AMOS

Airport Movement Simulator

ROSE Simulation

A FEW FACTS AND FIGURES

Aircraft types

Aircraft types (50+ and growing, different amount of paintings for each type)

- Airliners & Cargo
- Helicopters
- Fighters
- Transport aircraft
- Drones / Gliders
- Taildraggers
- Airships, Hot-air balloons
- Space shuttle
- Sporting aircraft and business jets

Vehicles

- Push-back tugs
- Follow-me cars
- Snowplough
- Fire trucks
- Tractors
- Busses, Cars
- Ambulance

The aircraft and vehicle list may be enlarged easily by the customer without necessary support of the manufacturer of AMOS. The required editors are part of the system.

Aerodrome database

Available real and fictional aerodromes:

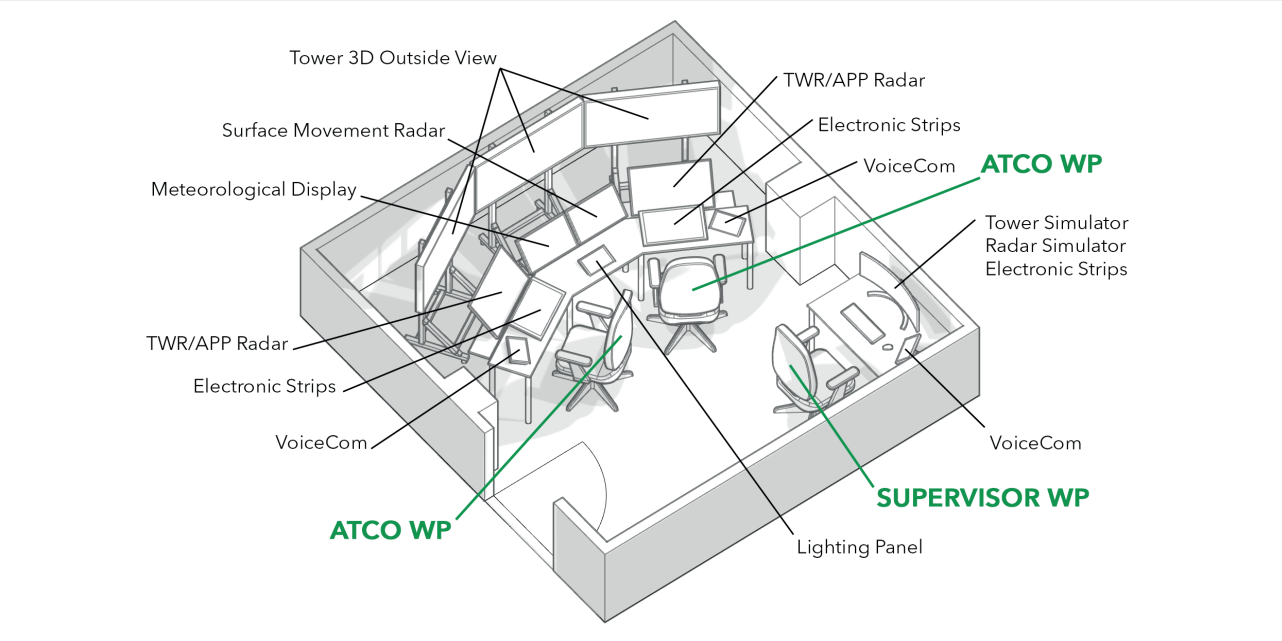
- **Europe**
  Vienna (Austria), Kunovice (Czech Republic), Bremen (Germany), Frankfurt (Germany), Hamburg (Germany), Geneva (Switzerland), Airosar (European fictional training airport)
- **USA**
  Daytona Beach (Florida), Valdosta (Georgia), KAAC (FAA Academy airport)
- ...further aerodromes are in the design progress

Any new aerodromes can be built in 15-20 days, depending on the level of detail. This is a service we provide as the manufacturer of the simulator, but can also be done by the customer since the necessary editors are part of AMOS. We provide any training for the system: for administrators, trainers, data prep-experts, sim-pilots, exercise designers and any other required profession.

Administration information

- Operating system: Windows 7 or newer
- 3D engine: Open GL
- Hardware: A graphics card such as NVIDIA GeForce GT 720 (or comparable) is recommendable to run AMOS with the desired speed and performance.
- Installation process: Just copy a 1GB directory onto the computer and enter the licence activation code. That is all: No extra *.dlls or sub-applications need to be installed.

Setup example for a small installation



INTRODUCING AMOS

The 3D tower simulator **AMOS** is suitable for various fields of use:

- High-end 3D graphic & performance in a full-scale simulator
- As valuable enrichment for basic training: It runs on any COTS computer

The simulator covers it all: realistic aircraft and vehicle movement on ground, in the air and during take-off and landing. This includes a whole set of procedures for VFR and IFR traffic which allows a realistic simulation of typical and demanding tower operations.

AMOS Video: A day in Vienna

This QR code links to a video that gives a first impression of the capabilities of **AMOS**.

All scenes have been captured from the simulator without adding visual effects to the 3D.

Aircraft types

AMOS is delivered with a variety of aircraft types & paintings, including helicopters, drones, gliders and military aircraft. Push-back and tow procedures are just as much a matter of course as any other complex movement on an aerodrome.

Weather

The integrated weather engine provides weather phenomenon in a way that makes you feel like freezing, getting wet or been blown away by the strong winds.

A unique lighting model generates night, sunrise or sunset scenes in a lifelike appearance.

Data preparation

The built-in editors offer a flexible and fast design tool for airport and exercises. Runways, taxiways, buildings and lighting can be added and altered in a short time. Exercise designers will appreciate the innovative and easy approach to prepare traffic along their training ideas.

The intuitive piloting interface allows a flexible handling of all kinds of traffic.

Launch **AMOS**, connect a few stations and start discovering tower simulation at its finest!

FIELDS OF USE

Full-fledge tower simulator

AMOS is capable of running on a large setup where multiple screens or projectors are used to display a 3D visual scene. For a setup like this, AMOS provides many configuration possibilities: The number of screens and the angle that is displayed can be set from one central position that is connected via the LAN.

In combination with the 3D view, additional computers can be connected to the setup. These could be:

- AMOS positions with subsystems for the ATCO workstation such as a ground radar, controller strips, lightning panel and meteorological data display.
- AMOS positions for the simulator pilot with intuitive mouse input options for the control of aircraft and vehicles – on the ground and in the air.

AMOS is designed to serve many different approaches – may it be a visual 3D station, an ATCO, pilot or supervisor position. The type of use is a matter of configuration, so that each different station has the input and display options, that are needed for the specific tasks to be performed from this position.

Combined tower & radar training

Tower simulator AMOS and radar simulator ROSE have a common format for writing joint exercises. This opens up the possibility doing combined radar and tower training. All flights can seamlessly be handed from one simulator to the other.

Besides all standard operations, AMOS is able to simulate several procedures. A lot of different VFR operations, Missed Approach, any military training situation or training of touch-and-gos, low-approaches and other can be practiced with all stations involved.

All tasks resulting from a combined project are highly supported by ROSE and AMOS - following the concept of easy-to-handle and efficient preparation.

Standalone use for basic tasks

AMOS can be used on a notebook for self-training and assessment. The tower simulator has been developed in a way that it works

- in the large setup (as described before) and
- on a standalone PC and
- any setup in between.

The scalability of AMOS is one of its strengths. A training provider has the possibility to use AMOS from the phase of classroom teaching and basic training up to any required level. Because of the realistic databases AMOS can be used as a special task trainer for active controllers working in any real tower. You will find yourself comfortable in your working environment when observing traffic through the tower windows, displayed by the AMOS generated view.

AMOS supports the task of repeating sequences or phraseology, which is a helpful option for all students.

AMOS can be used in a classroom to explain various procedures or simply to demonstrate how an approach looks like from a pilot's point of view, for example in poor visibility and at night.

You may look at the aerodrome lighting from any desired perspective. The lighting can be operated to generate a live impression about what it looks like on a real airport. Of course, this works in any desired weather or daylight situation.

It is possible to step into any vehicle or aircraft handled by AMOS in order to get an impression of the respective view. You may even drive or fly this particular vehicle / aircraft to find out what it means to the pilot.

FIELDS OF USE

Debriefing

AMOS is delivered with an appreciated tool that many users already know from working with ROSE: The Debriefilator. This innovative training module enables you to review any scene which has occurred during an exercise with a precision of one second.

So, rather than trying to reactivate a trainee's memory about a certain situation, which has been valid 20 minutes ago, you simply move back to that particular time and look at it. The Debriefilator allows any perspective, view angle and zoom level.

Every bit of data is displayed exactly as it was during this precise moment of the simulation, may it be the position of a strip, an input or anything else. Through the interactive replay students can follow in detail which incidents, instructions and sequences should be improved during the next trainings.

All gained data may be stored for later use. This includes the option to analyse and evaluate the data for statistic use.

Data preparation

AMOS includes many different editors that support the task of preparing exercises, aerodromes, objects and vehicles. A valuable concept of the tower simulator is to have all editors and the simulator in one application. One big advantage coming from that is, that you can develop an exercise with all timings and settings and test it right away without the need to convent, copy and install your data on a different system.

The design of the editors is the result of many years of experience in data preparation:

- On one side by completing the same tasks in the radar simulator ROSE, which is intensively used by training providers for more than 15 years now.
- On the other side by having worked in data preparation ourselves and knowing about the crucial functions, that make an editor efficient and easy-to-use.

AMOS provides the following editors:

- Exercise Editor for traffic preparation (including daytime, aircraft routing and positioning, timings & action)
- Weather Editor (clouds, wind, visibility, precipitation, daytime and -light)
- Airport Editor (position buildings, elements, taxiways, runways, parking positions, lightning)
- Texturing Editor
  - for buildings & other 3D environmental objects
  - for aircraft liveries
  - for vehicles, animals, any kind of 3D object...

ROSE Simulation

Creator of the AIR Suite

info@rose-simulation.com
www.rose-simulation.com
Phone: +49 9374 9797 560