NAVIGIS 8.2.1 Inland Navigation version PERISKAL
Schaal 1:11250 Orientatie : 300.0°
Chart Screen Navigation Logbook Routeplanning remarks NTS AIS Message Settings Help
Plan Monitor
Look Ahead Scale
Screen Navigation Routeplanning remarks Symbols Simulation AIS
14:46:35
Mauthausen
457
09/06/06
14:00:00
Info
km
Management Message RIS
Fairway
Sender of the message : BMVIT
Country where message is valid : AT
District/region within country:
Target group code :
Subject : Partial obstruction
Period of validity : 12-06-2006
14-06-2006
Name of Geo object : Donau
Abwinden
Kind of limitation : Blockage
Kind of limitation period : 12-06-2006 - 07:00
14-06-2006 - 1700
Communication channel info section :
Contents :
Notice source (authority) : Schleusenaufsicht Abwinden
OK
2121.0
2121
2120
2120.0
2119
2119.0
Gesperrt bei Abw
ABWINDEN
4337.08 km
193 °
Lat. 48 14.979 N
Long. 014 26.078 E
Depth
30/4/2006
Start
Automatische upd...
Eudora - [In]
GoldMine 5.0
DYMO Label
C:\Tresco Viewer\I...
Microsoft Word
Tresco INLAND E...
bernd3.JPG - Paint
14:46

Inland ENC
Harmonization Group




(c) 2003 by Ingrid Fiebak Fotografie

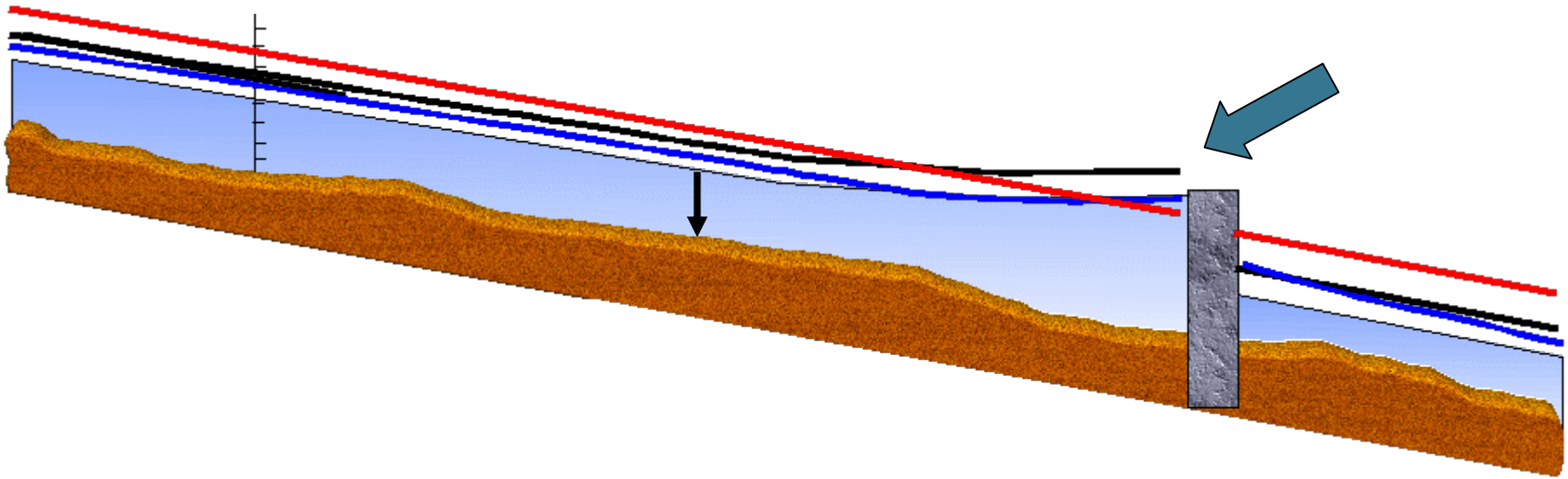
Depth information is referred to a reference water level.



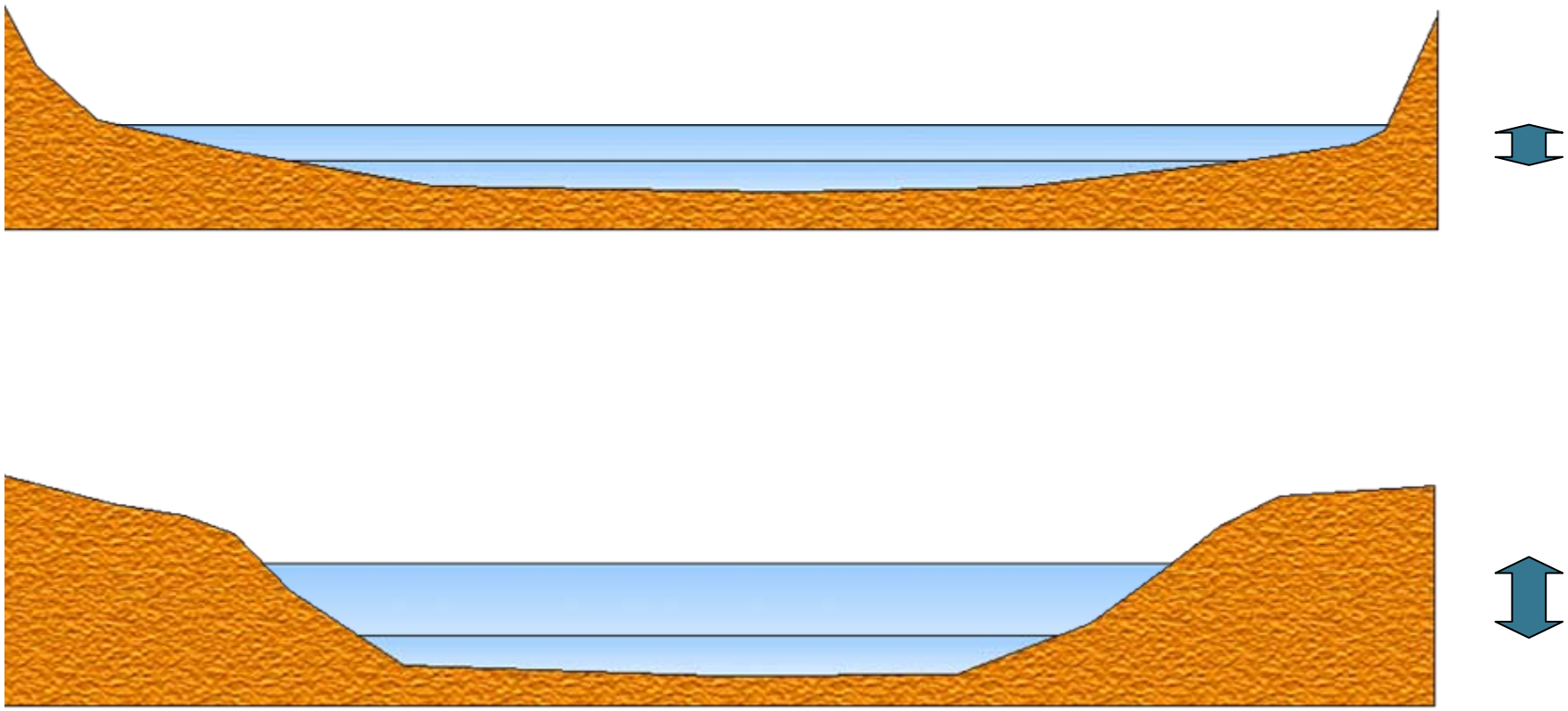
Depth information in Inland ENCs is referred to a reference water level, which is sloped and non-linear

If the water level at the gauge is 1 m above the reference level, the skipper adds 1 m to all the depth values

We need a water level model, because water levels are not parallel



Water level models are also needed for free flowing sections due to different cross sections



Water level and velocity information

- The information derived from water level models can only be used for a specific section of the river Rhine at the moment
- A proposal for a standardized format for detailed water level information has been developed
- The proposed format can also be used to provide velocity information, that is important for voyage planning applications and optimisation of the fuel consumption

More information on Inland ECDIS

- Visit ienc.openecdis.org
- Latest edition of the standard
- Digital parts of the standard for application providers
- Information on the expert groups
- Links to other websites with information on Inland ENCs (e.g. international organizations, national authorities, …)
- Discussion forum on Inland ENCs

Thank you for your attention!

Inland ENC
Harmonization Group