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AVIATION

Free Route Airspace (FRA)

"Giving users the freedom to plan a route in specified airspace"

Part 2 - Further Clarifications in FRA Implementation

Tihomir Todorov
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CONSORTIUM COORDINATOR sesar DEPLOYMENT MANAGER
FOUNDING MEMBER sesar JOINT UNDERTAKING
NETWORK MANAGER

Presentation Purpose

Issues for clarification

- Principles and guidelines for determining FRA significant points.
- Advantages and disadvantages of maintaining or removing fixed ATS routes.
- Flight Planning (DCT).
- Vertical Connectivity (Lower - Upper).
- Cross-border FRA.
- Training.

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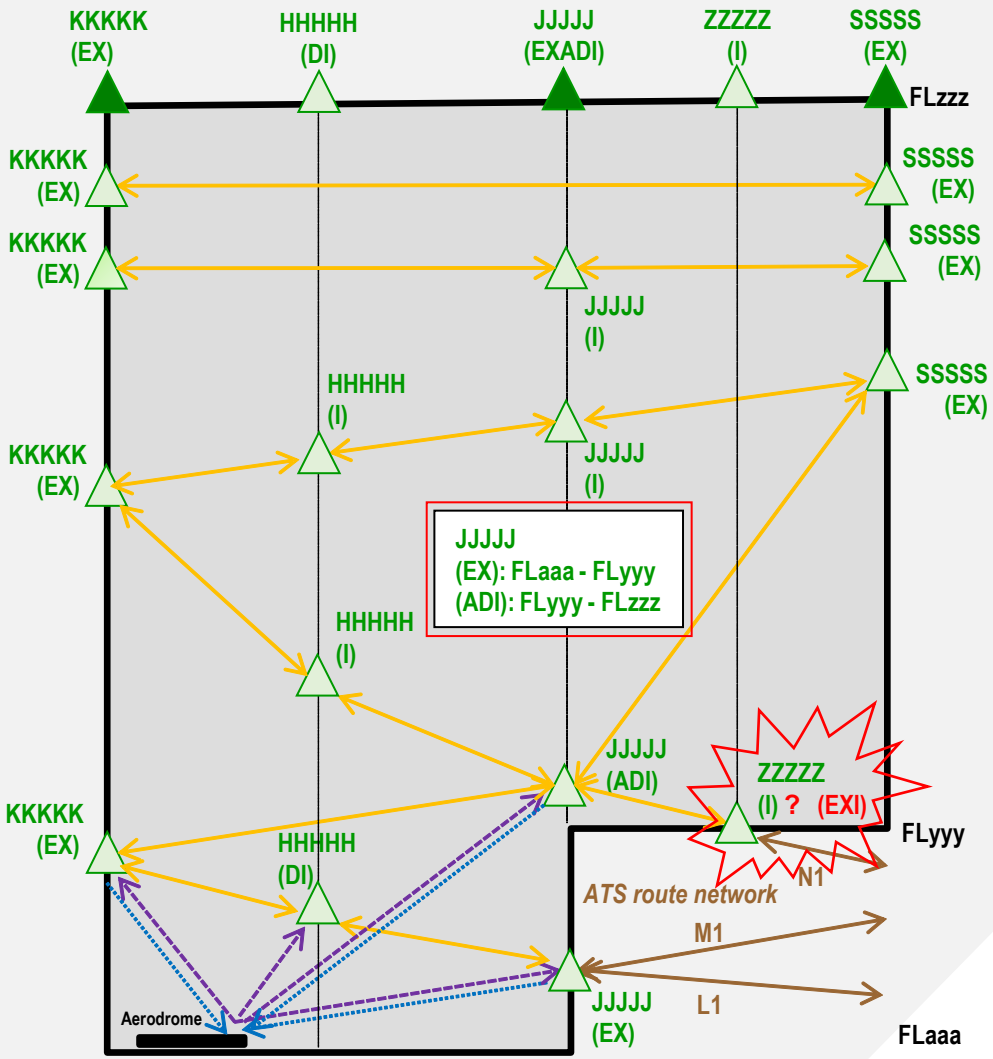
Principles and guidelines for determining FRA significant points

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Free Route Airspace: FRA Points Specificities

FRA Points Structure

- **FRA Horizontal Entry Point (E)**
  A published Significant Point on the horizontal boundary of the Free Route Airspace from which FRA operations are allowed.
- **FRA Horizontal Exit Point (X)**
  A published Significant Point on the horizontal boundary of the Free Route Airspace to which FRA operations are allowed.
- **FRA Intermediate Point (I)**
  A published Significant Point or unpublished point, defined by geographical coordinates or by bearing and distance via which FRA operations are allowed.
- **FRA Arrival Connecting Point (A)**
  A published Significant Point to which FRA operations are allowed for arriving traffic to specific aerodromes.
- **FRA Departure Connecting Point (D)**
  A published Significant Point from which FRA operations are allowed for departing traffic from specific aerodromes.



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Free Route Airspace: FRA Points Specificities

General Provisions

- Any published significant point - 5LNC and NAVAID ((2LNC or 3LNC)) can be used as a FRA significant point.
- Any unpublished significant point defined by geographical coordinates (46N078W, 4620N07805W) or by bearing and distance (DUB180040) might be allowed as FRA (I).
- No mandatory requirement that only selected number of existing 5LNCs and NAVAIDs shall be used as FRA significant points.
- No mandatory requirement that only “en-route” 5LNCs and NAVAIDs shall be used as FRA significant points.

Free Route Airspace: FRA Points Specificities

Entry/Exit Points

- A FRA (E) or FRA (X) or FRA (EX) point should be established exactly on the horizontal boundary of the relevant FRA area.
- A FRA (E) or FRA (X) or FRA (EX) point shall be declared according to the traffic patterns and the existing ATS route network structure, when available. Significant points which are entry-only or exit-only for existing ATS route network, when available remain entry-only or exit-only in FRA, with associated characteristics; where applicable (e.g. FL parity, FL limitations, etc.).
- In cross-border FRA, a FRA (E) or FRA (X) or FRA (EX) point, on the former internal FRA boundaries, should be changed to a FRA (I), where and when it is required depending on the nature of traffic flows.

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Free Route Airspace: FRA Points Specificities

Intermediate Points

- A FRA (I) point is located inside the FRA area.
- A FRA (I) point is not referenced to an aerodrome.
- A FRA (I) point is used inside the FRA area as a point:
  - For planning of user preferred trajectory.
  - For a change of speed or level, a change of track, or a change of flight rules is planned.
  - For Special Area avoidance.
  - For vertical transition to/from underlying fixed ATS route network without specific reference to an aerodrome.
  - From/to which FRA operation is possible, if before/after a fixed ATS route network is used.
- For avoidance of a special area, there is no mandatory requirement to establish a point for that purpose if the number of existing FRA (I) points is assessed as sufficient to allow flight planning around the particular area.

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Free Route Airspace: FRA Points Specificities

Arrival/Departure Points (1)

- A FRA (A) or FRA (D) or FRA (AD) point has no limitation in its vertical definition unless otherwise specified.

- A FRA (A) or FRA (D) or FRA (AD) point may:
  - Be located entirely inside the FRA vertical limit; thus, providing a “vertical function” for FRA operations.
  - Extend below the FRA lower vertical limit.

- A FRA (A) or FRA (D) or FRA (AD) point is always referenced to an aerodrome(s).

- A FRA (A) or FRA (D) or FRA (AD) is used as a point:
  - For planning of user preferred trajectory for arriving and departing flights.
  - For vertical transition to/from underlying airspace structure.
  - In combination with FRA Connecting routes, for channelling of arriving and departing flows avoiding undesired airspace crossings; thus, providing a “lateral” function for FRA operations.

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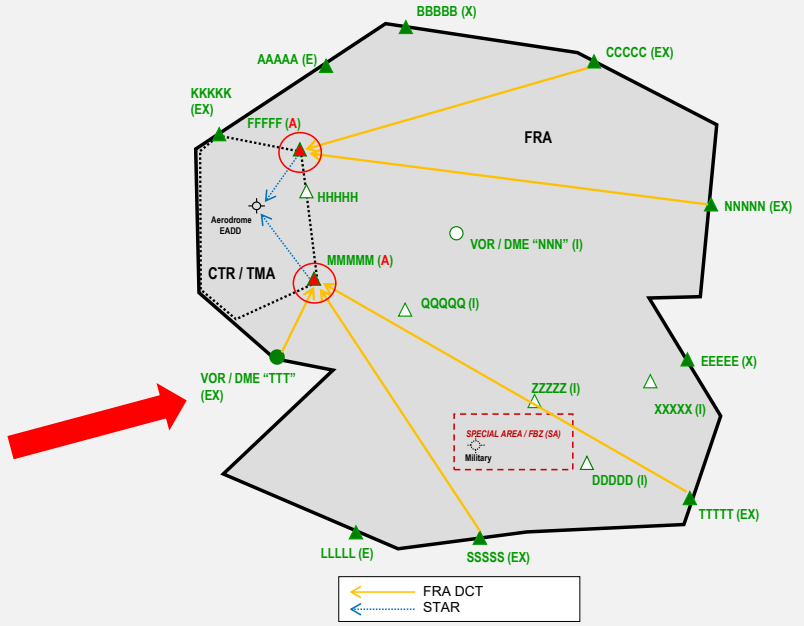
Free Route Airspace: FRA Points Specificities

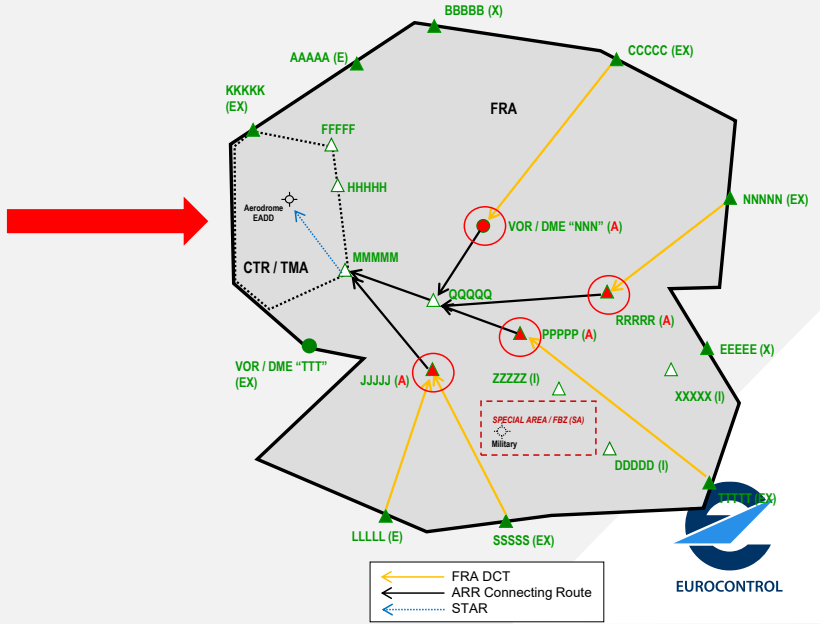
Arrival/Departure Points (2)

- A FRA (A) or FRA (D) or FRA (AD) point, depending on the lower limit of the relevant FRA area is established:
  - For an aerodrome with designated SIDs/STARs:
    - At a significant point located on the CTR/TMA boundary normally collocated with a significant point where a SID terminates and/or a STAR begins.

      Note: In exceptional cases, a significant point where a SID terminates and/or a STAR begins might not be located on CTR/TMA boundary, but this significant point might be established as a FRA (A) or FRA (D) or FRA (AD) point.

    - At a significant point located outside the relevant CTR/TMA but connected with a significant point where a SID terminates and/or a STAR begins via a specifically defined *FRA Connecting Route*.



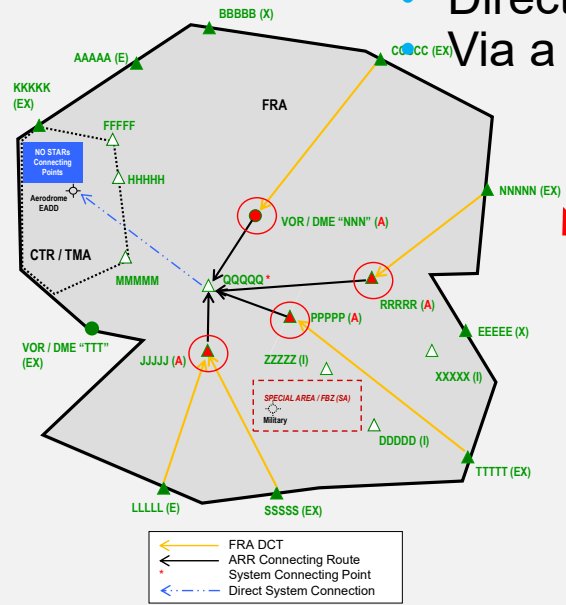


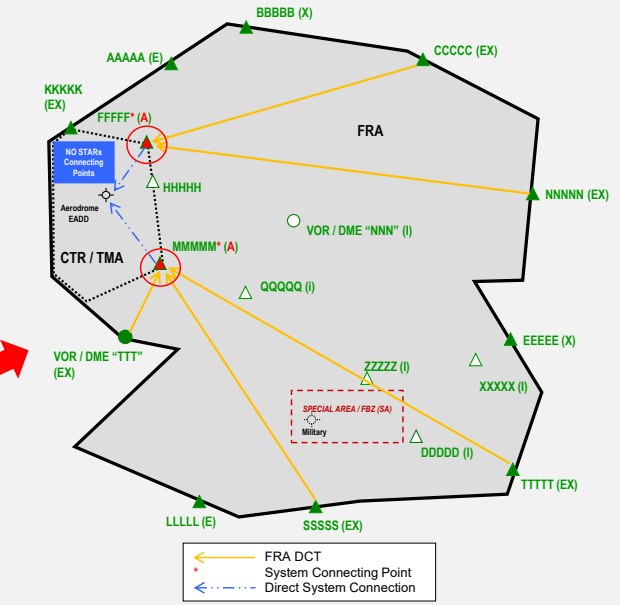
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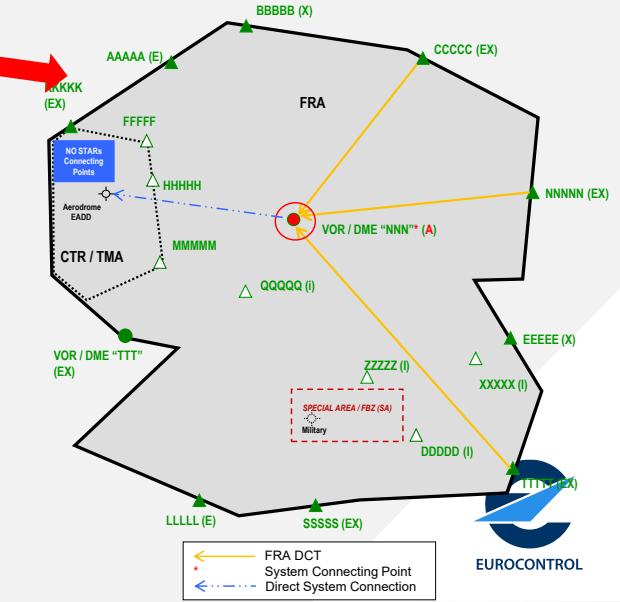
Free Route Airspace: FRA Points Specificities

Arrival/Departure Points (3)

- A FRA (A) or FRA (D) or FRA (AD) point, depending on the lower limit of the relevant FRA area is established:
  - For an aerodrome without designated SIDs/STARs or an aerodrome where SIDs/STARs to/from particular directions are not designed:
    - At a significant point located on the CTR/TMA boundary connected directly (DCT) to that aerodrome.
    - At a significant point located outside the relevant CTR/TMA connected:
      - Directly (DCT) to that aerodrome; or
      - Via a specifically defined *FRA Connecting Route*.







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Free Route Airspace: FRA Points Specificities

FRA Points Specific Information

- When required, FRA significant points have a specific information(s) as part of its FRA relevance definition.
  - Vertical FL band if different inside the FRA area from the general FRA vertical limits (e.g. a “balcony” in the FRA area definition).
  - FLOS over relevant FRA significant point.
  - Aerodrome(s) related to a FRA (A) or FRA (D) or FRA (AD) point.
  - FRA area name related to a FRA (A) or FRA (D) or FRA (AD) point located on a common boundary of two FRA areas.
  - Different FRA relevance on the same FRA significant point during defined time periods.
  - FRA points relevance association with different FRA areas in same State (not applicable to “Area for cross-border provision of ATS”).

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Advantages and disadvantages of maintaining or removing fixed ATS routes

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Free Route Airspace: ATS route network
General Provisions

- Historically, ATS routes have been the preferred tools to allow the safe and efficient management of high-density air traffic and to facilitate the early detection of possible conflicts and their resolution. Based on ICAO provisions, there is no requirement for ATS routes to co-exist in FRA where the air traffic services can be assured in a safe, efficient and sustainable manner.

- Each State shall decide to maintain or remove the fixed ATS route network during FRA operations and all details shall be provided in the national AIS publications.

- There is no mandatory requirement for the fixed ATS route network to be either maintained or removed when FRA is implemented.

Free Route Airspace: ATS route network

FRA with fixed ATS route network

- FRA operations and the use of the fixed ATS route network can be allowed simultaneously either inside the entire FRA area or in certain FIR(s)/UIR(s) within the same cross-border FRA area.

- FRA operations can provide additional flight planning options outside the scope of the fixed ATS route network e.g. flight planning outside the ATS route vertical limits, flight planning opposite of unidirectional ATS routes, etc.

- The fixed ATS route network can be maintained for flight planning purposes:
  - Within the relevant FRA area to ensure smooth vertical transition between FRA and non-FRA area.
  - During the FRA applicability period to ensure smooth lateral transition between FRA and non-FRA period.
  - For airspace users that would rather file their flight plans the traditional way.
  - For airspace users that are not eligible for FRA operations.

- In FRA areas where the fixed ATS route network is maintained:
  - There shall not be a specific requirement for flight planning by using only FRA flight planning procedures.
  - Parallel development of FRA and ATS routes cannot be considered as mandatory. The establishment of a new FRA significant point is not mandatory to be followed by the establishment of ATS routes, as all relevant new FRA options cannot be covered by ATS routes.

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Free Route Airspace: ATS route network

FRA without fixed ATS route network

- The fixed ATS route network might be suspended or completely removed either inside the entire FRA area or in certain FIR(s)/UIR(s) within the same FRA area.
- Removal of the fixed ATS route network within the vertical dimensions of the FRA area shall be subjected to detailed analyses by State(s) concerned.
- The following non-exhaustive list of actions shall be considered before deciding the removal of the fixed ATS route network:
  - Creation of a comprehensive list of ATS routes in the FRA area to be removed.
  - In case of different FRA lower limits and CTR/TMA upper limits (“mushrooms” existence of CTRs/TMAs within FRA area) - A creation of a comprehensive list of all ATS routes passing via the relevant CTRs/TMAs with their lower and upper limits.
  - Analyses and assessment of the way how ATS routes will be withdrawn from the State AIP.
  - Analyses and assessment of each ATS route passing via the relevant CTRs/TMAs and the requirements for the establishment of possible new 5LNCs on the CTR/TMA boundaries in support of the ATS routes withdrawal and proper AIP publication.
  - Analyses and assessment of possible route designators to be retained or changed.
  - The removal of ATS routes outside CTRs/TMAs might lead to several route designator breaks inside the relevant FRA area. This is unacceptable as the remaining ATS route segments inside CTRs/TMAs are considered as different ATS routes and will require new route designators.
  - Analyses and assessment of the positive and negative influence on flight planning systems.
  - *In non-H24 FRA area during the FRA applicability the transition from FRA to non-FRA applicability period shall be done exactly at defined times. To ensure a smooth transition certain time buffers may be required allowing an overlap of the FRA and ATS route availability periods.*
- Where considered feasible, to ensure proper vertical connectivity, the upper limit of the underlying fixed ATS route network can be overlapped with FRA at certain levels.

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Flight Planning (DCT)

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Free Route Airspace: FPL
DCT Term

- **DCT** (Doc 8400, ICAO Abbreviations and Codes (PANS-ABC)

  Direct *(in relation to flight plan clearances and type of approach)*

  Decoded abbreviation/indicator DCT (Direct) or Encoded abbreviation/indicator Direct (DCT) should be used only:
  - for flight planning purposes when submitting FPL;
  - when executing specified type of approach.

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Free Route Airspace: FPL
ITEM 15

- **ICAO Doc 4444 PANS-ATM**, Appendix 2 Flight plan provisions state the following under ITEM 15: ROUTE

Flights along designated ATS routes

INSERT,	[…]
OR	by **DCT**, if the flight to the next point will be outside the designated route, unless both points are defined by geographical coordinates.

Flights outside designated ATS routes

INSERT	points normally not more than 30 minutes flying time or 370 km (200 NM) apart, including each point at which a change of speed or level, or change of track, or a change of flight rules is planned. […]
INSERT	**DCT** between successive points unless both points are defined by geographical coordinates or by bearing and distance.

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Free Route Airspace: FPL
FRA

- Flights outside designated ATS routes.
- Segments between FRA significant points are to be indicated by **DCT** in ITEM 15: ROUTE of the flight plan.

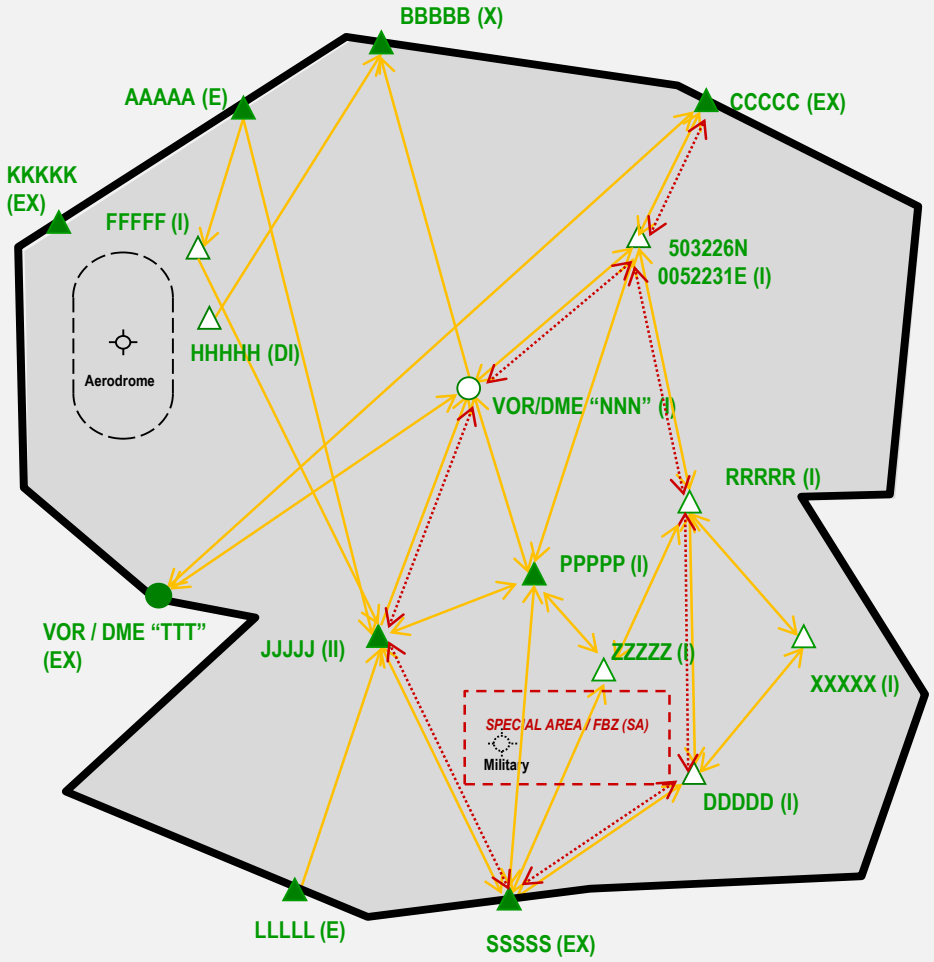
Examples:
[Entry Point] DCT [Intermediate point(published)] DCT [Intermediate point(published)] DCT [Exit Point]
[Entry Point] DCT [Intermediate point(unpublished)] DCT [Intermediate point(published)] DCT [Exit Point]
[Entry Point] DCT [Intermediate point(published)] DCT [Intermediate point(unpublished)] DCT [Exit Point]
[Entry Point] DCT [Intermediate point(unpublished)] [Intermediate point(unpublished)] DCT [Exit Point]

- No mandatory requirement that FRA significant points shall be inserted in the FPL at each 370 km (200 NM) flying distance. *No FPL rejection by EUROCONTROL if DCT is longer.*

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Free Route Airspace: FPL

Horizontally Transition (theoretical expression)



FPL ITEM 15

… CCCCC DCT 5032N 00523E DCT PPPPP DCT SSSSS …

… CCCCC DCT 5032N 00523E DCT NNN DCT JJJJJ DCT SSSSS …

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Vertical Connectivity (Lower - Upper)

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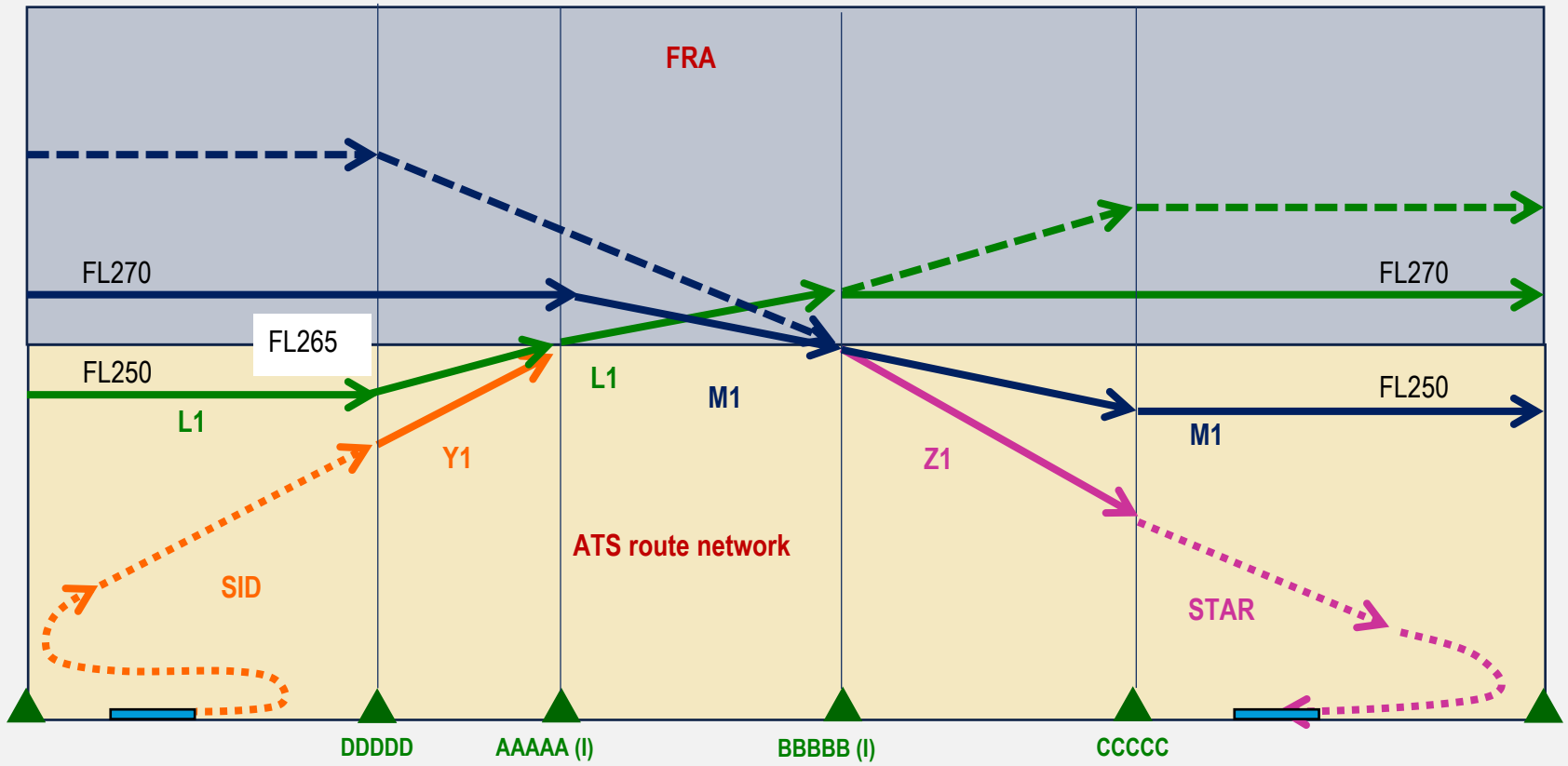
Free Route Airspace: Connectivity

Underlying ATS route network

- The vertical connection between FRA and the underlying fixed ATS route network shall take into account the various climbing and descending profiles.
- The interconnectivity between FRA and the underlying fixed ATS route network shall be ensured through the availability of a set of significant points reflecting the typical climbing/descending profiles.
- The publication of extended SIDs/STARs or published connecting ATS routes are also operationally recommended options.
- Wherever a fixed ATS route network will remain in operation below the FRA, this underlying ATS route network shall be refined to take into account the needs of FRA operations in the airspace above.

Free Route Airspace: Connectivity

Vertically Transition (theoretical expression)



FPL ITEM 15

(En-route climbing to FRA): … DDDDD/N460F270 L1 AAAAA L1 BBBBB/N460F370 DCT …

(En-route descending from FRA): … AAAAA/N460F250 DCT BBBBB M1 CCCCC M1 …

(Departure to FRA): (DDDDD3W) DDDDD/N460F270 Y1 AAAAA L1 BBBBB/N460F270 DCT …

(Arrival from FRA): … DDDDD/N460F250 DCT BBBBB Z1 CCCCC (CCCCC4W)

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Free Route Airspace: Connectivity

Terminal Airspace

- Access to/from Terminal Airspace and connection to/from specific aerodromes will need to be considered and appropriate refinements to TMA structures initiated, including the definition of additional SIDs/STARs to permit more flexibility.

- The definition of FRA connecting routes to facilitate flight planning for departing/arriving traffic might also be required. This could have implications for the management of Terminal airspace.

- *In case of implementation of FRA down to the upper limit of Terminal Airspace, the entry/exit points into/out of FRA should preferably be a significant point where a SID terminates or a STAR begins. In some cases, a redesign of the SID/STAR will be required and, depending on airspace complexity, extensions may need to be investigated to ensure appropriate traffic segregation.*

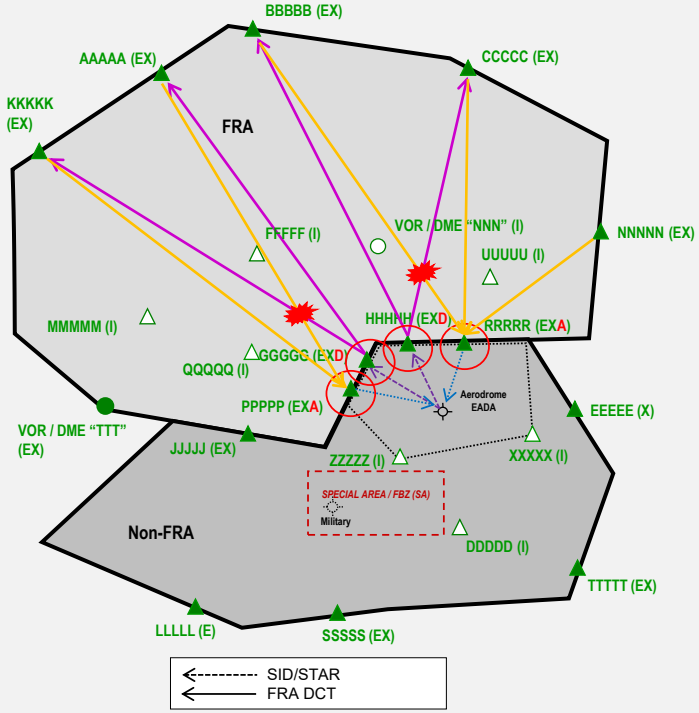
- *If for some aerodromes no suitable SID/STAR is available, flight planning using DCT should be facilitated.*

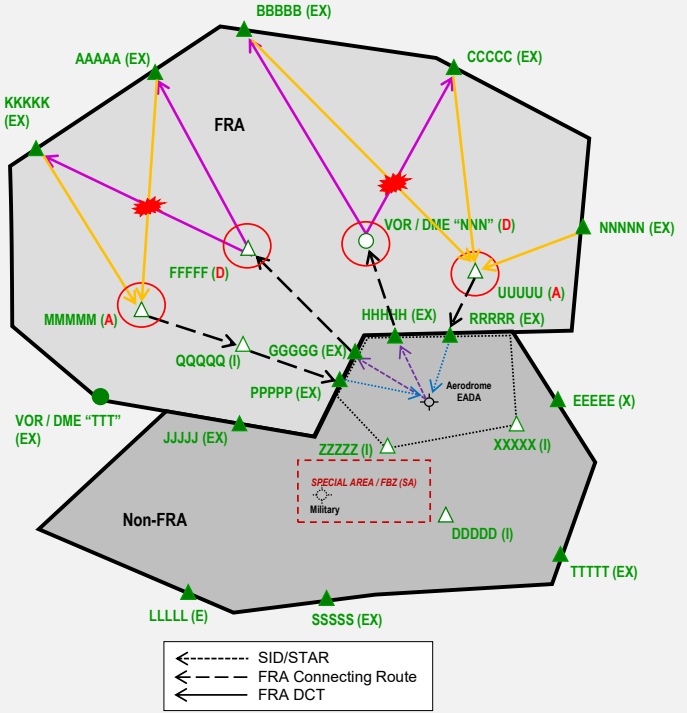
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Free Route Airspace: Connectivity

Connecting Routes

- Proper access to/from terminal airspace and connecting to/from aerodromes located inside or in close proximity outside the relevant FRA area may need to be considered.
- This may require a definition of FRA Connecting Routes to facilitate flight planning and traffic distribution, providing the routes between specifically defined FRA significant points or other existing significant points on CTR/TMA boundary or in its vicinity.
- A FRA Connecting Routes to/from terminal airspace shall enable an appropriate vertical transition to/from an aerodrome wherever possible.
- The FRA Connecting Routes are named as FRA Arrival Connecting Route and FRA Departure Connecting Routes.

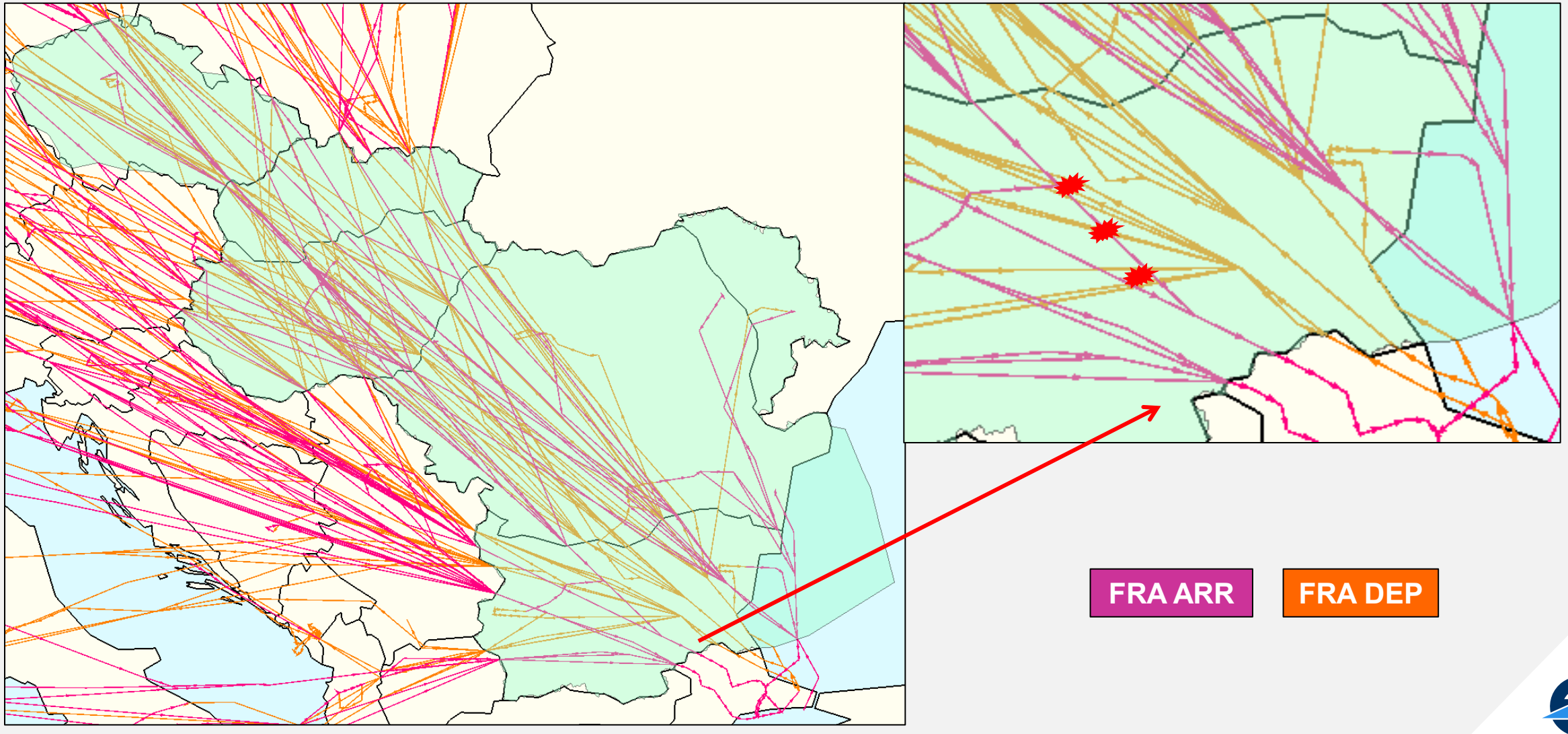




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Free Route Airspace: Connectivity

Connecting Routes - ARR/DEP Istanbul (LTFM)



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Cross-border FRA

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Free Route Airspace: Cross-border FRA
Definition

- **Cross-border FRA** is a specified free route airspace that comprises part and/or the whole areas of responsibility of at least two adjacent ATC units (e.g. ACCs, UACs, etc.) or FRA areas where common procedures are applied regardless of national and/or operational boundaries.

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Free Route Airspace: Cross-border FRA

General Provision

- When changes are foreseen in the cross-border application of FRA, agreement shall be reached on the FRA Concept implementation between all participating and new State(s).

- The effects of a change in the cross-border application of FRA are not limited to the State(s) that are directly affected by the cross-border application of FRA (i.e. adjacent State(s)). For this reason, proper coordination shall take place to evaluate the effects of the change of the cross-border application of FRA.

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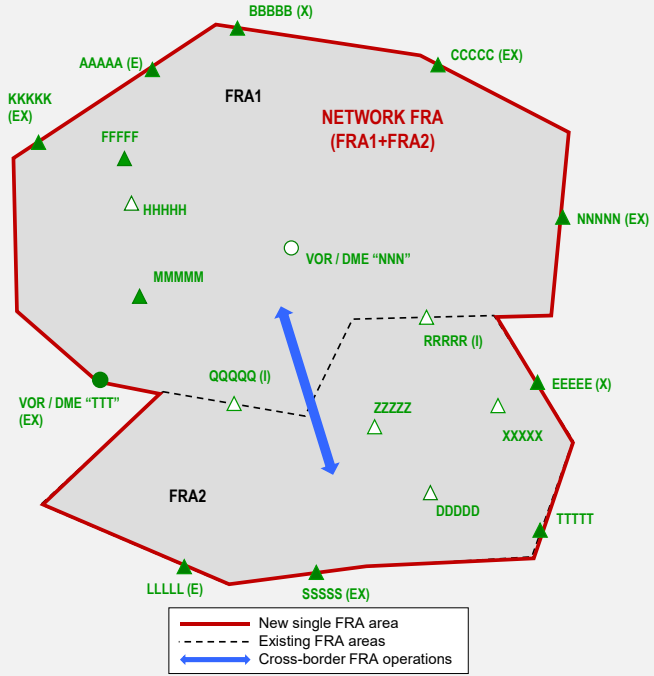
Free Route Airspace: Cross-border FRA
Requirements

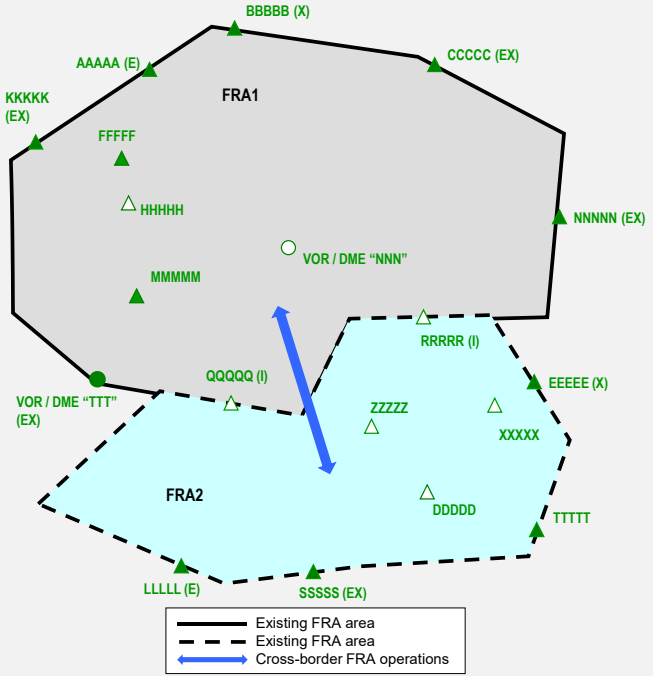
- If State(s) intend to implement cross-border FRA with an already existing adjacent FRA area, the implementing State(s) shall:
  - Inform, as soon as is practicable, all State(s) within the existing adjacent FRA area.
  - Reach agreement on the common cross-border FRA Concept implementation with all State(s) within the existing adjacent FRA area regarding procedures, ATC systems, national AIS publications, RAD, etc.
  - Perform an Impact Assessment.
  - Inform, as soon as is practicable, third-party State(s) (which are not part of cross-border FRA expansion) to allow them to evaluate the impact on procedures, ATC systems, national AIS publications, restrictions/limitations, etc. and, where applicable, coordinate with them such cross-border FRA implementation.

Free Route Airspace: Cross-border FRA

FRA Areas Definition

- Cross-border FRA expansion might be achieved by:
  - A single FRA area, representing a merge of the airspaces of existing FRA area.
  - Multiple FRA areas (each as a single continuum), allowing cross-border FRA operations between them.
- When cross-border FRA expansion is achieved as a single area, its unique name might be assigned based on agreement between State(s) concerned.





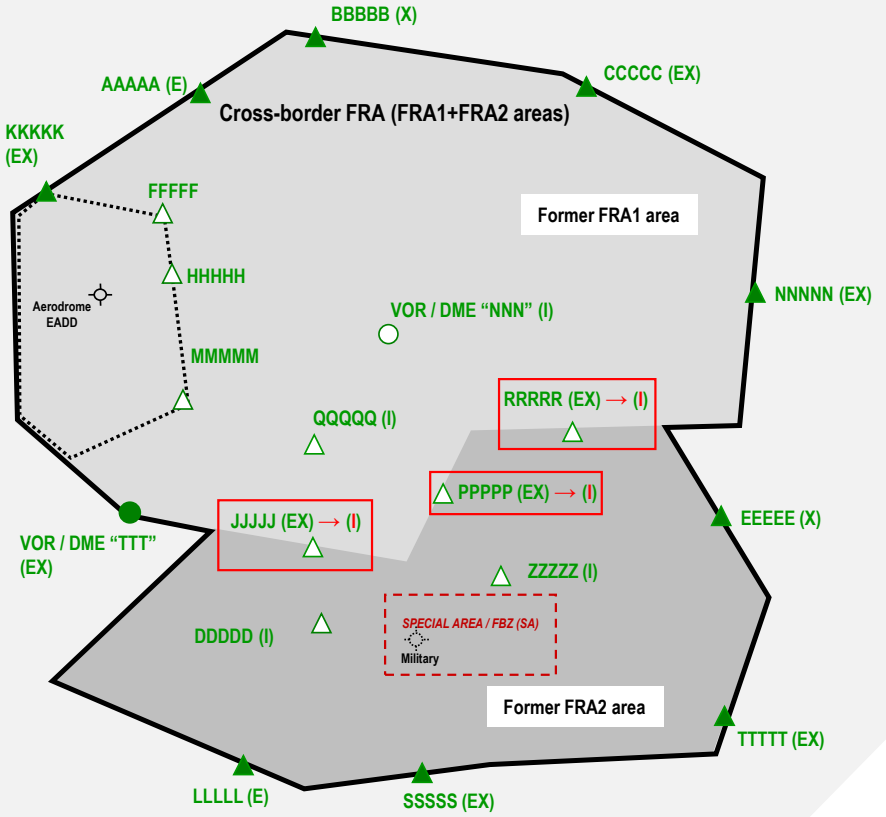
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Free Route Airspace: Cross-border FRA

FRA Points Specificities (1)

- All FRA (E) or FRA (X) or FRA (EX) points, on the former internal FRA boundaries, should be changed to a FRA (I), where and when it is required depending on the nature of traffic flows. There is no requirement that this FRA (I) point should be used as mandatory for flight planning, unless explicitly stated.

- No change in other FRA relevant points located in previous “single” FRA areas.



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Free Route Airspace: Cross-border FRA
FRA Points Specificities (2)

- Following the implementations of cross-border FRAs and their stepped expansions, the relevant ATM systems might encounter problems with flight plan processing due to duplicated NAVAIDs as FRA significant points.
- To avoid such potential problems and based on a network agreement, one of the following options can be considered:
  - A relevant NAVAID should not be defined as a FRA significant point.
    In case of duplicated NAVAIDs within the same cross-border FRA area, the relevant States/FABs/ANSPs during the FRA design phase need to coordinate and agree which of the NAVAIDs shall not be defined as a FRA significant point. Priority shall be given to significant points defined as FRA (E) or FRA (X) or FRA (EX), then as FRA (A) or FRA (D) or FRA (AD) and finally as FRA (I). Depending on such prioritisation and additionally assessment of existing FRA significant points around these NAVADs, the decision shall be taken.
    This is a solution if the geographical location of one of the NAVAIDs is not required for FRA purposes.
  - A new significant point, not marked by the site of a radio navigation aid (“unique” 5LNC), should be established and designated as a FRA significant point:
    - Closer to the relevant NAVAID geographical location; or
    - Collocated with the relevant NAVAID geographical location.

    This is a solution if the nearby or exact geographical location of one of the NAVAIDs is required for FRA purposes. The ATS route network below and/or inside the FRA, if exists, might need to be adapted via the new FRA significant point to allow appropriate connectivity.

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Free Route Airspace: Cross-border FRA
Flight Planning

- Flights outside designated ATS routes.
- Segments between FRA significant points are to be indicated by **DCT** in ITEM 15: ROUTE of the flight plan.

Examples:
[Entry Point] DCT [Intermediate point(published)] DCT [Intermediate point(published)] DCT [Exit Point]
[Entry Point] DCT [Intermediate point(unpublished)] DCT [Intermediate point(published)] DCT [Exit Point]
[Entry Point] DCT [Intermediate point(published)] DCT [Intermediate point(unpublished)] DCT [Exit Point]
[Entry Point] DCT [Intermediate point(unpublished)] [Intermediate point(unpublished)] DCT [Exit Point]

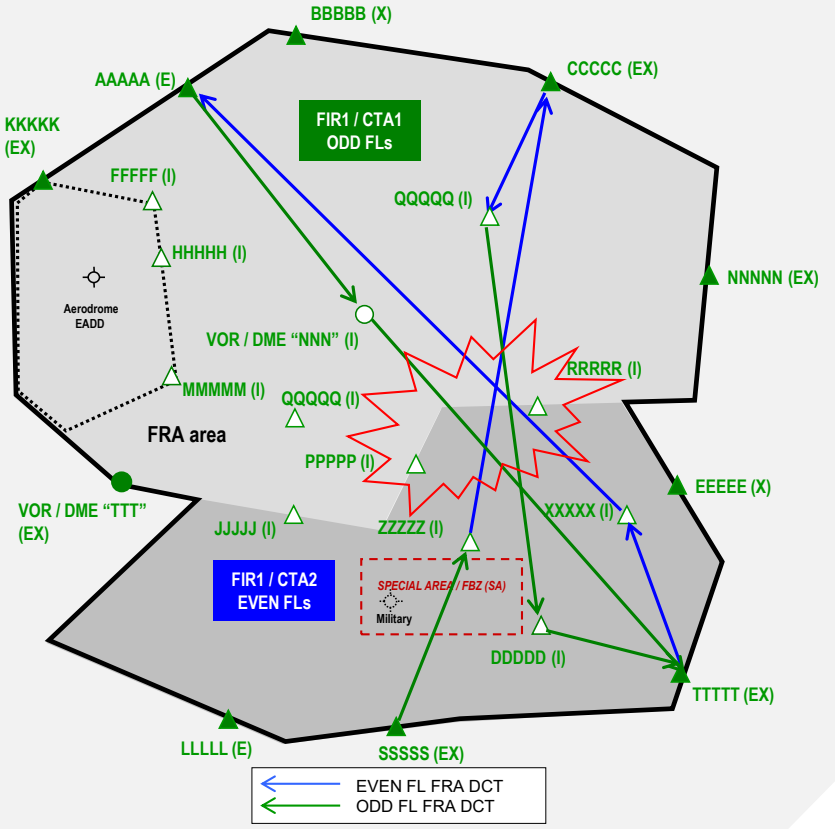
- No mandatory requirement that FRA significant points shall be inserted in the FPL at each 370 km (200 NM) flying distance. *No FPL rejection by EUROCONTROL if DCT is longer.*
- In cross-border FRA in some European States inside same FRA area, mandatory requirement is that at least one FRA significant point in each FIR shall be inserted in the FPL ITEM 15. This is to avoid unnecessary storage of significant points in ATM systems but does not have DCT length limitation.

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Free Route Airspace: Cross-border FRA

FLOS General Requirements

- In a cross-border FRA area, the existing provisions for FLOS inside a FRA area are valid and require appropriate coordination between the States concerned for their harmonised application and coherent publication in the States AIPs.
- LoAs shall include proper procedures in case the States/ANSPs decide to implement cross-border FRA operations with different FLOS in accordance with the State AIP ENR 1.7.
- As there are no fixed FRA significant points for aircraft transfer in cross-border FRA operations, the rules regarding the direction of cruising levels to be used when crossing the FIR/CTA boundary no longer apply.
- Inside a cross-border FRA area over or near the FIR/CTA boundary a simple ODD/EVEN FL rule is established, i.e. all flights from FIR1/CTA1 to FIR2/CTA2 to be on ODD FLs and all flights from FIR2/CTA2 to FIR1/CTA1 to be on EVEN FLs. This is more convenient than the standard ICAO ODD/EVEN FL orientation because:
  - Aircraft on the same cruising level are controlled by the same ATC unit/ Control Sector.
  - Determining the ODD/EVEN FLs for magnetic tracks near 180° and 360° or 090° and 270° could be arbitrary, which could lead to opposite aircraft flying on the same cruising level.



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Free Route Airspace: Cross-border FRA
FLOS and FL change requirements

- In a relevant FRA area, including a cross-border FRA area, there might be a requirement, depending on the applied FLOS, to change the direction of cruising level between FRA significant points in order to comply with the FLOS of the adjacent FRA or non-FRA area.

- For any flight entering the FRA area at EVEN FL or ODD FL and obliged to exit the same FRA area at ODD FL or EVEN FL, respectively, a change from EVEN FL to ODD FL or vice-versa is planned over a defined FRA (I) point inside the FRA area.

- In complex airspace where a State decides to implement FRA on a structurally limited basis, a FRA (I) point can be defined as mandatory for FL change. In all other FRA implementations, there might not be a limitation where and when the FL change shall be performed.

Direction of Cruising levels within a FRA area - Overflights		
FLs over FRA (E)	FLs over FRA (X)	FLs inside FRA area
EVEN	ODD	A change from EVEN FLs to ODD FLs shall be planned inside the FRA area (might add when required “and before/at relevant FRA significant point”).
ODD	EVEN	A change from ODD FLs to EVEN FLs shall be planned inside the FRA area (might add when required “and before/at relevant FRA significant point”).

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Free Route Airspace: Cross-border FRA

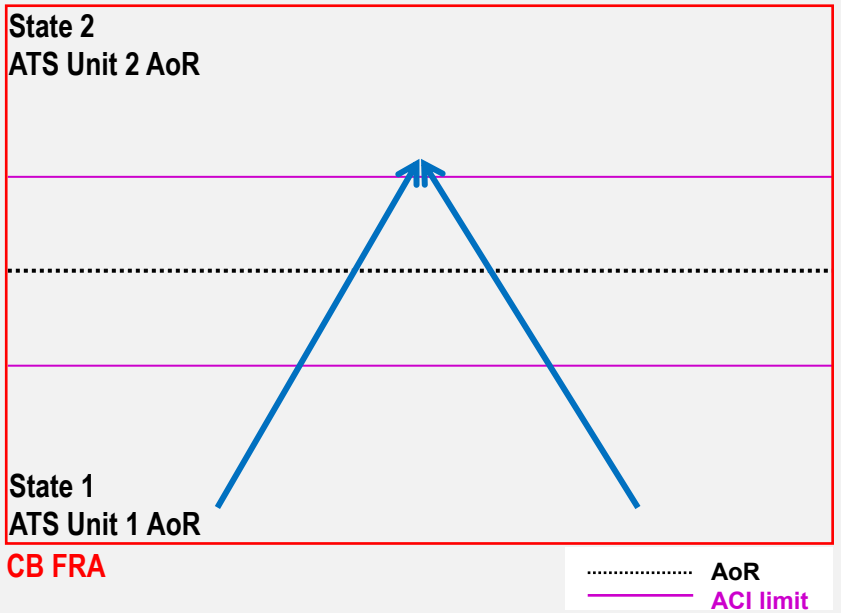
Area of Common Interface (ACI) - General Provisions

- In Europe in accordance with “The Common Format Letter of Agreement between Air Traffic Services Units” (https://www.eurocontrol.int/publication/common-format-letter-agreement-between-air-traffic-services-units), the Area of Common Interest is defined as a volume of airspace as agreed between two ATS Units, extending into the adjacent/subjacent Areas of Responsibility, within which airspace structure/organisation and related activities may have an impact on air traffic coordination procedures.

- ATCOs are required to be familiar with the airspace organisation and possible restrictions existing immediately beyond their immediate area of responsibility. The extent to which ACI will be described is determined at the level a particular Letter of Agreement. The description of the ACI is a mandatory element of a Letter of Agreement and, as a minimum, shall contain all of the cross-border ATS routes or FRA. In addition, ACI should contain the sectorisation of ATCUs concerned, special use areas within ACI and non-published COPs that may be required for system support when performing cross-border FRA operations.

- The transferring ATS Unit shall monitor the traffic and shall propose such exit conditions, that ensure that traffic exiting the transferring ATS Unit AoR remains separated within the receiving ATS Unit AoR. This requires ATCOs to be aware of planned flight trajectories outside the transferring ATS Unit AoR and therefore correct representation of planned flight legs, at least short after the common ATS Unit AoR boundary.

- The purpose of such proposal is to reduce the required coordination and does not imply any responsibility for provision of separation by the transferring ATS Unit within the airspace of the receiving ATS Unit. It is up to the receiving ATS Unit to accept these conditions or counter-propose new conditions based on the traffic situation within its own AoR.



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Free Route Airspace: Cross-border FRA

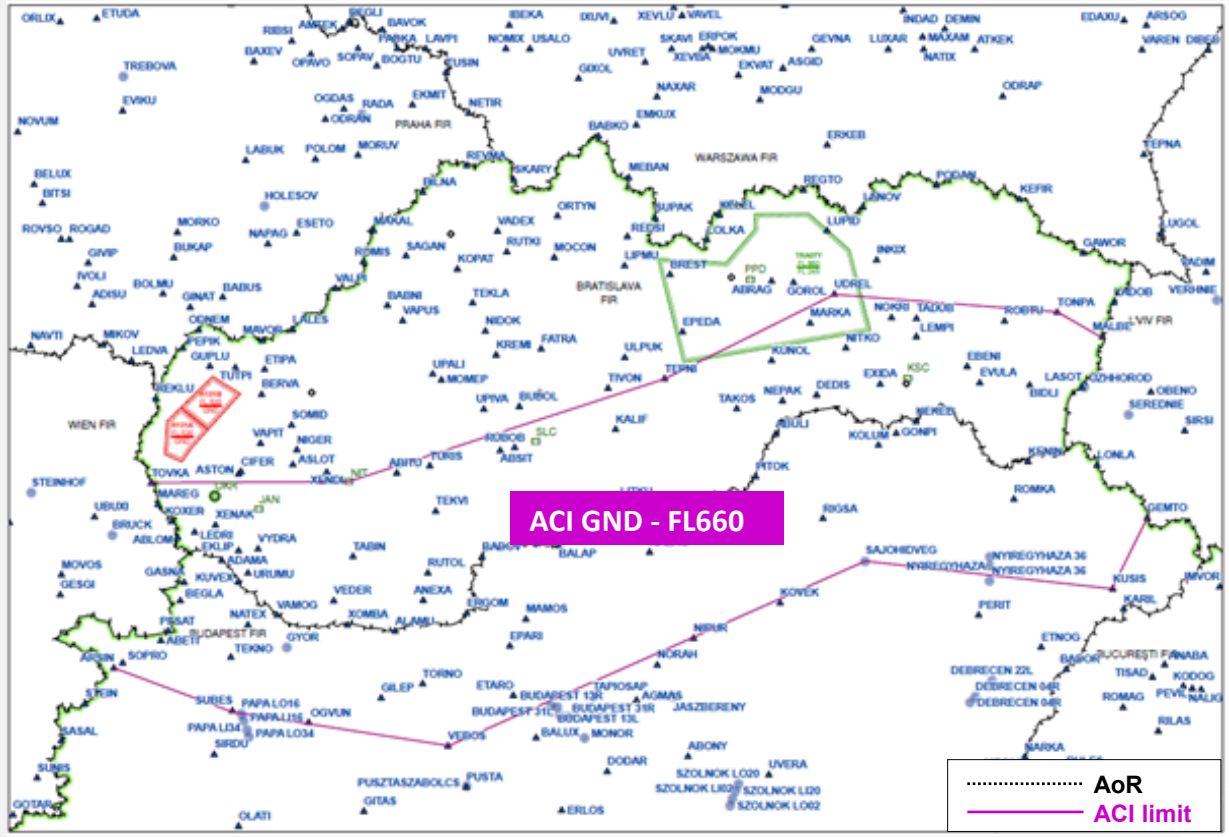
Area of Common Interface (ACI) - European Example

Common Format Letter of Agreement between ATS Units

- **Annex B: Area of Common Interest.**
  - Airspace Structure and Classification within the Area of Common.
  - Interest.
  - Sectorisation.
  - Special Areas within the Area of Common Interest.
  - Non-Published Coordination Points.
  - Appendices with maps describing Sectorisation and Special Areas.

- ***F.3.3 Transfer of Control without systematic use of the bi-directional speech facilities (Silent Transfer of Control)***

  *Transfer of radar control without prior coordination may be affected from **one** lateral basic sector to another, provided that the horizontal distance between the aircraft involved is not less than 10 NM as long as the succeeding ACFT remains within the ACI unless vertical separation exists.*



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Free Route Airspace: Cross-border FRA

Europe 2026 Summary

- Large cross-border FRA areas or FRA operations are implemented (not a full list):
  - **BALTIC FRA** (2 States).
  - **FRASC** - South Caucasus (2 States).
  - **SEE FRA** - South East Europe (6 States).
  - **BOREALIS FRA** (8 States).
  - **SECSI FRA -** South East Common Sky Initiative (8 States).
  - **BALTIC FRA** and **SEE FRA** (10 States).
  - **FRA-IT**, **FRA Malta** and **SECSI FRA** (10 States).
  - **SECSI FRA** and **SEE FRA** (16 States).
- Expanded cross-border FRA operations are expected also in 2027.

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Training

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Free Route Airspace: Training

General Issue

- FRA Concept did not cover any aspects related to FRA implementation training for ATCOs.
- No guidelines developed by EUROCONTROL on FRA training.
- Any ATM training is a State/ANSP responsibility.

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Free Route Airspace: Training
ATCOs Training Plan/Programme (Example*)

THEORETICAL TRAINING (around 4.5h)
Purpose: Course participants should become familiar with the topics and methods of training they will undergo.

- Topic 1: Course Introduction (20 min).
- Topic 2: FRA Concept (30 min).
- Topic 3: Application of the FRA Concept in … FIR/CTA (1 h).
- Topic 4: Specificities in providing ATS within … FIR/CTA after introduction of the FRA Concept (1 h).
- Topic 5: ATS procedures related to FRA (30 min).
- Topic 6: On-duty responsivities of Executive and Planning ATCO during provision of ATS in FRA (40 min).
- Topic 7: Changes in AIP related to FRA (20 min).

PRACTICAL TRAINING (around 4h)
Purpose: Participants in the course need to provide services for overflying, landing and departing aircraft in FRA, including service in the event of special/emergency situations, failures of individual systems/subsystems and generation of warnings from the Safety Nets subsystem.

- Topic 1: Qualification maintenance.
- Topic 2: ATS in FRA in special/emergency situations.

** Example above is a general expression of the ATCOs training plan in Bulgarian ANSP - BULATSA. Training was performed in 2013 and if required more detailed explanation and the entire plan can be provided.*

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Thank you!

tihomir.todorov@eurocontrol.int
nm.rndsg@eurocontrol.int
www.eurocontrol.int

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