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BLUE MED and the European Network Manager

The relationship EUROCONTROL/BLUE MED goes back a number of years, primarily as a support to the technical and operational groups which addressed feasibility. This support has continued in the following phases of the project and will undoubtedly increase further as BLUE MED moves into its implementation planning phase and the BLUE MED Functional Airspace Block becomes an ATM reality.



*Joe Sultana, COO
Directorate Network
Management -
EUROCONTROL*

However, in line with the major transformations in the institutional framework of European Air Traffic Management, brought about by the Single European Sky regulations, this relationship is changing. Two new structures, Functional Airspace Blocks (FABs) and the Network Manager, are two important drivers of this change. The SES performance framework will apply to both these structures and will strongly influence the relationship.

The designation of EUROCONTROL as the Network Manager (NM) allows the Agency to work for the establishment of BLUE MED from a well-defined role laid down in the EU Single European Sky Network Management Function regulation. This role gives the NM responsibilities at network level which are distinct and different from but complementary to the role of FABs at regional level and to the responsibilities of ANSPs at national level.

The NM main objective is to support the delivery of ATM at local and regional level within a framework of the best possible network operation. A performing network relies on performing FABs and in particular the ability of a FAB to optimise ATM performance i.e. capacity, flight efficiency, delay reduction at the required level of safety. A FAB which exploits all its capacity potential by considering its airspace as one block of airspace without boundaries, which can design its sectors to safety and expeditiously manage its traffic, which can use a single ATM concept throughout the whole of its area of responsibility, which has the same or totally interoperable ATS systems with fully shared data is a FAB which contributes its full share to the network performance.

The Directorate Network Management of EUROCONTROL wants to see this happen and will continue to support BLUE MED to achieve this. Therefore we look forward to seeing the free route airspace concept deployed across all the BLUE MED airspace, even if initially during the less busy periods. We are eager to be involved in the establishment of a BLUE MED ATFCM function which looks for BLUE MED solutions to overcome capacity shortfalls within BLUE MED before requesting ATFCM measures to be applied at network level. We will support BLUE MED in the establishment of a safety management system throughout the FAB. We will facilitate the synchronised implementation of new ops concepts with network operations and systems.

In addition to this supporting role, the NM has the obligation to ensure that network performance targets are being met, a consistent European route network is regularly enhanced and operations are seamless. It will be a big help to the NM if the number of pieces of the European ATM reduces from the 50+ ANSPs today to about 10 FABs in the coming years.

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The European performance targets will be challenging to achieve within a period of returning traffic growth. While in theory nobody disputes the need for a performing network which delivers the best possible service to aircraft operators operating within the European network, the whole performance target mechanism, with network targets broken down to local regional level introduces an inherent danger to the operational partnership needed between the network manager and the FAB. Hopefully ANSPs/FABs will not fall into the trap of focusing on targets at national or FAB level to the detriment of the network.

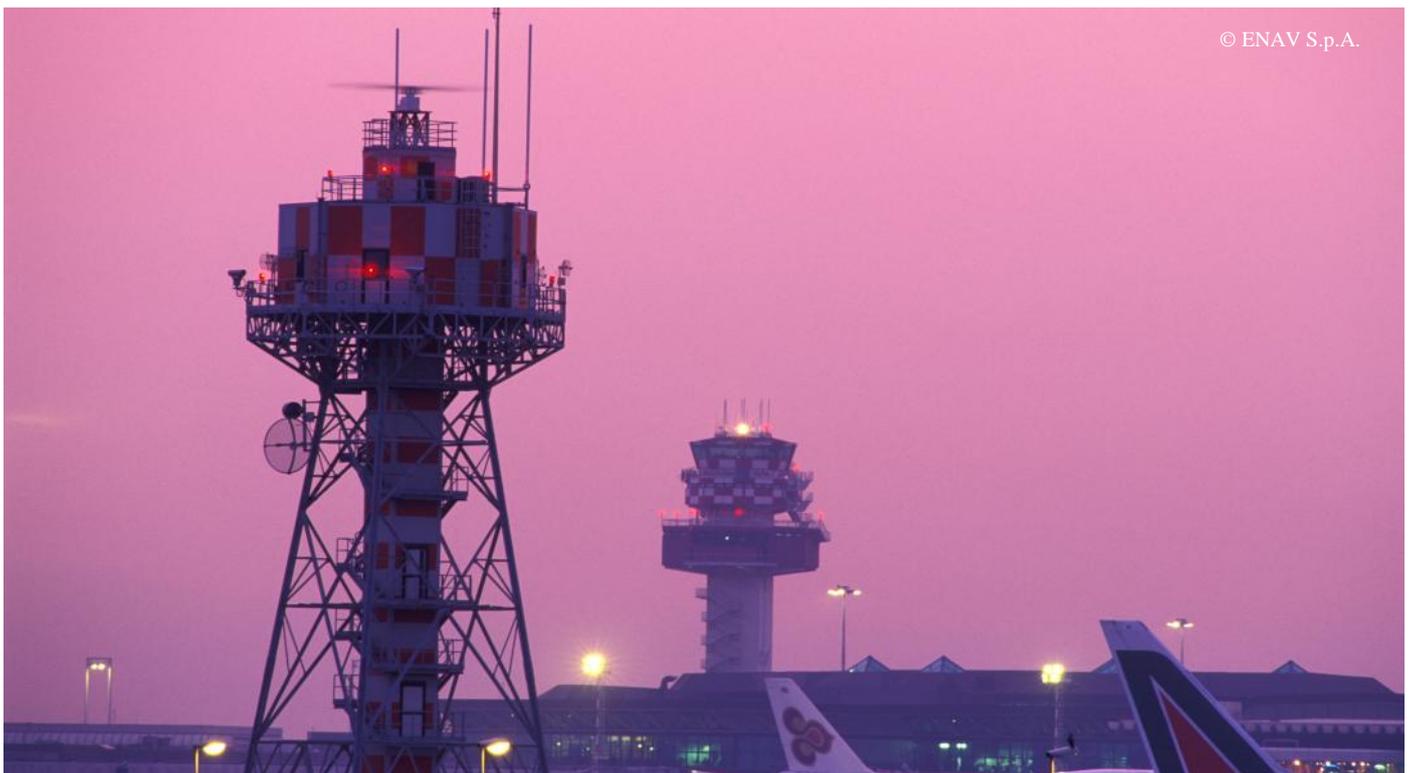
The Network Manager will have a strong operational relationship with FABs based on a collaborative decision making mechanism to be established within the next few months. A representative of the ANSPs participating within each FAB initiative will be a member of the Network Management Board. In this way, while the NM will have the right to take initiatives in support of improved equitable network performance, ANSPs through their FAB, will ensure that the NM is fulfilling its tasks and obligations in an effective and proper manner.

The support the BLUE MED ANSPs have given to the concept of Network Management and to EUROCONTROL's nomination to the role of Network Manager should reduce the risk of any weakening of the NM / BLUE MED operational partnership. This partnership, built on respect for the respective roles, is being cemented daily by the ongoing collaborative work.

It gave the opportunity to once again be involved and working with longstanding colleagues to make BLUE MED the cornerstone of ATM in Central/East Mediterranean and a close ATM partner to our North African neighbours. It is a goal worth striving for that gives great personal satisfaction.

*Joe Sultana, Chief Operating Officer,
Directorate Network Management - EUROCONTROL*

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BLUE MED Malta Free Route RTS

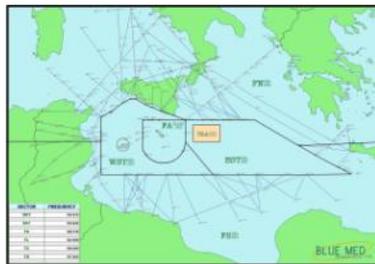


*Robert Sant, COO MATS -
Malta Air Traffic Services*

The extensively dimensioned LMMM airspace is centrally positioned over the high seas of the Mediterranean. The fact that there is only one international airport LMML and only one regional airport LICD situated within this airspace, results in a situation of predominant use of this airspace by overflying traffic. Situated in the cross roads between Europe, the north western African countries and the Middle East, the Maltese traffic flows are mostly on the north/south and west/east routes.

Malta ACC is composed of two large en-route sectors and a terminal sector. It has been noted that ATCOs have been managing traffic by clearing aircraft from entry to exit point ever since radar coverage on the east sector was established. It has been observed that aircraft operators appreciate this working method which is both time and fuel efficient, and have the tendency to expect the approval of a direct route to the exit point on checking in on the entry point of the LMMM UIR.

The Free Route RTS held at the ENAV experimental centre in November 2010 proved that this working method is safe even at elevated traffic levels close to sector capacity. It was noticed that the simulations did not have a negative effect on the ATCO working methods nor on the approach to managing traffic. To the contrary a flight planned free route resulted to have a positive effect on the Planning ATCO workload as the intervention to update the trajectory for each flight was reduced significantly. The planning controller ended up with more time in hand to perform the actual planning and in conflict detection to the executive controller. It is evident that this is a much more efficient method than the present operation where flight plan trajectories have to be updated by the planning controller to reflect the direct route execution.



Free Route RTS

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One has to mention that the free route RTS exercises were well planned and very realistic. Although the traffic during the simulations was increased by 10% of the actual sector capacity, controllers did not notice an unacceptable increase in workload. Thus the controllers do not need to change their mental attitude and approach to accommodate for any foreseen free route activities. One can say that it is clearly evident that the Free Route RTS was significant to indicate that the current methodology used by Malta ACC is on the right track to accept the introduction of the Free Route concept in the LMMM UIR.

Current plans to take a Go No-Go decision by Spring 2011 on the implementation of Free Route airspace in the Malta RTS "Go/No-Go" by end 2012 has been postponed due to the Libyan War.

FOCUS ON

BLUE MED IMPLEMENTATION PLAN



*Petros Stratis, BLUE MED WP8
Leader*

After two busy years of laborious and cooperative work, the various project teams and taskforces involved in the BLUE MED Definition Phase have identified a large number of improvements and harmonisation actions to be developed for the FAB.

Now the time has come to progress with the preparation of a most important delivery that will support the FAB achievement: the FAB Implementation Plan!

With the direction of the Governing Body, the WP8 participants have initiated in cooperation with the WP Leaders the process of definition and delivery of a roadmap for the FAB implementation and the subsequent evolutions in accordance with a short (2012) medium (2015) and, to the largest extent possible and in compliance with the SESAR deployment schedule, longer term (2015+) scenarios.

The produced Implementation plan will represent a best guess of how the FAB will work and when, intended to steer and enable the early FAB implementation phase (2012), while providing an initial plan for further FAB evolutions (2015-2020).



Albania and the BLUE MED FAB implementation

SESAR-BLUE MED - Interview with Patrick Ky



Patrick Ky, *SESAR JU Executive Director*

Could you describe briefly the status of the SJU activities?

The SESAR JU and its members are working hard to make progress towards our ambitious targets for 2020 of enabling a threefold increase in capacity, improving safety by a factor of ten, reducing by 10% the environmental impact per flight, and cutting ATM costs by 50%. In recent months, the focus has been on completing the programme ramp up, and as a result the majority of SESAR's 304 projects in the 16 different work packages are now in execution.

Many project started their technical activities in the course of 2010, and the SESAR JU received the first project deliverables in September 2010. More deliverables are expected throughout 2011, following the publication of the first SESAR Release. This first Release is the outcome of a thorough status review of all the SESAR projects to see where early results can be achieved to quicker serve the aviation world. Projects which are included in the 2011 Release will be verified and validated in an operational environment, allowing for a decision on industrialisation and subsequent deployment. The validation exercises will cover the areas of efficient and green terminal airspace operations, the initial 4D trajectory, end-to-end traffic synchronisation, as well as integrated and collaborative network management. We are therefore on course for SESAR to deliver concrete benefits in the course of 2011 for airlines, pilots, airports, air traffic controllers, passengers and the environment.

How do you see the interactions between SESAR Programme and the FABs?

SESAR and the FABs are both firmly established at the heart of the Single European Sky (SES) initiative, and are therefore both crucial to achieving the SES objectives. SESAR will develop the new generation of European ATM systems, through developing and validating common practises, operational concepts, architecture and roadmaps. The FABs will help to optimise the provision of air navigation services, stimulate cooperation between the different ANSPs, and will implement the new concepts and systems developed by SESAR. Many major ANSPs are involved in SESAR, and we're now beginning to see how the work being carried out in partnerships under the SESAR programme is creating a natural momentum for the formation of FABs. Their formation is not being driven by a regulatory agenda, but shows ANSP's own desires to increase their operational efficiency and lower costs across their common airspace. For SESAR, the FABs can play a key role in ensuring the seamless and continuous deployment of our results, and in delivering the expected improvement in ATM performance that SESAR will bring.

BLUE MED FAB as you know is an important interface with North Africa and Middle East. Do you consider this as an opportunity also for SESAR? How could a possible common strategy be developed?

It is essential that a programme like SESAR goes beyond the strict EU borders. It is worth mentioning that last year, the Moroccan ANSP (ONDA) became an associate partner to SESAR. We therefore welcome the possibility to discuss the implementation of SESAR technology in the context of BLUE MED. We also think that it would be interesting to have trials, exercises and activities performed in SESAR under a "BLUE MED" hat. This will help create the synergies that are required to make the Single Sky become a reality.

As everybody may be aware Albania is a non-EU Member State, but being part of ECAA Albania in accordance with the Article 9a of Regulation 550/2004 has the obligation to participate in a FAB initiative. Based on these provisions Albania has been involved for more than three years within the BLUE MED initiative. The initial involvements of Albania in the BLUE MED FAB was in April 2008, when it was accepted as part of the initiative with observer status. During 2009 the status of participation in the initiative was upgraded to "associated partner" and there-



Fisnik Tabaku, *BLUE MED Representative for Albania*

fore the involvement of the appropriate Albanian aviation institutions was progressively incremented.

These three years of participation and collaboration within BLUE MED have been accompanied with remarkable achievements in the field of ATM in Albania of whom BLUE MED can be considered as an enabler. One very crucial aspect of the achievements made is the establishment of the legal basis for the implementation of FAB, which is the SES I package. This legal basis is introduced in the national legal framework and has made possible the achievement of the phase I&II of ECAA, confirmed by the last ECAA assessment visit in October 2010. The other aspect of the achievements made in the field of ATM is the renovation of ANSP infrastructure. This aspect will make possible the accommodation of all the possible adjustments that will derive from the BLUE MED identified operational improvements as well as from the need for the implementation of FAB relevant SES I&II provisions.

All the above achievements have been made taking into consideration the final milestone, which is the BLUE MED FAB implementation. In this regard the participation of Albania in all the panels and working packages of BLUE MED FAB has played a key role, where the experience gained is the most valuable benefit, together with the good climate of trust created within the partnership. Albania is looking forward to dealing with the new challenges that may come up until the full implementation of the BLUE MED FAB. The major achievement is indivisibly connected with the experience that Albania will gain from this initiative.

BLUE MED – EUROCONTROL Cooperation Agreement



Dimitris Apsouris, EUROCONTROL

Cooperation between BLUE MED and the EUROCONTROL Agency goes way back. In 2006, the BLUE MED FAB project requested EUROCONTROL's assistance for the first time in the context of the BLUE MED Feasibility Study, with the intention amongst others, of using EUROCONTROL expertise and exploiting the "privileged" role of the Agency in ensuring the pan-European consistency of the Mediterranean FAB plans.

At the time, the very essence of the "FAB concept" as introduced in the context of the Single European Sky initiative of the European Commission was unclear. The BLUE MED partners, like other FAB initiatives defining feasible FAB models, identified several aspects (such as route network development, safety, interoperability, environmental and financial considerations) that could benefit from a shared European approach.

EUROCONTROL realized the unique harmonization opportunities offered by the creation of FABs. During its recent re-organisation, EUROCONTROL made sure the new structure would be able to effectively support FAB initiatives and simultaneously focus on inter-FAB requirements.

Within the new EUROCONTROL organization, the Single Sky Directorate and the Network Management Directorate have established specific structures to facilitate FAB developments in regulatory and service provision areas. The Agency's ongoing support to the BLUE MED FAB Definition phase encompasses several activities which include the design and validation of an optimized route network integrated in the European framework of the Advanced Airspace Scheme, the definition of the Safety Maturity Analysis and the Safety Case, the definition of an Environmental Validation Methodology specific for the FAB, and the conduct of an Environmental Assessment.

Most of these cooperation activities are through a specific Agreement, which constitutes the necessary framework for the parties to have a formal common understanding about the scope of the works and defines the financial arrangements for the conduct of the activities. The agreed EUROCONTROL policy requires that whenever a task is considered "of strategic importance" — producing results with a pan-European perspective that could be re-used to support other FABs — it shall be conducted at the expense of the Agency common resources. On the other hand, activities specific for a single FAB shall be executed against reimbursement of full costs.

I would like to conclude by saying that EUROCONTROL management and all involved teams share the view that supporting the establishment of FABs, in particular the complex and geographically-articulated BLUE MED FAB, is an important task and a very valuable opportunity to learn how to progress together in the building of the Single European Sky and extending it beyond European borders. The BLUE MED partners will benefit from harmonised concepts, methodologies, procedures, and toolboxes to address FAB requirements paying due attention to the inter-FAB needs. At the same time, EUROCONTROL could benefit from innovative ideas developed in the context of BLUE MED and undertake, if and as agreed, operational trials to validate new concepts for the provision of functions such as ATCFM/ASM FAB-wide.

We are looking forward to enhanced cooperation with the future FAB developments in line with the role of the Agency as the Network Manager.



Laying out the road to the BLUE MED MET harmonised service provision



Marco Tadini, ENAV, MET TF Leader

As part of BLUE MED WP1, the BLUE MED Operational package, a MET Task Force was established, with the aim of reviewing how MET services in support to air navigation are currently provided within BLUE MED countries and then to define a long-term roadmap for their harmonization.

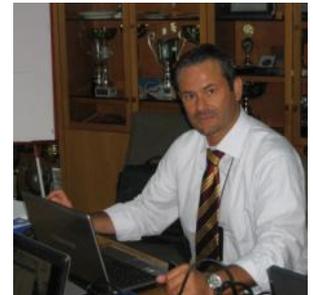
The current status and development of MET provision inside the BLUE MED area was analyzed and a set of shared harmonization targets were deployed, in order to identify a common MET service provision status, reachable by all BLUE MED Partners in the short-term (2010), by using Quick Win targets, related to deeper data sharing and operational communications between MET Offices, medium-term (2015) and long-term (2015+).

Apart from this institutional approach, I'm pleased to underline, as leader of this MET Task Force, the excellent contribution given by each Partner during our meetings, allowing us to go beyond our differences, our different organizational structures (e.g. public or private companies, MET service provision from inside or outside the ANSP), focussing instead on a future of widespread interest, where each MET Service, while maintaining its own national identity and functions, will operate following common procedures and compliant technologies.

When the MET Task Force was established, a questionnaire was distributed to obtain a complete and up to date picture of the partners' MET Services, identifying the different ways in which each MET provider is organised and the resources and specificities of that service provision. The positive approach, given by all Task Force Members, made possible to move from this present "puzzling" scenario to a new FAB status, where standardising both MET systems and procedures will result the leading strategy for ensuring an advanced support to ATM decision making processes in a CDM framework.

I'm personally sure that this "we will win" attitude will set the basis not only for this next harmonisation, but also for a next goal of further integration, when a "federative" service or even (why not?) a "real" BLUE MED MET Service, will serve aviation under a single BLUE MED sky.

The BLUE MED OLDI Real Time Simulation



Massimo Reale, WP2 Leader

The implementation of the Virtual Centre of the BLUE MED FAB at 2012 will start from an enhanced cooperation among the legacy ATM Systems composing the FAB. Such enhanced cooperation will be based on the regional exchange of a selection of additional OLDI messages to enhance inter-centre coordination and handover capabilities

and to guarantee the consistency of relevant information to all traffic operating throughout the FAB. Afterwards, BLUE MED will be looking at SESAR activities which aim at the validation of mature concepts for interoperability: whose requirements will be taken into consideration for the evolution of the IOP platform for the Virtual Centre, and ATM Systems composing the FAB shall start a migration towards the SESAR IOP requirements.

With this perspective, during the week 23-27 May 2011, a Real Time Simulation, based on the implementation of some additional OLDI messages, has been executed over the ESCAPE platform located at the ENAV premises of Via Agri in Roma, ATM System Simulation Platform department.

The objective of the Real-Time Simulation was to investigate, with the direct involvement of ATCOs, the possible effects of introducing the selected OLDI messages in their working environment. It aimed to highlight the benefits associated to the introduction of such technical (or software) enablers, as well as possible critical aspects and possible improvements that may come out during the study implementation. The Real-Time Simulation was also intended to provide the BLUE MED FAB Project Definition Phase with hints in order to support the definition of a possible way forward to the implementation of an enhanced set of OLDI messages.

The Legacy FDP Systems composing the BLUE MED FAB have been simulated together with their related HMIs which reproduced the real operational behaviour and with the attendance of ATCOs made available from each partner. Each "Simulated Legacy System" has been equipped with the set of the additional OLDI message and with the link of those to the actions performed by the ATCOs on their HMIs.

Some very good indications have been gained through the final brain storming were the involved ATCOs were free to report their feeling about usefulness and appropriateness of the proposed graphical solutions. The final picture will be available in the next couple of months when both quantitative and qualitative analysis will be concluded. At that time, important indications for the early implementation of this set of OLDI messages are expected.

BLUE MED FAB PROJECT: 5th Governing Body Meeting



Group photo of the participants in the 5th Governing Body Meeting

ENAV S.p.A. hosted the 5th BLUE MED Governing Body Meeting, which took place in Rome on May 24 - 25, 2011. Representatives from all of the project's partner Countries (Cyprus, Greece, Italy, Malta, Albania, Tunisia, Egypt, the Hashemite Kingdom of Jordan and Lebanon) were invited to take part in the meeting.

The first day's proceedings saw the participation of Dr. Georg Jarzembowski, the European Commission's Coordinator for the FAB initiatives of the Single European Sky, who explained his role to the representatives of Countries participating in the BLUE MED FAB Project, emphasizing the fact that the implementation of Functional Airspace Blocks (FABs) is a key element of the Single European Sky legislation and of the European Union's transportation policy.

The main objective of the meeting was the BLUE MED FAB "State Level Agreement", i.e. the treaty between Member States that is a key element for establishing a Functional Airspace Block.



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