

Simulation-based Radio Training

delivered by IFAD

IFAD TS A/S



IRASTrainer

IRAS*Trainer has been designed to provide both realistic communication equipment operation as well as a realistic communication experience. Something that today normally is done using expensive live equipment and complicated installations with limited capabilities or restrictions compared to the realistic field conditions.

IRAS*Trainer addresses the need for mission training in realistic communications scenarios.

Simulated Communication

IRAS*Trainer provides simulated communications for a large number of different HF, VHF, UHF and SATCOM radio systems.

The radio communication network simulates the real radio signal propagation such as HF radio propagation, line-of-sight, signal to noise ratios and audio effects including background noise and SATCOM delays etc.



Radio Communication Training

IRAS*Trainer enables basic and advanced radio operator training, procedure training as well as rehearsal of complex communications scenarios for a large number of different radio systems and operators.

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Simulation-based Radio Communication Training

Building on customer experience, high-fidelity simulation, and a state-of-the-art communications technology IRAS*Trainer provides the users with the capability to realistically train communications procedures at a wide range of levels from individual operators up to a full mission team training.

... in operation

Cost Effective

IRAS*Trainer is designed to operate in a stand-alone mode, or networked for training of entire teams.

Through a modular design and the use of interoperable components IRAS*Trainer provides an expandable, flexible, and cost-effective training solution.

The user friendly interface allows a single instructor to prepare and operate exercises with many students.

Instructor Station

Each classroom is equipped with an instructor station. The instructor station has been designed to enable one instructor to prepare, execute and monitor from one to several classes with up to 16 students each in a fast, intuitive and user friendly manner allowing the instructor to focus on the main objective, to educate the students.

A standard instructor station configuration is composed of a small simulation rack, a two monitor workstation, speakers, headset and microphone with push to talk. One monitor contains situation display and controls, and the other can be used for various monitor windows and remote control of student stations.

Main instructor functions:

- Central class room management
- Simulation library management
- Simulation setup
- Execution, monitoring and control

System Maintenance

The simulation system provides advanced remote maintenance and software update capabilities of the classroom and server installations.

Student Station

The student station is designed to provide both realistic communication equipment operation as well as a realistic communication experience. Something that today normally is done using expensive live equipment and complicated installations with limited capabilities or restrictions compared to the realistic field conditions. The communication equipment on the student station has a photo realistic representation with detailed simulation models of the equipment's actual behavior. The students communicate on a high-fidelity radio simulation network using headsets and push to talk. The settings of the communication equipment are reflected on the radio simulation network.

A standard student station configuration is comprised of a standard PC with headset, push to talk and touch screen enabling close-to-realistic operation of the simulated communications equipment.

Main student functions:

- Radio platform operation
- Antenna selection
- Communication equipment operation
- Communication

Simulated Equipment

IRAS*Trainer supports different types of communications equipment, such as:

- Radio Equipment
- Networked Radio Remote Control
- Modem
- TTY
- Power Supply
- Amplifier

The equipment can be connected and configured by the instructor in different ways into radio platforms and assigned to the individual student stations.

Interoperability

The IRAS*Trainer radio simulation network is DIS compliant allowing smooth integration with other simulation systems through DIS and HLA.

System Highlights

- Purely software based solution
- Built on COTS and open standards
- Designed with a layered architecture
- Modular and scaleable
- Highly configurable
- Easy to add new equipment

Deployment Options

- Stand-alone web-enabled operator training
- Instructor lead web-enabled operator training
- Schoolhouse equipment operator and communications procedure trainer

Danish Navy Installation

Turn-key solution delivered to the Royal Danish Navy Warfare Training School:

- 3 radio simulation classrooms
- 44 student stations
- 3 instructor stations and servers
- Several emulated navy radios
- Digital audio communications network
- Simulations joint across classrooms

IRAS Product Family

The IFAD Radio Simulation (IRAS) Product Family includes:

IRAS*Trainer - a complete simulation based radio communication trainer built on IRAS*Comm and IRAS*Radio.

IRAS*Comm - a DIS based simulated radio communications and intercom system.

IRAS*Radio - a suite of emulated radios.