The MARIN Vessel Traffic Service Simulator is an ideal training solution for VTS-Operators in accordance with IMO conventions and IALA guidelines and recommendations. This VTS simulator comes with a completely interactive Instructor – Trainee System, including numerous functions to optimise training results. It has an interface allowing for connection to various input/output devices and is able to integrate with operational VTS environments by means of the IVEF protocol. The system is highly flexible, scalable and can be delivered in standard desktop format with dedicated communication devices, or as a fully portable and wireless system using VOIP as the basis of communication.

VTS Simulator

The VTS Simulator is scalable to multiple Instructor and Trainee positions. As a minimum it comprises one Instructor Station and one Trainee Station. Optionally, the VTS simulator can be extended with a Main Instructor position for training supervision or train-the-trainer purposes. The Instructor and Trainee Stations can also 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. The system can be delivered as a fully portable and wireless setup using VOIP as the basis of communication, or in a standard desktop format with dedicated communication panels.

Key features

- Realistic manoeuvres, traffic interaction and settings
- Extensive vessel library with fast, regular and slow, seagoing and inland vessels of various sizes
- 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 with possibilities to subdivide into block areas and Picture-in-Picture facility on every display
Inter VTS Exchange Format (IVEF)

Inter VTS Exchange Format (IVEF) is an ongoing standardisation effort for the exchange of information between VTS systems, that has been recommended by the IALA VTS council. Using IVEF as the common communication protocol, MARIN’s VTS simulator offers the capability of integrating the simulation platform into an operational environment, allowing for on-the-job training. The information exchanged are real-time tracking positions, static vessel information and voyages related information.

Instructor-controlled features

MARIN’s VTS Simulator comes with a completely interactive Instructor. The instructor has a ship operator task and plays a major role in the communication between VTS operator and ship. He can always interfere manually with the training scenario. 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

IPS functionality

An Information Processing System is available at the 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 such as:

- 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.

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