



Agenda Item 5: Other business

**THE IMPORTANCE OF TIMELY PUBLICATION OF AERONAUTICAL INFORMATION
COMPLYING WITH THE AERONAUTICAL INFORMATION REGULATION AND
CONTROL (AIRAC) SCHEDULE**

(Presented by IATA)

SUMMARY	
This paper highlights the importance of timely publication of aeronautical information in compliance with the AIRAC schedule to support the industry wide updating of navigation databases, charts and other resources critical to safe air operations. Changes must be made in a timely manner to ensure current, accurate and consistent information is available to all aviation stakeholders including flight crews, air traffic controllers and flight operations personnel.	
References: <ul style="list-style-type: none">• ICAO Annex 15	
ICAO Strategic Objectives:	<i>A - Safety</i> <i>C - Environmental Protection</i>

1 Background

1.1 The best information has little value if it is not available to users when they need it. Aircraft operators flying RNAV procedures and airways are more dependent than ever before on having good aeronautical information, on time. With increasing airspace complexity, traffic density, volume of aeronautical information change and the use of computer-based navigation and display systems, it is more important than ever for States to publish aeronautical information with sufficient lead time for data bases and charts to be updated, distributed to users, and loaded in aircraft and ground-based systems before the effective date.

1.2 The introduction to ICAO Annex 15, *Aeronautical Information Services* says, “The object of the aeronautical information service is to ensure the flow of information/data necessary for the safety, regularity and efficiency of international air navigation.” To support that objective ICAO established Aeronautical Information Regulation and Control (AIRAC) in Annex 15, Chapter 6 to provide for the advanced publication of aeronautical information on a series of common effective dates. The *Aeronautical Information Services Manual* (Doc 8126) provides further guidance material on AIRAC.

2 Discussion

Today's Aircraft Operations

2.1 Most aircraft operating today have RNAV capabilities. They fly from computed positions to points in space defined by latitudes and longitudes in databases. No longer must they track radio signals to and from NAVAIDs at fixed positions on the ground. They can precisely fly optimum trajectories independent of NAVAIDs placement. The flexibility, accuracy and reliability of RNAV enable improvements to safety, efficiency, capacity and environmental concerns. RNAV depends on accurate and timely data. Advanced avionics systems are only as good as the data fed into them.

2.2 Conventional navigation based on VORs, NDBs and other ground-based NAVAIDs is generally more precise and reliable when conducted using FMS or GNSS with navigation solutions based on database references. Accurate and timely aeronautical information is very important to conventional navigation, as well as RNAV.

Annex 15 Standards and Recommended Practices (SARPs)

2.3 The Standard in Annex 15, 6.1.1 states that certain aeronautical information “shall be distributed under the regulated System (AIRAC), i.e. basing establishment, withdrawal, or significant changes upon a series of common effective dates at intervals of 28 days...” The schedule of effective dates is in the *Aeronautical Information Services Manual* (Doc 8126) Table 2-1.

2.4 The Standard in Annex 15, 6.1.4 states, “Implementation dates other than AIRAC effective dates should not be used for pre-planned operationally significant changes requiring cartographic work and/or for updating navigation database.”

2.5 The Standard in Annex 15, 6.2.1 states, “In all instances, information provided under the AIRAC system shall be published in **paper copy** form and shall be distributed by the AIS unit **at least 42 days in advance of the effective date...**”

2.6 Regarding the “Provision of **information in electronic form**,” the Standard in Annex 15, 6.3.2 states that information, “shall be distributed/made available by the AIS unit so as to reach recipients at least 28 days in advance of the AIRAC Effective date.”

2.7 Annex 15, 6.2.2 recommends that, “Whenever **major changes** are planned and where advance notice is desirable and practicable, information published in **paper copy form** should be distributed by the AIS unit **at least 56 days in advance of the effective date** should be used.”

2.8 Annex 15, 6.3.3 further recommends that, “Whenever **major changes** are planned and where advance notice is desirable and practicable, information provided in **electronic form** should be distributed/made available **at least 56 days in advance of the effective date.**”

2.9 It should generally be considered that a “**major change**” is one that has a greater than normal volume, scope or complexity, and that will require more than normal time and resources to update databases and charts. Major changes may also require advanced distribution to allow for end user planning and operational adjustments. Recognizing this, it is extremely important that aeronautical information reaches the end user by the effective date and that the distribution and availability of changes as early as possible is very desirable to the downstream service providers and users. Amendment 36 to Annex 15 provided additional information on what constitutes a major change in Appendix 4, Part 3, as follows:

PART 3

- 3. The establishment of, and premeditated major changes to:
 - 3.1 New aerodromes for international IFR operations.
 - 3.2 New runways for IFR operations at international aerodromes.
 - 3.3 Design and structure of the air traffic services route network.
 - 3.4 Design and structure of a set of terminal procedures (including change of procedure bearings due to magnetic variation change).
 - 3.5 Circumstances listed in Part 1 if the entire State or any significant portion thereof is affected or if cross-border coordination is required.

2.10 Doc 8126 – Aeronautical Information Services Manual provides a diagram showing the aeronautical data activities leading up to the AIRAC effective date:

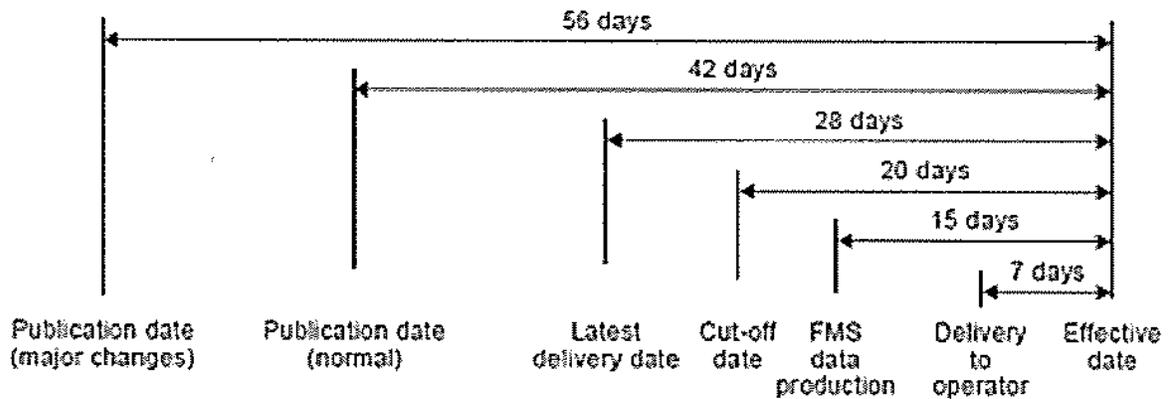


Figure 1: Processing Cycle for Airborne Navigation Databases

Consequences of AIRAC non-compliance

2.11 Late changes and major changes published without sufficient lead time put strains on downstream chart and database resources, maintenance processes, production processes and quality systems.

2.12 Databases and charts may not be updated by the effective date forcing aircraft operators to fly without updated information putting strains on flight crews, air traffic controllers and operations personnel.

2.13 Late postponements and cancellations may mean updated databases and charts are already released and in the field, leaving flight crews without the previous information that remains in effect.

3 Conclusion

3.1 It is critical to flight safety and efficiency for aeronautical information to be published with sufficient lead time for it to be processed, reach the users and be loaded into aircraft and ground based navigation and operations systems.

3.2 If aeronautical information cannot be published in compliance with the AIRAC schedule, the industry is best served if it is delayed to a later effective date to allow for timely distribution to users.

3.3 Postponements and cancelations 20 days or less prior to the effective date should be avoided, as the data and charts are finalized and the production processes do not allow for restoration of the previous data at that point in the process. Revisions will not be available to users until the next AIRAC effective date, which may be more than six weeks in the future

4 Suggested action:

4.1 The Meeting is invited to:

- a) Recognize the critical importance of timely and accurate information to the safety, regularity and efficiency of air transportation.
- b) Encourage States to publish aeronautical information in accordance with AIRAC.
- c) Encourage States to publish major aeronautical changes fifty-six (56) days or more in advance of the AIRAC effective dates whenever possible.