Voice Communication System
DSNA and MUAC team up

EUROCONTROL's Maastricht Upper Area Control Centre (MUAC) and the French Direction des services de la navigation aérienne (DSNA) have signed an agreement with Austrian equipment supplier Frequentis for the development, deployment and maintenance of a new-generation Voice Communi- cation System (VCS), which meets the Functional Airspace Block Europe Central (FABEC) Concept of Operations and the latest EUROCAE standards. The common procure- ment is based on the first common specifications developed by a joint FABEC task force.   *Page 03*

ATFCM/ASM
First operational experience

From 2 May until 31 July 2011, civil and military experts from air navigation service providers in FABEC devised common solutions for the pre-tactical phase (level 2: day-6 until day-1) in a live trial which was conducted in the prem- ises of the CFMU. Objective of the trial was to validate in operations the function that aims to optimise FAB-wide capacity provision, traffic flows and the use of airspace by civil and military users in close coordination with the network function (CFMU), military units and the local functions. A detailed analysis is expected in the second half of 2011 and will be the basis for further decision. But in any case – it was the first time that experts from almost all FABEC partners were working in one room on common operational solutions – a great opportunity to feel the common spirit.
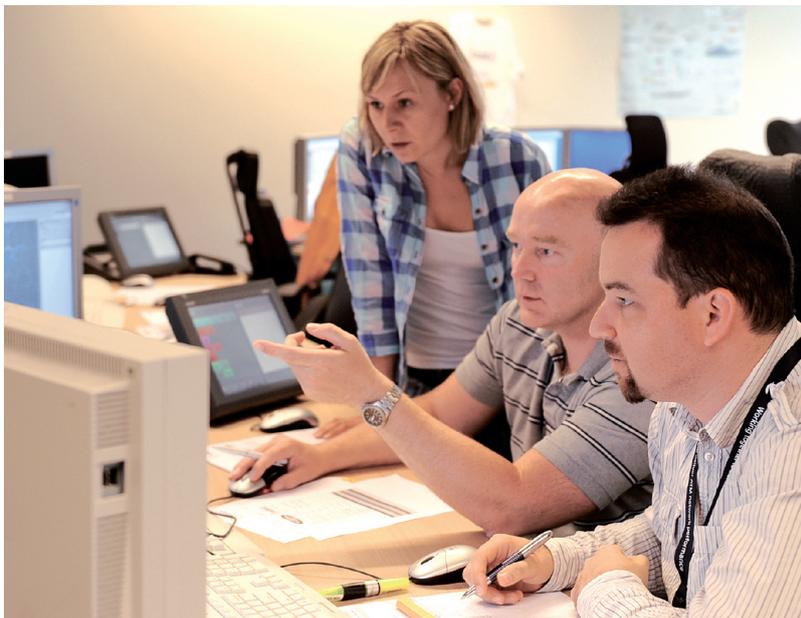
International teaming: Natascha Tanner (skyguide), Ger Lautenbach (LVNL), and Jean-Marie Belot (DSNA) at the FABEC function in Brussels on 9 May 2011.

Performance Plan
Next step of cooperation

On 29 June the six FABEC States, Belgium, Germany, France, Lux- emburg, the Netherlands and Swit- zerland sent to the European Com- mission the FABEC performance plan. The FABEC performance plan addresses at FABEC level the key performance areas of Safety, Environment, Capacity and Military Mission Effectiveness. The Cost-efficiency target is ad- dressed on national level. In some aspects we exceeded the legislative guidelines of the Euro- pean Commission. In particular, the integration of the Key Perfor- mance Area Military Mission Effec- tiveness is extremely important for the future of air traffic in the core area of Europe. In the course of creating this plan, the contents were discussed thoroughly with all stakeholders. The collective creation of this performance plan symbolises the commitment of all six States that want to and will make the FAB Europe Central and the Single European Sky a success. The document as well as background information are available under **www.fabec.eu**

skyguide and DFS
Training cooperation

The skyguide Training Centre and the DFS Air Navigation Services Academy in Langen signed a Memorandum of Understanding for Training Services in April with the goal of further intensifying the existing cooperation.   *Page 02*

making the difference

skyguide and DFS
Academies work together more closely

A common basis in many fields was identified for the training of air traffic controllers in both countries:

- Recruitment and selection of ATC personnel
- Joint use of training capacities for the internal demand of the companies and other businesses
- Harmonisation of training infrastructure
- Coordination and preparation of jointly offered services
- Standardisation of training contents
- Consistent qualification of instructors

Concrete examples include:

joint recruiting campaigns in areas on the border, avoiding double assessments regarding the aptitude of an air traffic controller, negotiations with the DLR with regard to the further development of aptitude tests. In addition, the DFS Academy supports skyguide through the delegation of instructors. Both academies also work closely together on external contracts.

skyguide – Geneva
Hosting FASTI workshop 29-30 November

The introduction of ATC support tools in Europe is a major endeavour. Eurocontrol's FASTI (First ATC Support Tools Implementation) Programme is now in the final phase of coordinating the implementation of such tools as Conflict Detection, Monitoring Aids and Electronic Coordination (SYSCO) on ECAC level. With new ATC systems or upgrades being deployed this year by a number of ANSPs, this is a good time to bring together key ATC decision makers in order to present and discuss their experiences as well as the operational benefits achieved in implementing the FASTI tools. Furthermore, an exchange about the compatibility of the FASTI tools and concept with key initiatives such as SESAR and FABs is of utmost importance in regard to past and future business decisions.

skyguide
Alex Bristol – the new Chief Operating Officer

Alex Bristol was previously serving as Development and Investment Director at NATS. Urs Ryf, skyguide's previous COO, announced in November 2010 that he intended to step down from the position for personal reasons. He will now familiarise Alex Bristol with his new skyguide duties. Alex Bristol began his career with NATS in 1992, and went on to serve as an air traffic controller, instructor and supervisor at London Heathrow Airport. From 2003 onwards he was successively appointed General Manager of Operations at Farnborough, Manchester, West Drayton and Swanwick (Europe's largest air traffic control centre).

ANA Luxembourg and DFS
Three air traffic controllers trained

The cooperation between DFS and the Luxembourg air navigation service provider ANA is being expanded further: Three air traffic controllers from ANA said their goodbyes after training for more than one year at the Academy. During this time, they acquired qualification for aerodrome control and approach control service.

A solid cooperation between ANA and DFS has existed for many years in regard to training. It began in 2005 with the training of AIS officers. Since 2007, DFS has trained young air traffic controllers for Luxembourg. Just recently, three participants successfully completed the sixth training course for trainee air traffic controllers at the DFS Academy. Together with trainees from DFS, the participants from ANA passed both the BASIC training course and the rating course for the aerodrome control service ADI. For the first time, rating training for this group was supplemented with an introduction to the procedures of Luxembourg Approach as well as a simulation of the Luxembourg airspace were offered. For this purpose, ANA also sent two of its own instructors to the Academy in Langen. The DFS Academy had already incorporated airspace organisation, flight procedures and traffic samples for the area of Luxembourg Approach into the simulation data-bank for a refresher training course for approach controllers.

Pictured, the three air traffic controllers from Luxembourg (left) with both of their instructors from ANA (right), and Gerhard Diener from DFS (middle).

DSNA and MUAC
FABEC to deliver first common Voice Communication System

The new VCS system will be deployed at MUAC in 2014 and across the French air traffic control facilities shortly thereafter.

"Technical convergence of air navigation infrastructure and systems can be a long process and the pace of replacement does not always coincide between air navigation service providers. A VCS system normally has a lifetime of some 15 years; the replacement process can therefore span a relatively long period. As far as DSNA and MUAC are concerned, our respective VCS systems needed to be replaced in the short term. This common procurement is a good opportunity to foster system commonality, maintenance synergies and to reduce acquisition and landline interconnection costs while ensuring that we make timely and well-balanced investments to meet future air traffic growth and sustain our performance" said Karl-Heinz Kloos, Director of MUAC and FABEC Champion for technical affairs.

"With this new VCS system, DSNA will deploy a new technology which facilitates exchanges with our partners abroad, in particular with those who participate in FABEC. This cooperation between DSNA and MUAC - like other projects undertaken in common between European air navigation service providers – is one of the first steps that will make the abstract concept of FABEC a reality. Other FABEC members may later rely on this common procurement and improve the commonality and maintenance synergies on voice communication systems inside FABEC. By selecting Frequentis and its French subcontractor CS for the development, deployment and maintenance of our new VCS system, DSNA recognises the competence of this world-renowned European equipment supplier. Although we can be very satisfied by the work already achieved during the negotiation phase, one should not forget that it is only the tip of the iceberg, and I want to wish the teams in charge of this ambitious programme every success", said Maurice Georges, Director of DSNA.

skyguide
Crystal clear in traffic load and complexity prediction

An innovative planning tool called Crystal is used by skyguide in its Geneva and Zurich ACCs. Crystal enables supervisors and FMP staff to accurately predict the upcoming traffic load and complexity, for all possible sector configurations, in order to choose the optimal one at all times. Furthermore, the tool allows to detect unforeseen traffic and to act on it early enough, i.e. either by preventing it from entering already overloaded sectors, or by taking measures in order to be able to handle the surplus traffic load.

The system provides high quality traffic prediction data 2.5 hours to 10 minutes ahead of time. It regularly receives updated flight progress messages from the CFMU, and is linked to several other operational systems that enable Crystal to be up-to-date in terms of sectorisation information, sector capacity, planned military activities or flight activation messages (ACT).

The tool allows the detection of flights due to enter a sector in which they were not expected, meaning that according to the filed flight plan, the flight was due to enter the airspace one sector above or below, or even in an adjacent sector. In the case of already overloaded sectors, the detection of such flights enables the supervisor / FMP staff to take early action on such intruders, and to request the ACC that will hand over the flight to do so at the planned flight level.

MUAC
SESAR: initial 4D validations on track

MUAC is planning the next-phase development of LINK 2000+. In addition to routine CPDLC messages – such as climb, descend, direct clearances, headings and frequency changes – speed instructions will be introduced in 2011, and a 2D route which can be evaluated by the pilot. Once accepted, this flight plan can be auto-loaded into the FMS (Flight Management System), replacing a voice exchange with a simpler, more accurate digital message. By the end of 2011, MUAC plans to assign a vertical trajectory, as well as a time constraint, to create a 4D flight profile. Known as "Initial 4D", the procedure will use the next-generation ATN data link standard that is currently under development and subject of a joint EUROCAE/RTCA standards committee. A team including Airbus, MUAC, Noracon and avionics manufacturers will fly a test aircraft from Toulouse to Stockholm via Copenhagen using a 4D flight profile in December 2011. The first Initial 4D flight trial is part of a work programme run by the SESAR Joint Undertaking. During this flight the trajectory will be uplinked to the cockpit, where the FMS can then fly an optimised route based on constraints provided by ATC, airframe and airline operations. This route will be downlinked via ADS-C to the ground system to ensure synchronisation of the trajectories. It is planned to simulate the flight in November 2011, in cooperation with an Airbus cockpit simulator in Toulouse, using technical infrastructure, the ATN network and data link/ADS-C messages. Another set of flight trials is planned at the end of 2012, and again in 2013.
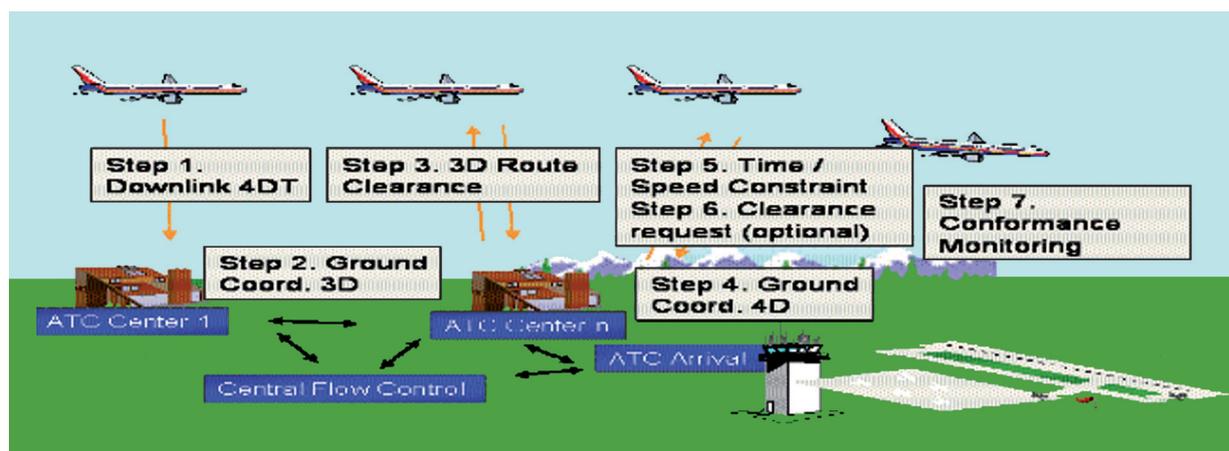
4D Trajectory Management Concept (Note: steps 2 and 4 are out of scope of I-4D)

LVNL
Paul Riemens appointed as CANSO Chairman

On 15 June 2011, CANSO has appointed Mr Paul Riemens – Chairman of the Executive Board and CEO of Air Traffic Control the Netherlands (LVNL) – as Chairman of the CANSO Executive Committee. He succeeded Interim Chairman Mr Eamonn Brennan.

Paul Riemens wants to intensify cooperation with other stakeholders in aviation such as IATA, because all share the same goals and strive for the same improvements of the infrastructure, which is necessitated by the ongoing growth of the air traffic. Besides he will continue to push for a Single European Sky instead of airspace fragmentation. Therefore, cooperation with airlines, airports, manufacturers and others suppliers as well as the governments is essential.

Mr Riemens will be supported by Mr Greg Russell (Airservices Australia), who will serve as Vice Chair of the Executive Committee. In addition, senior aviation leaders from around the world will represent CANSO's regional committees, Members at large, and Associate Members.

Paul Riemens (3rd from the right) after his appointment

DFS – Frankfurt Airport
New control tower in operations

The new tower at Frankfurt Airport

During the night of 13 to 14 June 2011, two weeks earlier than originally scheduled, the new control tower at Frankfurt Airport started operations.

The construction of a new tower was necessary as the existing tower in the south of the airport does not afford a clear and unobstructed view of the new runway in the northwest of the airport. The new control tower, a 70 metre (about 230 feet) high construction situated to the north of the parallel runways and next to a Lufthansa hangar, is equipped with state-of-the-art technology.

The structure, which was designed to fit in with the surrounding buildings at the airport but to also reflect the DFS corporate design, cost about € 34 million. The tower cab is approximately 100 square metres (1,000 ft²) in area, making it almost 40 square metres (430 ft²) larger than the existing tower and can accommodate 12 staff members.

Belgocontrol

A European first: connection of the FMTP IPv6 protocol

In collaboration with MUAC, Belgocontrol has established an IP (Internet Protocol) connection version 6 for the exchange of information via FMTP (Flight Message Transfer Protocol). FMTP is essential for the automatic exchange of flight coordination data between the two centres. The use of this new protocol is a requirement of the European Commission (European Implementation Regulation No. 633/2007), which will become effective on 31 December 2014. The aim is to solve the urgent problem of lack of available IP addresses in the previous version. Version 6 offers not only an almost endless supply of IP addresses, but also other benefits such as a better routing, which accelerates the exchange of data, improved auto-configuration of the network and a more efficient data protection.

Belgocontrol and MUAC are the first in Europe to have established a connection of this type. After testing the network connections and data communications between Belgocontrol's ISAAC system and the MUAC's DGW system, the connection was put into operation on 15 April of this year. Once the neighbouring ANSPs will have executed the necessary update of their systems, it will be possible to start connection tests with them.

A synchronized planning for the SES implementation regulation No. 633/2007 on the FMTP (IPv4/IPv6) for all FABEC partners was developed within the FABEC Oldi Task Force.

Belgocontrol

ADIDS-c

ADIDS-c, the Aeronautical Digital Information Display System – version-c, was entirely developed in-house throughout 2010. This new system, put into operation the night of 25 to 26 June, provides air traffic controllers with aeronautical and meteorological information indispensable for their work. This is nothing short of a revolution compared to the system they used before, because they no longer have to run through countless pages to find the right information. Via a dynamic HTML pages system, the ADIDS-c makes it possible to create customized pages depending on the unit where the ATCO works, for the benefit of efficiency and productivity.
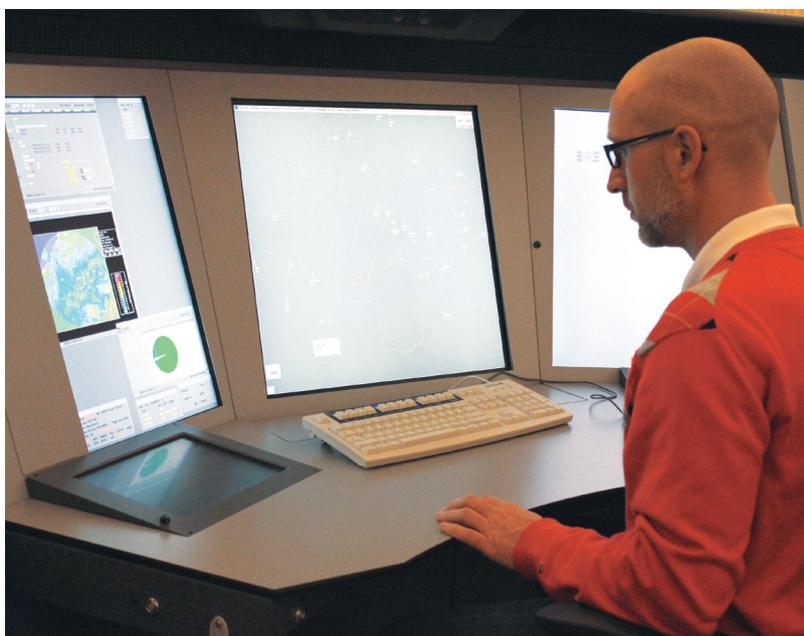
List of abbreviations

(A-)CDM	Airport Collaborative Decision Making	**CDM**	Cooperative Decision Making	**FMTP**	Flight Message Transfer Protocol
ACC	Area Control Centre	**CDO**	Continuous Descent Operations	**IATA**	International Air Transport Association
ACT	Flight Activation Message	**CEO**	Chief Executive Officer		
ADIDS-c	Aeronautical Digital Information Display System -C	**CFMU**	Central Flow Management Unit	**ICAO**	International Civil Aviation Organisation
ADS-C	Automatic Dependent Surveillance – Contract	**CNS**	Communications, Navigation and Surveillance	**ISAAC**	Innovative System for Automated Aeronautical Communication
ANS(P)	Air Navigation Service (provider)	**COO**	Chief Operational Officer	**NM**	Nautical Mile
ANA	Administration de la Navigation Aérienne Luxemburg	**DFS**	DFS Deutsche Flugsicherung GmbH	**NSA**	National Supervisory Authorities
AO	Aircraft Operator	**DLR**	Deutsches Zentrum für Luft- und Raumfahrt	**PRC**	Performance Review Commission
ASB	ANSP Strategic Board				
ASM	Airspace management	**ECAC**	European Civil Aviation Conference	**RTS**	Real-Time Simulation
ATC(O)	Air Traffic Control (Officer)	**EEC**	Eurocontrol Experimental Centre	**SES**	Single European Sky
ATFCM	Air Traffic Flow and Capacity Management			**SESAR**	Single European Sky ATM Research
ATM	Air Traffic Management	**EUROCAE**	European Organization for Civil Aviation Equipment	**SYSCO**	System Coordination
CANSO	Civil Air Navigation Services Organisation			**MUAC**	Maastricht Upper Area Control Centre
CBA	Cross-Border Area	**FASTI**	First ATC Support Tools Implementation		
CPDLC	Controller-Pilot Data Link Communications	**FMP**	Flow Management Position	**VFR**	Visual Flight Rules
		FMS	Flight Management System		

Points of contact

FAB Europe Central
Roland Beran, Chairman
Communication Cell
Am DFS-Campus 10
63225 Langen, Germany
Tel: +49 6103 707 4190
roland.beran@fabec.eu

FAB Europe Central
Project Steering Group
Hermann Theobald, Chairman
Tel: +49 6103 707 4090
hermann.theobald@fabec.eu

FAB Europe Central
ANSP FABEC Group
Peter Naets, Chairman
Tel: +32 2 206 21 35
peter.naets@eurocontrol.int

Belgocontrol, Belgium
Nadine Meesen
Tel: +32 2 206 2023
press@belgocontrol.be

DSNA, France
Jean-Michel Boivin
Tel: +331 58 09 49 09
jean-michel.boivin@aviation-civile.gouv.fr

Denis Lemarchand
Tel: +331 58 09 49 11
denis.lemarchand@aviation-civile.gouv.fr

DFS, Germany
Andrea Schäfer
Tel: +49 6103 707 4112
andrea.schaefer@dfs.de

ANA, Luxembourg
Luc Willems
Tel: +352 4798 22010
luc.willems@airport.etat.lu

LVNL, The Netherlands
Linda van Dort
Tel: +31 20 406 3681
communications@lvnl.nl

MUAC, Eurocontrol/Maastricht
Fred Könnemann
and Mireille Roman
Tel: +31 43 366 1247 or -1352
masuac.info@eurocontrol.int

skyguide, Switzerland
Raimund Fridrich
Tel: +41 22 417 40 10
info@skyguide.ch

Co-financed by the European Union
Trans-European Transport Network (TEN-T)