FABEC 4th Expert Workshop Report

12 February 2020

Paris IBIS Airport CDG

DOCUMENT SUMMARY

Objective:	A meeting of FABEC ANSPs with industry stakeholders to discuss issues faced by the ANSPs and other affected stakeholders in the FRA implementation.		
Origin:	FABEC FRA Group	**Audience**:	Members of the FABEC ANSP FRA implementation teams along with representatives from NM, the airlines, CFSPs, States and military representatives.

Title :	FABEC 4th Expert Workshop
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DOCUMENT CHANGE RECORD

Version	Date	Changes	Author
0.1	27/02/2020	draft	Jean-Michel Edard & Doug Meyerhoff
0.2	27/03/2020	Updates, addition of Action list	FX Prach, Nadine Meesen, Geoffroy Ville, Eric Swiryda
1.0	07/04/2020	Final formatting	FX Prach

APPROVALS

Approved version	Approved by	Approval date and reference	Approval outcome
	Geoffroy Ville		
	Peggy Devestel		

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1 INTRODUCTION

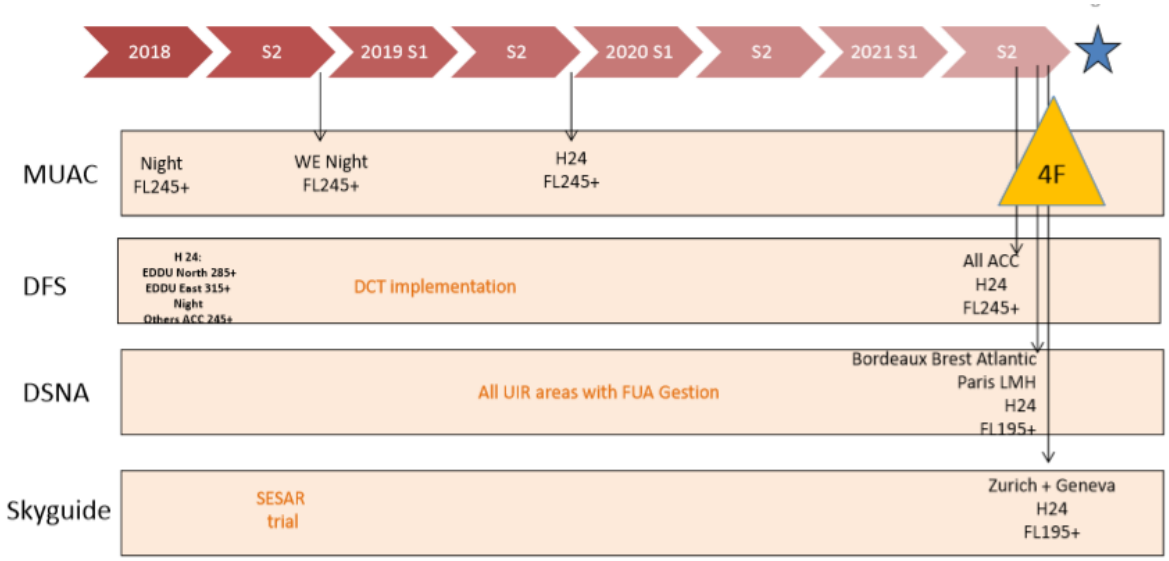
The meeting was opened at 10:00 am. All participants were welcomed by Mr. Geoffroy Ville, former chairman of the FABEC Standing Committee Operations (SC OPS). Apologies were received from Ms. Peggy Devestel, CW SC OPS.

By way of an introduction to the subject M. Ville highlighted some facts concerning the FRA concept within the FABEC region.

- FRA will be implemented ACC per ACC in a stepwise approach rather than by national boundary.
- With the FRA implementation date tied to the AIRAC publication in Dec 2021, an estimated 55% of all flights within Europe will be affected by the change on that day.
- Issues to be resolved in order to mitigate the risks involve timely publication of documents associated with the change, as well as training required not only for ATCOs but also CFSP staff and pilots.
- One of the goals of the workshop and of the FRA project group is to look for common methodology relating to implementation within FABEC.

Find here below a summary of the FRA deployment at the end of 2021:

- Maastrict Upper Air Control (MUAC) is already full FRA above FL245 H24.
- DFS will be full FRA above FL245 H24
- DSNA/ Brest (Atlantic Sector), Bordeaux, Paris will be full FRA above FL195 H24. This deployment reflects the first of 3 waves of activation. The second wave is due by the end of 2022 and includes a FRA cell just west of Paris. Wave 3 includes the remaining part of the country and is expected to be introduced in Dec 2023.
- Skyguide (Swiss Control) will be full FRA above FL195 H24.



It was noted that ENAIRE (Spain) and ENAV (Italy) are on different deployment timetables and that their base of FRA will be at odds with surrounding FRA areas.

The issue of the Flight Level Orientation Scheme (FLOS) was touched upon and there will be work to harmonize this within FABEC.

Representatives of Marseilles ACC requested that, although they are in the last wave of DSNA implementation they need to be kept informed of progress in the implementation, as they share common boundaries with a large number of ACCs implementing FRA before them.

Representatives of Eurocontrol Network Manager reminded that they have to be the collectors and disseminators of all information relating to the FRA implementations.

2 AGENDA

The following agenda was sent prior to the workshop and agreed by the participants

Time	#	*Item*	*Owner*		*Timing*
0930		Welcome Coffee			30
1000	1	Introduction FRA implementation calendar in FABEC area	Peggy Devestel FABEC CW SC OPS Geoffroy Ville Deputy COO DSNA	Welcome Presentation Discussion	10 20 10
1040	2	DSNA FRA Implementation and CONOPS	Marie-Christine Ouillade DSNA	Presentation Discussion	10 10
1100	3	skyguide FRA Implementation and CONOPS	Max Canham Skyguide	Presentation Discussion	10 10
1120	4	DFS FRA Implementation and CONOPS	Timo Kölker, Robert Winker DFS	Presentation Discussion	10 10
1140	5	Waypoints not on FRA boundaries	Max Canham skyguide	Presentation Discussion	15 15
1210	6	Managing Flight Plan Level changes	Max Canham skyguide	Presentation Discussion	25 25
1300		Lunch			60
1400	7	FUA Efficiency RAD Way of Writing	Marie-Christine Ouillade, Ludovic Isnard DSNA	Presentation Discussion	10 10
1420	8	NM Support in FRA implementation and validation	Tihomir Todorov, Denis Odic NM	Presentation Discussion	20 20
1500	9	CFSP/AO issue regarding major change in flight planning .	Keld Larsen CM CFSPG	Presentation Discussion	20 20
1540	10	Wrap up / Follow up actions	Geoffroy Ville, Deputy COO DSNA	Presentation	20
1600		End			

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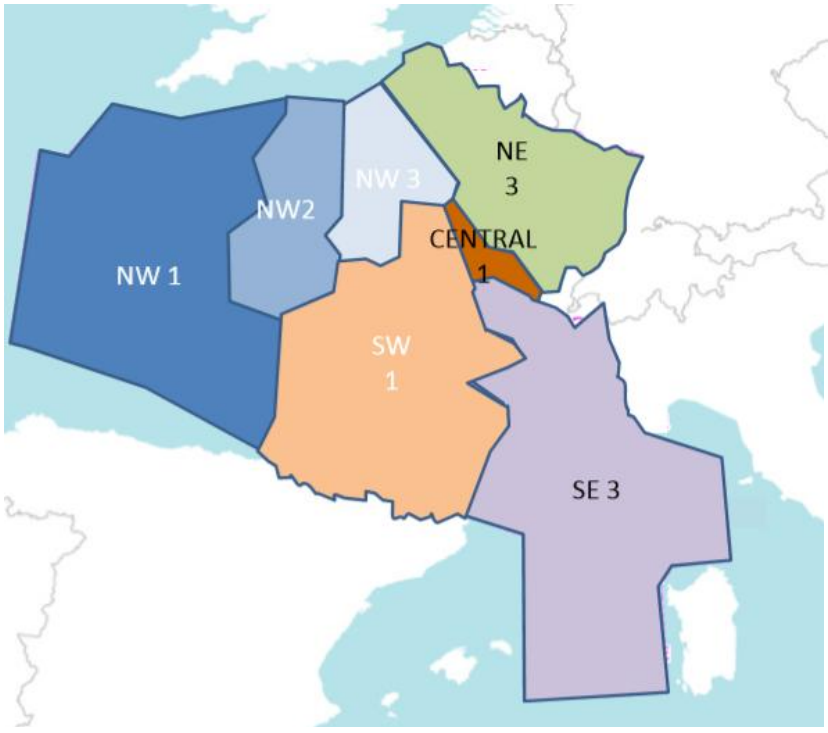
4 PRESENTATIONS

4.1 DSNA FRA IMPLEMENTATION and CONOPS:

Marie-Christine Ouillade presented the FRA implementation report for DSNA.
The implementation of FRA within DSNA's area of responsibility will be structured. These restrictions are resulting from the legacy FDPS system constraints.

- DSNA intends to keep all existing Coordination Points (COP) with adjacent FIRs and ACCs.
- The structured aspect of the FRA will be regulated and promulgated through the Route Accessibility Document (RAD).
- The existing ATS route network will be deleted upon implementation of FRA. There will be no transition period or fallback network capability.
- All Military airspace reservations within FRA will be subject to the Advanced Flexible Use of Airspace (A-FUA) provisions.
- The implementation will be done in 3 distinct waves, as shown in figure below.
    1. Wave one includes areas NW1, SW1 and Central 1 by Dec 2021. *See figure for description.
    2. Wave 2 includes NW2 by Dec 2022.
    3. Wave 3 includes NW3, NE3 and SE3, due in Dec 2023.



- Airspace design, There will be no change in the entry and exit COPs. All routes above FL195 within FRA will be deleted.
- Sectorisation and capacity, All existing geographical sector boundaries will be retained to reduce ATCO training and enhance system familiarity. RAD restrictions will allow to maintain traffic capacity.
- FRA cells are independent of ACC and sector boundaries.
- Airspace management changes will be adjusted and notified through the LARA system.
- Letters of Agreement (LoAs): as much as possible existing LoAs will be retained. If alterations are required, they will be renegotiated as and when required.
- FLOS will be harmonized in April 2020 between DSNA and Skyguide, aligning Swiss FLOS to the French one.
- All notifications of airspace changes will be published in the French AIP as prescribed in ERNIP part 1, Chapter 6, En-route Design Methodology, para. 6.5 Free Route Airspace Design.
- RAD wording was tested at the simulation centre in Brussels on the 11th of Feb.
- Due to the large number of smaller airports within France, connecting routes to access FRA will be published in the AIP appendix 5.
- The Brest Oceanic Transition Area (BOTA) will not be included within the BREST FRA.

QUESTIONS and ANSWERS

After the presentation, some questions were asked by the audience :

Q.: When will the details of the FRA implementations be available?
A.: Once the RAD has been rewritten in April 2021

Q.: When will daily Military activity be published?
A.: Via a website, the site will show airspace availability.

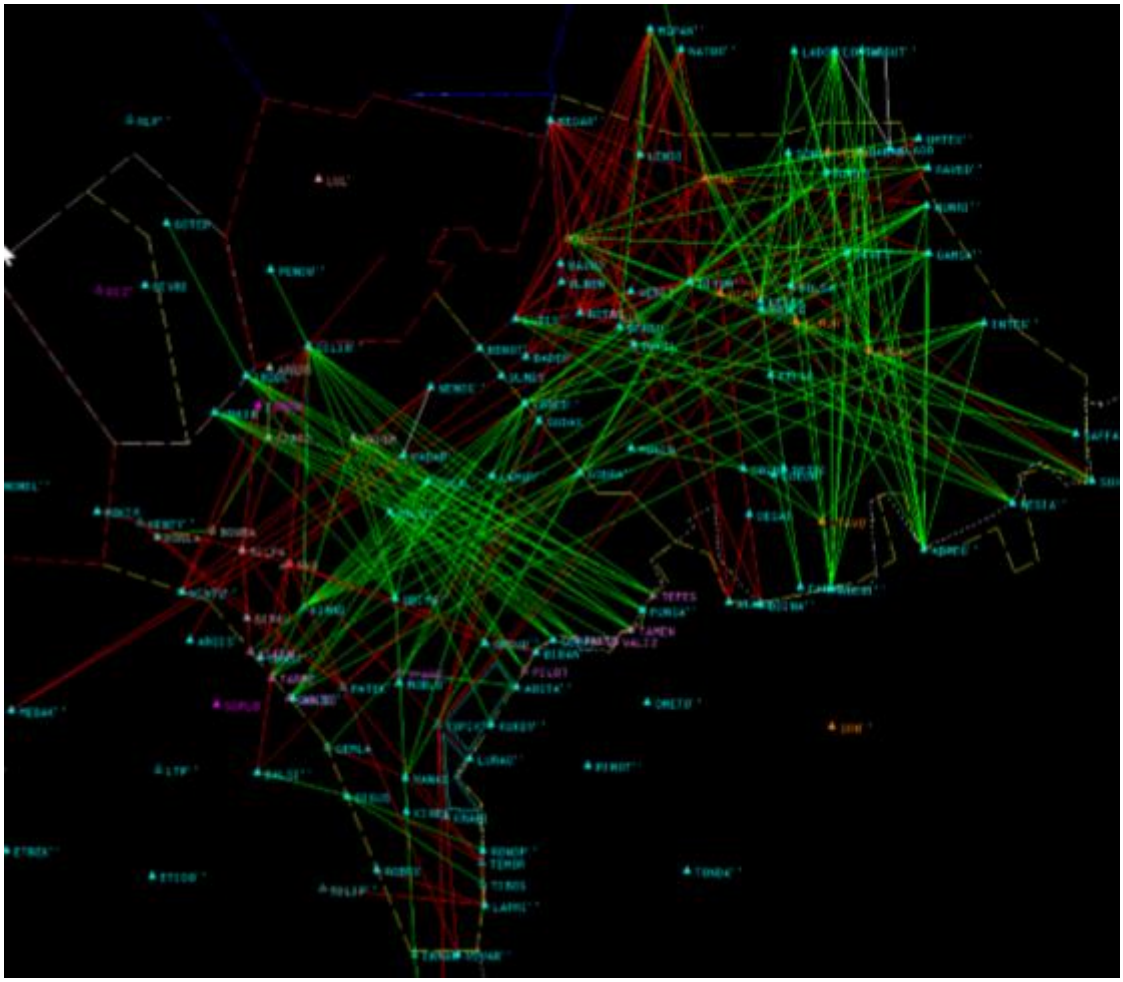
Q.: Will the proposed website show vertical airspace availability?
A.: The proposed website is being considered as an internal tool to help with ATCO training therefore it is not expected to be made available to the public.

Q.: Why have the FRA Entry and Exit points been defined as ‘Horizontal’?
A.: Due to the interface with Oceanic airspace. Perhaps the term ‘horizontal’ will be deleted.

Q.: Confirmation was requested regarding the FRA entry/exit points for regional airfields. Will these be identified as points and not via the remaining ATS route structure below FL195?
A.: All French Airfields identified in Appendix 5 will have FRA connectivity. OAT will be able to transition to GAT and vice versa at any point. DSNA are testing multiple connections between FRA and the underlying ATS structure

4.2 SKYGUIDE IMPLEMENTATION and CONOPS:

Max Canham presented the FRA implementation report for skyguide, introducing a lot of new connections as per the following figure.



Full FRA implementation is planned for Dec 2021 above FL195, encompassing the following elements/details:

- ATS route network will be withdrawn except for a few legacy routes retained to support some airfields.
- 50% of the Swiss FRA area of responsibility lies outside Switzerland.
- Due to technical limitations with the skyguide ATM system the FRA will be structurally limited. These limitations include new route handling and an exit conflict detection tool.
- Due to the nature and complexity of the airspace (aircraft being on frequency for an average of only 7 minutes), the full implementation of FRA would have a detrimental effect on capacity, therefore skyguide plans to use RAD restrictions to manage sector capacity.
- Neither safety nor capacity will be compromised through the use of a Structurally Limited Free Route Environment.
- Due to the time issues when dealing with adjacent ANSPs regarding airspace proposals, the time for changing plans is rapidly coming to an end.
- Switzerland will have the FRA base at FL195. This will cause connectivity issues with neighbouring countries, as Germany (DFS) will be FL245 and Italy (ENAV) will be FL305.
- Current DCTs utilized during the night will be retained.

- The FLOS will be re-aligned N/S to meet DSNA but will be at odds with DFS. This causes issues as currently 13 routes are notified in the AIP as non-standard.
- Switzerland publishes Flight Buffer Zones (FBZ) around military airspace reservations. Often these FBZ extend across international boundaries.
- All entry, exit and intermediate points will be published within the Swiss AIP. The use of LAT/LONG waypoints will not be permitted. Vertical connectivity to the FRA will be published via SIDs and STARs only.

QUESTIONS AND ANSWERS

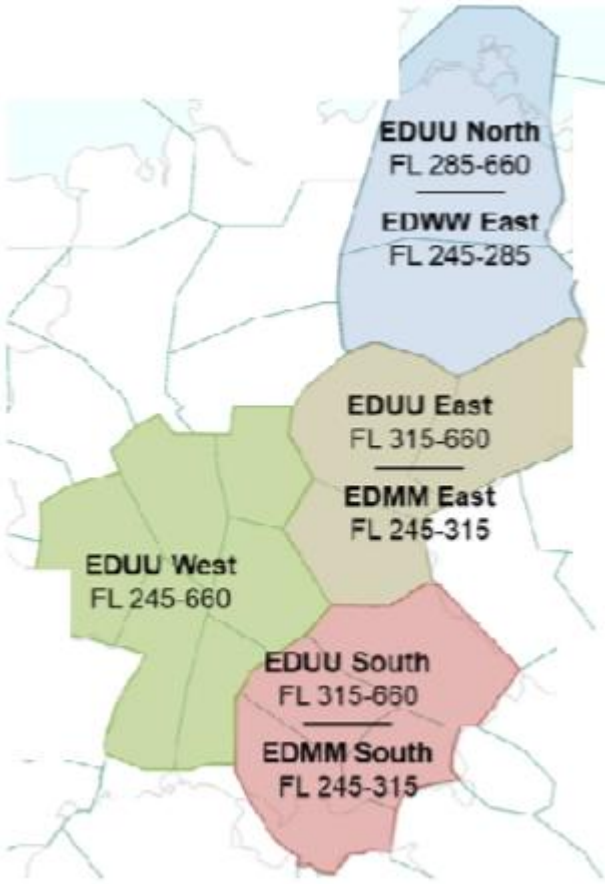
After the presentation, some questions were asked by the audience:

Q.: Will a set of points be retained to route around military airspace?
A.: Points will be retained but not all of them, there needs to be a balance between requirements and RAD complexity.

Q.: Why not utilize more CPDLC within Swiss airspace?
A.: That would work for traffic transiting at a single level, but with the sectors being layered with 2000' increments this would be totally unworkable for traffic climbing or descending within the AoR.

4.3 DFS FRA IMPLEMENTATION and CONOPS:

The DFS representative was unable to attend because his flight was cancelled, therefore the slides were presented by Geoffroy Ville.
Some sectors of DFS airspace have started FRA operations at intermediate levels and during certain hours of the day or weekend. As a reminder, German FRA has been built with the FRA cells concept, also called structurally limited FRA, as shown in the chart below.



For the next steps:

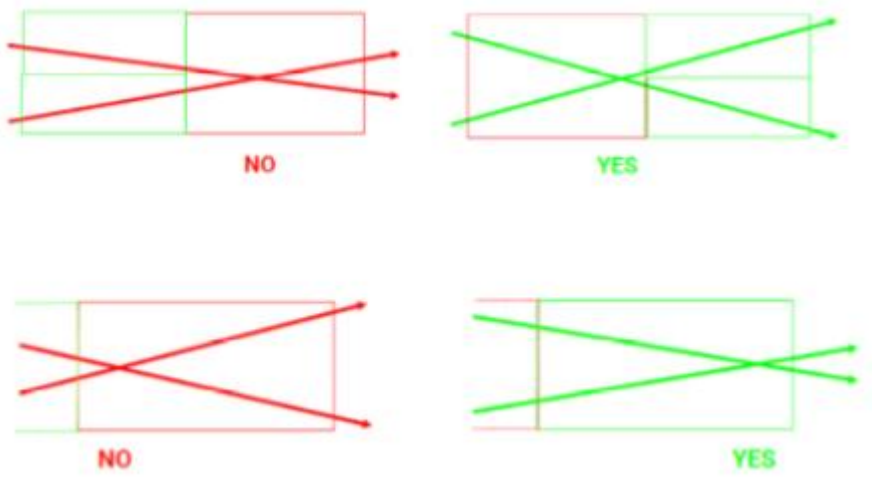
- All current ATS routes will be retained until FRA is available H24.
- There will be some structural limitations to the FRA implementation.
- Military reservations will remain unchanged.
- In an effort to minimize the training requirements and disruption to the operations, DFS will introduce the changes in small, gradual steps.
- Connecting routes based on the existing ATS network will be retained to provide connectivity between SIDs and STARs as well as the underlying network.

4.4 WAYPOINTS NOT ON FIR BOUNDARY:

Presentation was made by Max Canham, from skyguide

Historically waypoints were established at crossing or convergence points on the ATS network. As the sectorization within the ATS evolved, sector boundaries were developed to increase operational capacity as well as to reduce complexity and increase safety. As a result of this design policy many waypoints do not meet up perfectly with sector or territorial boundaries.

The following figure explains how crossings are located regarding sector borders in order to insure a safe traffic distribution throughout sectors.



Although the moving of FRA boundaries to match the position of existing waypoints is possible, there are considerations that extend beyond the simple act of rationalizing the waypoint and boundary. Often the movement of a FRA boundary will involve engagement with the ANSP on the other side of the boundary. In many cases this actor is not part of FABEC and any alterations would require changes to the LoA. This process can involve a considerable investment in time and protocol.

The Computerized Flight Planning Services representatives (CFSPs) have asked that the boundaries be moved to meet the waypoint positions. Taken in isolation this request may seem reasonable and straight forward, but if the ANSPs and other actors also request alterations to suit each of their specific requirements, unexpected issues regarding system capacity, sector count and ultimately safety can happen.

It was also answered that existing FRA airspaces are not using points on borders, but it does not prevent ANSPs to provide a performant FRA service, as shown in the following figure representing coordination points (yellow circles not exactly on borders) between KUAC and MUAC airspaces.

Is the adjustment of the FRA boundary a temporary solution to the problem ? Maastricht Upper Air Centre (MUAC) came across some of these issues in their implementation period in 2015. They managed to integrate the point not located directly on the boundary, but they had some issues with the geometric requirements of boundary points where the angles were too sharp to meet NM implementation requirement.

Discussion also took place with NM regarding position of points on FRA borders. Even though it was preferred from NM to have points exactly on FRA borders, it was recalled that the Eurocontrol FRA guidelines includes paragraphs allowing FRA points (E or X) to be located at a certain distance from the FRA airspace limits, within certain limits and after appropriate coordination with NM.

After discussion, the concept of temporary shifts in the FRA boundary was offered as a short term solution while a more permanent fix is sought. This solution would be acceptable since ATCOs focus on sector boundaries rather than on FRA boundaries.

4.5 FLIGHT PLAN LEVEL CHANGES:

Presentation was made by Max Canham, from SKYGUIDE.

Max started his presentation by looking at the way current elements of the flight plans listed in Field 15 are used to provide data to FDPS systems, appropriate sectors, and enabling AOs to use waypoints to potentially change their Flight Level, to choose another route, or to connect to SIDs/STARs.

He also pointed out that Flight Level Allocation Scheme (FLOS) is used differently inside FABEC airspace. DFS and MUAC are using FLOS in an East-West mode,

whereas DSNA and skyguide are using it in a North-South mode, as published in AIP ENR .1.7.

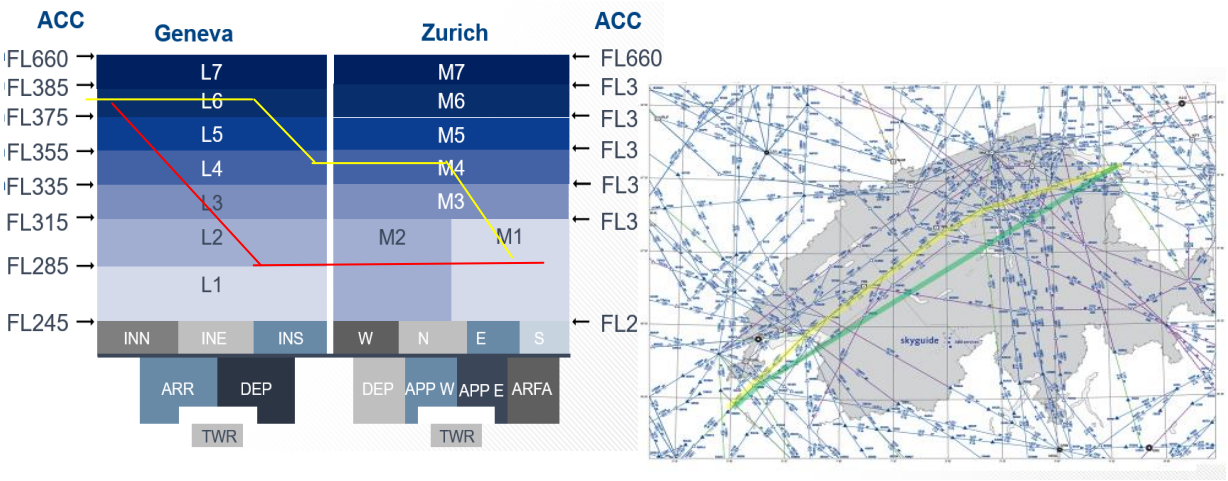
However, by removing the ATS route system and its numerous waypoints used for flight planning changes, FRA implementation will remove the possibility to publish a non-standard level via a specific waypoint in order to meet the RAD restriction.

Moreover, flight plans include level changes to meet these requirements as they are checked by NM systems or may result in flight plans 'rejection' if the requirements are not met.

Additional problems may then occur in a FRA environment if level changes are limited, because this could generate incorrect traffic counts in ETFMS leading to :

- Incorrect traffic prediction for ATC sectors
- Inefficient/Incorrect sector opening schemes and staffing levels
- ATFM regulations and delay for airlines
- Safety relevant ATC impacts such as increased Radio/Telephone communication (RT)or increased coordination

As an example, figures below were presented to explain possible impacts in terms of sector distribution if no intermediate waypoint is defined between entry and exit points of Swiss airspace. In this case, a non-efficient early descent in Geneva airspace would create artificial load in 3 Geneva sectors, and would also change sector distribution in Zurich.



Some solutions were suggested, but without guarantee of neutral impacts, amongst these:

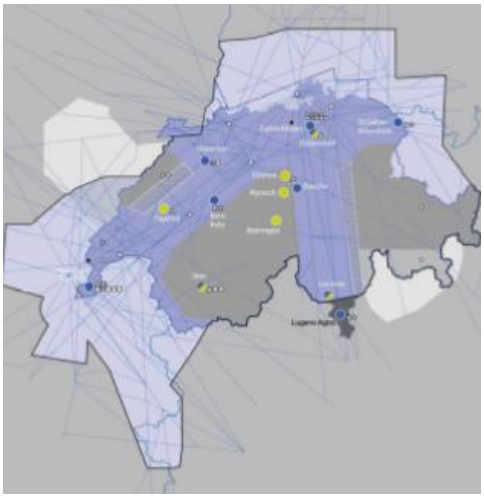
- The inclusion or introduction of new waypoints on the trajectories. This solution increases the demand on developing new 5 Letter waypoint designators, and the new waypoints increase the complexity of the associated RAD document.
- Allow level changes at locations defined by Lat/Long.
- Utilize extended or FF-ICE flight plans which include additional detail for flight level changes. Not all CFSPs, AOs or ANSPs can generate or read this new generation of Flight Plan. How could we manage a mix of old and new Flight Plan generation?
- Remove level changes from the flight plan by deleting the RAD level requirements and replace them with PTRs. This ensures correct processing in the NM systems, and ANSPs can ensure that the ATCOs correctly manage the change of flight level between entry and exit points. This may prove less efficient for the customer. How will CFSPs react to the replacement of RAD with level changes based on PTRs?

4.6 FUA: The use of FUA within FRA Airspace.

Presentation was made by Marie-Christine Ouillade, FABEC FRA project leader.

She first recalled that most of the many military areas in FABEC airspace are managed through an advanced FUA process allowing airspace users to file through military airspaces via AUP/UUP from D-1 until H-3.

Military activity has an important impact on AUs as shown in the following pictures, related to French and Swiss airspaces.



Regarding the current use of DCTs through military airspace, observations were made that some airlines using the same CFSP had different use of the DCT, and that globally the filing of DCTs when they are available is far from being optimum.

Taking French TSA34 as an example, it was mentioned that DCTs crossing this area were booked 67% of the available time, effectively planned by AUs 55% of the time (68% during weekends), but was booked by 2% of the flights when they are released in the UUP. This very poor level of updating route after military release is due to the risk

for an airline to be considered in this case as a late filer, without any guarantee of keeping the initial slot.

In these conditions, the use of the different segments offered by the FRA in military airspaces might lead to a safety issue if the time of availability is not fully respected. Expected entry time in military airspace is calculated on EOBT and not on CTOT, and then the risk is that flights having significant delay can be planned into an active area.

Moreover, violation message sent by NM is not known by the pilot. Question was asked to NM about an automatic message rerouting flights potentially impacted by military activity, but no answer from NM was received yet.

4.7 RAD: The way of writing

Presentation was made by Ludovic Isnard, RAD coordinator for DSNA. The first statement in his presentation was that the RAD won't change. A global revision of the RAD in the different FABEC airspaces will be required, but the way restrictions are described in the RAD will remain the same. The grammar will not change, but rewriting the RAD shall be carefully done.

Several ways of writing a FRA RAD are possible, in order to fit to each ANSP's strategy, or to fit with the relevant ANSP flight planning system.

As an example, skyguide's strategy will consist in allowing only some specific connections e.g. from entry to exit points. In addition, every FRA significant point will have its own restriction. Concerning vertical connectivity, restrictions will be defined via ATS routes to ensure connections to Swiss airports.

As DSNA FRA will start in Bordeaux and Brest, the strategies of these two ACCs were introduced. Brest ACC will define flow restrictions, in listing the various traffic flows allowed, and will also define route restrictions, to limit the number of intermediate points available for each flow and to prevent sector clippings.

Bordeaux ACC, with the current FDPS CAUTRA limitations, will manage its RAD by using existing points as often as possible, and will use accurate restrictions on some specific points, to allow for simplification of the restrictions by using recurrent patterns.

For both French ACCs, connectivity with their respective FIR airports will be ensured with APP5.

The new way of writing the FRA in the RAD will have advantages and inconveniences. Amongst the positive aspects, one can mention:

- No yoyo flights or sharp turns possible
- Easy and sensible FDPS parameters
- Easy RAD maintenance
- Human and machine readable
- Improved horizontal and vertical efficiency without loss of capacity

French ACCs also mentioned some negative aspects, such as:

- Difficulty in flight planning from one FIR to another FIR
- Military circular flights not possible
- Difficulties for GAT/OAT transition
- No stepped implementation
- Exhaustive route catalogue to maintain

Contingencies item was also addressed. Due to a lack of flexibility of the RAD, there will be a need to address specific situations for which the planning has still to be allowed. Amongst the possible solutions, NM scenarios or dormant RAD restrictions were cited.

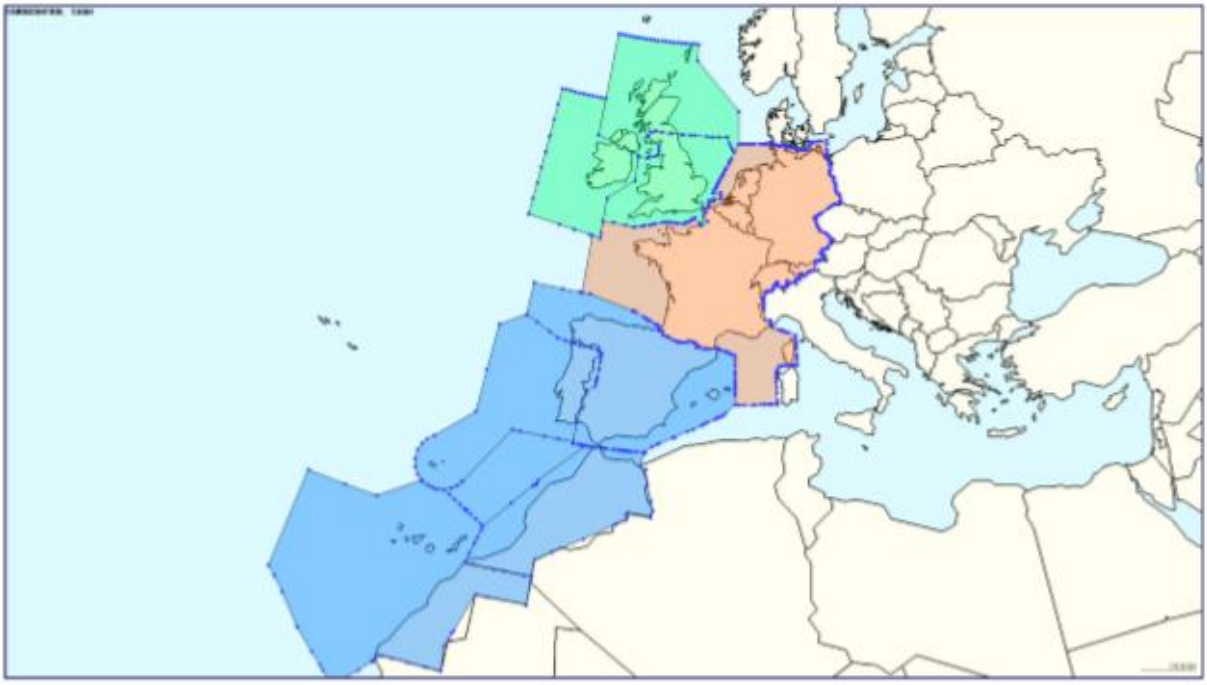
Ludovic also mentioned that feedback from users, and CFSPs in particular, is needed in the different prevalidations that will be organized in 2020 and in 2021. It is absolutely necessary to check if the envisaged writing of the RAD will fit CFSPs' systems, and possibly to see together how to make the RAD clearer if needed.

CFSPs supported the idea of participating to prevalidations, and asked if it will be possible to have a route catalogue. The answer was that this route catalogue might possibly exist, but it would then require to have the time and resources necessary to maintain it.

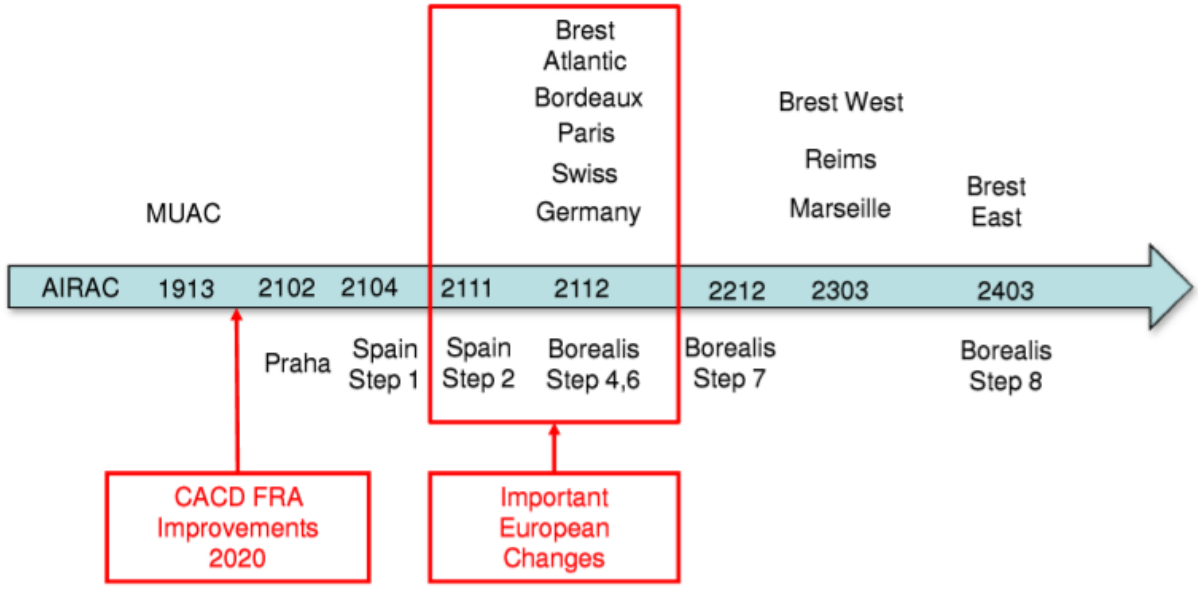
4.8 NM support for FRA implementation.

Presentation was made by Tihomir Todorov and Denis Odic, from NMD Airspace and Capacity Division. First of all they stated that all FRA projects are listed in ERNIP (European Route Network Improvement Plan) document, and have to be consistent with the FRA Design-Guidelines document.

Then they pointed out that the FRA projects of the FABEC Area are followed by NM West Area team, who is working on three different western European FRA areas as depicted in the chart below.



NM representatives reviewed the different FRA implementation processes of the FABEC area, and the challenge that it will represent in terms of coordination due to the simultaneous implementations of FRA projects at the end of 2021. See picture below.



Data requested by NM:

Some data have already been sent to NM from the various FABEC ANSPs. Nevertheless, some discrepancies have been noticed, especially concerning FRA sector limits. Some examples were presented focusing on alignments that differ sometimes between FRA area boundary and sector borders. Questions were sent to ACCs asking for accurate coordinates, and NM is waiting for answers from these ACCs.

Another issue from the NM perspective concerns FRA points that are needed at the borders between the future FRA areas. ACCs are requested to provide additional information on these points. A naming of the new FRA areas is also requested by NM.

4.9 CFSP/AO issues regarding major changes in Flight Planning

Presentation was made by Keld Larsen, Chairman of the NM CFSP group, on behalf of Lido, Sabre, Navblue, Rocket Route, Air Support.

After explaining the various activities through the terms of reference of the NM CFSP group, Keld Larsen presented the general viewpoint of his organisation. Concerning FRA implementation process, he formulated the following requests:

- Following the NM guidelines, the CFSP group is asking for the use of one single FRA model instead of a mix of models, which would make their task harder.
- While being able to digest a FRA implementation in 2 steps, they would prefer to have one unique phase of implementation

- Implementation of isolated FRA airspace should be avoided, to avoid transition through a non-FRA airspace between 2 FRA airspaces
- FRA floor at FL245 or below. This flight level in particular is not adapted for turboprop aircraft, for which the maximum usable FL is FL250. As a consequence, turboprop fleet will be limited at FL230/240.
- To ensure coordination between stakeholders, a one day workshop would be valuable, when details are available.
- ANSPs do not always understand how complex are the algorithms used by CFSPs, and the time needed to code or test CFSP software.

An additional remark was made by a CFSP representative, explaining that FRA borders should not be aligned with FIR boundaries, which would make planning along borders very complicated.

Availability of data and transition between current airspace and FRA

For CFSPs, the ideal would be to receive data 9 months before implementation, or at least a quite mature draft should be made available, so as to minimize the update to be done before the 3 prevalidation sessions (3 to 5 days for each session) that will take place at NM until November 2021. In any case, two months are necessary for CFSPs to insert data in their system.

For information, the French RAD coordinator mentioned that FRA data will be available on the AURA tool. The point is to know if CFSPs will have access to this tool. To be looked at…

To ensure a smooth transition to the FRA implementation, CFSPs expressed the following requests:

- To have a FRA lower limit at FL245 or below
- To keep current ATS routes structure at least for 6 months after FRA implementation
- To keep or create direct access to/from SID and STAR to FRA airspace.
- To have a clearer view regarding FRA and FIR boundaries

For FRA implementation in Poland or Austria, a good cooperation took place between ANSPs and CFSPs. Karl Larsen recommended to contact PANSA or Austro Control representatives for further information.

5 WRAP UP / TAKE AWAY

The wrap up and conclusions of the workshop were presented by Geoffroy Ville, Deputy COO of DSNA, and former chairman of the FABEC SC Ops.

He underlined that some remaining issues must be fixed, for instance in terms of design, with adequate coding for FRA points or segments, to ensure good connectivity between FRA and non-FRA airspaces. Other topics such as FLOS, FUA or RAD descriptions shall not be disregarded.

Geoffroy Ville also stated that the workshop had been held in a very positive way, providing pragmatic answers to some issues. Amongst these, he felt confident that

the idea to consider FRA boundaries as « conceptual », with adapted E/X points to be published would be a good way forward.

He did not forget to summarize the CFSPs and AUs point of view, in terms of requests on the needed working time prior the date of implementation, or on the one phase model to be implemented (and to stick to one floor, preferably at FL245 or below). CFSPs/AOs stipulated that they need 9 months to code/test before implementation (not necessarily before publication). He accepted the proposal to hold another workshop in autumn 2020 before finalization. And for a successful implementation, Geoffroy agreed with CFSP representatives to take Polish or Austrian FRA implementations as an example, and will contact their respective ANSPs for further information.

He also noted the request to have access to the FRA web application (including vertical connectivity), publication of routes around military airspaces (in appendix 7 or elsewhere) and a route catalogue. These accesses will be provided on a best effort basis as they were not designed for an external use.

As a conclusion, he highlighted the good spirit with which all attendees participated to this fruitful workshop. He thanked all AU, CFSP, ANSP, State and Military representatives for their attendance. He finally thanked in particular Marie-Christine Ouillade for the very good job she performed and wished her a happy retirement.

MEETING ENDED AT 16:20.

6 ACTION LIST

EW#	Date	Action	Owner	Deadline	Status
04/01	12.02.20	To make all presentations of the workshop available on www.fabec.eu and inform participants and other stakeholders of this publication.	Nadine Meesen	14.2.2020	Closed
04/02	12.02.20	To produce a paper on adjusting the FRA boundaries on the FRA E/X points as a temporary solution to NM concerns. It should be straightforward on the fact that current system limitations lead to this fix and has no legal implications.	Max Canham	17 April 2020	Open
04/03	12/02/20	To proper format the paper under action 04/02 to circulate at SC OPS and AC. (Decision and way forward to be discussed at SCOPS 67 (25 March 20) or 67 (24 June 20) and AC 43 (27 May 20)	AFG	SC OPS AC	Open
04/03	12/02/20	Generate complete report of the 4th Expert workshop and bring all items, especially of wrap-up, under the attention of FRA PMT and ODG to derive concrete actions	Nadine Meesen	ODG17 FRA PMT	Open
04/04	12/02/20	To organise follow-up or 5th expert workshop for AOs and CFSPs together with FRA PMT and ODG in autumn 2020 (post EW4 proposal: 30 September 2020 in Brussels)	Nadine Meesen	autumn 2020	Open