AIRPORT ATM SYSTEM

LETVIS® ATM Airport System is designed for planning and control of air traffic at any level of air traffic services and intended for both civil and military airports, and/or airports with joint civil/military operation. Controllers are provided with the integrated air picture of civil/military air traffic including related supplementary data and supporting functions.

LETVIS® ATM Airport 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, lighting, power supply, radar systems, consoles & cabinets, etc.) allow for a modernization of existing airports or a supply of new ones as a turn-key project. Optionally, upgrade and/or refurbishment of airport radar systems can be a part of supply. Moreover, a transportable version of airport can be supplied for temporary airports or airfields to be built up.

Mission:

The system provides all control capabilities at any airport (compliant/non-compliant with ICAO CAT I-III categories) to the full extent. It is intended primarily for Approach (APP) and Aerodrome (TWR) Control Centres and flight handling units (ARO, TWR) to enable:

❏ 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 (control & monitoring of airport equipment, data recording & analysis functionality, data exchange with other ATM centres, training, etc.)

Both general and extended capabilities of Airport 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:

- Radar control within terminal and assigned areas (LETVIS® RDD)
- Radar control for precision approach and landing LETVIS® RDD/PAR)
- Flight planning, departures/arrivals scheduling, procedural control (LETVIS® FDP/IDD)
- Local/area meteorological information processing (LETVIS® MET)
- Data/voice recording (LETVIS® MON) & analysis (LETVIS® ADP)

Extended capabilities:

- Digitization of analogue radar data and its plot/track processing (LETVIS® EXT/S)
- Multi - radar/sensor data processing (LETVIS® MRT)
- Multiple protocol support (LETVIS® COM) for
  - data exchange with other ATCCs
  - inter-sector or civil/military co-ordination
  - networking capability for radar data distribution and integrated air picture reception
- Operational planning and control of military air traffic, and airport operations (e.g. activities in terminal areas, diversions, etc.) (LETVIS® FDP/OPL)
- Management of flexible use of airspace (LETVIS® AMC)
- Collection and processing of meteorological, aeronautical and other information (text/graphical 2D/3D information on controlled area, emergency procedures, etc.) (LETVIS® IDP)
- Provision of flight briefing information and FPL filling-in support for crews (LETVIS® FDP/ARO)
- Continuous and on-line monitoring and diagnostics of position data sources including their remote control (LETVIS® SMC)
- Remote control, diagnostics and configuration of airport ATM systems, radar systems, airport equipment (power supply, lighting, meteo-sensors) (LETVIS® SMC)
- Controller / operator training (LETVIS® SIM)
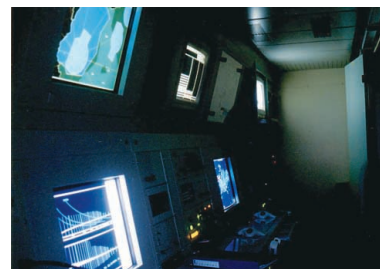
Outstanding features:

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:

- Position data sources — plot/track processing of up to 16 sources as follows:
  - PSR, SSR, MSSR with digital output
  - PSR, PAR with analogue output
  - passive surveillance systems (PSS)
  - automatic direction finders (ADF)
  - external systems output in ASTERIX or other format
  - specific equipment (data link to on-board GPS)
- 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, etc.) or other comm interfaces with messages in standard data formats (Doc.4444, AMA, OLDI, TSGA, AUP/UUP, CRAM, NOTAM, ADEXP, etc.) or specific ones (e.g. military messages)
- Meteo-data inputs
  - standard text messages (acc. to WMO, etc.)
  - non-standard or agreed text messages
  - airport meteo-sensors
  - weather radar output, PSR meteo-channel, satellite pictures
- Data display
  - single display of up to 2Kx2K resolution
  - multi-screen display (2 - 8) for one operator
- Recording and replay
  - recording of data/voice communication, operator actions, system status
  - synchronous replay and analysis of records, data reduction
- System redundancy — by modularity, incl. main/standby switch-over

Typical configuration:
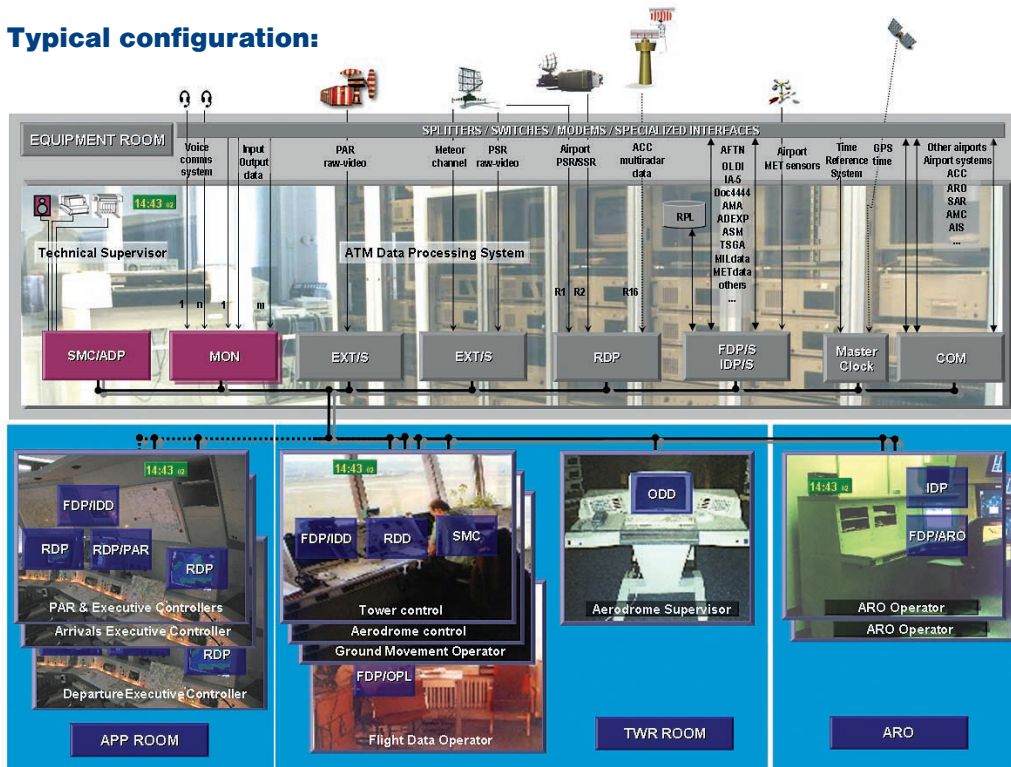
References:

Upgrades of, or new Airport ATM Systems have been delivered to customers in Slovakia and Czech Republic since 1994, and to Hungarian customers since 2000.