# AREA ATM SYSTEM

**Area LETVIS® ATM system is designed for planning, procedural and/or radar control of air traffic at any level of air traffic services provided by Area Control Centre for civil, military or joint operation. Controllers are provided with the integrated air picture of civil/military air traffic including information on structure and utilization of airspace, and other supplementary data/support capabilities.**

Area LETVIS® ATM system can be delivered in a variety of customer-specified configurations, ranging from working positions/modules to comprehensive ATM system supply that along with other sub-systems and equipment (voice communication systems, radar systems, consoles & cabinets, etc.) allow for a modernization of existing ACCs or a supply of new ACCs as a turn-key project.

## Mission:

The system provides all ATM capabilities at ACCs to the full extent while enabling:

- ❑ Planning and control of military air traffic acc. to ICAO and/or national military procedures
- ❑ Planning and control of civil air traffic acc. to ICAO and/or national standards (e.g. GOST, FAA)
- ❑ Joint (under EUROCONTROL) planning and control of civil/military air traffic
- ❑ Other related activities or processes (related to data recording & analysis, data exchange with other ATM centres, training, etc.)

Both general and extended capabilities of Area ATM System are covered by LETVIS® modules. Data processed by LETVIS® modules can be presented on single or multi-screen display of up to 2Kx2K resolution.

## General capabilities:

- Data collection and multi-radar/sensor data processing (LETVIS® MRT)
- Radar control (LETVIS® RDD)
- Flight planning, procedural control, statistical analysis (LETVIS® FDP/EDD)
- Collection and processing of meteorological and aeronautical data, and display of other information (text/graphical 2D/3D information on controlled area, emergency procedures, etc.) (LETVIS® IDP)
- Data/voice recording (LETVIS® MON) & analysis (LETVIS® ADP)

## Extended capabilities:

- Multiple protocol support (LETVIS® COM) for
  - data exchange with co-operating / lower level ATCCs, aircraft operators
  - inter-sector or civil/military co-ordination
  - networking capability to collect data for their processing by LETVIS® modules and distribution of integrated air picture
- Operational planning and control of military air traffic, airspace management (LETVIS® FDP/OPL)
- Continuous on-line monitoring and diagnostics of data sources incl. their remote control (LETVIS® SMC)
- Controller / operator training (LETVIS® SIM)

## Capabilities intended for other units:

Depending on the ACC structure following capabilities can be integrated:

- ❑ APP functions
  - Digitization of analogue radar data and its plot/track processing (LETVIS® EXT/S)
  - Radar control for precision approach and landing (LETVIS® RDD/PAR)
- ❑ AMC functions
  - For flexible use of airspace through allocation, management and co-ordination with its users, CFMU, ACC, AMC (LETVIS® AMC)
- ❑ SAR functions
  - For air search and rescue operations support (LETVIS® SAR)
- ❑ System for analysis of position data sources performance (LETVIS® SDAA)

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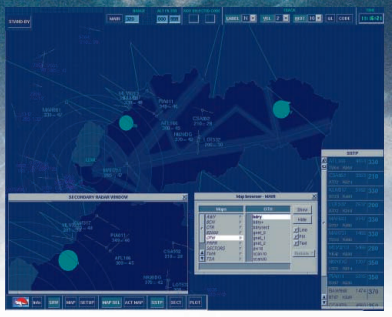
## Outstanding features:

High modularity, open system architecture, portability, advanced object-oriented technology enable:

- ✓ Competitive price/performance ratio
- ✓ Low life cycle costs
- ✓ Maximum efficiency at minimum cost through utilization of a customer existing equipment
- ✓ Customer tailored design
- ✓ System platform option (Intel® or Sun™ Sparc™ Station) with Unix™ (Solaris™) Operating System



## Specifications:

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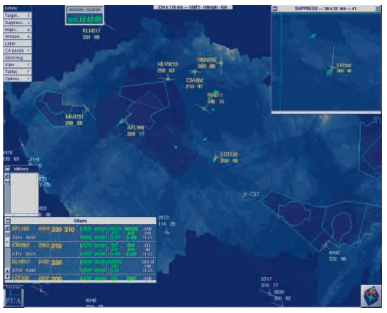
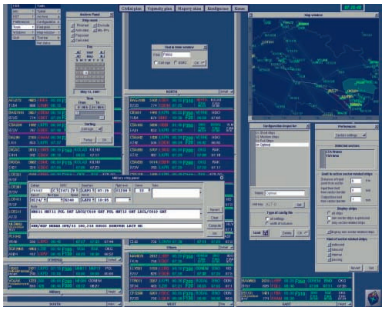
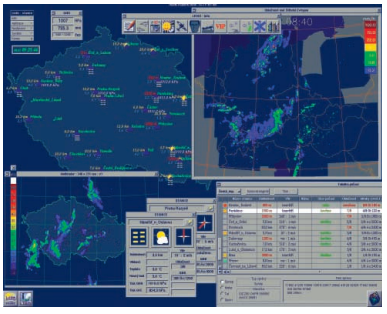
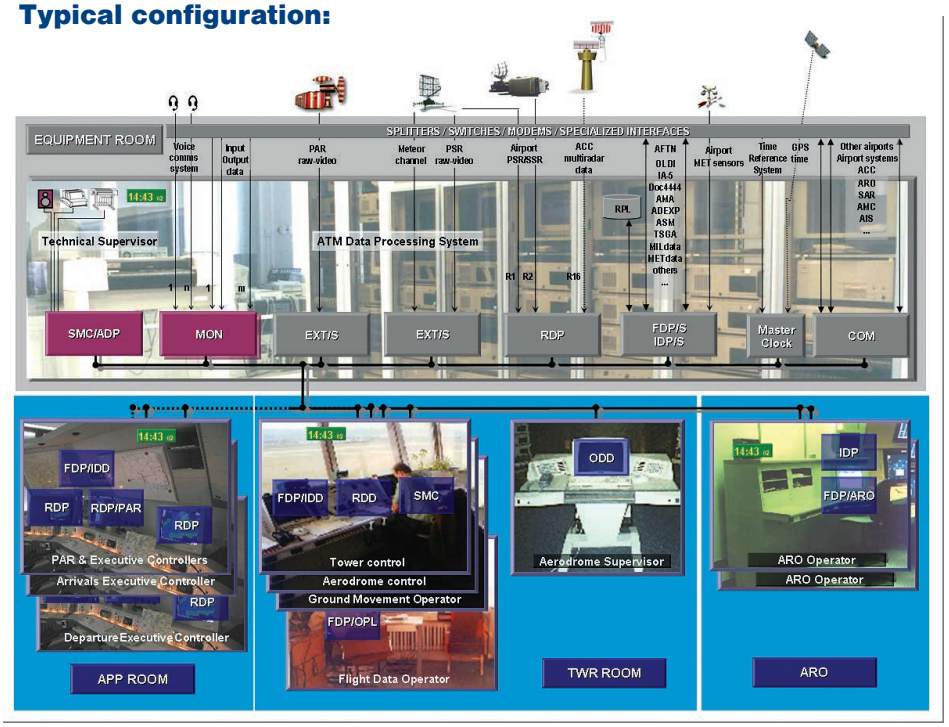
|---|---|
| ▪ Position data sources | plot/track processing of up to 16 - 80 sources as follows:<br>- PSR, SSR, MSSR with digital output<br>- PSR, PAR with analogue output<br>- ADS data interface<br>- passive surveillance systems (PSS)<br>- automatic direction finders (ADF)<br>- external systems output (in ASTERIX or other format) |
| ▪ Radar data update rate | from 4 to 10 sec, adjustable |
| ▪ Track capacity | up to 1000 |
| ▪ FPL or other plans inputs | standard (AFTN, OLDI, IA-5, IFPS, ATFM, etc.) or other comm. interfaces with messages in standard data formats (Doc.4444, AMA, OLDI, TSGA, AUP/UUP, CRAM, NOTAM, ADEXP, IFPS, ATFM, etc.) or specific ones (e.g. military messages) |
| ▪ Meteo-data inputs | - standard text messages (WMO)<br>- non-standard or agreed text messages<br>- weather radar output, PSR meteo-channel, satellite pictures<br>- wind aloft, temperature forecast |
| ▪ Data display | - single display of up to 2Kx2K resolution<br>- multi-screen display (2 – 8) for one operator<br>- large screen display |
| ▪ Recording and replay | - recording of data/voice communication, operator actions, system status<br>- synchronous replay and analysis of records, data reduction |
| ▪ System redundancy | by modularity, incl. main/stand-by switch-over |







## Typical configuration:




## References:

Civil/military Area ATM Systems were delivered by ALES to customers in Slovak Republic (CACC and MACC Bratislava), Czech Republic (MACC Prague), and Ukraine (ACC Kiev).

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