**RAD GENERAL DESCRIPTION**

**(European Route Network Improvement Plan - Part 1, Section 8)**

1. **INTRODUCTION**
   1. The Route Availability Document (RAD) is created based on:
2. COMMISSION REGULATION (EU) No 255/2010 of 25 March 2010 laying down common rules on air traffic flow management, Article 4 - General obligations of Member States, paragraph 4; and
3. COMMISSION IMPLEMENTING REGULATION (EU) No 123/2019 of 24 January 2019 laying down detailed rules for the implementation of air traffic management (ATM) network functions and repealing Commission Regulation (EU) No 677/2011, Annex I - The European Route Network Design (ERND) Function, Part B - Planning principle 5(d).
   1. The RAD is a common reference document containing the policies, procedures and description for route and traffic orientation. It also includes route network and free route airspace utilisation rules and availability.
   2. The RAD is also an Air Traffic Flow and Capacity Management (ATFCM) tool that is designed as a sole-source flight-planning document, which integrates both structural and ATFCM requirements, geographically and vertically.
4. **BASIC PRINCIPLES**
5. The objective of the RAD is to facilitate flight planning, in order to improve ATFCM, while allowing aircraft operators’ flight planning flexibility. It provides a single, fully integrated and co-ordinated routeing scheme. Except where otherwise specified the RAD affects all areas where the Network Manager provides ATFCM services.
6. The RAD enables States/FABs/ANSPs to maximise capacity and reduce complexity by defining restrictions that prevent disruption to the organised system of major traffic flows through congested areas with due regard to Aircraft Operator requirements.
7. The RAD is designed as a part of the Network Manager (NM) ATFCM operation. It is organising the traffic into specific flows to make the best use of available capacity. Whilst, on its own, it will not guarantee the protection of congested ATC sectors during peak periods, it should facilitate more precise application of tactical ATFCM measures.
8. The RAD should also assist the Network Manager in identifying and providing re-routeing options. Global management of the demand will, potentially, lead to an overall reduction of delays. It is important to note that to achieve this, some re-distribution of the traffic may be required through the implementation of Scenarios. This may result in modified traffic/regulations in some areas where, under normal circumstances, they would not be seen.
9. The content of the RAD shall be agreed between the Network Manager and the Operational Stakeholders through an appropriate Cooperative Decision Making (CDM) process.
10. The RAD is subject to continuous review by the Network Manager and the Operational Stakeholders to ensure that the requirements are still valid and take account of any ATC structural or organisational changes that may occur.
11. The RAD is updated each AIRAC cycle following a structured standard process of:
12. Requirement;
13. Validation;
14. Publication by the Network Manager in cooperation/coordination with all Operational Stakeholders.
15. The RAD is only applicable to the IFR part of the Flight Plan.
16. Each State shall ensure that the RAD is compatible with their AIP with regard to the airspace organisation inside the relevant FIR/UIR.
17. The NM is responsible for preparing of a common RAD reference document, collating, coordinating, validating and publishing it, following the CDM process as described in this section.
18. **STRUCTURE**
19. **Document structure**
20. The RAD consists of:
21. General description;
22. **Annex 1 – Area Definition**
23. **Annex 2 – Traffic Flow Rules, which includes three sub-annexes:**
24. **Annex 2A – Flight Level Capping Rules**
25. **Annex 2B – Local and Cross-border Capacity and Structural Rules**
26. **Annex 2C – FUA Traffic Flow Rules**
27. **Annex 3 – Flight Planning Facilitation Options, which includes two sub-annexes:**
28. **Annex 3A – Aerodrome Connectivity Options**
29. **Annex 3B – En-route DCT Options**
30. **Annex 4 – Special Events and Crises**
    1. **General description**

It defines the basic principles, general structure of the RAD, the structure of RAD restrictions, period of validity, application, amendment process, temporary changes, some flight planning issues, routeing scenarios, publication, tactical operations and RAD review process.

* 1. **RAD Annex 1 – Area Definition**

This Annex defines a number of aerodromes included in the RAD described by the following terms:

1. “Group” - defines a number of 3 (three) or more aerodromes that may be subject to the same traffic flow rules and/or flight planning facilitation options. For example a major destination may have a number of minor satellite aerodromes in the vicinity; this constitutes a “Group”.
2. “Area” - defines as a number of aerodromes within the same region and may comprise several “Groups”, or individual aerodromes.

The definition of the Group and/or Area, with the exclusion or inclusion of certain aerodromes is the responsibility of the State/FAB/ANSP within which the Group and/or Area exists; however other States/FABs/ANSPs may use the definition.

To reduce confusion, there can only be one definition of each Group and/or Area.

It is the responsibility of the State/FAB/ANSP to ensure that when corrections are made to any Group and/or Area that these amendments are also applicable to any traffic flow rule and/or flight planning facilitation option using the defined Group and/or Area. The Network Manager will endeavour to notify relevant States/FABs/ANSPs of such changes.

The data expressing Group and/or Area of aerodromes include, but not limited to, identification, definition, referenced State/FAB/ANSP, remarks, etc.

* 1. **RAD Annex 2 – Traffic Flow Rules**

**Definition**

A Traffic Flow Rule is consider any capacity or structural measure imposed to flow of traffic laterally and/or vertically.

**Annex 2A – Flight Level Capping Rules**

This Annex defines FL capping rules imposed by each State/FAB/ANSP and is applied from aerodrome of departure to aerodrome of destination.

The data expressing FL capping rules include, but not limited to, categorisation, identification, relevant aerodrome(s) of departure, relevant aerodrome(s) of destination, airspace structure conditions, vertical conditions, crossing airspace(s), applicability, remarks, etc.

**Annex 2B – Local and Cross-border Capacity and Structural Rules**

The Annex defines traffic flow rules imposed by each States/FABs/ANSPs on specific:

Significant point(s); or

ATS route segment(s); or

Airspace volume(s) (FIR/UIR, AoR of relevant ATC Unit - CTA/UTA, TMA, CTR or individual/collapsed control sector(s) within an ATC unit, Free Route Airspace, area or zone).

The Annex also contains the relevant traffic flow rules included in Letters of Agreement (LoA) between adjacent ATC Units requested to be Hard checked by the Network Manager.

* 1. **Annex 2C – FUA Traffic Flow Rules**

This Annex defines the traffic flow rules imposed by each State/FAB/ANSP in accordance with the Flexible Use of Airspace (FUA) concept.

The data expressing FUA traffic flow rules include, but not limited to, valid information related to relevant area/zone, allocated via EAUP/EUUP, such as options identification(s) - individual, group, description of identifications belonging to relevant option, categorisation, operational goal, specific conditions for the utilisation of FRA Intermediate Point(s), affected ATS routes and/or DCT options when area/zone is activated, remarks, etc.

* 1. **Traffic Flow Rules Categorisation**

Traffic Flow Rules shall be divided into two categories separated by eligible criteria, which are not limited to the lists presented below:

**Capacity (C)**

Any traffic flow rule is eligible for this category, if it:

Prevents sector workload - permanent, seasonal or daily.

Avoids sector complexity through traffic flows:

* + Redistribution, de-conflicting, crossings, merge, convergence, organisation, orientation, segregation (departures from arrivals, departures from overflights, unidirectional flows, etc.).

Contributes to demand/capacity balancing/traffic count or occupancy.

**Structural (S)**

Any traffic flow rule is eligible for this category, if it:

Facilitates:

* + SID/STAR requirements;
  + PBN requirements;
  + Aircraft performance, equipment, type, etc. (e.g. turboprop, jet, A321, …).

Relates to:

* + Structural rules in LoA;
  + Local military requirements;
  + Non-operational requirements.

Overcomes:

* + Inappropriate airspace design;
  + Any system limitations.

Enables CCO/CDO.

Allows correct horizontal and/or vertical sector sequencing/clipping.

Each Traffic Flow Rule in Annex 2 shall be categorised by a single category provided to the Network Manager by States/FABs/ANSPs.

* 1. **RAD Annex 3 – Flight Planning Facilitation Options**

**Definition**

A Flight Planning Facilitation Option is considered any measure allowing connectivity and enhancement in flight planning laterally and/or vertically.

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**Annex 3 A – Aerodrome Connectivity Options**

This Annex defines the flight plan filing options allowed by each State/FAB/ANSP to/from relevant aerodrome. Based on relevant State AIPs AOs shall be informed about the airspace organisation and procedures at/around the aerodromes.

This Annex contains:

1. Aerodrome DCT horizontal limits.
2. Connecting significant points for ARR/DEP to/from aerodromes without designated SIDs/STARs or to/from aerodromes where SIDs/STARs to/from particular directions are not designed.
3. Significant points where SIDs terminate or STARs begin, for aerodromes with designated SIDs/STARs.
4. Additional compulsory FRA Departure (D) / Arrival (A) Connecting Point(s) from/to a certain TMA/ aerodrome and indications on their use for departures / arrivals from / to specific aerodromes.
5. Aerodrome connecting routes or FRA Arrival/Departure connecting routes from/to the en-route phase of a flight, where established. The FRA connecting routes are those established in accordance with FRA Concept and FRA Design procedures.
6. Information for some flight plan filing limitations with regard to last/first SID/STAR points and ATS route network, if required.
7. Information for AOs to comply with SIDs/STARs, if required.
8. The data expressing aerodrome connectivity options include, but not limited to, departure or arrival aerodrome, significant point where a SID terminates, significant point where a STAR begins, SID/STAR ID, significant points allowed for direct connection to relevant aerodrome, aerodrome connecting routes, utilisation/ applicability/identification, operational goal, remarks, etc.

**Annex 3 B – Enroute DCT Options**

1. This Annex defines the en-route DCT (Direct) flight plan filing options imposed allowed or not allowed by each State/FAB or ATC Unit in accordance with provisions of ICAO Doc 4444 PANS-ATM.

This Annex contains:

1. DCT horizontal options inside the AoR of the relevant ATC Unit.
2. Cross-border horizontal DCT options between the AoR of the relevant ATC units.
3. Vertically defined DCTs with availability “No” or “Yes”. Also part of these DCTs might be DCTs defined within the vertical limits of the Free Route Airspace (FRA) to specifically ensure proper vertical connectivity in flight planning with non-FRA area.
4. This Annex should contain, for DCTs with availability YES, all possible remarks concerning the airspace crossed by the allowed DCTs. Based on relevant State AIPs AOs shall be informed for DCTs passing by: Uncontrolled airspace, Danger areas, Prohibited areas, Restricted areas, TSAs, TRAs, CBAs, CTRs, TMAs etc.
5. This Annex should not be considered as an airspace design tool creating a complimentary ATS route network or FRA environment in Europe.
6. Where DCT refers to Free Route Airspace (FRA) the definition of the FRA shall be found in the relevant AIP.
7. Each State shall insure that the DCTs are compatible with the AIP of State concerned with regard to the airspace organisation inside the AoR of the relevant ATC Units.
8. The data expressing en-route DCT options include, but not limited to, first/start and last/end significant point of referenced DCT option, DCT vertical limits/availability/utilisation/identification/direction of cruising levels, local and cross-border DCT horizontal limits and identification, operational goal, referenced ATC Unit name/vertical limits, remarks, etc
   1. **RAD Annex 4 – Special Events and Crises**

This Annex is created and published by the Network Manager, when required for the purpose of special event or during crisis i.e. European/World Sport Events, Olympic Games, large-scale activity, Military activity/exercises, economic forums, etc.

This Annex contains traffic flow rules and/or flight planning facilitation options of a temporary nature, expressed in accordance with structure of Annexes 1, 2 and 3.

1. **Traffic Flow Rules and Flight Planning Facilitation Options Structure**
2. **Compostion**

Each restriction is hierarchical and specific and has been arranged to facilitate parsing of the information into computer systems.

A restriction shall not qualify for inclusion in the RAD unless it has a FLOW ELEMENT attached to it. A FLOW ELEMENT is defined as affecting either:

1. Departures from an Airfield/Group/Area.
2. Arrivals to an Airfield/Group/Area.
3. Traffic flying between Airfields/Groups/Area.
4. Overflying traffic.
5. For the usage of the restricted object (significant point, ATS route segment, defined DCT, airspace volume (ATC Unit, AoR of relevant ATC Unit - CTA/UTA, TMA, CTR or individual control sector/s within an ATC unit), etc.) there are 3 (three) main types of restrictions:
6. Not available for …

Flight planning via restricted object is forbidden for described flow(s).

1. Only available for …

Flight planning via restricted object is allowed exclusively for described flow(s).

1. Compulsory for …

Flight planning via restricted object is the only valid option for described flow(s).

1. For the combination of elements that define the flow of traffic, there are 2 (two) types of restrictions - inclusive and exclusive:
2. INCLUSIVE restriction - traffic must meet ALL of the conditions to be subject to the restriction. The implicit logical operator between the listed conditions is an “AND” - Logical Conjunction**.**

**Fictitious Example**

|  |  |  |
| --- | --- | --- |
| **Airway** | From - To | Restriction |
| UL1 | AAAAA - BBBBB | *Not available or Only available or Compulsory for traffic*  Above FL275  With DEP …  With ARR |

1. EXCLUSIVE restriction - traffic only needs to meet ONE of the numbered sub-conditions to be subject to the restriction. The implicit logical operator between the numbered conditions is an “OR” - Logical Disjunction**.**

**Fictitious Example**

|  |  |  |
| --- | --- | --- |
| **Airway** | From - To | Restriction |
| UL1 | AAAAA - BBBBB | Not available or Only available or Compulsory for traffic   1. ARR ….. 2. Via … Except 3. ARR …… 4. DEP….. 5. Via … with ….. |

1. Usage of combinations and terms in utilization expression

If circumstances allow or if it is required for better expression of the utilization, the 3 (three) usage types can be combined as follows:

1. “Only available” and “Compulsory” might be used in combination, resulting in “Only available and Compulsory”.

**Fictitious Example**

|  |  |  |
| --- | --- | --- |
| **Airway** | From - To | Utilization |
| UL1 | AAAAA - BBBBB | *Only available and Compulsory for traffic*  ARR …. |

1. “Only available …” together with “Not available …”, are combined by using the formula:

“Only available for …

Except …”

**Fictitious Example**

|  |  |  |
| --- | --- | --- |
| **Airway** | From - To | Utilization |
| UL1 | AAAAA - BBBBB | *Only available for traffic*  ARR ….  Except Via… |

1. Combining “Compulsory… ” with “Not available…. ” is NOT POSSIBLE. The TWO independent numbered expressions shall be given within the same box.

**Fictitious Example**

|  |  |  |
| --- | --- | --- |
| **Airway** | From - To | Utilization |
| UL1 | AAAAA - BBBBB | 1. *Compulsory for traffic*   ARR ….  Via…  Above FL245 at…   1. *Not available for traffic* DEP …. |

1. term “Except” to define usage:

The expression “Not available for traffic except …” shall be avoided, “Only available for traffic…” shall be used instead.

**Fictitious Example**

|  |  |  |
| --- | --- | --- |
| **Airway** | From - To | Utilization |
| UL1 | AAAAA - BBBBB | *Not available for traffic*  Except DEP …. |
| It is the same as below which is clearer**.** | | |
| UL1 | AAAAA - BBBBB | *Only available for traffic* DEP …. |

1. The expression “Only available for traffic except” shall be used only if the combination of elements is inclusive.

**Fictitious Example**

|  |  |  |
| --- | --- | --- |
| **Airway** | From - To | Utilization |
| UL1 | AAAAA - BBBBB | *Only available for traffic*  ARR ….  Via…  Above FL245 at…  *Except* DEP …. |

1. If the combination of elements is exclusive, it can lead to two different ways of interpretation. To have the required effect TWO (or more) independent numbered expressions shall be given within the same box.

**Fictitious Example**

|  |  |  |
| --- | --- | --- |
| **Airway** | From - To | Utilization |
| UL1 | AAAAA - BBBBB | *Only available for traffic*   1. *Except* DEP …. 2. ARR ….Via… 3. ARR…Via… |
| Shall be expressed as: | | |
| UL1 | AAAAA - BBBBB | 1. *Only available for traffic* 2. ARR ….Via… 3. ARR… Via… 4. *Not available for traffic*   DEP …. |

1. The word “except” used in expression of utilization can also be used in between brackets to exclude relevant destinations from Area/Group definitions; FIR/UIR; ACC/UAC; etc. used as terminal conditions.

**Fictitious Example**

|  |  |  |
| --- | --- | --- |
| **Airway** | From - To | Utilization |
| UL1 | AAAAA - BBBBB | Only available for traffic  ARR *nnnnnnn* Group (except *nnaa*)  Via… |

1. The 2 (two) combination of elements types might also be used alone or in combination.
2. The term Requested FL (RFL) is used for RAD purposes and refers to the actual requested cruising level as specified in the ICAO flight plan field 15. Where it is used it shall be applied only to the State/FAB/ANSP in question unless otherwise specified. If a restriction specifies FL that is understood to be the flight level measured against IFPS calculated profile and is checked accordingly.
3. Restrictions for the same restricted object (significant point, ATS route segment, defined DCT, airspace volume (ATC Unit, AoR of relevant ATC Unit – CTA/UTA, TMA, CTR or individual control sector/s within an ATC Unit), etc) may be identified by more than one unique identifier. A single restriction should aim at containing all the flow elements that concerns a single operational goal or closely relation operational goals.
4. State/FAB/ANSP restrictions shall be uniquely identified by a 6 (six) digit alpha/numeric identifier which comprises the ICAO nationality letters for location indicators assigned to the State of origin or 2 (two) letter Regional / FAB naming convention prefix code, together with a 4 (four) digit number (LF2016, DU2001, RE2001). Exception from above rules is allowed for DCT identification in **Annex 3B** where a maximum 9 (nine) digit alpha/ numeric identifier containing 5 (five) digit number might be used (LF50001, DU52345, RE54999, DSYX50000) and FUA Restrictions in **Annex 2C**.
5. Cross-border (RAD) restrictions
6. FUA restrictions Identification

The FUA restrictions shall be identified as follows:

* Restricted Airspaces Identifier (RSA ID) as published in State AIP followed by 1 letter R, S, T, U, V, W, X, Y (LBTSA11R); or
* Restricted Airspaces Identifier (RSA ID) as published in State AIP followed by 1 letter Z indicating FBZ existence followed by 1 letter R, S, T, U, V, W, X, Y (LBTSA11ZR).

*Note: In case of more than 8 FUA restrictions per RSA the NM RAD Team in coordination with relevant NRC/s and/or other NMOC Team/s is authorised to use other letters starting with Q on reversed order (Q, P, N, M, etc. with no use of letters “O” and “I”).*

When more than one FUA restriction is used for same RSA, the last letter shall be assigned based on the following rules:

* R - describes the most restrictive limitation/s in RSA availability;
* S - describes the less restrictive limitation/s different from those under letter “R”;
* T, U, V, W, X, Y - same descending logic as for letter “S”.

1. Definition

RAD restrictions, except if otherwise mutually agreed by the States/FABs/ANSPs, shall be categorized as being cross-border when they are referenced to:

1. boundary significant point;
2. ATS route segment or DCT starting from or ending at boundary significant point;
3. cross-border ATS route segment via boundary significant point or cross-border DCT.
4. The referenced significant point shall be located on common boundary between two adjacent airspaces. The concerned airspaces might be FIRs/UIRs or ACCs/UACs or CTAs/UTAs or FABs or combination of them. These airspaces shall not be inside the same FAB, if FAB prefix code is used in identification.
5. Cross-border restrictions might be or might not be part of the relevant LoA. Clear explanation for that shall be given by the appropriate National RAD Coordinator (NRC) in Column “Operational Goal”.
6. For any State/FAB/ANSP restriction, not defined as cross-border and considered that has impact on adjacent State/FAB/ANSP clear explanation for that shall also be given by the appropriate National RAD Coordinator (NRC) in Column “Operational Goal”.
7. Identification

Cross-border restrictions shall be identified with an 8 (eight) digit alpha/numeric identifier as follows:

1. twice ICAO nationality letters for location indicators assigned to the State followed by 4 (four)digit number (EGEB1009); or
2. twice 2 (two) letter Regional / FAB naming convention prefix code followed by 4 (four) digit number (DUBM1001); or
3. ICAO nationality letters for location indicators assigned to the State and 2 (two) letter Regional / FAB naming convention prefix code or vice-versa followed by 4 (four) digit number (LWBM1001, DULY1001).
4. First two letters are identifying the State / FAB / ANSP performing the ATC action, while the second two letters - State / FAB / ANSP affected by that action**.**
5. The Maastricht UAC restrictions are considered as cross-border and shall be identified as follows:
6. inside AoR: ICAO nationality letters for location indicators assigned to the relevant State (EB, ED EH) and 2 (two) letters “YX” followed by 4 (four) digit number (EBYX1009);
7. outside AoR: 2 (two) letters “YX” and ICAO nationality letters for location indicators assigned to the neighbouring State or 2 (two) letter Regional / FAB naming convention prefix code followed by 4 (four) digit number (YXED1001, YXIU1002).
8. Coordination

Cross-border restrictions shall be coordinated between the NRCs of the States/FABs/ANSPs concerned BEFORE submission for inclusion in the RAD.

Any cross-border restriction discovered by the NM RAD Team that has not been coordinated will be removed from the RAD until the coordination process has been completed.

1. Identifiers shall be assigned at RAD document as per tables below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Group ID** | **Origin ID** | **Restriction type** | **Restriction subtype** | **Publication** |
| 1 - 99 | Country code or ATC Units or Regional / FAB ID | DCT | DCT limit inside ATC Units | **Annex 3B** |
| 400 | Country code or ATC Units or Regional / FAB ID | DCT | Cross-border DCT limit | **Annex 3B** |
| 1000 - 1499 | Country code or Regional / FAB ID(s) | Traffic Flow | Cross-border restrictions | **Annex 2B** |
| 2000 - 3999 | Country code or Regional / FAB ID | Traffic Flow | State/FAB/ANSP restrictions | **Annex 2B** |
| 4000 - 4999 | Country code or Regional / FAB ID(s) | Traffic Flow | City pair level capping | **Annex 2A** |
| 5000 - 5499  50000 - 54999 | Country code or Regional / FAB ID(s) | Traffic Flow | Conditions on DCT segments Point-to-Point | **Annex 3B** |
| 5500 - 5999 | Country code or Regional / FAB ID | Traffic Flow | Conditions on DCT segments to/from airfields | **Annex 3A** |
| 6000 - 6999 | Country code or Regional / FAB ID(s) | Traffic Flow | Plain text notes | Whole document |
| 7000 - 7499 | Country code or Regional / FAB ID(s) | Traffic Flow | Military restrictions | Whole document |
| R, S,… Y | RSA ID as per AIP | FUA | FUA | **Annex 2C** |

|  |  |
| --- | --- |
| **Prefix code** | **Region / FAB / ANSP (State / ANSP)** |
| BL | BALTIC FAB (Poland, Lithuania) |
| BM | BLUE MED FAB (Italy, Greece, Cyprus, Malta) |
| CE | FAB CE - FAB CENTRAL EUROPE (Austria, Czech Republic, Croatia, Hungary, Slovakia, Slovenia, Bosnia and Herzegovina) |
| DU | DANUBE FAB (Bulgaria, Romania) |
| DS | DENMARK / SWEDEN FAB (Denmark, Sweden) |
| EC | FABEC - FAB EUROPE CENTRAL  (France, Germany, Switzerland, Belgium, Netherlands, Luxembourg, Maastricht UAC) |
| NE | NORTH EUROPEAN FAB (Estonia, Finland, Latvia, Norway) |
| PE | SOUTH WEST FAB (Spain / Portugal) |
| IU | UK / IRELAND FAB (United Kingdom, Ireland) |
| YX | Maastricht UAC |
| RE | Regional / Pan-European / Axis |

1. Where date/time ranges are used these shall be considered as INCLUSIVE. When time periods are expressed in column RESTRICTION or column UTILIZATION, restrictions are not appliedoutside those published times unless otherwise specified.
2. A restriction shall not qualify for inclusion in the RAD unless it has a FLOW ELEMENT attached to it. A FLOW ELEMENT is defined as affecting either:
3. Departures from an Airfield/Group/Area;
4. Arrivals to an Airfield/Group/Area;
5. Traffic flying between Airfields/Groups/Area;
6. Overflying traffic.
7. **Time periods**
   * 1. The time periods are in Co-ordinated Universal Time (UTC) used by air navigation services and in publications issued by the AIS. The expression “summer period” indicates that part of the year in which “daylight saving time“ is in force. The other part of the year is named the “winter period”. Times applicable during the “summer period” are given in brackets. Daylight saving time is UTC plus 1 hour. The “summer period” in Europe is introduced every year on the last Sunday in MAR at 01:00 UTC and ceases on the last Sunday in OCT at 01:00 UTC. For detailed description in each State the relevant AIP shall be checked.
     2. Details of weekend periods**,** if and when used are included where relevant. The start and end time of the periods relates to the entry to the segment concerned.
     3. Additional periods can be declared as weekends (e.g. Busy Fridays, Nights, Bank Holidays), refer to national publication and relevant annex for the details.
     4. To access data regarding Public Holidays pertinent to each State, refer to GEN 2.1 of the respective AIP.
8. **Definition of limits expressed by FL**
9. The vertical limits shall be expressed as follows (ref. ERNIP Part 1):
10. above the lower limit or minimum en-route altitude and below FL290 - VFR flight levels in accordance with ICAO Annex 2, Appendix 3, page 1 (e.g. FL035 or corresponding altitude… FL285);
11. above FL290 and below FL410 in RVSM areas - number representing the layer/ intermediate level between IFR flight levels ending on ..5 (e.g. FL295 …FL405);
12. above FL410 or above FL290 in non RVSM areas - number representing the layer/ intermediate level between IFR flight levels ending on ..0 (e.g. FL420 …FL500 … ).
13. **Expression of abbreviated words meaning Departure and Destination**
14. In all Appendixes and Pan-European Annex, if and when used and required the expression of abbreviated words meaning Departure and Destination from/to certain airport/s or in/outside FIR/UIR / ACC/UAC / ATC Units shall be used based on ICAO Doc. 8400 - Abbreviations and Codes as follows:
15. DEP - code meaning “Depart” *or* “Departure”;
16. ARR - code meaning “Arrive” *or* “Arrival”.
17. **PERIOD OF VALIDITY**
18. The routeing organisation is permanently effective and applies daily H24, except where otherwise specified. When it can be identified that capacity is surplus to demand the RAD restrictions may be relaxed from the H24 time constraints.
19. The RAD may be suspended, or temporarily relaxed, in cases where it has an abnormally adverse impact upon the traffic flows. This action will always be co-ordinated through the CDM process between the Network Manager and its Operational Stakeholders.
20. **APPLICATION**
21. The RAD will be fully integrated into the Network Manager Operational systems, including IFPS, through the Route Restrictions computer model. Any changes to the Pan-European Annex will automatically be checked provided the relevant notification period has been observed.
22. Changes agreed outside the AIRAC cycle will not be handled automatically by IFPS until such time as the system can be updated at the appropriate AIRAC date.
23. **CDM PROCESS**
24. Amendments to the General Description of the RAD, or the period of validity, shall be co-ordinated between the Network Manager and the Operational Stakeholders via the RAD Management Group (RMG) and approved by NETOPS team. Inclusion or withdrawal of additional Annexes or Appendixes shall follow the same process.
25. The Operational Stakeholders shall provide their request for changes to the NM RAD Team, taking into account agreed publication and implementation dates, in accordance with AIRAC procedures and Handbook Supplement for the Provision of Environment data.
26. All new RAD restrictions, amendments and changes will be checked by the NM RAD Team versus airspace organisation in the area. Any possible discrepancies will be notified to the States/FABs/ANSPs concerned as soon as possible.
27. Suspension of NAVAIDS, and/or replacement by temporary mobile units will be promulgated via the Pan-European Annex. States should ensure that the NM RAD Team is notified of these changes.
28. The final content of any amendment to the RAD shall be positively agreed between the NM RAD Team and State/FAB/ANSP concerned. This agreement shall be reached in a form of e-mail confirmation, meeting report/minutes or any other means reflecting final mutual agreement for change. These agreements will be properly recorded by the Network Manager.
29. Amendments will be published by the NM RAD Team as follows:
    1. 34 days in advance of the relevant AIRAC cycle;
    2. Until the establishment of an automated RAD process amendments will be highlighted in **RED**/**BLUE** **BOLD** and will be annotated by abbreviationNEW/AMD;
    3. Restrictions that have been removed will be annotated abbreviation DEL;
    4. “Last minute” changes:

* are changes required due to exceptional circumstances and/or only when they have a significant impact on operational requirements;
* shall be:
  + - announced by the NRCs as ordinary amended or new RAD requirements;
    - exceptionally annotated as such;
    - sent via e-mail to the NM RAD Team in accordance with ERNIP Part 4;
* will be promulgated on the NM NOP portal via the “Increment File”.
* will be announced by the NM RAD Team via e-mail to the Operational Stakeholders similarly as RAD distribution.

1. **TEMPORARY CHANGES**
2. Temporary changes due to exceptional circumstances (e.g. major equipment failure, industrial action or large-scale military exercises) may necessitate the suspension of part of the RAD for specified periods, and additional routeings will be activated where possible following co-ordination with the relevant FMPs and AOs.
3. Temporary changes will be published by AIM giving details of the traffic affected, the period of activation and the corresponding routeings.
4. **FLIGHT PLANNING**
5. The RAD defines restrictions on routes/points, through specified areas during the published period of validity. Aircraft operators planning flights through these areas must flight-plan in accordance with these route restrictions, taking into account any change of validity.
6. When a route is restricted between two points it must be understood that all segments, between the recorded points, are included in the restriction.
7. An operator who has submitted a flight plan for a route and wishes to change to another route must either; send a CHG (Change) message giving the new route or; cancel the existing flight plan and submit a new flight plan following the replacement flight plan procedure. This applies equally to re-routeing proposed by the Network Manager and to changes made at the initiative of the AO.
8. When filing flight plans, AOs must comply with any flight level limitation published in the RAD. AOs shall be aware that when receiving the confirmed FPLs the FLs used are NOT checked against the Flight Level Orientation Scheme (FLOS) applied by the State concerned.
9. AOs shall also be aware that when receiving the confirmed FPLs using DCT options from Appendixes 4 and 5 these flight plans are NOT checked against Minimum Sector Altitudes (MSA) or Minimum En-route Altitudes (MEA) published by the States in the relevant parts of their AIPs. In accordance with provisions of ICAO Doc 4444 - ATM (PANS-ATM) AOs remains responsible with the checking of MSA and/or MEA.

*Note: Refer to IFPS User’s Manual for full details.*

1. **ROUTEING SCENARIOS**
2. For each area expected to be critical, a number of flows could be identified, for which other routeings are available, that follow the general scheme, but avoid the critical area. These are known as routeing scenarios.
3. When, during the planning phase, the Network Manager identifies the risk of major imbalance between demand and capacity, it may be decided, after agreement with all FMPs concerned, to make part (or all) of the alternative routeings mandatory for the period expected to be critical.
4. Scenarios may be identified which require the temporary suspension of route restrictions within the RAD for a particular traffic flow.
5. The list of available scenarios is promulgated on the NMNOP portal.
6. **PUBLICATION**
7. The RAD is created in accordance with ICAO publication procedures and is published on the NM NOP website, 34 days in advance prior to the relevant AIRAC cycle.
8. Each State may promulgate the RAD by any one of the following methods:
9. Publish the RAD in its entirety as an AIP Supplement (the onus is on the State to ensure that the RAD is kept up to date);
10. Publish relevant Appendices and State/FAB/ANSP part of the Pan-European Annex of the RAD as an AIP Supplement;
11. Publish reference to the NM NOP website in the AIP.

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| **DAY** | **PROCESS** | **ACTION** |
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| **D-63** | Notification to States**/**FABs/ANSPs "One week to Cut-off". | NM |
|  |  |  |
| **D-56** | Finalisation of States**/**FABs/ANSPs requirements. | States**/**FABs/ANSPs |
| Cut-off date. States**/**FABs/ANSPs provide amendments to the NM. |
| Three weeks to compile the RAD and to resolve errors/conflicts. | NM |
|  |  |  |
| **D-34** | Publication. | NM |
| Two weeks to assess impact of new restrictions. |
|  |  |  |
| **D-14** | Results of impact assessment of new restrictions. | NM |
| Changes/amendments to be promulgated via the “Increment File”on the NM NOP Portal. |
|  |  |  |
| **D-10** | Freeze of ENVironment tape for AIRAC. | NM |

1. Where applicable, publication of route availability in national aeronautical information publications shall be fully consistent with this common reference document.
2. **TACTICAL OPERATIONS**
3. The Network Manager in conjunction with the FMPs will monitor the actual situation during the day of operation to ensure the RAD is achieving the balance of traffic required.
4. During periods of unanticipated high demand the Network Manager may co-ordinate an extension to the period of validity of routeing scenarios with the relevant FMPs. This will be published by AIM, giving at least three hours notice.
5. During periods of significant improvement to the ATFCM situation, the Network Manager will co-ordinate with the relevant FMP, a reduction in the period of validity of scenarios. This will be published by AIM.
6. If, due to a major unexpected event, there is a significant disturbance to traffic patterns, after co-ordination with the relevant parties (FMPs and AO’s), the Network Manager may suspend part of the RAD and provide alternative routeings.
7. With effect from AIRAC -6 day (D -6), implemented RAD Data is considered as Operational. Management of such changes to the RAD is the responsibility of the NRC of the originating State
8. If, after AIRAC -6 day (D -6), a State discovers an error or omission to the RAD that is SAFETY RELATED, then it is the responsibility of the NRC to contact the NM RAD Team to request a live update of the NM CACD in order to correct the problem. The safety related RAD error or omission shall be exceptionally annotated as such and shall be sent via e-mail to the NM RAD Team in accordance with ERNIP Part 4. The NM RAD Team will only act after consultation with the NRC or his designated Deputy. Following the consultation process the NM RAD Team shall create the necessary DMR and the change shall be promulgated via the “Increment File”. During the weekend, the ACC shall contact the Current Operations Manager and the matter shall be handled MANually. A second alternative is to request that the restriction in question be DISABLED in ENVironment so that there will not be a check at IFPS.
9. **RAD REVIEW**
10. The NM RAD Team is responsible for coordination of the entire RAD review process.
11. The RAD review is required to ensure that all data contained within the RAD is current and correct. The review is also the opportunity to ensure that any modifications, within the incremental update to the Network Manager Operational systems, are reflected in the construction of RAD restrictions.
12. A RAD review for each and every Annex/Appendix, including cross-border restrictions, shall be completed annually during designated meetings and as a rolling process by the NM RAD Team. The existing South West, South East, North West, North East or Ski - Airspace or ATFCM meetings could be used for RAD review purposes. Additional ad-hoc RAD review meetings could be organised in case of any urgent issues to be discussed.
13. The outcome of each RAD review shall be properly documented through the report or minutes. The reports/minutes will be stored by the NM RAD Team.
14. Each State**/**FAB/ANSP shall convene an internal RAD review with the airlines concerned. Such an internal review shall be announced to the NM RAD Team and shall cover as minimum the validity of all restrictions; the timeliness of restrictions; the completeness of all restrictions. The NM RAD Team may offer items to be covered. The results of such an internal review shall be passed to the NM RAD Team as soon as possible.
15. For each cross-border RAD review the NM RAD Team shall perform a RAD impact assessment on each relevant restriction. This analysis shall be carried out together with the Operational Stakeholders.
16. The NM RAD Team shall maintain a List of proposed/requested by the AOs RAD restrictions for consideration by the States/FABs/ANSPs. The List shall contain the restrictions traceability and shall record the proposal’s status as change/removal/update till RAD restriction resolution or deletion.