
AIRSPACE REDESIGN

Focus on the essentials

The key to achieving the operational performance level required by the EU is to find joint solutions for the existing bottlenecks. They are mainly located at the intra-FABEC boundaries where dense traffic flows and military requirements collide with the nationally-oriented organisation of air navigation services. So cooperation on many levels, civil-military, for example, and among various national air navigation service providers is a must. A number of airspace redesign projects were launched, starting geographically in the south at the border triangle formed by Switzerland, France and Germany, and following the route to the north along the German borders to Luxembourg, Belgium, the Netherlands and up to the German Bight in the North Sea. Most of the issues are not new; they have been hampering air traffic for decades – but thanks to FABEC they are now being addressed and first solutions are ready for implementation.

Project West

Simulations of the interface between FABEC and the southeast of England (Project West), for example, will take place in April 2011. Three routes instead of two are to be introduced between the UK and the control centre in Reims, France. In a second phase, a military cross-border zone, which is currently used by the Belgian and French military, will be reshaped. These improvements can be achieved due to the close collaboration with the British colleagues who launched an initial internal investigation in February 2010. Thanks to the principles of the flexible use of airspace, routes here can be optimised further. Implementation of these changes is scheduled for winter 2012/13 after they have been validated.

Project CBA Land/CW

A typical win-win situation will arise from a large-scale cross-border re-sectorisation planned at the borders of Germany and the Netherlands. In a first step, a military cross-border area will be implemented to accommodate training for the fighters operated by the Dutch and the German air force. Procedures for arrivals and departures to Bremen, Hamburg and Hannover will have to be changed. The simulations needed are to take place in the course of 2012, and implementation is scheduled for 2014. In a second step and by 2015 at the latest, a military area – well known from the AmRuFra-case – located near Amhem will disappear. These implementations will significantly improve the flows from the Frankfurt area to the Amsterdam area and vice versa. In addition, it will facilitate the 4th initial approach fixes in Amsterdam and influence improvements in the Luxembourg area.

Project LUX

The most complex area in Europe could be the area around Nattenheim – a fragmented airspace which affects almost all of the FABEC partners and will be tackled by the LUX project. The structure of this airspace has developed based on individual needs over the last century. This means on the one hand that civil flows and the respective route network have to be taken into account – especially as it is strongly connected to the airports in Brussels, Frankfurt, Cologne, Düsseldorf, Luxembourg and Paris. On the other hand, military areas ought to be re-organised or re-designed accompanied by an effective management of the airspace, i.e. a common airspace management and air traffic flow management as is envisaged in the live trial to be conducted in summer 2011. Furthermore, it is envisaged to harmonise the division flight levels between the upper and the lower airspace as well as to create a cross-border sectorisation.

French-German dimension: CBA 22

An almost new – and perhaps historic dimension – is the creation of the first common military cross-border area to be used by the French and the German air force. The plan is to combine existing military airspaces on both sides of the border above the Palatinate, the Black Forest and Alsace. From a military point of view, this new area will fulfill training needs for new high performing combat aircraft like the Eurofighter or the Rafale, which would not be possible with the existing structure.



By creating this cross-border area, the German air force intends to release the western part of the existing TRA Lauter, and new balcony solutions along the northern boundary will allow additional departure routes from Frankfurt to cope with the future demand of the 4th runway.

Overcoming historical issues: SWAP

With the current ATS route network, traffic flows on routes UN852 and UN853 are crossing twice. In addition, these routes interfere with other traffic flows controlled by Paris ACC and Reims ACC. To improve the situation, the first real-time simulation with two scenarios for the new FABEC routes network took place in April 2010 at Eurocontrol

Brétigny. The simulation concerned the airspace in the northeast of France where the density of traffic is high and the volume of civil airspace is restricted by French military areas like TSA 22 or TSA 200. Thirty-three controller working positions were simulated in the attendance of 45 civil controllers from Paris ACC, Reims ACC, skyguide, Belgocontrol, Maastricht UAC and their military counterparts. The controllers validated a scenario which resulted in modifications of the arrival and departure routes (SIDs/STARs) for Geneva Airport as well as a modification of the French-Swiss military cross-border area CBA 25. Implementation is planned for March 2013.

