FAB news
July 2011

The newsletter of the UK–Ireland FAB

European Commission commends FAB progress

"It's very interesting. It's mature. We expect a lot from you and we're very optimistic about your future." These were the closing comments from Marinus De Jong, European Commission DG MOVE, following his presentation to the UK-Ireland FAB Management Board (FMB) meeting in July. He acknowledged the fine work achieved to date and focused on the criticality of the London TMA and its interaction with FABEC TMAs (Paris, Frankfurt and Amsterdam). The unique characteristic of the North Atlantic traffic flows was addressed as well as the potential opportunities from the expansion, in time, of the UK-Ireland FAB with the Danish-Swedish FAB, and with other North European States (see page 7).

Mr. De Jong emphasised that FABs are a tool to achieve performance and have a very important link with the new Network Manager. He reiterated the Commission's expectations that national regulators actively engage in the harmonisation of their activities. The discussions also focused on the difficult road ahead regarding the implementation of the performance scheme by the Performance Review Body (PRB).

The FMB is the ANSP body responsible for implementing the UK-Ireland FAB on behalf of the member States, and comprises ANSP, military and customer representatives. This was a unique and highly rewarding session for the FMB as it was the first time it has been attended by a Commission representative. Also, arising out of the Memorandum of Cooperation between the ANSPs of the UK-Ireland and Danish-Swedish FABs, ANSP representatives from Denmark and Sweden also attended, Mr. Nils Sprenger (Naviair) and Mr. Niclas Gustavsson (LFV). The meeting provided a valuable platform to exchange many ideas and to share common views with the Commission.

During the meeting the Board endorsed proposals for the implementation of a single network management organisation across Irish and UK airspace (see page 3). Donie Mooney, IAA Director Operations and FMB co-chairman said, *"This is a great step for the FAB and a clear demonstration of the maturity of our work. The FAB cannot exist unless the airspace is treated as one entity".*

continued page 5 . . .

FAB Board Meeeting - 14th July 2011

Contents

Planning for the next three years

Each year the FAB management board publishes a three year plan and a report for the previous year. April saw the publication of the UK-Ireland FAB Plan 2011-2014 and the annual report on progress achieved in 2010.

The FAB Report 2010 contains a summary of the significant achievements delivered during the year. Virtually all of the 24 distinct projects due for delivery in the last year have been implemented. They were developed on a partnership basis with our airspace users and deliver repeat financial and operational savings to our customers in terms of reduced CO2, reduced fuel burn costs, and reduced track miles.

The FAB Plan is the third rolling UK-Ireland FAB Plan and covers the period 2011 – 2014. It is a working document containing a technical description of activities. The FAB Plan sets out the programme of work for the near future, including;

- Technology coordination (new in this plan),
- Enhanced coordination between the various FAB stakeholders including, the national supervisory authorities, the military, trade unions, and joint NATS/IAA customer engagement,
- Improvements to the processes for the assessment and measurement of FAB benefits to aid the prioritisation of FAB initiatives,
- Inter-FAB coordination will be enhanced, through the Memorandum of Understanding between the ANSPs of the UK-Ireland FAB and Danish-Swedish FAB and through the Borealis framework (of wider integration between all NEAP ANSP members),
- All SES II FAB Implementing Rules will be met as required,
- The provision of national performance plans,
- Work will be jointly conducted to align with emerging SESAR activities.

A key element of the FAB Plan 2011-2014 is ODNET; Optimise Domestic, North Atlantic and European Traffic flows. No other FAB has a role in traffic integration on this scale. North Atlantic (NAT) Eastbound traffic affects the management of FAB domestic and core European operations on a daily basis. The nature of NAT traffic integration is pivotal in ensuring that the FAB efficiently manages domestic and European networks, thereby providing benefit to all stakeholders.

Read the report and plan at;

http://www.iaa.ie/index.jsp?p=545&n=267

Donal Handley
FAB Co-ordinator
IAA

feedback ...

"I am very pleased to read through the FAB Plan and see that a number of areas of concern I have had for many years are being addressed through a series of projects that will demonstrate the benefits that we expect to be delivered by the UK-Ireland FAB - the first operational FAB. The ODNET project promises to give significant advantages to Monarch as both an intra-European and North Atlantic carrier. The work in enhancing FUA (flexible use of airspace) will provide greater access to airline operations at times when the airspace is not required by the military and as airlines we should all support the requirements of the military when they have need of it.

We should all be aware of the raft of regulations heading our way through SES II and SESAR and it is good to see the FAB is working towards alignment by the given timescales as required. The array of projects in the FAB Plan highlight the need to stay at the forefront in many areas – including airspace design, new technologies, safety, AIS, regulatory issues and performation-based navigation. These can only be delivered with the full support of the customers of the UK-Ireland FAB and I would urge all to become involved."

Mark Deacon
Navigation Services Administrator
Monarch Airlines

feedback ...

"Delta is very impressed with the collaborative efforts of the UK/IAA FAB and all the benefits we derive from that collaboration. This FAB is a model of what the other FABs should strive to be. The NTFSRs and the efforts to include first tier EU airports Amsterdam, Charles de Gaulle and Frankfurt into this program are to be commended."

Gary Edwards
Supervisor International Operations
North Atlantic, Europe, Middle East & India
Delta Airlines

Network Management – the route to further customer benefits

One of the major FAB projects currently underway is the introduction of an integrated network management function across Irish and UK airspace. Significantly, both airspaces will be treated as one continuum and, on a daily basis the four ACC centres (Dublin, Prestwick, Swanwick, and Shannon) will participate in network management for all FAB traffic. Planning functions will also be integrated and information will be promulgated from a central website for ease of use. This integrated network management function will link with the wider European network manager and will fully comply with the Implementing Rule requirements. The target date for implementation is March 2012.

The aim of a joint network management function is to strike a balance between ATM capacity and airspace user demands with major emphasis on improved safety, flight efficiency, environmental impact, and cost.

A number of processes have already been introduced to support the implementation of network management across FAB airspace including;

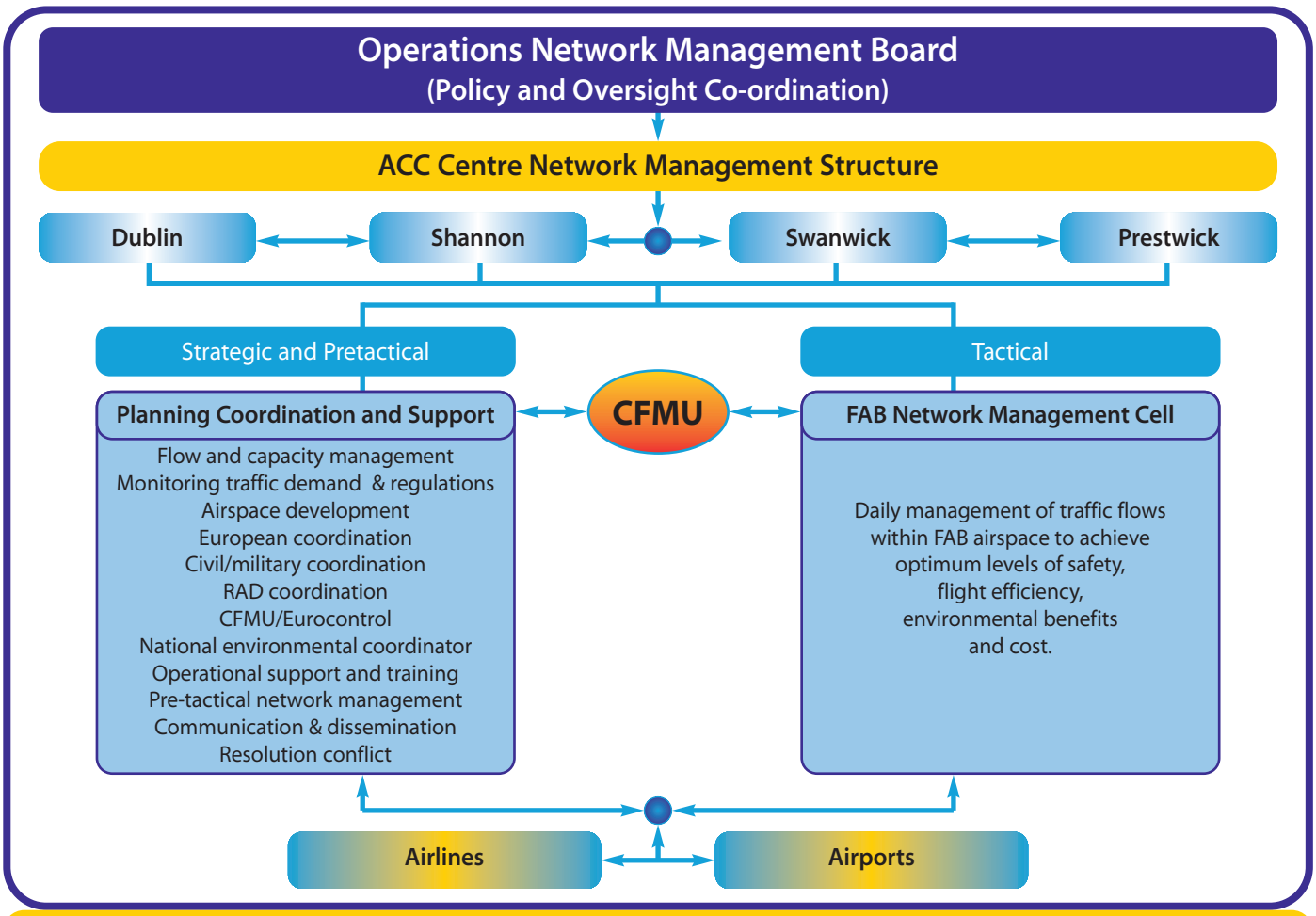
- Publication of a daily FAB pre-tactical network brief for operators.
- Eight week strategic brief to support longer term planning.
- Publication of FAB RAD (route availability) documents on the CFMU web site.

Various activities are underway to support its implementation, including:

- the introduction of the TLPD (traffic load prediction device) system into Shannon and Dublin to give an integrated view of traffic data for the FAB airspace thereby enabling station managers to improve network management decisions;
- the introduction of the 'Lara' civil/military airspace planning tool to improve the activation requests and cancellation of danger areas with earlier visibility;
- the training of personnel in the function of network management
- the introduction of a measurement tool to record improvements made.

The overall benefit of a regional UK-Ireland FAB Network Management process will result in a more efficient network which will reduce delays, track miles, and CO2 emissions and increase capacity for all airspace users.

Aidan Fox
General Manager, Shannon, IAA



Proposed FAB Network Management Structure

Delays minimised during UEFA final

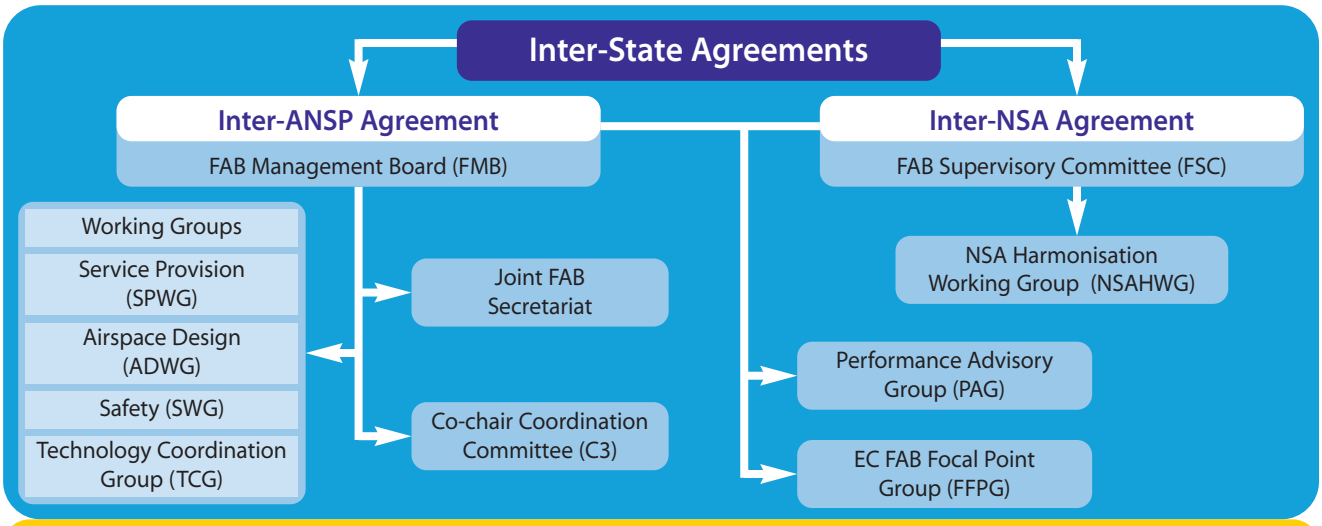
The FAB partners demonstrated a practical application of network management during the UEFA Europa League final which was held in Dublin in May. Almost 90 additional flights had signalled their intention to operate into Dublin and as both finalists were from Oporto, this posed capacity problems for both Shannon and Dublin ACCs. As the cost effective routes from Oporto to Dublin only onloaded the Dublin south sector one constraint was immediately identifiable, Dublin south and Shannon eastern sectors. This preferred route via UT9 is almost €600 (£510) cheaper than using airways via Spain, France and UK to destination, however there are equipment requirements for this routing.

NATS and the IAA developed a plan that provided optimum capacity for both arrivals and departures to Dublin and also reduced the impact of the event on Dublin based operators. As the Dublin south sector was the main onload sector for the UEFA flights some balancing had to be put in place to remove the corresponding amount of flights and ask the operators of these flights to re-route into the Dublin north sector. The difficulty was to capture enough flights that were prepared to re-route without adding significant mileage.

Flights were scheduled to depart immediately after the match as it was essential that all match traffic had departed before 04:00 as after this time priority would be given to Dublin based operators and their early morning schedule. The agreement reached with Eurocontrol/CFMU was to release 20 aircraft per hour as this was the number of flights Oporto could manage on arrival. This was achieved by using MDIs (minimum departure intervals) and spreading the flights on different routes so as not to overload an adjacent centre. The final planned departure to Oporto left Dublin at 03:28.

Delays for the event for the EI/EG FAB were 940 mins for two days and only on Dublin arrivals. Without FAB level planning delays would have reached almost 3,000 mins but because of the rerouting scenarios they were greatly reduced.

Joe Talbot
Shannon ATC Station Manager
IAA



FAB Structure

If you only know this about the FAB, know…

- The FAB has been operating highly successfully since it was established in June 2008 and is leading the way in helping Ireland and the UK meet the objectives of the Single European Sky.
- More than 20 distinct projects, developed on a partnership basis with FAB airspace users including the military, have been delivered to date. The benefits of these projects, for example ENSURE and NTFSR include greater flight and fuel efficiency, and CO2 reduction.
- It is estimated that over the next five years some 50,000 tonnes of CO2 will have been saved annually through projects introduced under the FAB, saving some €48 million – three times more than targeted.
- The FAB is delivering enhanced safety, improved operational efficiency, reduced combined ANSP costs and is generating customer savings.
- The UK/Ireland FAB is Europe's transatlantic gateway - the conduit for North Atlantic (NAT) and European traffic flows. One of its core functions is the integration of NAT traffic flows with domestic UK/Ireland traffic flows. No other FAB or European ANSP has a role on this scale in the integration of traffic. The unique nature of NAT traffic integration is pivotal in ensuring that the FAB efficiently manages domestic and European networks, thereby providing benefit to all stakeholders. During 2010 the projects associated with the NAT/European interface were grouped into a programme known as 'ODNET' (Optimisation of the Domestic, North Atlantic and European Traffic) which sits at the heart of our FAB Plan.

The Board also endorsed the progression of joint AIM and procurement activities and reviewed the general status of the projects contained in the current UK-Ireland FAB Plan 2011-14. For the benefit of the invited guests, the Board took the opportunity to highlight some key areas, including activities in relation to SESAR, customer engagement, regulatory coordination, SMS harmonisation, and the enhancement of the benefits assessment process.

Mr. Sprenger provided a detailed overview of the programme of work contained in the Danish-Swedish FAB, including the three pillars of NUAC, Entry Point North, and COOPANS, leaving the UK-Ireland representatives with some clear ideas on future possibilities for further flight efficiency and cost savings.

Ian Hall, NATS Director International Operations and FMB co-chairman, *"This is a pivotal time as all stakeholders need to respond to the SES requirements including the new Network Management arrangements. It's a sign of our leadership that the UK-Ireland FMB can host such a transparent meeting and secure feedback from the European regulator and our neighbouring FABs on these critical issues."*

The FMB meets again in December.

Left to right: Niclas Gustavsson, LFV; Marinus de Jong, EC; Ian Hall, FMB co-chair, NATS; Donie Mooney, FMB co-chair, IAA; Nils Sprenger, Naviair.

View of the Prestwick Centre operations room

Improving safety through a common safety scheme

Within the FAB the IAA and NATS use the Safety Significant Event (SSE) scheme, developed by NATS, as a tool to assess incident severity. The scope of the SSE scheme extends only to en route traffic. The use of a common scheme for en route events by both ANSPs ensures that operational safety performance and targets in FAB airspace are assessed using the same methodology.

The scheme is based on the number of barriers available to prevent an incident becoming an accident after a loss of separation has occurred. It assumes that the barriers work in a particular order - ATC (timely and effective), then ATC (belated or with help of safety nets), then pilot, then Providence. These are categorised as SSE4, SSE3, SSE2 and SSE1 events respectively. An additional letter is annotated based on proximity, where;

- 'a' is less than a third of the required separation,
- 'b' is between one third and a half,
- 'c' is between a half and 100% of separation, and
- 'd' is more than 100% separation (where, due to its nature, the event is investigated as if it were a loss of separation).

In line with common European requirements the SSE scheme will eventually be replaced by the RAT (Risk Assessment Tool) which is structured upon experience gained from a number of schemes including SSE and those of other European ANSPs.

Garrett MacNamara
Manager, Safety Standards & Procedures, IAA

Joint regulatory projects

A key component of the FAB is the cooperation that exists between the two National Supervisory Authorities, the UK CAA and the IAA's Safety Regulation Division. Here, Stephen Hand of the UK CAA gives an update on key regulatory projects currently underway.

Performance-based Navigation (PBN)

PBN offers the application of standardised navigation specifications defining the required navigation performance and functionality for each route segment and instrument flight procedure. The implementation of PBN as a design tool is principally a matter for the applicant sponsoring the airspace change. However, choice of an ICAO PBN specification and how it should be applied is critical to the ordered evolution of any airspace system and for that, regulatory policy and guidance is required to set the parameters around which PBN may be used.

For the UK / Ireland FAB, a working group co-chaired by the UK CAA and IAA has developed a policy for the application of PBN in United Kingdom and Irish airspace. The group brings together all interested parties – operators, ANSPs, military, airports, regulators and EUROCONTROL to progress implementation issues associated with PBN. The policy document is the first deliverable from the group and following completion of stakeholder consultation will be published at the end of July.

Transition Altitude Harmonisation

Harmonisation of Transition Altitude and associated procedures brings safety benefits through the simplification of airspace and procedures both within and beneath controlled airspace. The foundation of a harmonised Transition Altitude will also be an enabler for future changes such as improved Continuous Descent Arrival profiles and Continuous Climb Departures.

Work on harmonisation has previously been attempted across Europe without success but it is hoped that working as a FAB we will be able to make progress. The work also has the support of the European Commission, as simplification of airspace is an objective of the Single European Sky. It is though a significant undertaking and involves a considerable amount of work in changing procedures, charts, documentation and training of controllers. Subject to satisfactory aviation stakeholder consultation and all requisite safety assessments, the UK/Irish FAB have committed to change during winter 2013/14 allowing a two year lead time. A target implementation date will be identified soon.

Performance Scheme

Under SES II a Performance Scheme for Air Navigation Services (ANS) was introduced, covering four key performance areas (KPAs): safety; the environment; capacity (delay); and cost-efficiency. The European Commission have set EU-wide targets in each of the KPAs, and for Reference Period One (RP1 – 2012 to 2014) UK and Ireland have decided to adopt national plans, with individual local targets for capacity and cost-efficiency. The national plans were subject to various formal and informal consultation, including a joint CAA-IAA stakeholder consultation meeting held in April. In addition to the national plans, the Performance Advisory Group (PAG) of the FAB developed and submitted to the EC a UK-Ireland FAB Aggregated Plan.

Stephen Hand
Head of European ATM Policy Coordination, UK CAA

feedback ...

"Thomas Cook welcomes the ongoing operational work of the UK/IAA FAB and we see clear benefits in more direct cross border routings resulting in a reduction in fuel and CO2 emissions. Further initiatives including less RAD measures, more available direct routings and a more flexible use of CDRs should see more efficient routings. We hope to subsequently see a significant reduction in costs as a result."

Chris Woodland
Flight Dispatch Manager
Thomas Cook Airlines UK

Flow management position, Swanwick

Working group round-up

Meetings of the individual FAB working groups took place in early June. In attendance were members of the three working groups; Airspace Design, Service Provision and Safety as well as the UK Ministry of Defence and Irish/UK trade union representatives. These meetings were followed by a meeting of the co-chair coordination committee.

The purpose of these meetings is to review and manage the implementation of all projects contained in the FAB Plan 2011-14. They are crucial in terms of supporting the ANSP governing body, the FAB Management Board. Significant support was provided by the working groups in the run-up to the FMB meeting attended by our EC and Danish-Swedish FAB colleagues.

(left-right) Roger Dillon, NATS; Karen Bolton NATS; Nick Lowth, IAA; Bill Becton, IAA

The Service Provision Working Group (SPWG), co-chaired by airline representatives, Nick Rhodes and Cees de Rover, took the opportunity to examine the status of the SPWG work programme, including the implementation of network management, reduced separation on the North Atlantic and enhanced customer engagement plans. Of interest to our airline readers will be the intended date for our second joint CEO/customer forum, scheduled to take place in Dublin on the 7th December 2011. More details will issue later in the year.

The Safety Working Group (SWG) focused activities on their work programme, including Safety Management System harmonisation, SERA (Standardised European Rules of the Air) and the FAB Safety Case.

The Airspace Design Working Group (ADWG) caught up on all ongoing projects, including Dublin Point Merge, the TEN-T funded feasibility study for FAB high level sectors and the potential integration of AIM. Military progression of cross-FIR Flexible Use of Airspace (FUA) was also discussed.

The next round of formal meetings is scheduled to take place in October and, thanks to a kind offer from Nick Rhodes on behalf of Flybe, the meetings will take place in Exeter at Flybe HQ.

(left-right) Nick Rhodes, Flybe; Dave Carty, NATS; Ronan Farrell, IAA

FAB to FAB 4 to Borealis

Building on the good work already achieved within the UK/Ireland FAB, efforts are underway to see if further efficiencies can be achieved through cooperation with other FABs. Following the signing in March of a Memorandum of Cooperation with the Denmark /Sweden FAB, meetings are underway at ANSP level to drive progress towards greater flight efficiency, cost efficiency and operational consistency in line with Single European Sky (SES) performance goals.

Under the terms of the MoC, IAA, NATS, Naviair and LFV will investigate the benefits of a closer, more integrated working relationship. A feasibility study into further integration of the two FABs is currently underway and is due for completion in the Autumn. The four ANSPs involved will in the meantime continue to cooperate closely with their other Northern European ANSP partners, and will explore the implementation of a formal ANSP alliance (through the Borealis project) and the possible establishment of a combined FAB in due course.

Under the Borealis agreement, the NEAP members (the ANSPs of Denmark, Estonia, Finland, Iceland, Ireland, Latvia, Norway, Sweden and UK) agreed to set up a temporary organisation with the job of defining an alliance structure for the service providers. This temporary organisation, named Borealis, is tasked with creating the commercial and financial terms under which its members can improve performance across the airspace of all countries involved. The aim will be not only to improve flight efficiency and reduce environmental impact, but to reduce the cost of services and operational/technical infrastructure across the whole area. These arrangements may reach across the boundaries of FABs and States, but will only be binding between the ANSPs directly involved.

feedback ...

"bmi are active supporters of the UK/Irish FAB, and have welcomed the early successes in the programme. Moving forward we believe that the FAB can deliver further benefits particularly to short and medium haul operators through the removal of cross-FIR boundary restrictions, greater integration, introduction of high-level sectors, and improved delegation of airspace leading to real cost reductions and improved route efficiency"

Grant Worsley
ATS Manager, bmi

NATS ... Q&A

NATS is responsible for air traffic management of 2.2m square kilometres of airspace over the UK and eastern North Atlantic. The London and Scottish FIRs account for 11% of Europe's airspace and 25% of the traffic. Prestwick is Europe's newest ATC centre, opened in February 2010 by Princess Anne and bringing under one roof the Area Control functions for both Scottish and Manchester, as well as the Oceanic operation and Scottish Military ATC. Swanwick is Europe's biggest centre housing London Area Control, the busy and complex London Terminal operation and London Military ATC. Between them they handle some 2.2 million flights per year.

Simon Hocquard and Pauline Lamb are NATS' Operations Directors for Swanwick and Prestwick respectively.

How does your role fit into the FAB structure?

Simon: *Swanwick is the biggest operations centre in Europe, and our airspace is the most complex and important in terms of European interface – including our Irish partners. My role is really important in providing the link between central Europe, the FAB and our customers - whatever improvements we can make to those interfaces should always be with our customers in mind to make their operations as efficient as possible. The role embraces both the tactical and the strategic – making sure that we are as efficient as possible today, while also helping drive the future shape of our operation which is what the FAB is all about.*

Pauline: *Prestwick's blend of Oceanic, Enroute and Terminal operations all interface with, and affect the day to day operation of our Irish partners which means that close collaboration, both at a tactical and strategic level, is vital for our customers to receive an effective service. I see my role as ensuring that we maximise the efficiency of our current infrastructure and work towards a seamless operation which provides flight plannable efficient flight profiles from the mid Atlantic to all the major European destinations.*

What does a typical day look like?

Simon: *Too many meetings, unfortunately! The most enjoyable part is talking to people – finding the time is always a challenge but it really is key to understanding the push and pull of the operation and identifying priorities – and ideas for future-proofing - which I can then feed into the FAB.*

Pauline: *I don't think there is such a thing as a typical day and often what is planned has to change. The best days start with a jog, which allows for strategic thinking time and usually results in action lists! The variety of subjects covered in one day can be enormous, today - approving safety documentation, challenging project criteria, health and safety review, some coaching, liaising with customers, and exploring strategic direction. When I am at Prestwick a walk round the ops room is an essential part of the day – they are a great team and keep me well informed of "how it really is".*

What has the FAB achieved that wouldn't have happened anyway?

Simon: *I think the best example is our alignment during the volcanic eruptions. We earned the respect of the rest of Europe for how we managed our airspace and the FAB structure, with our regulators very much involved in our customer teleconferences.*

Pauline: *Common methods of managing safety culture improvement and common SSE schemes. And we achieved great cooperation between Ireland and the UK over Dublin/Antrim airspace changes which resulted in improved airspace design and enabling improved operations at Dublin.*

What has been the biggest advantage of operating as a FAB?

Simon: *Establishing a close working relationship with the Irish, and having the military and the regulators locked in to the structure, has made a big difference in how we communicate and approach issues from a joint perspective. The NTFSRs are just one example of where we've already saved our customers many millions of euros.*

Pauline: *The close working relationship at every level. From the CEO to the ATCOs on the ops room floor, there are relationships which are built around common goals. When something needs doing there is a free exchange of thought and information which removes any potential barriers and gets the job done effectively. Both sessions of volcanic ash have resulted in very close collaboration. Strategic representation as a FAB at North Atlantic forums ensures our views are aligned and often results in outcomes that are good for both of us.*

What is the breakthrough you'd like to see the FAB achieve for your operation?

Simon: *I think the work that is currently going on to establish a common FAB transition altitude will be a major breakthrough and I'm very excited about the opportunities it presents for us to introduce continuous climb, higher holding and continuous descent from higher levels. If we are going to reduce the amount of holding, working with our neighbours will be absolutely essential to stream traffic from further out, particularly from the busy London TMA.*

Pauline: *A long term view of our "concept of operations" outlining what 4D trajectory operations will look like. From this, a progressive plan to redesign the Northern Control Area (Manchester TMA) and Dublin interfaces maximising new methodologies. I would like to see the FAB work collaboratively at ensuring requirements for our future systems are aligned on this future concept, and include the effective management and integration of traffic to and from the mid Atlantic.*

If you have any comments on this publication or story ideas for future editions please contact either:

Mark McLaren, NATS, Joint FAB Secretariat:
mark.mclaren@nats.co.uk or
+44 (0)1489616262

Donal Handley, IAA, Joint FAB Secretariat:
donal.handley@iaa.ie or
+353 (1)6031527