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EDINNA
EDUCATION IN INLAND NAVIGATION

54 session of the Working Party on the Standardization of technical and safety requirements Inland Water Transport

Workshop

Education Standards and Professional Requirements in Inland Navigation

The use of dedicated Inland Waterway Simulators in IWT education and training

Jörn Josef Boll, M.A.
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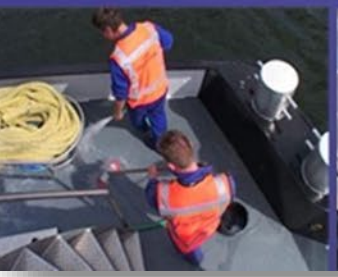
Board Secretary of the *EDINNA* network

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Maritime Academy Holland

- Co-operation between partners in maritime and IWT education
- Educational programme for students from the age of 12
- Training and courses available for professionals at all levels
- Accredited and supervised by
  Ministry of Transport / Shipping Inspectorate
  Ministry of Education


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- 9 locations
- 43 education programmes
- 53 special courses
- 2,300 students (2015-2016)
- 4,100 course participants

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The use of dedicated Inland Waterway Simulators in IWT education and training

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Contents:

- Why IWT Simulators?
- Features of IWT Simulator
- Standards for IWT Simulators
- Target Groups for Simulator use


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Why IWT Simulators

- Modernizing IWT education and examination
- Variable levels of difficulty/no actual danger to others
- Repeatable and interruptible scenarios (controlled environment)
- Relatively cheap (still a major investment)


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Mandatory software and hardware features of a IWT Simulator (i.e.)

Dynamic Models:
Hydrodynamic / Current / Bottom-profile / Wind / Interaction

Visual and Acoustic Model:
Environments / Own Ships / Target Ships / Interaction

Layout:
Equipment of a contemporary IWT Helmstand/ Functional Instructor Station


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Hardware features

Instructor Station

Training Bridges

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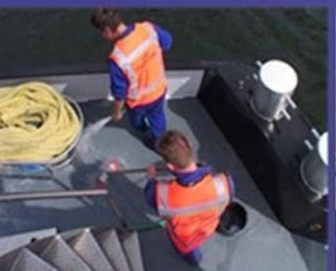
Software Features

Interactive Environments

Variety of different IWT Vessels



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Standards for simulators in IWT training and examination

"CESNI/QP/Simul" 2017

Establishment of a non-permanent working/expert group on VHINS

- Task 1: Preparation of a proposal regarding the technical requirements and functionalities for VHINS
- Task 2: Assessment of the necessity for of a standard for the accreditation of VHINS


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Standards for simulators in IWT training and examination "CESNI/QP/Simul"

As laid down in ES-QIN, Edition 2018

- Differentiation between Vessel handling Simulators and Radar Simulators
- 79 standards defining the technical requirements for IWT Simulators (Layout/ Hardware-/ Software functions)
- Procedure for the approval of simulators used in examinations

The different simulators should be applicable for different assessments


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Target groups for Simulator use

Training Tool i.e.	**Assessment Tool** i.e.	**Infrastructure testing Tool** i.e.
IWT Education and Training	Practical Examination	Real live tests of (projected) waterway infrastructure
The Netherlands	Praktijkexamen Schipper (NL)	Stationsbrug Franeker (NL)
France		
Germany	TOAR –according to NVIC 4-01 (USA)	City of Groningen (NL)
Belgium		


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Simulators as training tools

As part of the regular practical training

Progressing level of difficulty

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Assessment with Simulators

https://www.youtube.com/watch?v=PthS4Ghyb9c

As part of the “Praktijkexamen Shipper”

A shortened path for career changers to the Boatmasters license

Program of at least one year with 4 progressively difficult exams

The 3rd exam (first exam without assistance) on the simulator

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Infrastructure testing tool

Old Bridge in the town of Franeker (NL)
Passage takes ca. 20 min.

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Infrastructure testing tool

New bridge in the Simulator

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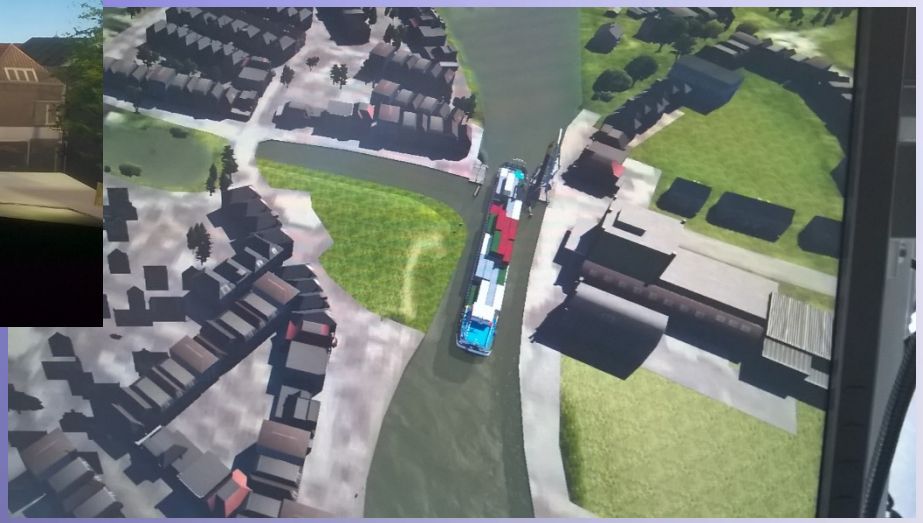
Infrastructure testing tool

Bridge passage in 6 minutes



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Infrastructure testing tool

City of Groningen

https://www.youtube.com/watch?v=E-weGUebQDs

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Thank you very much!

Большое спасибо!


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