



Network Manager
nominated by
the European Commission

FRA Implementation To-Date

Implementation Status

FRA Workshop
EUROCONTROL HQ, Brussels 24 - 25 May 2018

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FRA Implementation

The beginning and implementation ways



▪ **The beginning**

In 2008, EUROCONTROL initiated the coordinated development and implementation of FRA in cooperation with civil and military experts in airspace design, ECAC member States, ANSPs, airspace users, flight planning organisations and relevant international bodies.

▪ **Implementation Ways**

Laterally:

- Flights allowed to flight plan within “specified airspace” between officially published **Entry/eXit** points or via **Intermediate** points.
- “Specified airspace” usually represents the area of responsibility for relevant air traffic control (ATC) unit.

Vertically:

- Above FL335; FL305; FL285; FL245; FL175; FL095, 9500FT, etc.

Time:

- Core night (e.g. as 22:00 - 04:00 UTC Summer time);
- Near night (extended night);
- + Weekend;
- H24.

FRA Implementation

Main Principles

FRA shall be **operationally** driven and produce tangible benefits for all airspace users

Military airspace requirements shall be satisfied

European Airspace Design Methodology will be respected

Common practice and methodology, used by EUROCONTROL/NM, will be applied

FRAL (FRA Lisboa) Portugal



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State Implementation:

- Date: 07 MAY 2009
- Laterally: AoR of Lisboa ACC
- Vertically: FL245 - UNL
- Time: H24
- ATS route network: Withdrawn
- FPL requirements: FRA (I) definition by geographical coordinates - Allowed
- Evolution: No - single FRA area

NMOC Implementation:

- Airspace Volume: ATC Unit Airspace - AUA
- Model: Full FRA

Implementation Issues:

- None

FRA Ireland

Ireland



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State Implementation:

- Date: 17 DEC 2009
- Laterally: AoR of Shannon ACC (Shannon CTA/UTA, NOTA, SOTA)
- Vertically: FL075 - UNL
- Time: H24
- ATS route network: Withdrawn
- FPL requirements: FRA (I) definition by geographical coordinates - Allowed
- Evolution: FRA Ireland FL245 - 17 DEC 2009
FRA Ireland FL075 - 12 OCT 2017

NMOC Implementation:

- Airspace Volume: FRA airspace (Elementary Regulated Airspace - ERAS)
- Model: Full FRA

Implementation Issues:

- FRA not published in AIP in accordance with ERNIP Part 1

FRAC (FRA Chisinau)

Moldova



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State Implementation:

- Date: 01 MAR 2014
- Laterally: AoR of Chisinau ACC
- Vertically: FL095 - FL660
- Time: H24
- ATS route network: Available
- FPL requirements: FRA (I) definition by geographical coordinates - Not Allowed
- Evolution: NFRAC "Core" Night - 01 MAY 2014
NFRAC "Extended" Night - 30 APR 2015
FRAC H24 - 09 NOV 2017

NMOC Implementation:

- Airspace Volume: ATC Unit Airspace - AUA
- Model: FRA with Intermediate points (FRA - IP)

Implementation Issues:

- None

HUFRA (FRA Hungary) Hungary



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State Implementation:

- Date: 05 FEB 2015
- Laterally: AoR of Budapest ACC
- Vertically: 9500FT - FL660
- Time: 05:00 - 23:00 (04:00 - 22:00)
- ATS route network: Withdrawn
- FPL requirements: FRA (I) definition by geographical coordinates - Not Allowed
- Evolution: HUFRA H24 - 05 FEB 2015
Cross-border FRA HUN / ROU Night - 20 AUG 2015 (*)
SEEN FRA Night - 30 MAR 2017 (*)

NMOC Implementation:

- Airspace Volume: ATC Unit Airspace - AUA
- Model: FRA with Intermediate points (FRA - IP)

Implementation Issues:

- None

FRAU (FRA Ukraine) Ukraine



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State Implementation:

- Date: 05 MAR 2015
- Laterally: AoR of Kyiv ACC, L'viv ACC, Dnipropetrovs'k North ACC, Odesa North ACC
- Vertically: FL275 - FL660
- Time: 20:00 - 05:00 (21:00 - 04:00)
- ATS route network: Available
- FPL requirements: FRA (I) definition by geographical coordinates - Not Allowed
- Evolution: No - single FRA areas

NMOC Implementation:

- Airspace Volume: ATC Unit Airspace - AUA
- Model: FRA with Intermediate points (FRA - IP)

Implementation Issues:

- None

EYSFRA (FRA Lithuania)

Lithuania



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State Implementation:

- Date: 10 DEC 2015
- Laterally: AoR of Vilnius ACC
- Vertically: FL095 - FL660
- Time: H24
- ATS route network: Available
- FPL requirements: FRA (I) definition by geographical coordinates - Allowed
- Evolution: EYSFRA FL245 - 10 DEC 2015
EYSFRA FL095 - 08 DEC 2016

NMOC Implementation:

- Airspace Volume: FRA airspace (Elementary Regulated Airspace - ERAS)
- Model: Full FRA

Implementation Issues:

- Improvements in the AIP publication in line with ERNIP Part 1 required

M-FRA (FRA Skopje ACC)

The Former Yugoslav Republic of Macedonia



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State Implementation:

- Date: 23 JUN 2016
- Laterally: AoR of Skopje ACC
- Vertically: FL245 - FL660
- Time: H24
- ATS route network: Withdrawn
- FPL requirements: FRA (I) definition by geographical coordinates - Not Allowed
- Evolution: No - single FRA area

NMOC Implementation:

- Airspace Volume: ATC Unit Airspace - AUA
- Model: FRA with Intermediate points (FRA - IP)

Implementation Issues:

- None

FRA-IT (FRA Italy) Italy



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State Implementation:

- Date: 08 DEC 2016
- Laterally: AoR of Milano ACC, Padova ACC, Brindisi ACC, Roma ACC
- Vertically: FL305 - FL660
- Time: H24
- ATS route network: Withdrawn
- FPL requirements: FRA (I) definition by geographical coordinates - Not Allowed
- Evolution: FRA-IT H24 FL335 - 08 DEC 2016
FRA-IT H24 FL305 - 24 MAY 2018

NMOC Implementation:

- Airspace Volume: ATC Unit Airspace - AUA
- Model: FRA with Intermediate points (FRA - IP)

Implementation Issues:

- Initial improved coordination with NM would have avoided flight plan processing difficulties in vertical connectivity with airports and non-FRA area due to non-existence of ATS route network
- Improved publications

FRA Malta

Malta



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State Implementation:

- Date: 08 DEC 2016
- Laterally: AoR of Malta ACC
- Vertically: FL305 - FL660
- Time: H24
- ATS route network: Available
- FPL requirements: FRA (I) definition by geographical coordinates - Not Allowed
- Evolution: FRA Malta H24 FL335 - 08 DEC 2016
FRA Malta H24 FL305 - 24 MAY 2018

NMOC Implementation:

- Airspace Volume: ATC Unit Airspace - AUA
- Model: FRA with Intermediate points (FRA - IP)

Implementation Issues:

- None

SEEN FRA (South East Europe Night FRA) Bulgaria/Hungary/Romania



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State Implementation:

- Date: 30 MAR 2017
- Laterally: AoR of Budapest ACC, Bucuresti ACC, Sofia ACC
- Vertically: 9500FT / FL105 / FL175 - FL660
- Time: 23:00 - 05:00 (22:00 - 04:00)
- ATS route network: Withdrawn / Available / Available
- FPL requirements: FRA (I) definition by geographical coordinates - Not Allowed
At least one FRA significant point per FIR
- Evolution: FRAS Night (BGR) - 14 NOV 2013
N-FRAB Night (ROU) - 11 DEC 2014
HUFRA H24 (HUN) - 05 FEB 2015
Cross-border FRA HUN / ROU Night - 20 AUG 2015
SEEN FRA Night - 30 MAR 2017

NMOC Implementation:

- Airspace Volume: ATC Unit Airspace - AUA
- Model: FRA with Intermediate points (FRA - IP)

Implementation Issues:

- None
- SEEN FRA - None. Requirement for at least one FRA significant point per FIR managed by EURO restriction (AIP publication) with reference to Bucuresti CTA.

FRALB (FRA Albania)

Albania



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State Implementation:

- Date: 25 APR 2017
- Laterally: AoR of Tirana ACC
- Vertically: FL195 - FL660
- Time: H24
- ATS route network: Withdrawn
- FPL requirements: FRA (I) definition by geographical coordinates - Allowed
- Evolution: FRALB Night - 25 APR 2017
FRALB H24 - 07 DEC 2017

NMOC Implementation:

- Airspace Volume: ATC Unit Airspace - AUA
- Model: Full FRA

Implementation Issues:

- FRALB Night – Initial difficulties in flight plan processing at FRA start/end periods due to suspension of ATS route network during the FRA operational hours
- FRALB H24 – None

FRAG (FRA Georgia)

Georgia



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State Implementation:

- Date: 25 MAY 2017
- Laterally: AoR of Tbilisi ACC
- Vertically: FL255 - FL660
- Time: H24
- ATS route network: Available
- FPL requirements: FRA (I) definition by geographical coordinates - Not Allowed
- Evolution: No - single FRA area

NMOC Implementation:

- Airspace Volume: ATC Unit Airspace - AUA
- Model: FRA with Intermediate points (FRA - IP)

Implementation Issues:

- None

NEFRA (North European FRA)

Denmark/Estonia/Finland/Latvia/Norway/Sweden



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State Implementation:

- Date: 25 MAY 2017
- Laterally: AoR of relevant ACCs
- Vertically: FL095 / FL135 / FL 285 - FL460 / FL660
- Time: H24
- ATS route network: Available
- FPL requirements: FRA (I) definition by geographical coordinates - Allowed
- Evolution: FRAS 1 “Overflights North of 61st parallel” (SWE) - 09 APR 2009
FRAS 2 “All overflights” (SWE) - 06 MAY 2010
FRAS 3 “ARR/DEP North of 61st parallel” (SWE) - 16 DEC 2010
FRAS 4 “All overflights and ARR/DEP” (SWE) - 05 MAY 2011
DK/SE FAB FRA 1 (DNK/SWE) - 17 NOV 2011
DK/SE FAB FRA 2 (DNK/SWE) - 14 NOV 2013
NEFAB FRA (EST/FIN/LVA/NOR) - 12 NOV 2015
NEFRA “Without NOR” - 23 JUN 2016
NEFRA - 25 MAY 2017

NMOC Implementation:

- Airspace Volume: ATC Unit Airspace - AUA
- Model: Full FRA

Implementation Issues:

- Use of FRA (I) points as FRA (E) or FRA (X) or FRA (EX) due to deficiency of “Full FRA” Model
- Flight plan invalidation along the AUA borders inside NEFRA area
- “Balcony effect” issues due to different FRA lower limits

ARMFRA (FRA Armenia)

Armenia



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State Implementation:

- Date: 07 DEC 2017
- Laterally: AoR of Yerevan ACC
- Vertically: FL285 - FL660
- Time: 20:00 - 02:00
- ATS route network: Available
- FPL requirements: FRA (I) definition by geographical coordinates - Not Allowed
- Evolution: No - single FRA area

NMOC Implementation:

- Airspace Volume: ATC Unit Airspace - AUA
- Model: FRA with Intermediate points (FRA - IP)

Implementation Issues:

- None

MUAC FRA (FRA Maastricht UAC)

Belgium/Germany/Luxembourg/Netherlands



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State Implementation:

- Date: 07 DEC 2017
- Laterally: Part of AoR of Maastricht UAC
- Vertically: FL245 - FL660
- Time: 23:00 - 05:00 (22:00 - 04:00)
- ATS route network: Available
- FPL requirements: FRA (I) definition by geographical coordinates - Not Allowed
- Evolution: No - single FRA area

NMOC Implementation:

- Airspace Volume: FRA airspace (Composed Regulated Airspace - CRAS)
- Model: FRA with Intermediate points (FRA - IP)

Implementation Issues:

- None

SECSI FRA (South East Common Sky Initiative)

Austria/Bosnia and Herzegovina/Croatia/Montenegro/Serbia/Slovenia



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State Implementation:

- Date: 01 FEB 2018
- Laterally: AoR of Wien ACC, Sarajevo ACC, Zagreb ACC, Beograd ACC, Ljubljana ACC
- Vertically: Lowest Available Level (LAL) / FL205 - FL660
- Time: H24
- ATS route network: Withdrawn
- FPL requirements: FRA (I) definition by geographical coordinates - Allowed
- Evolution: SEAFRA Night (BIH/HRV/MNE/SRB) - 30 APR 2015
SAXFRA H24 (AUT/SVN) - 10 NOV 2016
SEAFRA H24 (BIH/HRV/MNE/SRB) - 08 DEC 2016
SECSI FRA H24 - 01 FEB 2018

NMOC Implementation:

- Airspace Volume: FRA airspace (Composed Regulated Airspace - CRAS)
- Model: Full FRA

Implementation Issues:

- SEAFRA Night – Initial difficulties in flight plan processing at FRA start/end periods due to suspension of ATS route network during the FRA operational hours
- SAXFRA - Difficulties with LAL definitions; Use of FRA (I) points as FRA (E) or FRA (X) or FRA (EX) due to deficiency of “Full FRA” Model; “Balcony effect” issues due to different LAL limits
- SECSI FRA - Use of FRA (I) points as FRA (E) or FRA (X) or FRA (EX) due to deficiency of “Full FRA” Model

DFS FRA (FRA Germany)

Germany



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State Implementation:

- Date: 01 MAR 2018
- Laterally: FRA cells based on AoR of Karlsruhe UAC, Munchen ACC, Bremen ACC
- Vertically: FL245 / FL285 / FL315 - FL660
- Time: H24 / 22:30 - 04:00 (21:30 - 03:00)
- ATS route network: Depending on FRA cell - Withdrawn / Available
- FPL requirements: FRA (I) definition by geographical coordinates - Not Allowed
- Evolution: No - single FRA cells

NMOC Implementation:

- Airspace Volume: FRA airspace (Composed Regulated Airspace - CRAS)
- Model: FRA with Intermediate points (FRA - IP)

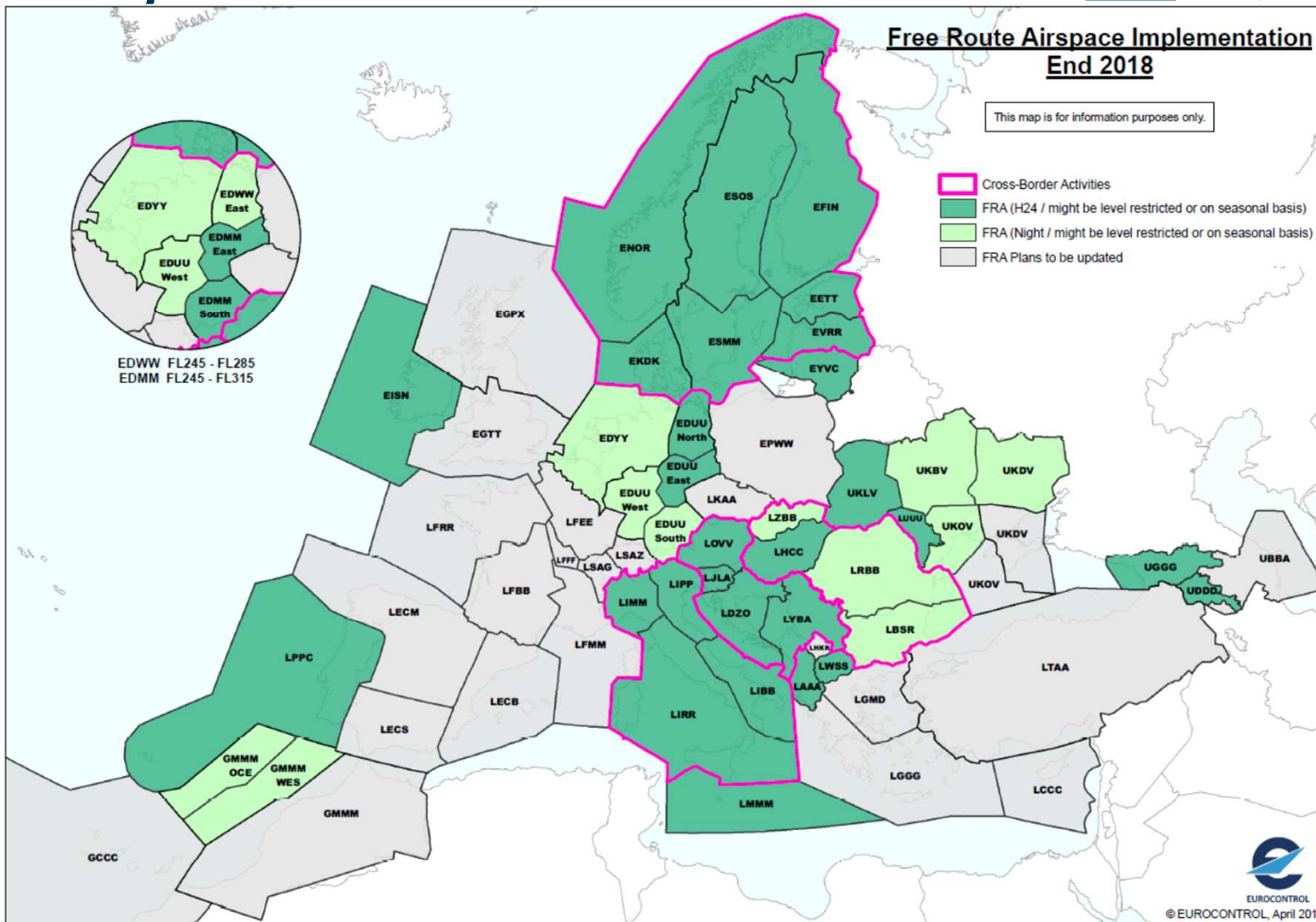
Implementation Issues:

- For DFS FRA implementation purposes NMOC system was updated by establishment of new "FRA airspace" (Elementary or Composed Regulated Airspace - ERAS / CRAS) for proper FRA processing

FRA Implementation - end 2018



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QUESTIONS and COMMENTS