

# Simulated Radio Communication and Intercom System

... delivered by IFAD

## IRASComm

IRAS\*Comm is a DIS based Radio Communication and Intercom System designed to provide realistic voice communication in training simulators. IRAS\*Comm enables communication (talk and listen) on multiple radios and nets simultaneously.

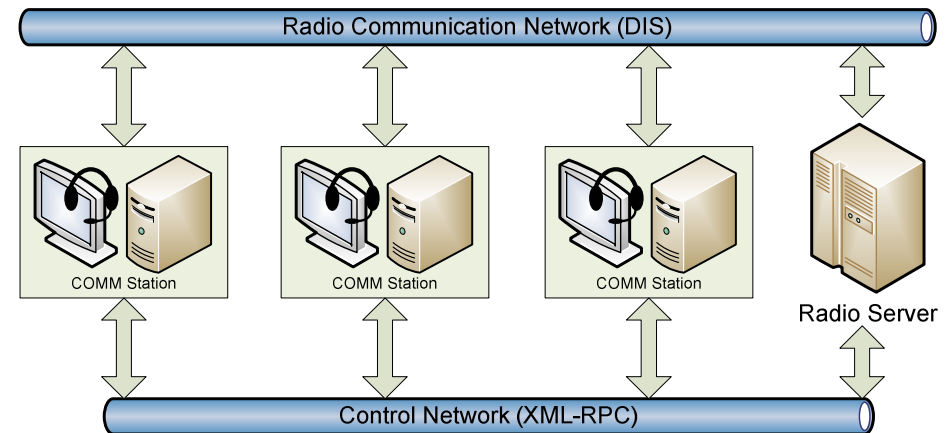
IRAS\*Comm can be used on a stand-alone basis, integrated with other platforms through DIS/HLA or embedded into existing simulators through the Remote Control API.

IRAS\*Comm is a highly configurable software solution based on COTS and open standards.

## Simulated Radio Communication

IRAS\*Comm provides simulated communications for HF, VHF, UHF and SATCOM radio systems. The radio communication network simulates the radio signal propagation and audio effects, including background noise and SATCOM delays etc., based on various radio settings and parameters.

# IFAD TS A/S



## Simulator Communication System

Communication is a cornerstone in any team training environment from low cost serious games to high end dedicated training devices. IRAS\*Comm is a highly flexible simulated radio communication and intercom system designed to meet the requirements of the communication infrastructure in military training simulators.

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# Framework for Simulated Communication

Building on customer experience, high-fidelity simulation, and a state-of-the-art communications technology IRAS\*Comm provides an ideal communication framework for all types of simulators.

# Cost Effective solution

The IRAS\*Comm software solution is designed to run on standard COTS hardware with Windows or Linux operating systems. Through its remote control API for C, C++ and Java and its wrapper for Delta3D it is easy to integrate IRAS\*Comm into existing simulation systems.

## System Components

- Communication Station
- Radio Simulation Server
- Remote Control API

## Communication Station

The communication station (COMM station) provides DIS-based radio communication and intercom for a single headset and push to talk (PTT) or equivalent audio equipment.



The COMM station is designed to create and operate a dynamic number of concurrent radios allowing the operator to simultaneously listen to multiple receivers in left, right or both ears .

## Radio Simulation Server

The radio server manages all simulated radios for the COMM stations.

The server handles radio simulation processing, setting and retrieving of radio parameters, sharing of radios between radio stations etc. The radio server can be configured as one or more central processing servers or embedded in the COMM stations.

## Remote Control API

The Remote Control (RC) API enables applications and custom GUI's to control and monitor IRAS\*Comm through the network.



The RC-API is available for any platform supporting XML-RPC, including Java, C and C++. A specific Delta 3D wrapper is provided with the API.

## Record & Playback

Flexible Record & Playback facilities are available through DIS logging and dedicated radio objects allowing record and playback on individual radio nets or the entire network.

## Radio Net Monitor

In addition to standard DIS radio network monitoring a large number of parameters can be monitored through the RC API, including radio parameters, station and server settings, individual PTT signals, S/N ratios etc.

## Interoperability

IRAS\*Comm is DIS compliant allowing smooth integration with other simulation systems through DIS or DIS-HLA bridging.

## Main Features

- Simulated radio voice communication
- Record & Playback
- Radio net monitoring
- Highly flexible and scalable
- Purely software based
- Multi platform (Windows, Linux)
- COTS hardware
- Open standards (DIS, XML-RPC)
- DIS Interoperability
- Easy application integration
- WAN/LAN distributed communication

## Radio Simulation

- HF, VHF, UHF and SATCOM
- Signal/noise, line of sight
- Audio effects/background noise
- Freq., bandwidth, power, modulation
- Position, squelch
- Shared radios between COMM stations

## Planned extensions

Continuous improvements and extensions based on user feedback, including HLA Gateway and Terrain Database Server.

## System Requirements

- Intel Atom 1,6 GHz or better
- 1 GB RAM
- Windows or Linux
- Standard Sound Card

## Royal Danish Navy

The Royal Danish Navy has selected IRAS\*Comm for the modernization of the Navy Tactical Trainer. The Tactical Trainer configuration includes

- 130+ COMM stations
- Listen to 14 radios per COMM station
- Transmit on 1 radio per COMM station
- 40 radio net (UHF/VHF/HF) per exercise
- 12 concurrent exercises
- Shared radios in 12 own ship cubicles
- Record & Playback facilities

IRAS\*Comm is selected to replace existing communication infrastructures in the RDN SAR/NAV trainer (44 COMM stations) and the RDN IRAS\*Trainer installation (47 COMM stations).

## IFACTS

IRAS\*Comm is embedded as communication infrastructure in IFACTS (the IFAD Forward Air Controller Training Solution). The basic configuration contains 3 COMM stations with 3 (UHF/VHF/HF) radios per station.

## ACT

Arenalogic has selected IRAS\*Comm for the F16 Air Combat Trainer. The basic configuration contains 2 COMM stations with 2 (VHF/HF) radios per station.

IRAS\*Comm is delivered with ACT to the Royal Danish Air force.