

# AIRSPACE MANAGEMENT SYSTEM

## AIRSPACE MANAGEMENT CELL SYSTEM

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CSA952  
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LETVIS® ASM system is designated for automated data processing of airspace management processes in Pre-Tactical and Tactical stages and support of airspace allocation in Strategic stage.

LETVIS® ASM/AMC system is essential part of ASM system for primarily Pre-Tactical Airspace Management and Civil-Military Co-ordination missions realised within the frame and philosophy of EUROCONTROL Flexible Use of Operation concept by the civil-military AMC workplace.

### Missions of the system:

- ❑ Pre-Tactical and Tactical levels of the Airspace Management :
  - support of day-to-day AMC manageable airspace segregation, allocation and operations
  - preparation, approval and promulgation of efficient AUP/UUP
  - analysis, preparation and harmonization of CDR availability, based on AUP, CRAM data and GAT expectations
  - monitoring, control and co-ordination of the real airspace use and airspace deallocation
- ❑ Strategic levels of the Airspace Management:
  - resolving of all potential conflicts of OAT operations with airspace allocated by AMC and AIS
  - analyses of demands, and requesting of allocation non-regular and non-AMC manageable airspace structures based on the scheduled OAT
  - identification of the consequences of the airspace segregation and its real use to GAT
  - co-ordination with AIS
- ❑ Strategic and Pre-Tactical levels of OAT planning:
  - gathering of OAT requests, preparation and promulgation of OAT flight plans and military commands;
  - analyse of consequences of OAT restrictions to GAT
- ❑ Analyses and Maintenance functions:
  - support information functions
  - monitoring and analysis
  - maintenance of the system
- ❑ Liaison and co-ordination with other workplaces:
  - liaison with corresponding AAs, CFMU/CADF, ACC/FMP, neighbouring AMCs
  - delegation of system functionality to ASMU at ACC/FMP according to the ACC/FMP area responsibility
  - data-exchange with AFTMU, AIS

### General capabilities:

- ❑ in-time collection, check-up and processing of airspace requests received automatically or entered manually
- ❑ full automated processing of formalized and semi-automatic handling of non-formalized messages
- ❑ preparation and processing of airspace plan in all ASM Levels, interactively in textual and graphics (map) form
- ❑ interactive conflict probe and handling of: airspace requests each other, with the airspace structures and planned air operational and general traffic
- ❑ presentation of data being processed in tabular form of strips and map form, print-out of map compositions
- ❑ promulgation of plans processed a monitoring of theirs' realization
- ❑ archive of appropriate data for further analysis and report preparation.
- ❑ analysis and statistics of data processed based on pre-defined and user-declared criteria
- ❑ processing and displaying of environmental information (GIS, aeronautical, meteorological, NOTAMs,...)

### References:

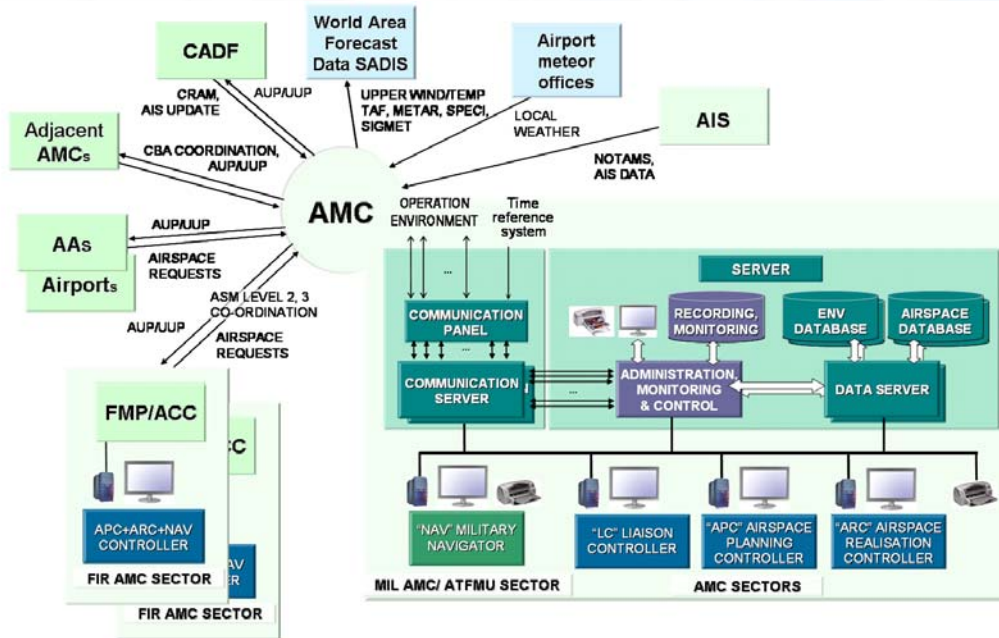
The System has been updated to the current configuration based on the EBRD tender for Ukrainian AMC, as the part of the joint civil-military AFTMU centre at Kiev (UKRAEROCENTRE), where it operates in configuration of 4 working positions at AMC and 1 working position at each of the Ukrainian ACC/FMP (Kiev, Kharkiv, Simferopil, Dnipropetrovsk and Lviv). Working positions for military AMC centres have been delivered for Slovak Air Force in the configuration of the Air Force Tactical Planning System and for Czech Air Force, at the MACC Prague, which upgrade to the described configuration is prepared yet.



## Typical configuration:

ASM Level 2 and 3 functions of the System are being provided by the following LETVIS® ASM/AMC working positions, which roles can be on-line delegated among operators:

- Liaison controller LC: for collection and processing of airspace requests, approval and promulgation of processed Airspace Use Plan and co-ordination with other workplaces involved in this process
- Airspace planning controller APC: for analyse of processed airspace requests, CDR availability and Airspace Use Plan preparation
- Airspace Realisation Controller ARC: monitoring and supervision of airspace utilization based on the Airspace Use Plan



Optional working positions for multi-ACC configurations belonging to single AMC are available:

- Airspace Management Operator ASMO: with delegated system functionality of AMC at ACC/FMP's area of responsibility

Other working positions are available with defined ASM-Level-1 functions up to specialized military tasks, based on the operation mission of current LETVIS® ASM configuration to be provided:

- Military Navigator NAV : for planning of non ATS routes flights of national and foreign users (OAT activities), consequent analyses and requesting of demands for new or particularly non-regular and non-AMC manageable airspace structure (ASM level 1);
- Approved Agencies AA: for preparation, dispatch of airspace requests and processing of airspace plan, e.g. in configuration of the Air Force Tactical Planning System at appropriate air traffic services centre (LETVIS® OPL) or at air force centre (LETVIS® FDP/IDD)

Administration and maintenance of the System are provided by the:

- Database administrator DBA for centralised maintenance of the application configuration of the System, analyses and statistics data evaluation
- System administrator SA for centralised monitoring, maintenance and setting-up of the System

## Architecture of the system:

The System is customized application software system with client-server architecture of Oracle® database, in Sun® Solaris™ operating environment, based on the COTS technology with optional SPARC™/x86™ hardware architecture and variable options for components' backup on different level.

## System interfaces:

- standard (AUP/UUP, CRAM, NOTAMS,...) and user-defined messages (e.g. AFTN telegrams, NOTAM project, AIS updates, military orders...)
- standard or and use-defined data protocols
- AFTN, leased data lines, G703/G704 interfaces