

## Datasheet

# VTS Simulator

### Introduction

The MARIN *Vessel Traffic Service Simulator* is an ideal training tool for VTS-Operators in compliance with relevant IMO and IALA guidelines and recommendations. Rather than just having one operator workstation as a training device, this VTS simulator comes with a completely interactive Instructor – Trainee System, including numerous functions to optimise training results. The system is highly flexible, with an interface allowing for connection to various input/output devices.

### MARIN

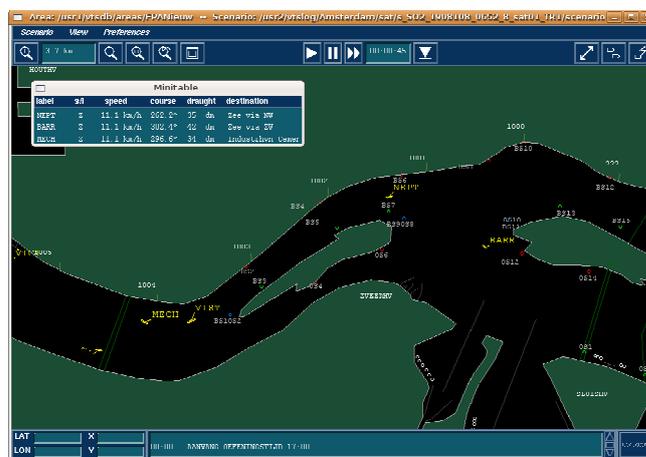
MARIN has been an independent and innovative service provider for the maritime industry since 1932. The services incorporate a unique combination of simulation, model testing, full-scale measurements and training programmes. The VTS Simulator originates from in-house developments for MARIN's Nautical Centre MSCN having been the prime user for training Dutch VTS Operators under auspices of NNVO for many years. NNVO is the National Institute on VTS training. Built on this expertise, a VTS Curriculum can be delivered as an integral part of the scope in accordance with IMO conventions and recommendations (some mandatory) and IALA guidelines and recommendations.

### VTS Simulator

The VTS Simulator is scalable to multiple Instructor and Trainee positions, but has as a minimum one Instructor Station and one Trainee Station, using three traffic image screens with multiple sensor input possibilities and separate raw/synthetic images, an Information Processing System (IPS) and Communication equipment. Optionally, the simulator can be extended with a Main Instructor position for Training Supervision or train-the-trainer purposes.



When not in use, the Instructor Station can either be used as a scenario Preparation System or as a Debriefing Station for tutorial purposes or to give one-to-one feedback on a specific training session. The simulator has a flexible and modular set-up. The inclusion of raw and synthetic radar allows for the training of operators of both simple shore-based stand-alone units and of more complex and sophisticated systems.



### Key features

- Realistic manoeuvres, traffic interaction and settings
- 4-Channel VHF simulation including disturbances
- Extensive vessel library with fast, regular and slow, seagoing and inland vessels of various sizes, with the possibility to include up to 100 vessels per scenario
- Raw radar and synthetic radar
- Basic Management Information System
- Debriefing; audio logging of all communication with extensive playback functions, for all parts of the exercise
- Playing area of maximally 256 x 256 nm with possibilities to subdivide into block areas and Picture-in-Picture facility on every display

## Instructor-controlled features

MARIN VTS Simulator comes with a completely interactive Instructor. The training scenario has been computerised in such a way that the instructor can always interfere manually with the exercise. The instructor has a ship operator task and plays a major role in the communication between VTS operator and ship. Some typical Instructor-controlled features of the MARIN VTS Simulator are:

- Automatic or Manual Control of Traffic
- AIS settings
- Course-Speed-Control (CSC) for Shore-Based Pilotage Simulation
- Failure events
- Change traffic settings and labelling
- ETA/ETD
- Temporary blinding of vessels
- Simulation of VHF, Intercom and telephone, including radio disturbances

## IPS functionality

An Information Processing System is available at Trainee and Instructor positions during simulation and upon preparation or debriefing. IPS can be edited at any time and it is used to display information on:

- Vessel parameters
- Pilot on board (Y/N)
- Classification of cargo on board
- Lock and harbour information
- Weather reports and nautical information

## Additional features

The MARIN VTS Simulator comes standard with a number of managing tools and it can be used for more than simulation purposes only.

## Managing tools

- Different accounts with shared or user-defined databases
- Back-up tool
- Ship-modelling tool
- Remote dial-in for support and maintenance services

## Research

The simulator can also be used for research. For example, problems related to work load, communication procedures, remote piloting and traffic planning can be studied.



## Your benefits

- Flexible and scalable
- Cost-effective
- COTS components, utilising normal PCs
- IALA-regulations compliant
- In-house training (requiring normal office space)
- Customised
- Instructor, Preparation and Debriefing software
- Extensive library of Vessels
- Optional Dedicated Geographical Databases
- Easy to add ship models and geographical databases at any time
- Easy and unlimited creation of new exercises
- Proven Technology

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