

EXPERT

AIR TRAFFIC CONTROL SIMULATOR

EXPERT ATC Simulator is designed for training and retraining as related to radar, non-radar and visual control, to maintain controller professional skills, to work-out abnormal and emergency procedures, to research controller's operating procedures in case of airspace structure change or introduction of new ATC operation techniques.

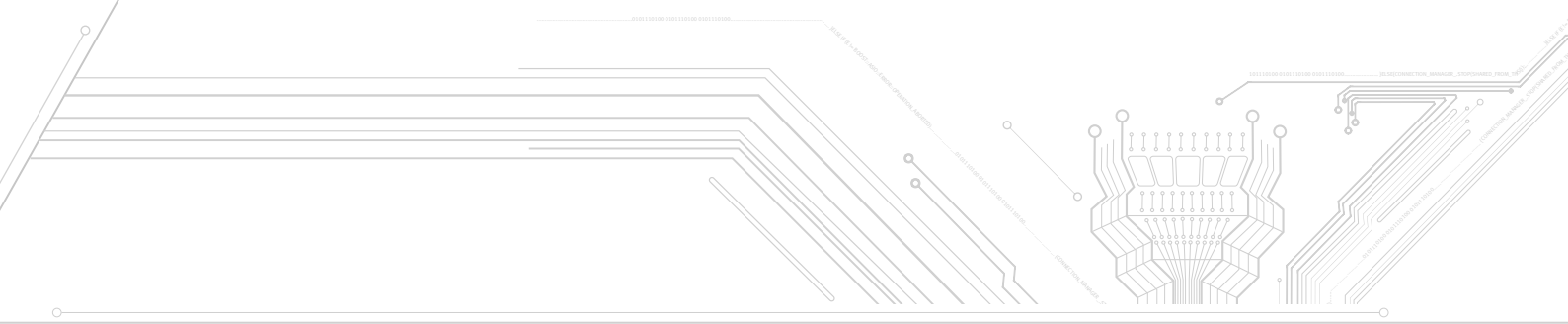
The simulator includes Tower module and Radar control module.

FUNCTIONALITIES

EXPERT simulator enables:

- simulation of air traffic en-routes and in terminal areas without limitation of distance and complexity of responsibility area
- generation of training plans of any duration and intensity
- simulation of changeable weather conditions
- simulation of failures of radars, navaids, airborne equipment
- simulation of emergency conditions in flight
- entering any changes in exercise plan in the process of training





Air traffic situation is displayed considering types and parameters of surveillance means used in ATC area.

ATC controller workstation interface is identical to the interface of ALPHA ATC system including “bypass” and AMAN/DMAN functions. Adaptation to similar ATC and ATM automation systems may be implemented.

Radar module enables situational awareness simulation for ATC personnel training. The simulator is designed for ATC centers to test and develop professional skills, and for educational institutions for initial training.

Maximum module configuration including 40 workstations and is installed in Moscow ATC center.

Tower module is designed for representation of 3D model of airfield and landscape considering preset weather conditions (visibility, clouds, precipitations, wind, thunder storm, etc.) and day time. There are about 100 models of airplanes and helicopters (commercial, general aviation, military), ground vehicles, people, and animals. The module also includes simulators of lighting facilities controls and video monitoring controls. Visualization of Tower module varies view from 180 to 360 degrees depending on customer wishes and room parameters.

In the course of training the recording is effected enabling exercises playback in time with voice over communication system which allows for monitoring and analysis of the process.



STRUCTURE

Radar control module

Servers

Workstation equipment:

- Training supervisor workstation
- Radar and/or non-radar control workstations
- Instructor (pseudo-pilot) workstation
- Exercise preparation workstation
- Technical control and monitoring workstation

Tower module

Visual environment simulator including:

- computer image generators
- display facilities (projectors or monitors)

Sound generator

Tower controller workstation

Lighting systems control simulator

Airfield video surveillance simulator

Additionally the simulator may be provided with:

- voice communication system
- controller consoles
- reference system

