

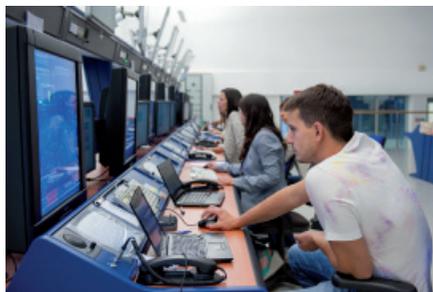
Croatia Control Ltd (CCL) is a state-owned limited liability company that operates pursuant to relevant EU and national laws and regulations, and adhering to the principles and procedures of ICAO (International Civil Aviation Organisation) and EUROCONTROL (European Organisation for the Safety of Air Navigation).

The primary business of CCL is provision of air navigation services, pursuing the basic principle of a high level of air traffic safety in compliance with Single European Sky framework, and CCL has been certified for provision of the following services:

- Air Traffic Services (ATS),
- Communication, Navigation and Surveillance Services (CNS),
- Aeronautical Information Services (AIS),
- Aeronautical Meteorological Services (MET).

Apart from the headquarters located in Zagreb, CCL has 7 additional remote sites scattered throughout Croatia, mainly on the larger airports.

Air Traffic Management (ATM)



Aiming to assure safe, orderly and efficient ATM, CCL provides the performance of the following functions:

- Air Traffic Services (ATS) - include air traffic control services (aerodrome, approach and area control), flight information services, alerting services, air traffic advisory services;
- Air Traffic Flow Management (ATFM),
- Airspace Management (ASM).

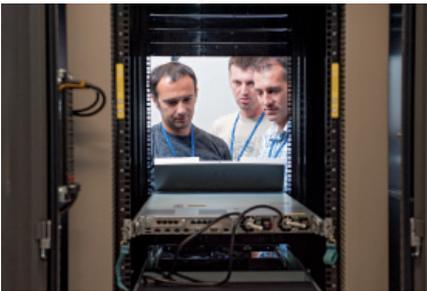
Nearly 250 air traffic controllers work in shifts in operational centres.

Civil-military coordination



In Croatian airspace, CCL is also responsible for ANS provision to the military flights. Civil-military Airspace Management Cell (AMC) has been established for that purpose.

Engineering and maintenance



Highly qualified engineers and technicians have continuously been engaged in the maintenance and upgrading of the following systems: ATM Data Processing Systems, Communications Systems, including radio-communication transceiver, Navigation Systems, Radar Systems, Electric Power Systems, Network Communications Systems and Meteorological Systems.

Aeronautical Meteorology (MET)

CCL is a designated service provider of aeronautical meteorology in Croatia and its services are provided in accordance to the ICAO Annex 3.

Aeronautical Information Service

The basic elements for provision of aeronautical information service are:

- International NOTAM office,
- AIP Publications office,
- ATS reporting offices at aerodromes.

Simulator (SIM BEST)



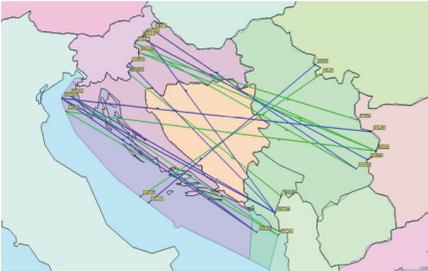
The new ATC simulator of the most modern technology, within the upgrade to the CO-OPANS ATM system, was installed in 2013 and it is identical to the operating system that is put into operation in February 2014. Air traffic controllers are able to work on 10 suites (20 working positions), therefore it is possible to simulate a great number of real-time air traffic situations, validate air traffic changes and procedures, perform real-time and fast-time simulations, enable emergency training etc.

Performance

In 2013, there were half a million IFR GAT flight movements in area of responsibility of CCL. Following the idea of FAB initiative to enhance capacity, CCL fulfilled all capacity objectives disaggregated at European level, en-route ATFM delay and baseline capacity. Comparing year 2013 and 2012, en-route ATFM delay is reduced from 0.27 to 0.09 minutes per flight.

CCL takes appropriate actions to decrease fuel consumption of airspace users. This is done by the route design (introduction of direct routes), the development of new procedures (CDA, CCA) and the establi-

shment of environmental management system (ISO 14001). According to the recent achievement from May 2013, CCL and neighbouring Serbia and Montenegro ATS Agency (SMATSA) have been among the first ANSPs in Europe to implement the project of Free Route Airspace (FRA), enabling airlines to use night cross-border direct routes between the areas of responsibility (AoR) of the Zagreb and Belgrade Area Control Centres (ACCs).



This project is one of the key improvements within the EU initiative on establishing the SES regardless of state borders, aiming to enhance safety and efficiency, and to increase capacity of air traffic in Europe. As compared to the existing structure of routes and air traffic, the establishment of these direct routes will, just in a single night, enable a 1650 km reduction in planned route distance, which equals to savings in 5.3 tonnes of fuel, 16.2 tonnes of CO2 emissions and 65.7 kg less NOx.

International activities

FAB CE

FAB CE (Functional Airspace Block Central Europe) is a joint Initiative of 7 States (Austria, Bosnia & Herzegovina, Croatia, Czech Republic, Hungary, Slovakia and Slovenia)

and ANSPs (Austro Control, BHANSA, CCL, ANS CR, HungaroControl, LPS SR, Slovenia Control) from Central Europe.

To meet the future needs of a growing air travel and transport industry, European ATM needs to become more flexible, harmonised and seamless. The European Commission's SES initiative aims for the unification of European airspace. The creation of FABs independent of national boundaries will optimise airspace usage and capacity, making the flow of air traffic over Europe more efficient.

The FAB CE Agreement, as well as FAB CE ANSP Cooperation Agreement, were signed in May 2011. The implementation of FAB CE will maintain and wherever possible improve the current level of safety notwithstanding the increased traffic, through the establishment of a common safety management system.

The ATM services within the FAB CE will be provided in an environment characterised by cross-border airspace design and extensive cross-border sectorisation. The airspace design process will therefore not be constrained by borders between the FAB CE States, but will be based on operational needs and air traffic flows resulting in better horizontal and vertical flight efficiency, improvements in productivity and the consequent increase in capacity.

With the FRA concept, the users will be able to freely plan a route between a defined entry and exit point, with the possibility to route via intermediate (published or unpublished) way points, without reference to the ATS route network. The step by step realisation within FAB CE will result in incre-



mental benefits by applying “FRA” structures and principles and deploying “FRA” stepwise across the borders to a FAB CE wide implementation by 2018.

FAB CE will result in a reduction of flight delays, while at the same time handling more air traffic. Capacity will be increased to cope with the expected rise of traffic. The enhancement of Civil Military Cooperation and application of the Flexible Use of Airspace will also be a benefitting factor to capacity.

A Communication network is the key enabler for cross-border operations. It will improve cost efficiency by replacing the point-to-point connections with network connectivity. Frequency management will allow best use of limited aviation radio spectrum.

COOPANS

COOPANS
a CO-OPERation of Air Navigation Service providers



The COOPANS (COOPERation between ANS Providers) framework agreement between CCL, IAA, LFV, Naviair and Austro Control (providers from Sweden, Denmark, Ireland, Austria and Croatia) has gone further than the traditional relationship between Air Navigation Service Providers and the ATM supply industry and has set the foundations for a strong and long-term partnership.

COOPANS has adopted a common managerial approach where the 5 ANSPs act as one organisation together with the supplier Thales with a focus on common success. The harmonisation of functionalities and joint investments enable the implementation of an advanced and unified ATM system.

By upgrading their legacy system to single mature ATC software, COOPANS founding members foresee:

- Common stepwise operational and technological evolution,
- Optimisation of life cycle costs,
- Sharing the same system and support baseline for operation and maintenance.

Members maximise benefits using common tools, methods, and operational procedures throughout the system life cycle. From a financial perspective, common procurement is defined for all major programme steps: development, integration, deployment and maintenance.

COOPANS' highest priority is to provide a customer oriented solution supporting economic efficiency and environmental protection, with a focus on maintaining the required level of safety whilst increasing capacity to meet our customers' demands. COOPANS intends to be at the forefront of European standards, implementing the latest proven ATM tools to minimise CO2 emissions and improve situational awareness

In February 2014 CCL launched the new ATM system based on the COOPANS latest version. The operating software is based on the Thales TopSky system and has been applied by seven ATC Centres in five European countries. It ensures CCL's permanent harmonisation with the EU standards and competitiveness on the European market of ANS.

Through joint development and cooperation with Thales all 5 ATM system are harmonized, including all upgrades, usually twice a year. Member states make joint investments and share expenses, thus reaching cost savings and safety benefits.