

TKMS



FLIGHT DECK OFFICER SIMULATOR

A PRODUCT OF THE VISTIS® BRAND



Your Maritime Powerhouse



FLIGHT DECK OFFICER (FDO) SIMULATOR

In order to successfully train flight deck officers (FDO), an intensive training programme is necessary, as well as continuous, practical exercises for follow-on training. The established training methods are very expensive, while training quality and outcomes are highly influenced by the availability of aircrafts and ships, as well as differences in flight decks and the dependency on weather conditions. Replacing the actual helicopters and ships with the VISTIS® FDO-Simulator for training future FDOs, customers will not only make large savings on training cost, but also ensure a high quality, easily-planned training that is not influenced by external conditions such as weather or ship / aircraft availability, resulting in potentially better learning outcomes and a higher trainee success rate. This also leaves the real ships and helicopters available for their primary use: operational missions.

The simulator equipment

The FDO-Simulator consists of a mobile instructor workstation as well as the trainee equipment, a Head Mounted Display (HMD) and a Motion Capturing Suit (MoCap).

After equipping the trainee with the MoCap Suit and HMD, the trainee appears on the virtual flight deck and his gestures are translated to the virtual flight deck officer character in the simulator. In this way the trainee can learn correct marshalling signals as well as approach, departure and emergency procedures. The instructor configures and manipulates the training session via touchscreen and 3D mouse and is connected with the trainee over a bi-directional voice communication line.

The FDO-Simulator is delivered as a ready-to-use training solution (hard- and software) that can be set up with minimal effort in any suitable environment.

READY-TO-USE TRAINING SOLUTION

Simulator delivered ready-to-use in custom-built flight case:

Key points	♦ Full equipment packed into a flight case ♦ Includes instructor desk ♦ Training ready in 20 minutes ♦ Mobile solution ♦ Indoor & outdoor usage ♦ Independent from environment ♦ Single power connection needed ♦ Up to 8hrs Training without recharge (battery change needed) ♦ Training area requirement only 20x20m
Dimensions	Height: 120 cm Width: 110 cm Depth: 60 cm
Weight	140 kg (Flightcase can be divided into 3 parts, with a maximum weight of 50 kg each)
Package content	Instructor workstation: Instructor PC, instructor touch-screen Trainee equipment: FDO-PC, 1 x Head Mounted Display (HMD), 1 x Motion Capturing Suit (MoCap); recharging equipment



Typical training situation setting. The operator controls the training environment on the mobile FDO unit while the trainee is moving freely wearing the Motion Capturing Suit (MoCap).

TRAINING CONCEPT

The simulator training of FDO personnel starts with the individual training of the required marshaling gestures. Followed by the standard landing and take-off procedures and leading to complex emergency procedures, it supports the trainee's cognitive and procedural learning. Additionally, it enhances the situational awareness of the trainee, while creating mental and physical pressure.

1. Individual marshaling gesture training:

- ♦ 32 marshaling gestures available
- ♦ Demonstration of gestures by avatar
- ♦ Automatic recognition of trainee's gestures

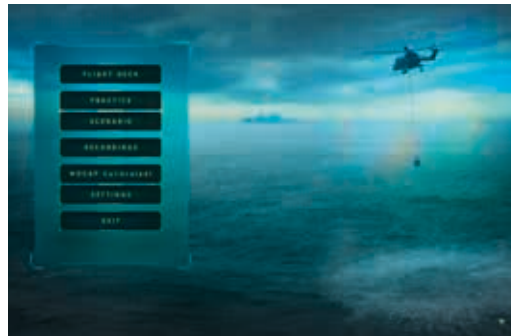
2. Landing and take-off procedures:

- ♦ Crossdeck
- ♦ Fore and aft
- ♦ Relative
- ♦ Hot refueling
- ♦ HIFR – hot in-flight refuelling
- ♦ External cargo

3. Emergency procedures:

- ♦ Fuel leakage while refuelling
- ♦ Engine fire
- ♦ Harpoon failure
- ♦ Crash on deck
- ♦ ELVA (fog flight) incl. throwing markers
- ♦ Single engine approach on landing
- ♦ Misbehaviour of flight deck personnel
- ♦ Birds on deck

Graphical user interface on touchscreen



Main Menu



Procedure selection



Suit calibration for individual users



TRAIN AS YOU FIGHT

The FDO-Simulator is not designed as a replacement for live training. However, the high visual quality, combined with realistic scenarios and emergency procedures, as well as the trainee acting similar as on the actual flight deck, leads to outstanding training outcomes and a better success rate of the trainees. Thus, trainees are well prepared for live training sessions on board the ships.

Instructor Setup:

- ◆ Scenario configuration via touchscreen
- ◆ Taking over helicopter control using the 3D mouse (optional)
- ◆ Selectable camera positions including free-to-move camera
- ◆ Triggering of emergency scenarios / disturbances during training session
- ◆ Record and replay of training sessions
- ◆ Switch day / night and weather scenarios during training session
- ◆ Sea state / realistic physical ship movement optional
- ◆ Changing between available helicopters / ships during simulator runtime
- ◆ Static bi-directional voice communication line with the trainee

Trainee Setup:

- ◆ Immersion into the virtual flight deck with Head Mounted Display (HMD) and headphones
- ◆ Sight steering mechanism with 360 degree viewing range
- ◆ Realistic 3D-Sound
- ◆ Steering of the helicopter utilising the motion-capturing suit
- ◆ Supervision of virtual flight deck personnel utilising the motion-capturing suit
- ◆ Full 20x20m moving radius possible
- ◆ Static bi-directional voice communication line with the instructor
- ◆ No specialised clothing required

If you are interested, please do not hesitate to contact us – we are available to provide further information and engage in more deep dive.

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