

**INTERNATIONAL CIVIL AVIATION ORGANIZATION
ASIA AND PACIFIC OFFICE**



**REPORT OF THE FIFTH MEETING OF
ICAO AERONAUTICAL INFORMATION SERVICES–AERONAUTICAL
INFORMATION MANAGEMENT IMPLEMENTATION TASK FORCE
(AAITF/5)**

BEIJING, CHINA, 25 – 26 JUNE 2010

The views expressed in this report should be taken as those of the Task Force
and not of ICAO

Adopted by the Task Force
and published by ICAO Asia and Pacific Office

TABLE OF CONTENTS

PART I - HISTORY OF THE MEETING

	Page
Introduction	i
Officer and Secretariat	i
Language and Documentation	i
Opening of the Meeting	i

PART II - REPORT ON AGENDA ITEMS

Agenda Item 1: Adoption of Agenda.....	1
Agenda Item 2: Review of AAITF/4	1
Agenda Item 3: Review of AAITF Terms of Reference.....	2
Agenda Item 4: Review of APANPIRG/20	3
Agenda Item 5: Review of Recent ICAO Developments and Deliberations in Regard to the Work of the Aeronautical Information Services-Aeronautical Information Management Study Group (AIS-AIMSG).....	3
Agenda Item 6: Review of Air Navigation Deficiencies in the AIS Field & Proposed Action..	8
Agenda Item 7: Outcomes of Global AIM Congress - Beijing	8
Agenda Item 8: Latest Developments in AIS Fields	8
Agenda Item 9: Any Other Business	10
Agenda Item 10: Review of Task List.....	14
Agenda Item 11: Date and Venue for the Next Meeting	14

AAITF/5
Table of Contents

APPENDICES

Appendix A	List of Participants	A-1
Appendix B	List of Working and Information Papers	B-1
Appendix C	Revised Draft TOR	C-1
Appendix D:	Summary and Recommendations from the AIM Congress	D-1
Appendix E:	AIS Regulation in Australia.....	E-1
Appendix F:	AIMNet Collaboration	F-1
Appendix G:	Draft Chapter 3 of the AIS guidance material	G-1
Appendix H:	Airservices Australia Mercury Project.....	H-1
Appendix I:	Task List	I-1

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PART I - HISTORY OF THE MEETING

1. Introduction

1.1 The Fifth Meeting of ICAO AIS-AIM Implementation Task Force (AAITF/5) was held at Beijing International Convention Centre in Beijing, China on 25 and 26 June 2010.

1.2 The meeting was attended by 56 experts from Australia, Bangladesh, China, Hong Kong China, Macao China, Indonesia, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand, United States, Viet Nam, Eurocontrol, IATA, IFALPA and Jeppesen. The list of participants is attached at **Appendix A** to this Report.

2. Officer and Secretariat

2.1 Mr. Peter Hobson, AIS Manager, Airservices Australia continued as the Chairperson of the Task Force. Mr. Kyotaro Harano, Regional Officer Air Traffic Management (ATM), ICAO Asia and Pacific Office, was the Secretary for the meeting.

3. Language and Documentation

3.1 All discussions were conducted in English. Documentation was issued in English with a total of five working papers and twelve information papers considered by the meeting. The list of working and information papers is attached at **Appendix B** to this Report.

4. Opening of the Meeting

4.1 Mr. Peter Hobson welcomed all delegates. He thanked the Air Traffic Management Bureau (ATMB) of the Civil Aviation Administration of China (CAAC) and ICAO Asia and Pacific Office for providing the conference facilities and the secretarial work, and all the delegates for their contributions. He noted that the concluding remarks from the preceding AIM Congress, the congress would not be continued in that form and ICAO would be reliant upon “volunteer” workforce at the ICAO Headquarters, the Regional Office, the regional ATM/AIS/SAR Sub-Group (ATM/AIS/SAR/SG) and the Task Force. In the future, the work dispensed to their respective groups will likely be merged as to be more supportive of the AIS-AIM Study Group (AIS-AIM) at the ICAO headquarters. Consequently, as the next two days progress, he requested the participants to be ready to contemplate and contribute to the Task Force Terms of Reference (TOR) and purpose to see if the Task Force should continue.

4.2 Finally, Mr. Hobson thanked all the participants for working over the weekend. This was a very short time for the conduct of a Task Force meeting and consequently the meeting will be moderated to ensure that the agenda is covered and worked through completely. Clearly, some of the items under discussion will be moved through at very fast pace and some short breaks will be necessary.

4.3 On behalf of Mr. Mokhtar A. Awan, Regional Director, ICAO Asia and Pacific Office, Mr. Kyotaro Harano welcomed all the delegates to AAITF/5. He expressed his appreciation to ATMB, China for hosting that significant meeting over the weekend immediately after the AIM Congress. China should be congratulated for having very successfully hosted the Congress for preceding three days. He thanked all the delegates for extending their stay in Beijing to accommodate the meeting while he acknowledged that for some, the scheduling of AAITF over a weekend was abnormal.

4.4 Mr. Harano highlighted the importance of AIS in the context of the CNS/ATM systems. The ICAO headquarters was envisaging the transition from legacy AIS to the provision and management of information that was data centric, as opposed to product centric, within a broader concept of AIM in order to satisfy the requirements arising from the ICAO Global ATM Operational Concept. Accordingly, from the last meeting, another “A” (AIM) was added to the name of the Task Force to be AAITF (AIS-AIM Implementation Task Force). This reflects the global transition from product-based AIS to data-centric AIM, and the 18th meeting of the ATM/AIS/SAR Sub-group (ATM/AIS/SAR/SG/18, June 2008) approved the change of the name together with the revised TOR.

PART II - REPORT ON AGENDA ITEMS

Agenda Item 1: Adoption of Agenda

1.1 The Secretariat proposed agenda which was subsequently agreed and adopted by the meeting.

Agenda Item 2: Review of AAITF/4

2.1 Australia presented the meeting a summary of activities of ICAO electronic Terrain and Obstacle Data (eTOD) Special Implementation Project (SIP) and AAITF/4, which were held at the ANA Crowne Plaza Hotel in Narita, Japan from 23 to 24 and 25 to 27 February 2009, respectively, as reported to ATM/AIS/SAR/SG/19 (June 2009, Bangkok) as follows:

eTOD SIP

- Item 1: History of eTOD; presented by Mr. Ken Reid, Eurocontrol
- Item 2: eTOD Working Group; presented by Mr. Ken Reid, Eurocontrol
- Item 3: eTOD Working Group Findings; presented by Mr. Ken Reid, Eurocontrol
- Item 4: The eTOD Requirements – General to all areas; Area 1, Area 2, Area 3 & Area 4; Presented by Roy Langridge of the Eurocontrol eTOD Working Group.
- Item 5: Survey Technologies and GIS Software; Presented by Japan
- Item 6: eTOD in Japan; Presented by Japan
- Item 7: eTOD in China; Presented by China
- Item 8: eTOD in Hong Kong; Presented by Hong Kong, China
- Item 9: eTOD in NZ & Australia; Presented by Australia
- Item 10: eTOD in USA and Airspace Management of Obstructions; Presented by USA
- Item 11: eTOD in Europe; Presented by Eurocontrol
- Item 12: eTOD Institutional Issues; Presented by Eurocontrol
- Item 13: eTOD Data Quality Mitigations; Presented by Eurocontrol
- Item 14: AIS Automation in Japan; Presented by Japan
- Item 15: AIS Automation Philippines; Presented by Philippines

2.2 The meeting recalled that there was a varying degree within Asia/Pacific Region of implementation status and readiness for the existing Annex 15 – *Aeronautical Information Services*, Chapter 10 eTOD Standard and Recommended Practices (SARPS). Japan and ICAO were thanked by the SIP participants for that opportunity to exchange learning a potential solutions and technologies supporting the eTOD objectives.

AAITF/4

Agenda Item 1:	Adoption of Agenda
Agenda Item 2:	Review of AITF/3
Agenda Item 3:	Review of AAITF Terms of Reference
Agenda Item 4:	Review of APANPIRG/19
Agenda Item 5:	Review of Recent ICAO Developments and Deliberations in regard to the work of the Aeronautical Information Services – Aeronautical Information Management Study Group (AIS-AIMSG)
Agenda Item 6:	Review of Air Navigation Deficiencies in the AIS Field & Proposed Action
Agenda Item 7:	Outcomes of Global AIS Congress – Singapore
Agenda Item 8:	Latest Developments in AIS Fields
Agenda Item 9:	Any Other Business
	- AIRAC effective time difference in the regions; - Centralized AIS database for the regions; and - AIS-AIM and AIS Automation in Australia.
Agenda Item 10:	Review of Task List
Agenda Item 11:	Date and Venue for the Next Meeting

Agenda Item 3: Review of AAITF Terms of Reference

3.1 The meeting reviewed the TOR of the Task Force. The TOR content was discussed and the meeting once agreed to it without any amendment. Later in the meeting, however, a suggestion to add an item to the TOR was presented as follows:

“consider:

...

- d) the regional performance framework form-based implementation plan and report upon it to the Sub-group”

3.2 Consequently, the meeting agreed to the new TOR as in **Appendix C** to this report. The Secretariat was tasked to report to the 20th Meeting of the ATM/AIS/SAR/SG (ATM/AIS/SAR/SG/20) in July 2010 for their adoption.

Agenda Item 4: Review of APANPIRG/20

Review of the Report of APANPIRG/20, and Follow-up on Decisions and Conclusions Relevant to the AIS Field

4.1 The meeting noted the outcomes of the 20th Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/20, September 2009), and ATM/AIS/SAR/SG/19 (June 2009, Bangkok). Full details of both meetings are available on the ICAO Regional Office website.

4.2 A detailed discussion took place regarding the Performance Framework Form (PFF) and its application. The Secretariat advised the meeting that ATM/AIS/SAR/SG/19 developed the draft PFF and the subsequent APANPIRG/20 adopted the PFF for AAITF, however, the Secretariat wished to draw to the attention of the Task Force for their review particularly of the tasks and timeframes to verify and/or elaborate.

4.3 The Chairman accepted a task to complete the PFF in sufficient time for its presentation at ATM/AIS/SAR/SG/20 in July. Further a task has been added to the AAITF Task List to provide clear representation and detail more suited to the monitoring of AIM performance in the region over time (especially in relation to the sub-tasks that will be necessary).

Agenda Item 5: Review of Recent ICAO Developments and Deliberations in Regard to the Work of the Aeronautical Information Services-Aeronautical Information Management Study Group (AIS-AIMSG)

Report on AIS-AIMSG/2

5.1 China reported the outcomes of the second meeting of AIS-AIMSG (AIS-AIMSG/2, November 2009) which was held at the ICAO headquarters in Montréal, Canada. The full Summary of Discussions and the supporting study notes (SNs), information papers (IPs) and presentations are under the AIS-AIMSG web page for meetings:

<http://www2.icao.int/en/ais-aimsg/Lists/Meetings/AllItems.aspx>

Actions Concerning Annex 15

Action 2/5: Including AIM in Annex 15 and Relevant Guidance Material (Amendments 37 and 38)

5.2 An incremental approach to the transition to AIM was inevitable. The group realized that in the future data-driven environment, users would have the option to specify the data items needed and download them to their applications. This option would also be available for deriving paper products as long as these were required.

5.3 The Secretary informed the group that the objective of the MET/AIM Divisional Meeting planned for 2014 would be to present a restructured Annex 15. The restructuring of an Annex was considered to have significant implications on all Contracting States and that an international consensus should be sought. It could not be included in a routine amendment. Amendment 37, scheduled for applicability in 2013, would need also to include AIM elements. Some key elements may be included as Recommended Practices which may be upgraded to Standards in a subsequent amendment after consideration by the divisional meeting. It was further considered that the need to include elements of AIM in Annex 15 (Amendment 37) would form a parallel activity to the actual

restructuring of the Annex (Amendment 38). Therefore, the AIS-AIMSG Ad-hoc Group in considering inclusion of AIM in Annex 15 would:

- a) continue to consider the restructuring of Annex 15;
- b) develop digital AIM services guidance material;
- c) take into account additional input outlined during the meeting (SoD), and
- d) submit draft proposals to AIS-AIMSG/3.

Action 2/8: Proposed Note in Annex 15 Related to Provision of Aeronautical Data using Data Link (Amendment 37)

5.4 The group reviewed a draft note for inclusion in Amendment 37 to Annex 15 related to supplying aeronautical data directly to flight crews via data link. It was suggested that text supporting the use of data link be included in Chapter 6 of Annex 15 which dealt with the AIRAC system.

5.5 But it was suggested that it would be too soon to introduce a Standard for data link into Annex 15, considering the capacity of some States to collect the required data, equipment of current fleets, available bandwidth and so on. However, the group considered a note in Annex 15 would serve to create awareness about it in the AIM community.

5.6 It was noted that provision of aeronautical data via data link was also being considered by groups concerned with the provision of MET information. It was agreed that the note required refining, and that a provision may also need to be drafted for inclusion in Annex 3.

Actions Concerning Doc.8126

Action 2/7: Changes to Amendment No. 2 to Doc 8126

5.7 The changes focused on AIRAC late postponement; harmonization with Operating Procedures for AIS Dynamic Data (OPADD) 3.0; guidance on AIRAC adherence; update of NOTAM Selection Criteria; Annex 15 Amendments 34, 35 & 36 consequential changes, etc. The group also noted that one of the current difficulties of the NOTAM format was that it allowed for flight level (FL) to be used in item Q) and another unit of measurement to be used in Items F) and G). The group also noted the consequential changes to the *Aeronautical Information Manual* (Doc 8126) resulting from amendments to Annex 15, and questioned the relevance and clarity of changing from channel to frequency for navaid information in the AIP. Also, the addition of information on low visibility procedure in the section AD 2.22 was questioned as the same information was published on a chart. It was agreed that the AIS Manual should align with the provisions in Annex 15 and the Secretary take into account comments provided during AIS-AIMSG/2 in relation to Amendment No. 2 to the manual.

Actions Concerning Doc.9674

Action 2/15: Guidance on the Use of Coordinates Transformation (Amendment No. 2 to Doc 9674)

5.8 The group reviewed a proposed amendment to the *World Geodetic System — 1984 (WGS-84) Manual* (Doc 9674). It was noted that the proposed new wording which recommended that “once WGS-84 coordinates had been obtained, the use of transformation be avoided” needed to be amended, since it was considered that coordinates would continued to be transformed for survey purposes. It was agreed that the Secretary would study this matter further and provide new text.

5.9 The group discussed guidance on the transformation of 1/10 min into degrees, minutes and seconds and suggested wording that “The charting and data publication resolution ranges from the highest resolution requirement of 1/100 sec to the lowest resolution requirement of 1 min (i.e. 1/100 sec, 1/10 sec, sec and min). Applications or messages processing or transmitting coordinates may have different resolution requirements (e.g. flight plan, coordinate entry in FMS by the pilot).”

Actions Concerning the AIM Quality Manual

5.10 The Ad-hoc Group tasked with developing the draft *AIM Quality Manual* had produced a mature document. However, there were few outstanding issues to be addressed.

Action 2/17: Inclusion of SMS in the AIM Quality Manual

5.11 A reference to the *Safety Management Manual (SMM, Doc 9859)* is to be included in the AIM quality manual.

Action 2/20: Inclusion of Means for Measuring Integrity in the AIM Quality Manual

5.12 The Ad-hoc Group would develop guidance material on the means for measuring integrity for examination by the group at its third meeting in November 2010 and subsequent inclusion in the AIM Quality Manual.

Action Concerning the AIS Training Manual

Action 2/25: Guidance Material on AIS Training

5.13 The group noted the progress underway to develop AIM staff training guidance and that an ad-hoc group under the CANSO AIM Working Group had been formed to address this task. It was considered that the best way to proceed would be to first address existing AIS training issues. Therefore, the group agreed to develop an AIS training manual that would be amended to include AIM elements at a later stage. The group noted that the guidance material was to apply the competency framework of the *Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868)* to EUROCONTROL’s Common AIS Staff Profiling (CASP) and AIS Training Development Guidelines. The AIS-AIMSG Ad-hoc Group would:

- a) develop an AIS training manual, taking into account available material on training;
- b) ensure, during development of the manual, coordination with Secretariat; and
- c) present a draft of the AIS training manual to AIS-AIMSG/3.

Action Concerning eTOD Guidance Material

Action 2/23: eTOD guidance material

5.14 The group was informed that Eurocontrol was developing eTOD guidance material which would be made available to ICAO in the second half of 2010. The guidance material was expected to include advice on implementation planning, data quality, metadata, assessment of obstacle representation, determination of areas for specific aerodromes, and data collection techniques. The eTOD guidance material would be provided to the group for comment as soon as the first version is available expected in the first quarter of 2010.

*Actions Concerning AMDB Guidance Material***Action 2/10: Annex Provisions Related to Aerodrome Mapping Data (Amendments to Annexes 4, 14, 15)**

5.15 Following AIS-AIMSG/1, an action was assigned to develop, in liaison with the joint EUROCAE/RTCA Committee WG44/SC217, a draft proposal to integrate aerodrome mapping databases into Annexes 4, 14 and 15 provisions. The group acknowledged that there was a need to include provisions in Annex 15 related to aerodrome mapping data because existing and emerging situational awareness applications requiring such data had a significant potential to enhance safety.

5.16 France acting as liaison between EUROCAE/RTCA Committee WG44/SC217 (Action agreed 1/13 refers) presented a proposal by that group, and reported that consensus within the group and with stakeholders had been achieved on the proposal except for the data quality classification. Unresolved concerns related to the stringency of the data quality requirements whereby the stringent requirements that would serve all applications needed at some aerodromes would be too costly to implement or unnecessary to serve other aerodromes. The group discussed various ways to address these concerns, including providing two levels of accuracy, the less stringent of which would be required (Standard) and the more stringent of which would be recommended (Recommended Practice).

*Actions Concerning AIXM Governance***Action 2/3: AIXM governance**

5.17 The group discussed that further development of the Aeronautical Information Exchange Model (AIXM) would require international participation and focus, and the governance of the state of the model would be a particular issue. It was observed that the AIS-AIMSG may not offer the required international exposure to provide adequate governance of the model. It was agreed that the group would take the recommendations from Federal Aviation Administration (FAA) and Eurocontrol as to an appropriate body to govern the further development of the AIXM/AICM model. Such a body would need to represent all appropriate international stakeholders. The members from Eurocontrol and the FAA were asked to develop a proposal for the establishment of an appropriate body with technical and broad-based representation to support the governance of the evolution of the AIXM model for review by AIS-AIMSG/3.

*Action Concerning Guidance Material on Legal and Institutional Issues***Action 2/29: Guidance Material on Legal and Institutional Issues**

5.18 The group reviewed a number of legal and institutional issues to be considered in the context of AIM that had been identified by the Ad-hoc Group, and the comments thereon provided by the Secretariat. The issues were grouped under three main areas concern, namely, cost recovery, liability and copyright/ownership.

5.19 The State's responsibility for the provision of aeronautical information was already included in Annex 15. The group was informed by the Secretariat that the resolution of liability issues rested with States and it was not within ICAO's purview to address liability through Annex material.

5.20 Copyright issues and applications differed considerably from State to State and between civil law and common law jurisdictions. Copyright may be extended in some jurisdictions to limit access to information in a manner detrimental to flight safety and the need to provide airspace users with timely and complete information.

Actions Concerning Information on NextGen and SESAR

Actions 2/30 and 2/31: Information on NextGen and SESAR

5.21 In view of the numerous data domains to be modeled and possible spill over into AIXM, concern was expressed that AIXM should not be allowed to expand to an unmanageable extent. There was also discussion on the total cost of SESAR and associated cost savings including those that may be brought about by enterprise architecture methodology. The meeting recognized that it should monitor developments concerning NextGen and SESAR, and members should endeavor to share information in this regard with the group at the next meeting.

Actions Concerning MET

Action 2/32: Review of Draft Guidance Material on the Display of Graphical (Meteorological) Information in the Cockpit

5.22 There were already specifications related to meteorological information for aircraft in flight in Annex 3. In addition, draft Amendment 75 to Annex 3, applicable in November 2010, would introduce an enabling clause for the provision of any other meteorological information in alpha-numeric or graphical form as agreed between the meteorological authority and the operator concerned. The group noted that draft guidance material in support of this provision had been developed by the former Meteorological Information Data Link Study Group (METLINKSG) and was awaiting publication pending adoption of Amendment 75 in February 2010. The group was asked to review the draft guidance material on the display of graphical (meteorological) information in the cockpit and provide comments to the Secretary by 31 December 2010.

Actions Concerning Future Work

Action 2/38: Mapping of Group Activities to Deliverables

5.23 The Secretary will prepare a table which maps the activities of the group to:

- a) the original expected outputs outlined in the Air Navigation Commission paper;
- b) the terms of reference included in AIS-AIMSG Memo/1; and
- c) the steps (projects) in the Roadmap for the Transition from AIS to AIM.

5.24 China's review of AIS-AIMSG/2 was extremely valuable to the Task Force members and was of assistance to the States in setting plans that will accord with the future Annexes. This work is vital to the Task Force and further reports from the AIS-AIMSG/3 in November 2010 are programmed and tracked on the AAITF Task List.

Agenda Item 6: Review of Air Navigation Deficiencies in the AIS Field & Proposed Action

6.1 The meeting reviewed the List of Deficiencies adopted by APANPIRG/20 and noted that Cook Islands, Kiribati, Nauru and Papua New Guinea were the listed States in regard to AIP Format. New Zealand informed the meeting that they were assisting the first three in that list and expected to complete the work by end 2011. The list should be updated only after the AIPs have been published.

Agenda Item 7: Outcomes of Global AIS Congress – Beijing

7.1 Mr. Ken Reid, Eurocontrol, summarised the topics covered during the preceding four day Congress and workshop. He emphasised that the challenges were global and needed global leadership from ICAO and advised that Director of Air Navigation Bureau, ICAO had taken on the baton. ICAO had established the AIS-AIMSG and planned a MET/AIS Divisional meeting late in 2014. He also provided the meeting with the draft recommendations adopted by the Congress. The summary of the briefing and the draft recommendations can be found at **Appendix D** to this report. The recommendations along with all presentations and information papers would be published on the Eurocontrol website.

Agenda Item 8: Latest Developments in AIS Fields**Adoption of Amendment 36 to Annex 15 and Amendment 56 to Annex 4**

8.1 Australia informed that Amendment 36 to Annex 15 was adopted by the Council at the fifth meeting of its 189th Session on 22 February and Amendment 56 to Annex 4 – *Aeronautical Charts* was adopted by the Council at the sixth meeting of its 189th Session on 24 February 2010.

Changes Introduced

8.2 The meeting was made aware of the latest changes introduced to Annexes 15 and 4 as follows:

Annex 15 –

- New provisions relating to the operational use of the public Internet;
- the reporting of volcanic ash deposition;
- quality management systems;
- the use of automation enabling digital data exchange;
- electronic aeronautical information publications;
- the NOTAM Format; and
- an extended applicability date and reduced requirements for eTOD.

Annex 4 –

- Definitions and new provisions relating to cyclic redundancy check; and
- a date for the Aerodrome Terrain and Obstacle Chart — ICAO (Electronic).

8.3 The meeting noted that the changes introduced by Amendment 36 to Annex 15 and Amendment 56 to Annex 4 would become applicable on 18 November 2010. Any differences which would exist were to be notified by 18 October 2010. An exception was that the proposals related to eTOD contained in Annex 15 paragraphs 10.1.4 and 10.1.5, and Annex 4 paragraph 5.2.1 were to

become applicable on 12 November 2015 and any differences which would exist were to be notified by 12 October 2015. The chairman thanked Australia for the update on the amendments to Annexes 4 and 15.

AIS Regulation in Australia

8.4 Australia informed the meeting that the Civil Aviation Safety Authority (CASA) of Australia was currently creating a new Civil Aviation Safety Regulation (CASR) Part 175 – Aeronautical Information Services. The development of CASR Part 175 took into consideration the following issues:

- a requirement for the AIS provider to publish an IAIP and aeronautical charts in accordance with the SARPs of ICAO Annexes 15 and 4;
- authorisation of data service providers to publish or supply aeronautical information and aeronautical data the same as that published in the IAIP and aeronautical charts;
- RTCA DO-200A aeronautical data processing standards applied to the AIS provider and data service providers;
- requirement for the AIS provider to supply data service providers authorised under Part 175 with aeronautical data subject to a licence agreement;
- aeronautical data originators supplying aeronautical data to the AIS provider subject to a Service Level Agreement (SLA) and the nomination of responsible and authorised persons to act on their behalf;
- a requirement for the AIS provider and data service providers to establish a Safety Management System, incorporating a Quality Management System; and
- the AIS provider and data service providers to nominate an accountable manager responsible for ensuring their organisation's compliance with CASR Part 175.

8.5 The PowerPoint presentation made by Australia is at **Appendix E** to this paper. The meeting appreciated Australia for the valuable input.

AIMNet Collaboration

8.6 Australia informed the meeting that the Executive of Airservices Australia (AsA) and Airways Corporation New Zealand (ACNZ) agreed to progress a collaboration strategy to improve service delivery outcomes, and to create greater value for the owners and customers of each organisation in early 2008. In July 2008, a collaborative relationship between the two organisations was formalised by the CEOs of AsA and ACNZ. The operating principles and objectives of this relationship were established under an agreement called the "Bowral Accord".

8.7 AIM was recognised as an important Air Traffic Management (ATM) capability enabler, with the potential to deliver significant near-term benefits through collaboration. In early 2009, AsA and ACNZ specialists from ATM planning, AIS operations and the Information Technology planning areas established a relationship called the "AIM Network" (abbreviated to AIMNet).

8.8 Since its establishment, the AIMNet team has successfully developed a relationship

that is based upon principles of trust, openness and honesty among its members. The team has identified a range of collaborative initiatives on AIM, and are currently seeking approval to advance some of these initiatives through the Executive Collaboration Group. The meeting thanked Australia for the presentation and noted the information.

8.9 The PowerPoint presentation made by Australia is at **Appendix F** to this report. The meeting appreciated the information on the collaboration efforts between Airservices Australia and Airways New Zealand.

Agenda Item 9: Any Other Business

Adoption of Eurocontrol Operating Procedures for AIS Dynamic Data Edition 3.0

9.1 The meeting recalled that the Asia/Pacific AIS Dynamic operating procedures, which are published in the Guidance Manual for Aeronautical Information Services (Chapter 3 – Operating Procedures for AIS Dynamic Data), had been updated by Japan based on the Eurocontrol OPADD except for Chapter 6 SPECIFIC EUROPEAN ARRANGEMENTS 6.2 Procedures using an Item X) for their specified conditions of Europe. The last update was made at AITF/3 (June 2008, Bangkok) based on Edition 2.1.

9.2 Japan informed the meeting that Eurocontrol had published the Eurocontrol OPADD Edition 3.0. To ensure global harmonization, the Asia/Pacific procedures now required updating.

9.3 The meeting thanked Japan for their continuous work to undertake the updating work and agreed to review the draft Chapter 3 as in **Appendix G** to this report. States were required to contact Japan if there are comments. Unless there are comments sent to Japan by the time of APANPIRG/21 in September, the Eurocontrol OPADD Edition 3.0 (except for Chapter 6, 6.2 Procedures using an Item x) would be adopted for Chapter 3 of the *Guidance Manual for Aeronautical Information Services (AIS) in the Asia/Pacific Region* (Edition 3.0). Subsequently, the Secretariat would upload the regional guidance Manual on the Regional Office's website after incorporating the OPADD Edition 3.0 in Chapter 3.

NOTAM Standard Operating Procedures Based on OPADD 3.0 in the Republic of Korea

9.4 To enhance a global harmonization in AIS field, the Republic of Korea had translated OPADD 3.0 into Korean and adopted it in part as Standard Operating Procedures (SOP) for NOTAM on 24 February 2010. The Republic of Korea's SOP for NOTAM consists of five chapters as follow:

- a. General;
- b. NOTAM creation;
- c. Multi-Part NOTAM;
- d. Database Completeness and Coherence Messages; and
- e. Procedures for SNOWTAM, ASHTAM, etc.

9.5 The current Chapter 3 of the Asia/Pacific Guidance Manual for Aeronautical Information Services was adopted by AITF/1 (March 2006, Bangkok) and subsequently updated by Japan based on Eurocontrol OPADD Edition 2.1 in 2008.

9.6 The Republic of Korea fully supported the work of Japan to update Asia/Pacific OPADD as presented in WP/5, basing Eurocontrol OPADD 3.0 to enhance global harmonization.

Airservices Australia Mercury Project

9.7 Australia informed the meeting that Airservices Australia initiated the Mercury Project in 2008, with the objective of procuring and implementing a contemporary Aeronautical Information Management (AIM) capability. The scope of this project was defined by the requirement to replace Airservices ageing (and legacy) Aeronautical Data Management System (ADMS) with an AIXM compliant data store (or “Reference Data Store (RDS)”), and associated static data management tools. In addition, Airservices sought to acquire a range of AIXM compliant AIM applications (AIP, eTOD, Charts, Airspace and Procedure Design, etc), facilitating integration with the Mercury RDS.

9.8 In late 2008, Airservices Australia released a Mercury Request For Tender (RFT) to industry. The tender process was conducted over two distinct phases: an open tender evaluation phase and a shortlisted tender evaluation phase. The entire process took approximately 12 months to complete, with the preferred supplier (Ingegneria dei sistemmi - IDS) selected and a final business case presented to the Board of Airservices Australia in October 2009. Board approval to initiate contract negotiations with IDS was provided to the project in late 2009. Contract negotiations between Airservices Australia and IDS were finalised in April 2009, and a formal contract signing ceremony was held on 24 May 2010. The PowerPoint presentation made by Australia is at **Appendix H** to this report. The meeting appreciated the information.

NOTAM Geographical Reference Qualifiers “COORDINATES & RADIUS”

9.9 Republic of Korea advised the meeting that qualifier 'Coordinates & Radius' for geographical reference in Item Q) helps user easily recognize the area of influence.

Qualifier Coordinates & Radius Used in the Republic of Korea

9.10 According to Chapter 5, 5.2.1 and the Appendix 6 of Annex 15, NOTAM Qualifiers 'COORDINATES & RADIUS' of Item Q shall be inserted as follows:

The latitude and longitude accurate to one minute, as well as a three-digit distance figure giving the radius of influence in NM (e.g. 4700N01140E043). Coordinates present approximate centre of circle whose radius encompasses the whole area of influence, and if the NOTAM affects the entire FIR/UIR or more than one FIR/UIR, enter the default value "999" for radius (Appendix 6 of Annex 15)

9.11 In case that, for example, a prohibited, restricted or danger area is activated in the form of circle shape and its center coordinates is given in degrees, minutes and seconds, coordinates can only be inserted to one minute according to the requirement mentioned as above. By doing so, the gap between the originally affected area and the area resulting from item Q) occurs as follows:

If restricted area is activated with a circle of 2 NM radius centered on 35°00'30"N 127°00'30"E, in general, 'COORDINATES & RADIUS' in Item Q-'COORDINATES & RADIUS' may be inserted as 3500N12700E002. In this case, however, originally given radius value 2NM cannot encompass the whole area of influence.

9.12 In order to prevent the gap as indicated above, the Republic of Korea add additional 1 NM to original given radius value in Item Q) as follows:

Q)RKRR/QRTCA/IV/BO/W/000/130/3700N12700E003
A)RKRR B)1006031400 C)1006031600
E)TEMPO RESTRICTED AREA ACT AS FLW :
A CIRCLE RADIUS 2NM CENTERED ON 370030N1270030E
F)SFC G)13000FT AMSL)

9.13 Maximum 0.65 NM difference occurred from originally affected area. It is necessary for users to have more precise information in order to prepare their flight efficiently. In this regards, the present resolution for 'Coordinates & Radius' should be changed to one second resolution in order to meet requirements for the future navigation.

9.14 The Task Force members were interested in the topic and some States indicated similar experiences and had used similar solution.

9.15 The Secretariat informed the meeting that Annex 15 provided sufficient guidance and the actual position should be indicated in Item E).

Issue of Difference of AIRAC Effective Time between Japan and the Republic of Korea

9.16 At AITF/3, a question was raised about the difference of the AIRAC effective time in the Asia/Pacific Region, especially 24 hour difference between Japan and the Republic of Korea. At ATM/AIS/SAR/SG/19, Australia suggested the establishment of the 12 hours buffer front and back from 00:01 UTC on an AIRAC day, and the revision of the ICAO *Aeronautical Information Services Manual* (Doc 8126) which would permit States to apply an effective time on the AIRAC date, taking into consideration the air traffic circumstances of each State. But ATM/AIS/SAR/SG/19 could not support the suggested amendment and urged the States involved continuing consultation to seek a solution.

9.17 Japan advised that the global air traffic flow is closely related to the regional operations, and expressed that the best way to solve this issue was to move the AIRAC effective time of the Republic of Korea as close as possible to those of China and Japan. For the purpose of regional harmonization, the Republic of Korea expressed its intension to move the AIRAC effective time of the Republic of Korea a day earlier from 15:00 UTC to 16:00 UTC in the near future. Republic of Korea postulated that Japan also should move it to 16:00 UTC for aviation safety. The meeting thanked Japan and the Republic of Korea for the information.

New AIRAC Effective Time of the Republic of Korea

9.18 Further, the Republic of Korea advised the meeting that a study by the Republic of Korea presented to AAITF/4 showed five States were applying different times or a date from 0001 UTC because it is the time when their airports or airways are congested, or start to be congested, and was not appropriate for them to commence complex implementations. Discussions to find a single AIRAC date/time among States concerned had been placed during APANPIRG/20, but a rigid specific time to suit all States' circumstances was not achievable. Immediate dialogue among the concerned States to find a solution was urged by the meeting. To follow up this urgent request, the Republic of Korea held a series of internal and external meetings to find the best way to bridge the time gap. Among the five States applying a different AIRAC application time, the Republic of Korea was the only one that issues AIRAC later than 0001 UTC of the AIRAC date.

9.19 As to application time, the Republic of Korea learned from its study presented to AAITF/4 that no single time satisfied the concerned State's needs. Specially, considering geographical location of the Republic of Korea, neither 1500 UTC nor 1600 UTC can present a perfect harmonization in the China-Korea-Japan region.

9.20 The results from traffic volume statistics analysis showed that Incheon FIR's traffic volume of 1500 UTC for the last six months was 193% more than that of 1600 UTC. Moreover, the recent AIRAC amendments were on complex implementation such as new airport open, TMA lateral/vertical adjustment, tower frequency change and Standard Instrument Departure (SID) changes. Operational authorities including ATC facilities, flight procedure design divisions and safety management sections expressed their severe concern about applying these important and safety-concerned changes at 1500 UTC which is busier than 1600 UTC.

9.21 In this regards, the new AIRAC effective time of the Republic of Korea was decided as 1600 UTC. This new AIRAC date and time will come into force as soon as possible, but no later than end of this year. The Chairman congratulated Japan and the Republic of Korea for the collaborative efforts to resolve issue of different AIRAC time.

AIM Implementation Plan of the Republic of Korea

9.22 Republic of Korea carried out a project last year as an effort to meet the ICAO roadmap and to comply with the related SARPs of Annex 15, and, as a result, developed the national roadmap for AIM implementation. The Republic of Korea's AIM implementation roadmap contains the following contents:

- *Regulation Review* - propose national regulations need to be revised;
- Current and future plan study on Eurocontrol, the FAA, Sweden and Japan;
- *System consolidation proposal* - How to combine current into the new;
- *Operational proposal* - Suggest ideal organizational structures; and
- *Annual plan* – Review other States' roadmaps.

9.23 Republic of Korea's AIM will be consisted of six components, which are AIP, NOTAM, PIB, TOD, AMDB and Weather. All these aeronautical information products will be developed by 2016 along with AIM DB in accordance with the national roadmap through the following seven work plans:

Work plan No.1, regulations are going to be amended or newly established from 2010 to 2016 in order to timely reflect ICAO's scheduled amendment on ICAO Annex 4 and Annex15.

Work plan No.2, AIM Implementation Special Task Force Team has been organized. This TF consists of members from AIS authorities, universities, airport operators, airlines, military authorities and weather authority, and they are bones and brains of AIM implementation. The TF is responsible to design a detailed developing plan for each AIM product as well as to provide practical advises on operational aspect of AIM products.

Work plan No.3, organization transform. Current AIS organization is separately placed at airports, regional offices and head quarter, and needs to be consolidated in a form which suits to carry out AIM.

Work plan No.4, training. People who provide or use electronic aeronautical information will learn how to adjust themselves to the new type of aeronautical information and electronic working environment.

Working plan No.5, design and develop AIM DB. DB for static data, dynamic data, e-AIP XML data and GIS will be developed in a way to secure data safety and integrity.

Working plan No.6, develop a production and management program (PMP) for AIP, NOTAM, PIB, TOD, AMDB and Weather.

Working plan No.7, held periodic workshops and seminars in order to provide information and share opinions among aeronautical information providers and users.

9.24 In accordance with the national roadmap, Republic of Korea is now developing e-AIP. This e-AIP will completely satisfy the requirements extracted from ICAO Annex15 and AIS-AIMSG study notes. This meeting noted that the Republic of Korea was proceeding with AIM implementation, and as the first outcome, e-AIP would be available in 2011.

Structure of Sub Group

9.25 Australia proposed a discussion where AIS and MET could be matched together in a single Sub-group of APANPIRG. New Zealand advised the meeting that APANPIRG/20 had considered a similar working paper. Following discussion where a few different ideas were tested that following Draft Decision emerged for consideration by the Sub-Groups and APANPIRG.

Draft Decision – Reorganization of AIS and MET

That, in light of the close relation for the development of the digital exchange of information and SWIM/CDM concepts, MET function come under ATM/AIS/SAR SG or AIS and MET form a new Sub-group.

9.26 New Zealand and Australia agreed to develop the joint working paper in this regard for consideration by APANPIRG.

Agenda Item 10: Review of Task List

10.1 The meeting reviewed the task list of the Task Force as in **Appendix I** to this report.

Agenda Item 11: Date and Venue for the Next Meeting

11.1 The meeting agreed tentatively that the next meeting of the Task Force may be held in early 2011, following AIS-AIMSG/3 in November 2010. United States agreed to undertake the secretariat service if necessary.

12. Closing of the Meeting

12.1 Mr. Harano thanked the Chairman and the core group members of Australia, China and Japan for the preparation of the meeting. He also thanked all the participants for their attendance and interest.

12.2 Mr. Hobson thanked all the participants for their contributions and attendance at AAITF/5. He thanked the organisers ATMB, CAAC and the Asia/Pacific AIS chiefs and delegates. He thanked also those from the AIM industry who had agreed to stay with them and participate in the meeting. Special thanks went to their ICAO representative and experienced secretariat Mr. Kyotaro Harano.

12.3 In closing, Mr. Hobson took a moment to recognise the wonderful effort and facilities provided by China for both the Congress and the AAITF meeting. He wished Asia/Pacific participants to recognise the global nature of the AIM business, its complexities and all that the future holds as we transform the paper based AIS AIP & NOTAM into the digital data exchanges and enhanced products that have been demonstrated to us over the last few days.

12.4 Transition of AIS to AIM continues to be, and will remain uneven. Some areas of the world and states are more advanced than others (and it is likely that this will be the norm). However, the rapid uptake of new airlines and their advance PBN capabilities will increase drive the data services providers, including State AIS/AIM departments.

12.5 Mr. Hobson recalled that they had reviewed the developments from the ICAO headquarters AIS-AIMSG during the AAITF meeting with the presentations from China, and the work from that group will continue to be important; but it is his sincere hope and belief that this Task Force could provide more value to the headquarters SG, by being a contributor, as well as a recipient.

12.6 The future of the AAITF is dependent on the measure of its work, and some of that has to be more tangible than the undeniable benefits from the comarade and networking opportunities provided. There does need to be more working and information papers from participants. Mr. Hobson declared AAITF/5 closed at 11:30.

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AAITF/5
Appendix A to the Report

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AAITF/5
Appendix A to the Report

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AAITF/5
Appendix A to the Report

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AAITF/5
Appendix A to the Report

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AAITF/5
Appendix A to the Report

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AAITF/5
Appendix A to the Report

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AAITF/5
Appendix A to the Report

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AAITF/5
Appendix A to the Report

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LIST OF WORKING AND INFORMATION PAPERS

WORKING PAPERS

NUMBER	AGENDA	WORKING PAPERS	PRESENTED BY
WP/1	1	Provisional Agenda	Secretariat
WP/2	4	Review of APANPIRG/20, and Follow-up on Decisions and Conclusions relevant to the AIS Field	Secretariat
WP/3	8	Adoption of Amendment 36 to Annex 15 and Amendment 56 to Annex 4	Australia
WP/4	10	Review of the Task List of AAITF	Secretariat
WP/5	9	Adoption of Eurocontrol Operating Procedures for AIS Dynamic Data Edition 3.0	Japan

INFORMATION PAPERS

NUMBER	AGENDA	INFORMATION PAPERS	PRESENTED BY
IP/1	-	List of Working Papers (WPs) and Information Papers (IPs)	Secretariat
IP/2	8	AIS Regulation in Australia	Australia
IP/3	2	Review of eTOD SIP & AIS Implementation Task Force (AITF/4)	Australia
IP/4	3	Terms of Reference of AAITF	Secretariat
IP/5	9	Airservices Australia Mercury Project	Australia
IP/6	8	AIMNet Collaboration	Australia
IP/7	9	Release of Eurocontrol OPADD Edition 3.0	Republic of Korea
IP/8	9	NOTAM Geographical reference qualifiers 'COORDINATES & RADIUS'	Republic of Korea
IP/9	9	Issue of Difference of AIRAC Effective Time between Japan and Republic of Korea	Japan and Republic of Korea
IP/10	5	Report on AIS-AIMSG/2	China
IP/11	9	New AIRAC Effective Time of Republic of Korea	Republic of Korea
IP/12	9	AIM Implementation Plan of Republic of Korea	Republic of Korea

.....

DRAFT

Terms of Reference of the AIS Implementation Task Force (AITF)

The objectives of the Task Force are to:

- a) study means of aeronautical data management by civil aviation authorities and/or ATS providers in other regions including the aeronautical information exchange model (AIXM) and the electronic AIP (eAIP), and consider the feasibility in making use of these methods/models in the Asia/Pacific Region;
- b) examine the means of aeronautical data exchange used in other regions and application in the Asia/Pacific Region;
- c) assist States to implement Quality Systems for aeronautical information in an expeditious manner;
- d) develop training material and conduct workshops on the Guidance Manual for AIS in the Asia/Pacific Region;
- e) develop guidance material for Static Data Procedures and the AIS Automation Plan;
- f) review and update the Guidance Manual taking into account amendments to ICAO SARPs, guidance material;
- g) monitor and review technical and operating developments in the AIS field especially in the area of automation and database management; and
- h) monitor the transition from AIS to AIM, and in particular monitor development of the replacement of Annexes 4 & 15 and guidance documents under development by ICAO.

To achieve the above objectives, the Task Force shall consider:

- a) results of the ICAO Aeronautical Information Services – Aeronautical Information Management Study Group (AIS-AIMSG);
- b) amendments to Annex 4, Annex 5, the AIS Manual (Doc 8126), and the Aeronautical Chart Manual (Doc 8697); and
- c) revisions to the EUROCONTROL *Operating Procedures for AIS Dynamic Data* (OPADD); and
- d) the regional performance framework form-based implementation plan and report upon it to the Sub-group.

The Task Force will report to the ATM/AIS/SAR Sub-Group of APANPIRG

(Adopted by the 14th Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group, 2003, and amended by the 18th 20th Meeting of the ATM/AIS/SAR/SG, 2008/2010)



Global AIM Congress 2010 Conclusion

Bo Redeborn
Moderator Global AIM Congress 2010
Executive Director CND
EUROCONTROL



Beijing

Global AIM Congress 21 – 24 June 2010



- Inform & create engagement
- Discuss, &
- Agree
- Make recommendations for the future
- To support ICAO



Beijing

Global AIM Congress 21 – 24 June 2010



Review Day 1

- Morning – Strategic Objectives
 - From Madrid to Beijing
 - The Road to Global AIM – ICAO
 - The Airline Community Needs – IATA
 - Making 'planes Run on Time
- Afternoon – User Needs
 - ATM & PBN – ICAO
 - Airlines & Information – Cathay Pacific
 - Vision of Future Air Navigation – IFALPA
 - ATC & Information - IFATCA



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Review Day 2

- Present Initiatives
 - ATMB – China
 - NextGen – FAA
 - SESAR – Eurocontrol
 - Into the Future - FAA
 - CISCEA – Brazil
 - The Change Process – Airservices Australia
 - JCAB – Japan
 - WMO





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Review Day 3

- Requirements for Change
 - EUROCAE
 - FEDEX
 - Airservices Australia
 - ICAO AISAIMSG
- Panel Debate





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Panel Debate - Key Issues

- ICAO and its future role
- Evolution of SARPS & Guidance Material
- People Issues Including Training Requirements
- Technical issues
- Continuation of Engagement and Awareness





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Conclusions

- A very comprehensive set of presentations which outlined
 - Present and future requirements
 - Present initiatives
 - And future Plans
- It is clear that the needs of ATM for aeronautical information far exceed Annex 15 & 3
- The future is the Net-centric Information environment
- And with FEDEX, SESAR & NextGen the timescales for change are tight
- There is an urgent need to address holistic IM



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Conclusions

- The challenges are global and need global leadership
- All look to ICAO for leadership
- ICAO has taken on the baton
- It has established the AISAIMSG which is delivering, and
- Plans a MET/AIS Divisional meeting late in 2014



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Recommendations



- That ICAO adopt the notion of AIM
- That ICAO consider the means to incorporate the transition from AIS through AIM into the Net-centric Information environment into its working arrangements
- That ICAO consider the means to create a truly inclusive dialogue for change
- That ICAO promote an initiative to agree on a common data com enabler(s) for the roll-out of global AIS/MET data link services
- That ICAO consider ways of creating inclusion of all aspects of aviation information needs



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ACTIONS



- ICAO to include an AIM to SWIM element in its Next Generation of Professionals initiative
- ICAO to consider the future evolution of the role of its Regional offices and staffing within the context of aeronautical information management and evolving needs
- ICAO will consider co-hosting of a forum on future system needs in 2012 in the Asia/Pacific Region



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- This Congress has clearly demonstrated that Information & Information Management is essential to the evolution of ATM
- From AIS to AIM, to SWIM, to Information Management circa 2025
- A demanding & challenging path of change

The Challenge is yours to meet!



Beijing Global AIM Congress 21 – 24 June 2010



- Thanks to the ATMB for being such splendid hosts
- To all the speakers for their first class presentations
- To industry and its exhibition
- And to you the audience for being so supportive

- And to the Consortium & their organisations for their dedication
- The Congresses have delivered to expectations
- They have provided an excellent forum to make the case for AIM, and
- To prepare for the ANC in 2012 and the Divisional meeting in mid-2014



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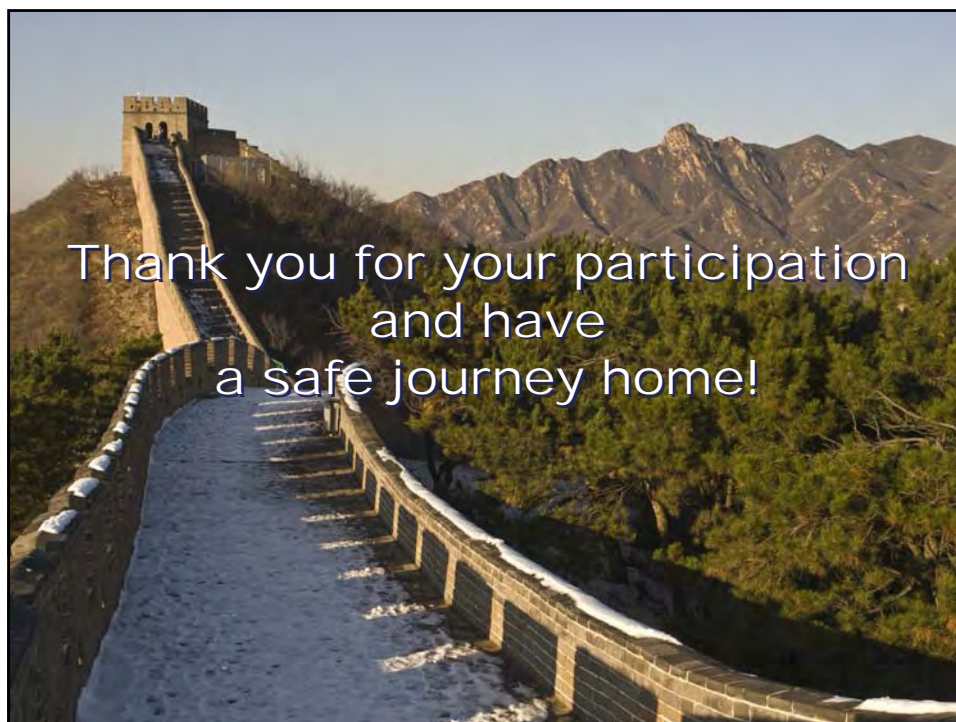


With apologies to Sir Winston Churchill

*“AIM is not the end, it is not even the beginning of the end,
it is the end of the beginning”* in the process of transiting to a
globally harmonised net-centric information environment



Beijing Global AIM Congress 21 – 24 June 2010



Thank you for your participation
and have
a safe journey home!

CASR Part 175

Aeronautical Information Services



Australian Government
Civil Aviation Safety Authority

www.casa.gov.au



safe skies for all

What is AIS ?

- An aeronautical information service is required to be provided by Contracting States to the Chicago Convention
- The AIS should ensure the flow of aeronautical information and aeronautical data necessary for the safety, regularity and efficiency of international air navigation
- Standards and Recommended Practices (SARPs) for provision of AIS are contained in Annex 15
- Additional SARPs relating to the provision of Aeronautical Charts are contained in Annex 4

Why do we need to regulate ?

2008 ICAO Universal Safety Oversight Audit Programme (USOAP)

- Finding that no safety oversight system exists in Australia for AIS (Annex 15) or MAP (Annex 4)

Airspace Act 2007

- CASA is to regulate provision of AIS

Civil Aviation Act 1988

- CASA has the safety-related functions conferred on it under *Airspace Act 2007*
- CASA may make Regulations giving effect to safety provisions of Chicago Convention

Most important – Safety !!!

- Ensure data integrity is maintained throughout data chain
- Provide level of assurance for end user (pilots and airline operators)

Current Australian Regulations

Air Services Act 1995

- Airservices Australia to provide an AIS

Air Services Regulations 1995 Part 4.11

- Functions of an AIS
- Collection and dissemination of aeronautical information relating to the safety, regularity and efficiency of air navigation, including
 - aerodromes
 - air traffic services and facilities
 - communication and air navigation services and facilities
 - meteorological services
 - search and rescue services and facilities
 - procedures and regulatory requirements connected with air navigation
 - notification of hazards to air navigation

Current Australian Regulations (continued)

Air Services Regulations 1995 Part 4.12

- AIS to publish AIP
- AIS to publish NOTAM
- AIS must publish information within the AIRAC cycle

Civil Aviation Regulation 233 (1)(h)

- Pilots to carry latest aeronautical maps, charts and other aeronautical information applicable to route being flown, and any alternate route, published in AIP, or
- Published by person approved in writing

Civil Aviation Order 20.18 (9A)

- If waypoints and nav aids published in AIP, required to be carried under CAR 233 (1)(h), are included in a GPS:
 - Database not able to be modified by pilot
 - Database current and from a supplier approved under CAR 233 (1)(h)

Aeronautical Data Chain

- Data originators (aerodromes, airspace and procedure designers, ATS provider, MET, CNS provider, Department of Defence etc)
- AIS provider
 - AIP (including aeronautical charts) and NOTAM
- Data service providers (Jeppesen, Lufthansa Systems FlightNav, Navtech etc)
 - Airway or Route Manual
 - Maps and charts
 - ARINC 424
- Data application integrators (Garmin, Honeywell, Smiths, Thales, Universal etc)
 - FMC, FMS, GPS
- End user (airlines, pilots, ATS etc)

Industry consultation

Part 175 Project Team formed with the following Standards Consultative Committee (SCC) industry representatives

- Airservices Australia (AIS provider)
- Qantas Airways Limited (end user)
- Department of Defence (data originator)
- Australian & International Pilots Association (end user)
- Guild of Air Pilots and Navigators (end user)
- Civil Aviation Safety Authority (regulator)

CAR 233 (1)(h) approval holders invited to be part of project team

Two approval holders formed part of the Project Team

- Jeppesen Aviation (data service provider)
- Lufthansa Systems FlightNav (data service provider)

Applicability of Part 175

AIS provider

- Airservices Australia

Data service providers

- CAR 233 (1)(h) Instrument of Approval holder
 - Jeppesen
 - Lufthansa
 - Aerostratos
- Equivalent to Type 1 LOA (FAA or EASA)
 - Acceptable Means of Compliance (AMC)

Aeronautical data originators

- Aerodrome operators
- Procedure designers
- Airspace/air route designers etc
- Defence

Not included in Part 175

Data application integrators – Type 2 LOA holders

- Avionics manufacturer (Garmin, Honeywell, Smiths, Thales, Universal etc)
- Aeronautical data is required to support the intended function of the avionics
- Approval needs to specify the compatible system (make, model, series, part number)
- Don't code data but rather pack data

Aircraft operator responsible for FMC/FMS/GPS data:

- Integrity
- Completeness
- Currency
- Installation

Subject of Airworthiness and Operations regulations (in Australian environment)

Objectives of Part 175

- Create standards for AIS provider
- Create standards for data service providers
- Ensure data integrity is maintained
- Ensure error correction and notification processes
- Ensure Safety Management Systems are implemented
- Ensure Accountable Managers are appointed
- Assign responsibility to data originators

Objectives of Part 175 (continued)

- Ensure provision of terrain and obstacle data
- Align with pilot responsibilities under CASR Part 91 – General operating and flight rules
- Align with approved data requirements of CASR Part 91

AIS provider

AIS to be provided according to standards contained in:

- Annex 15 (not Recommended Practices)
- Annex 4 (not Recommended Practices)
- RTCA DO-200A/ED-76 Standards for Processing Aeronautical Data

Exception to standard if difference is filed by Australia and published in AIP

AIS to publish IAIP

- AIP
- AIP Amendments
- AIP Supplements
- NOTAM
- AIC
- PIB

AIS provider (continued)

Aeronautical charts

- Charts operationally suitable for all phases of flight
- Charts provide functionality specified in Annex 4 for each phase of flight

Except AOC Type A & B, Precision Approach Terrain Charts produced by aerodrome operator in Australia (subject to CASR Part 139 – Aerodromes)

Aeronautical data processing system

- Automated
- Allow digital exchange or supply of aeronautical data
- Format of data at least that required by Annex 15 and Doc 8126
- Data content at least that required by Annex 15 and Doc 8126

AIS provider (continued)

Requirement for supply of aeronautical data to data service providers

- Subject to licence agreement containing:
 - Data product specification
 - When data is to be supplied
 - Authenticated electronic means of data supply
 - Method of protection applied to data
 - Management of requests to alter data
 - Error notification

AIRAC notification

- 28 days AIRAC notice for changes to AIP and aeronautical charts
- 56 days AIRAC notice for major changes
- Data originators to be advised of AIS cut-off dates

AIS provider (continued)

AIS provider to have Service Level Agreements (SLA) with each aeronautical data originator

SLA to include:

- Cut-off dates for IAIP and aeronautical charts amendments
- What aeronautical data is required to be supplied
- Standard data entry format
- Authenticated electronic means of data supply
- How data changes are verified by originator

CASA can direct changes to aeronautical data published in IAIP and on aeronautical charts if necessary in the interests of aviation safety

Data service providers

Data service to be provided according to standards contained in:

- RTCA DO-200A/ED-76 Standards for Processing Aeronautical Data

Aeronautical information and aeronautical data same as that published in Australian AIP and aeronautical charts (data not format – determined by user requirements)

- Same effective date
- Applicable for same period

Aeronautical data processing system

- Automated
- Allow digital receipt or supply of aeronautical data
- Provide data in a format suitable for intended use

Data service providers (continued)

Receipt of aeronautical data from AIS provider

- No alteration of aeronautical data allowed
- Notify AIS provider of errors detected in aeronautical data
- Request to CASA to alter data if necessary in interests of safety

CASA can direct changes to aeronautical data if necessary in the interests of aviation safety

Data integrity

- Data is obtained from an authorised source
- Electronic transfer of data from data originator to AIS provider to data service provider
- Data is traceable to its source
- Data is received in correct format, accuracy and resolution
- Data is not altered during storage or transit
- Data is complete to support function required
- Data is checked for accuracy against source data prior to publication

Data integrity (continued)

- Data is applicable during period of its intended use
- Data is published in a format suitable for its intended use
- Data not altered during formatting for publication

Error correction and notification

AIS provider and data service providers to implement procedures to:

- Record, investigate and correct any errors in aeronautical information and aeronautical data
- Ensure error corrected by most appropriate means
- Corrected information or data is clearly identified
- Source of error is identified
- Processes established to eliminate source of error
- Significant errors which may affect safety to be reported to CASA

Safety Management System

AIS provider and data service providers to implement Safety Management System. Requirements are based on Framework for SMS in ICAO SARPs (Annex 6, Annex 11, Annex 14)

SMS to include:

- Safety risk management plan
- Outline safety accountability of managers
- Hazard identification processes
- Risk assessment and mitigation
- Safety performance monitoring
- Management of change
- QMS (ISO:9001)
 - Including Quality Management standards in RTCA DO-200A/ED-76

Accountable Manager

AIS provider and data service providers to appoint Accountable Manager

Accountable Manager is responsible for:

- Ensuring adequate financing and resources
- Ensuring Safety and Quality Management policies are established
- Ensuring service provider complies with Part 175
- Conducting annual review
- Identifying any non-conformities or deficiencies and address how they are to be resolved
- Reporting significant non-conformities or deficiencies to CASA

Responsibility of data originators

Must have a SLA in place with AIS provider

Nominate a responsible person to supply aeronautical data to AIS provider for publication in AIP or aeronautical charts

Responsible person is to:

- Notify AIS provider when aeronautical data published in AIP and aeronautical charts changes
- Responsible for quality and accuracy of aeronautical data supplied
- Ensure aeronautical data changes are coordinated with all affected parties
- Ensure changes to aeronautical data can be readily identified
- Review information at least annually
- Adhere to AIRAC notification

Responsibility of data originators (continued)

Nominate authorised persons to supply aeronautical data to AIS provider for issue as NOTAM

Authorised person is to:

- Notify AIS provider when NOTAM are required to be issued
- Provide the aeronautical data changes in an appropriate timeframe
- Ensure aeronautical data changes are coordinated with all affected parties
- Ensure changes to aeronautical data can be readily identified
- Format is suitable for publication as NOTAM

Data originators to provide authenticated electronic means of supplying aeronautical data to AIS provider

Terrain data

Geoscience Australia (State geospatial information agency) to provide terrain data to AIS provider

GA and AIS provider to have a SLA

SLA same as with other data originators

SLA to also include:

- Complete data product specification
- Ensure standards, format, resolution and quality standards of Annex 15 are met

Obstacle data

CASA allowed to require any organisation that owns an obstacle to provide data to AIS

CASA allowed to require any organisation that maintains obstacle data to provide data to AIS

Obstacle data to be provided is defined by collection surfaces specified in:

- Annex 4
- Annex 14
- CASR Part 139 - Aerodromes
- Annex 15
- Doc 8168 (PANS-OPS)
- CASR Part 173 – Instrument flight procedure design

Obstacle data (continued)

AIS to provide obstacle owners or database managers with data product specification

Data product specification to contain, as a minimum:

- Owner of obstacle
- Type of obstacle
- Geographic location (WGS84)
- Height above ground level
- Elevation above mean sea level
- Whether marked or lit
- Metadata regarding obstacle

What about AIM ?

- CASR Part 175 requires adherence to Annex 15 SARPs
- As SARPs are transitioned to incorporate:
 - AIM
 - AIXM
 - Digital data catalogue/data dictionary
 - AMDB

Part 175 will automatically require the AIS provider to comply with the new standards

Timeframe

- 6 October 2009 - Notice of Proposed Rule Making (NPRM) and Annex (lay draft of regulations) published
- 4 December 2009 - Comment period (8 weeks) closed on NPRM
- 5 May 2010 - Draft Notice of Final Rule Making (NFRM) and Summary of Responses (SOR) finalised
- 6 May 2010 - Final drafting instructions submitted to Attorney General's Department
- May 2010 – December 2011 - Legal drafting (estimate only)

Timeframe (continued)

- June 2012 - NFRM, SOR and final regulations published
- December 2012 - 6 month implementation period
- allow service providers to prepare expositions
 - allow service providers to implement SMS
 - allow regulator to complete entry level audits
- 1 January 2013 - CASR Part 175 becomes effective
- 2014 - Post implementation review

Summary

CASR Part 175 will:

- Create standards for AIS and data service providers
- Place responsibility on data originators
- Ensure data integrity is maintained
- Provide CASA with a means of conducting surveillance
- Provide Australia with means of demonstrating compliance with ICAO SARPs
- Provide aviation industry with necessary levels of safety assurance

Thank you



**Collaborating on
AIM
Facilitating Regional AIM**



**AIMNet Collaboration
Airways NZ / Airservices Australia**



Discussion Items

1. Collaborating

- What is collaboration?
- Why collaborate?
- What are the benefits?

2. Facilitating Collaborations

- What's required?
- Frameworks
- Getting Engaged
- Learning to Collaborate

3. The AIMNet experience

- Introduction
- Current Status
- Challenges ahead





Collaborating

COOPERATION

PARTICIPATION

COORDINATION

HARMONISATION

INTEGRATION

There are plenty of BUZZ WORDS, but do they all mean the same thing?

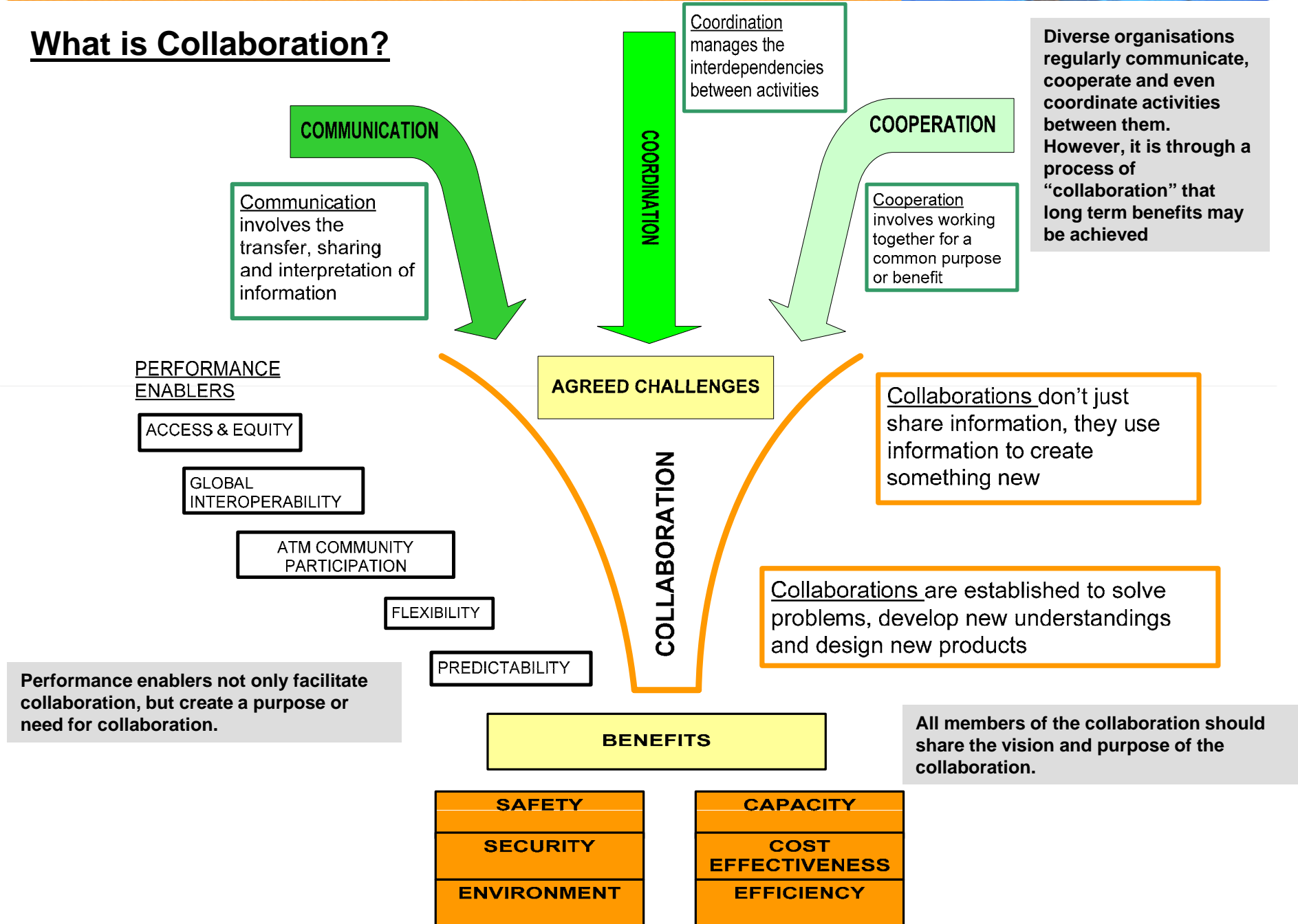
COMMUNICATION

INTEROPERABILITY

CONSULTATION

COLLABORATION

What is Collaboration?



Collaborating



Why collaborate?

Political & Environmental Drivers

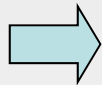
- Growth in aviation
- Operational efficiencies
- Cost effectiveness
- Increasing demands from industry
- Seamless Airspace objectives
- Neighbourhood assistance
- Environmental responsibilities

Technology Drivers

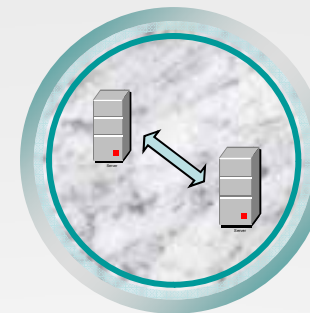
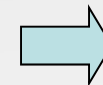
- Rapid changes in technology solutions
- Web technologies that provide new possibilities for collaboration & interoperability
- SWIM & AIM objectives
- Cost of investment
- Open standards providing a pathway towards technical interoperability
- SOA principles move the focus to servicing the customer



Collaboration



Information Sharing



Interoperability

Collaborating



What are the benefits?

- **Generating and enhancing business opportunities**
 - Access new / innovative solutions
 - Access to new customer groups
- **Strengthening human resource management & corporate culture**
 - Employee motivation, morale, loyalty and retention
 - Foster empathy and caring that reinforce a focus on service
 - Expanded opportunities for employees
 - Access to innovative ideas and knowledge transfer
 - Increase an organisation's ability to attract potential employees
- **Supporting corporate strategies**
 - Neighbourhood assistance
 - Seamless skies
 - Operational & Cost efficiencies
 - Interoperability
 - Environmental
- **Capabilities**
 - Greater choice in technology infrastructure
 - Expanded support network
 - Improved decision making
 - Harmonisation

Facilitating Collaborations



What's required?

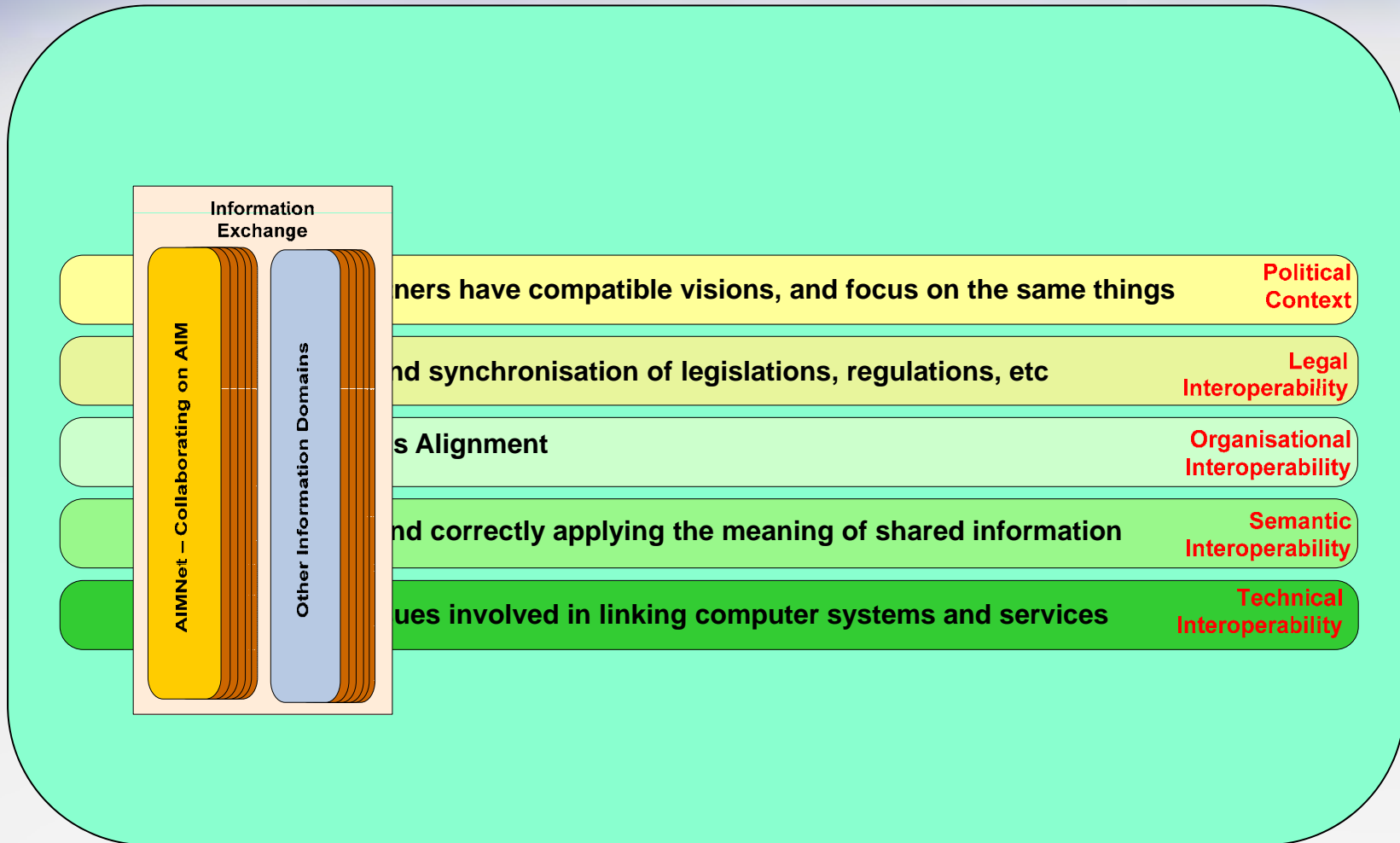
The I's that create successful We's

Collaborative Advantage: The Art of Alliances, Harvard Business Review

- **Individual Excellence:** Partners have something of value to contribute to the relationship
- **Importance:** The relationship fits major strategic objectives, so they want to make it work.
- **Interdependence:** The partners need each other (complementary assets and skills).
- **Investment:** Partners invest in each other to demonstrate their respective stakes in the relationship.
- **Information:** Communication is reasonably open. Partners share information required to make the relationship work (objectives, goals, technical data, knowledge of conflicts, trouble spots, etc)
- **Integration:** Partners develop linkages and shared ways of operating so they can work together smoothly.
- **Institutionalisation:** The relationship is given a formal status, with clear responsibilities and decision processes.
- **Integrity:** The partners behave toward each other in honourable ways that justify and enhance mutual trust. They do not abuse the information they gain, nor do they undermine each other.

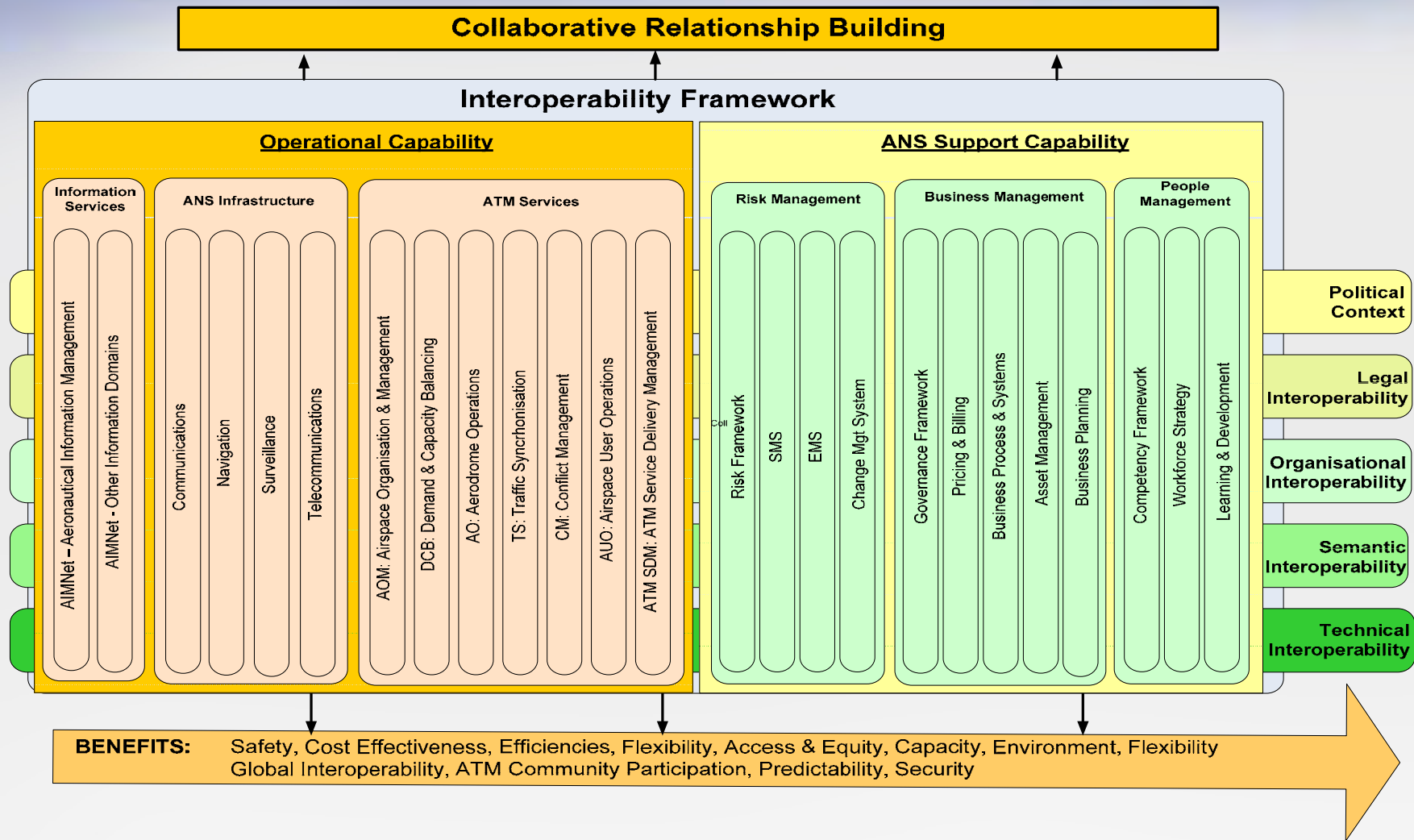
Facilitating Collaborations

Frameworks: Strategic Service Alliance Framework



Facilitating Collaborations

Frameworks: Strategic Service Alliance Framework



Facilitating Collaborations

Frameworks: Strategic Service Alliance Framework



Interoperability Layer	Considerations	Critical Issues
Political	<ul style="list-style-type: none"> • Economic stability • National security • Governmental structure • National identity • Key State relationships 	<ul style="list-style-type: none"> – Governance – Growth – Influence – Safety & Stability – Culture – Trade Partners, alliances etc
Legal	<ul style="list-style-type: none"> • Legislative & Regulatory framework • Contractual • Intellectual Property • Confidentiality agreements • Structure • Military 	<ul style="list-style-type: none"> – Level of commitment & support – Capability of change – Ability to engage – Jurisdiction – Existing agreements – Requirements – Enforceability
Organisational	<ul style="list-style-type: none"> • Structure • Strategic priorities / directions • Influences • Operations • Processes • Change environment 	<ul style="list-style-type: none"> – How culture supports aspirations – Priorities / constraints – Capacity to meet opportunities – Government influence – Alignment of objectives – Supporting frameworks

Facilitating Collaborations

Frameworks: Strategic Service Alliance Framework



Frameworks

Interoperability Layer	Considerations	Critical Issues
Semantic	<ul style="list-style-type: none">• Language• Communication protocols• Change management	<ul style="list-style-type: none">– Interpretation– Understanding– Compliance / alignment with standards– Relationship continuity
Technical	<ul style="list-style-type: none">• Information Domains• Priorities• Level of integration• Architecture• Communication capabilities• Safety requirements	<ul style="list-style-type: none">– Compatibility protocols– Requirements (e.g. geographic isolation)– Interoperability– Bandwidth and cost constraints– Alignment of requirements

Interoperability considerations are identified, assessed and resolved on an iterative basis – throughout the collaboration (i.e. before, during and after).

Facilitating Collaborations

Getting Engaged



1. Meeting the Family

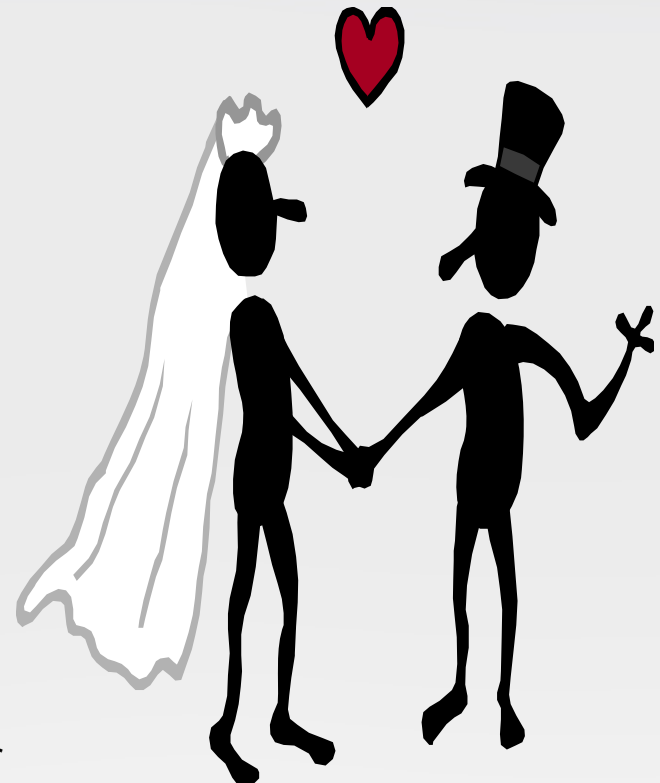
- Initial rapport must be supplemented by the approval, formal or informal, of other people in the organisations.
- Other stakeholders may also need to approve the relationship (regulators, government departments, etc).

2. The Vows

- The relationship is formalised (agreements).
- Good agreements incorporate a specific joint activity (e.g. AIMNet, or a specific project). The relationship is more important than the agreement!
- Vows should include a commitment to expand the relationship (e.g. personnel swaps).
- The vows should incorporate clear signs of continuing independence for all partners (its an alliance, not a take-over).

3. Housekeeping

- Romance quickly gives way to day-to-day reality as partners begin to live together.
- As projects get under way, greater interaction with other organisational members (possible issues arise).
- Operational and cultural differences begin to emerge
- More communication than anticipated is required.



Facilitating Collaborations

Learning to Collaborate



1. Strategic integration

- Continuous contact among top leaders (the more contact top executives have, the more successful the collaboration will be).

2. Tactical integration

- Bringing middle managers or professionals together to develop plans for specific projects or joint activities, to identify organisational or system changes that will link the companies better, or to transfer knowledge.

3. Operational integration

- Provides ways for people to carry out their day-to-day work and have timely access to the information, resources or people they need to accomplish their tasks (joint training, information portals, etc).

4. Interpersonal integration

- Relationships mature and the network of interpersonal ties between the members also grows.
- Strong interpersonal relationships help resolve small conflicts before they escalate.

5. Cultural integration

- Those involved in the relationship need to have the communication skills and cultural awareness necessary to bridge their differences.



A decade from now.....



Together, we could:

- Shared infrastructure solutions
- Shared resources
- Regional cadetship programs
- Capability development programs
- Harmonised information standards
- Regional training services



The AIMNet Experience

Introduction



AIRWAYS
NEW ZEALAND

1. Meeting the Family

- 2008, the Executive of Airservices Australia (AsA) and Airways Corporate New Zealand (ACNZ), agreed to progress a collaboration strategy.
- AIM specialists get together to progress a collaboration strategy on AIM.

2. The Vows

- The relationship is formalised (Bowral Accord, AIMNet Framework).
- Regular communication structure is established.
- Roles & responsibilities are defined.
- Activities are supported.

3. Housekeeping

- Initiatives are defined (AIMNet Roadmap).
- Challenges emerge – but relationship is strong.



The AIMNet Experience



Current Status

Established: March 2009

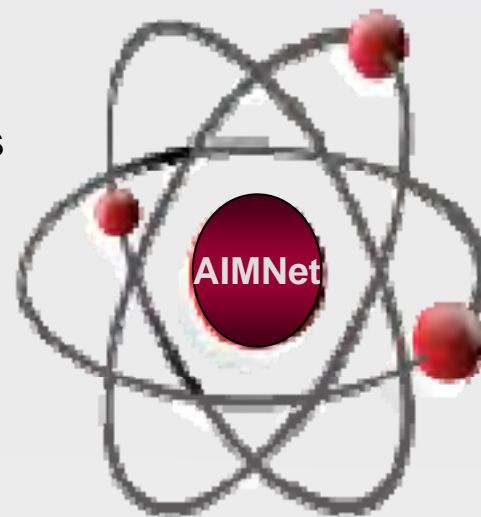
Members: Airservices Australia + Airways NZ

Objective: To explore and review collaborative opportunities relating to AIS / AIM capabilities

Scope: Infrastructure / Services / Experience – associated with the delivery of AIS / AIM functions

Opportunities:

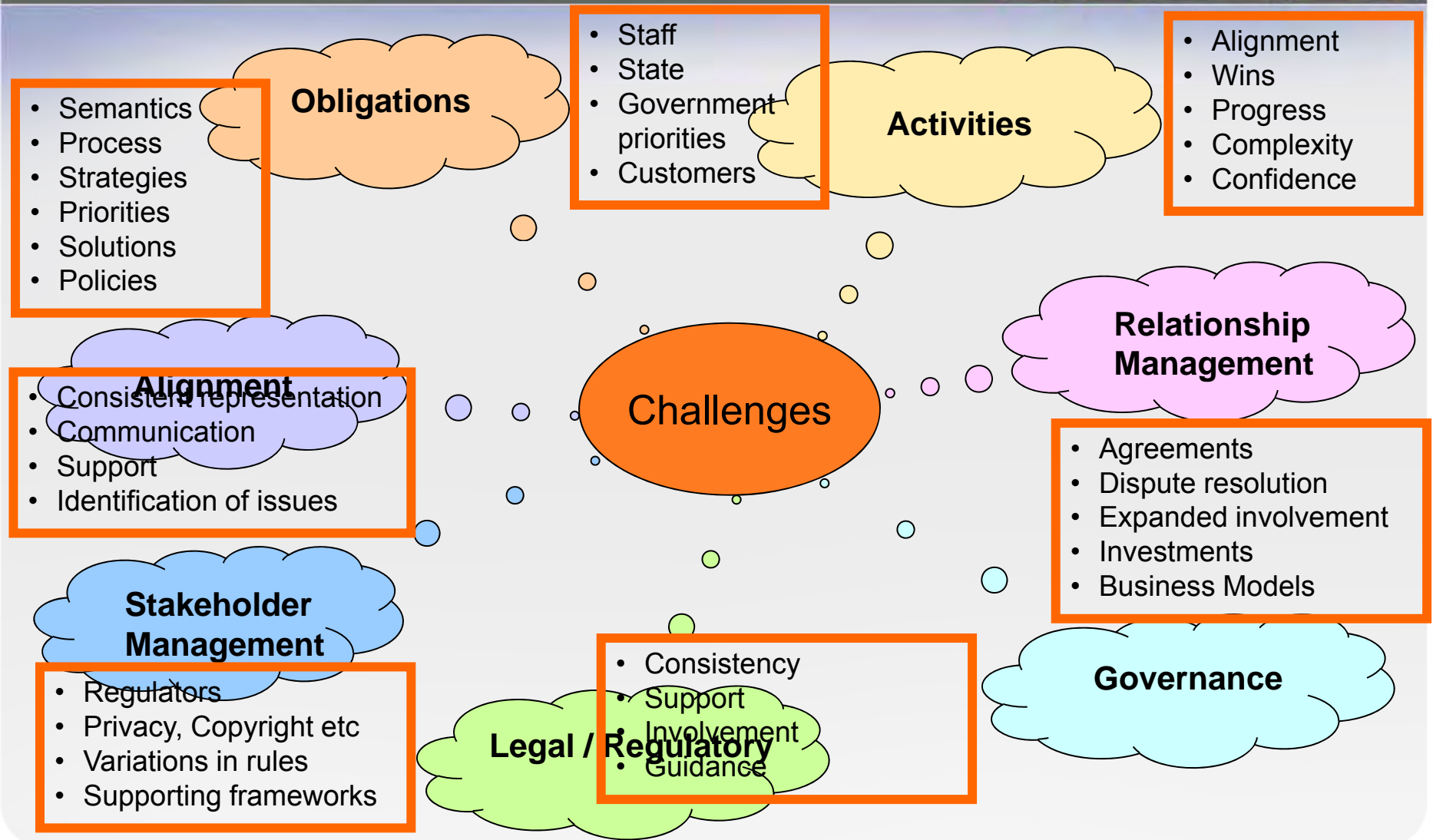
1. NAIPs / ANAIS Next Generation
2. Combining and/or sharing BOF / NOF services
3. Combine and/or share HF services
4. Mercury capabilities
5. Establishing a Collaborative Culture
6. Develop and test a collaboration framework that can be extended to include additional members



The AIMNet Experience



Challenges Ahead – Housekeeping



Collaboration Quotes!



"The secret is to gang up on the problem, rather than each other." - Thomas Stallkamp

"Politeness is the poison of collaboration." - Edwin Land

"It is the long history of humankind (and animal kind, too) those who learned to collaborate and improvise most effectively have prevailed." – Charles Darwin


Individually, we are one drop. Together, we are an ocean." - Ryunosuke Satoro

"Alone we can do so little; together we can do so much." - Helen Keller

"The purpose of life is to collaborate for a common cause; the problem is nobody seems to know what it is." - Gerhard Gschwandtner

Questions?





CHAPTER 3
OPERATING PROCEDURES
FOR
AIS DYNAMIC DATA
(OPADD Edition 3.0)

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TABLE OF CONTENTS

1	INTRODUCTION.....	1-1
1.1	Preface	1-1
1.2	Context	1-1
1.3	Purpose	1-1
1.4	Scope.....	1-2
1.5	Applicability	1-3
1.6	Referenced Documents	1-4
2	NOTAM CREATION	2-1
2.1	Introduction	2-1
2.2	Basic Rules for NOTAM Creation.....	2-1
2.3	Detailed Procedures.....	2-3
2.3.1	NOTAM Series Allocation	2-3
2.3.2	NOTAM Number	2-3
2.3.3	NOTAM Type.....	2-3
2.3.4	NOTAM Qualification Item Q) – General Rules	2-4
2.3.5	Qualifier ‘FIR’	2-4
2.3.6	Qualifier ‘NOTAM CODE’.....	2-5
2.3.7	Qualifier ‘TRAFFIC’	2-6
2.3.8	Qualifier ‘PURPOSE’	2-7
2.3.9	Qualifier ‘SCOPE’	2-8
2.3.10	Qualifiers ‘LOWER/UPPER’	2-11
2.3.11	Qualifier ‘GEOGRAPHICAL REFERENCE’ – General Rules	2-13
2.3.12	Qualifier ‘GEOGRAPHICAL REFERENCE’ – Co-ordinates	2-13
2.3.13	Qualifier ‘GEOGRAPHICAL REFERENCE’ – Radius.....	2-14
2.3.14	Item A) – Single Location (FIR or AD)	2-15
2.3.15	Item A) – Multi-Location (FIR or AD)	2-16
2.3.16	Item B) – Start of Activity	2-17
2.3.17	Item C) – End of Validity	2-18
2.3.18	Item D) – Day/Time Schedule – General Rules.....	2-18
2.3.19	Item D) – Day/Time Schedule – Abbreviations and Symbols Used.....	2-21
2.3.20	Item D) – Day/Time Schedule – Special Cases.....	2-23
2.3.21	Item D) – Day/Time Schedule – Examples.....	2-24

2.3.22 Item E) – NOTAM Text	2-28
2.3.23 Items F) and G) – Lower and Upper Limit	2-34
2.4 Creation of NOTAMR and NOTAMC.....	2-35
2.4.1 General Procedures Related to NOTAMR and NOTAMC Creation.....	2-35
2.4.2 Specific Procedures Related to NOTAMR Creation	2-39
2.4.3 Specific Procedures Related to NOTAMC Creation	2-39
2.5 Checklist Production	2-41
2.5.1 Checklists – General.....	2-41
2.5.2 Checklist Qualification – Item Q)	2-41
2.5.3 Checklist Format – Item E)	2-42
2.5.4 Checklist Errors	2-43
2.6 Publication of Information by NOTAM, AIP Amendment or AIP Supplement	2-43
2.6.2 Publication of permanent information by NOTAM.....	2-43
2.6.3 Incorporation of NOTAM information in AIP Amendment	2-44
2.6.4 Incorporation of NOTAM information in AIP Supplement	2-45
2.7 Trigger NOTAM and Related Procedures.....	2-45
2.7.1 Trigger NOTAM – Definition	2-45
2.7.2 Trigger NOTAM – General Rules	2-45
2.7.3 Trigger NOTAM relative to AIRAC AIP AMDT	2-47
2.7.4 Trigger NOTAM relative to AIP SUP (AIRAC and Non-AIRAC).....	2-47
2.7.5 Notification of changes to AIP SUP	2-48
2.8 NIL Notification.....	2-50
3 NOTAM PROCESSING	3-1
3.1 Introduction	3-1
3.2 Objective	3-1
3.3 Applicability	3-2
3.4 Procedures for the processing of NOTAM.....	3-2
3.5 General Principles.....	3-2
3.6 Conversion of original NOTAM Class I.....	3-3
3.7 Triggering of printed publications.....	3-4
3.8 Translation of NOTAM.....	3-5
3.9 Syntax correction	3-5
3.10 Data correction	3-6
3.11 Editing	3-6
3.12 Procedures for dealing with NOTAM Subject to Query	3-7

3.13	Procedures for the creation of NOTAM Series ‘T’	3-8
3.13.1	General procedures	3-8
3.13.2	Trigger NOTAM in Series ‘T’	3-8
3.13.3	NOTAM in Series ‘T’	3-9
3.14	Procedures for Correction of NOTAM	3-10
3.15	NOTAM Verification	3-10
3.16	NOTAM Identification	3-11
3.16.2	Publishing NOF Identification	3-11
3.16.3	NOTAM Series Allocation	3-11
3.16.4	NOTAM Number	3-12
3.16.5	NOTAM Sub-Number (Multi-part NOTAM)	3-12
3.17	NOTAM Type	3-12
3.18	NOTAM Qualification (Item Q)	3-12
3.18.1	General rule	3-12
3.18.2	Qualifier ‘FIR’	3-12
3.18.3	Qualifier ‘NOTAM CODE’	3-13
3.18.4	Qualifier ‘TRAFFIC’	3-14
3.18.5	Qualifier ‘PURPOSE’	3-14
3.18.6	Qualifier ‘SCOPE’	3-14
3.18.7	Qualifiers ‘LOWER/UPPER’	3-14
3.18.8	Qualifier ‘GEOGRAPHICAL REFERENCE’	3-16
3.19	NOTAM Items	3-16
3.19.1	Item A) – Location ‘FIR/AD’ – General	3-16
3.19.2	Item A) – Location ‘FIR/AD’ – Single-Location NOTAM	3-18
3.19.3	Item A) – Location ‘FIR/AD’ – Multi-Location NOTAM	3-18
3.19.4	Item B) – Start of Activity	3-19
3.19.5	Item C) – End of Validity	3-19
3.19.6	Item D) – Day/Time Schedule	3-20
3.19.7	Item E) – NOTAM Text	3-20
3.19.8	Items F) and G) – Lower and Upper Limit	3-20
3.20	Procedures Related to NOTAM ‘R’ Processing	3-21
3.21	Procedures Related to NOTAM ‘C’ Processing	3-24
3.22	Checklist Processing	3-26
3.22.1	General Principles	3-26
3.22.2	Checklist Received as a NOTAM	3-26
3.22.3	Checklist Not Received as a NOTAM	3-27

3.23	Missing NOTAM	3-28
3.24	NOTAM Deletion	3-28
4	DATABASE COMPLETENESS AND COHERENCE MESSAGES	4-1
4.1	General Principles	4-1
4.2	Request for the Repetition of NOTAM (RQN)	4-2
4.2.1	Codes and Symbols used.....	4-2
4.2.2	Examples of the Request for NOTAM.....	4-2
4.3	Request for the original version of NOTAM (RQO)	4-3
4.3.1	General Specification.....	4-3
4.3.2	Codes and Symbols used.....	4-4
4.3.3	Example of the Request for Original NOTAM.....	4-4
4.4	Request for the Repetition of ASHTAM (RQA)	4-4
4.4.1	Codes and Symbols used.....	4-4
4.4.2	Examples of the Request for ASHTAM.....	4-5
4.5	Content of the Reply Messages (RQR)	4-6
4.5.1	General Specification.....	4-6
4.5.2	Standard Expressions in Reply Messages	4-7
4.5.3	Examples for Status of NOTAM.....	4-8
4.6	Request for a List of valid NOTAM (RQL)	4-9
4.6.1	General Specification.....	4-9
4.6.2	Codes and Symbols used.....	4-10
4.6.3	Examples of the request for a List of valid NOTAM.....	4-10
4.7	Incorrect Requests (RQN, RQO, RQL)	4-11
4.7.1	General Specification.....	4-11
4.7.2	Standard Expressions.....	4-11
5	PROCEDURES FOR SNOWTAM, ASHTAM AND SPECIAL CONDITIONS	5-1
5.1	Introduction	5-1
5.2	SNOWTAM	5-1
5.2.1	Definition.....	5-1
5.2.2	Procedures for SNOWTAM creation.....	5-2
5.2.3	Procedures for SNOWTAM processing	5-4
5.3	ASHTAM	5-4
5.3.1	Definition.....	5-4
5.3.2	Procedures for ASHTAM creation	5-5
5.3.3	Procedures for ASHTAM processing.....	5-6

5.4	Bird Hazards	5-7
5.4.1	Definition	5-7
5.4.2	Procedure	5-7
6	OTHER PROCEDURES	6-1
6.1	Multi-Part NOTAM	6-1
6.1.1	General Principles	6-1
6.1.2	Procedures for Multi-Part NOTAM	6-1
6.1.3	Examples	6-1
7	GUIDELINES FOR THE CREATION AND PROVISION OF PRE-FLIGHT INFORMATION BULLETINS (PIB)	7-1
7.1	Introduction	7-1
7.1.1	Understanding and Background	7-1
7.1.2	The basic user requirements related to Briefing	7-2
7.2	Data Selection Layers	7-2
7.3	Types of Bulletins - PIB	7-3
7.3.1	Area type Bulletin.....	7-3
7.3.2	Route type Bulletin.....	7-4
7.3.3	Aerodrome type Bulletin	7-5
7.3.4	Administrative Bulletins.....	7-6
7.4	Types of Messages/elements to be included in the PIB	7-6
7.5	Criteria for PIB Customisation – Query Filters	7-7
7.5.1	Time window for PIB validity:.....	7-7
7.5.2	NSC qualifiers applied	7-8
7.5.3	Vertical Criteria (Flight Levels).....	7-9
7.5.4	Geographical criteria.....	7-9
7.6	Principle structure of a PIB	7-10
7.6.1	NOTAM sorting	7-10
7.7	PIB - specific presentation considerations	7-11
7.7.1	General layout considerations	7-11
7.7.2	Presentation of dates/times	7-11
7.7.3	Location Indicators.....	7-11
7.8	Delivery of PIB	7-12
7.9	PIB - additional elements to be considered	7-12
7.9.1	Provision of AIP-SUP in relation to PIB	7-12
7.9.2	Special areas	7-12

- 7.9.3 User information 7-13
- 7.10 Update Services 7-13**
 - 7.10.1 Notification 7-13
 - 7.10.2 Update PIB 7-14
- 7.11 User specific Data 7-14**
- 7.12 Possible Evolution of Briefing services 7-15**
 - 7.12.1 Integrated Briefing - the Concept of the 'One Stop Shop' 7-15
 - 7.12.2 The following data elements should be integrated: 7-16

Appendix A1 – System Parameters

Appendix A2 – Glossary

1 INTRODUCTION

1.1 Preface

Within the Asia and Pacific Region, the AIS-AIM Implementation Task Force (AAITF), which is a sub-group of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) ATM/AIS/SAR Sub-Group, has been monitoring the international and automation developments that relates to the NOTAM domain.

In particular, revisions to the EUROCONTROL Operation Procedures for AIS Dynamic Data (OPADD) have been tracked and compared to operating procedures used in the Asia Pacific region.

Principally, this work has been led by Japan and culminated in the fifth meeting of the AIS/AIM Implementation Task Force (AAITF/5, June 2010) where the Task Force formally agreed that EURO OPADD 3.0 excluding its Chapter 6 be adopted by APANPIRG for use as the Asia/Pacific OPADD.

Peter Hobson
Chairman of the AAITF

1.2 Context

1.2.1 The document 'EUROCONTROL Guidelines - Operating Procedures for AIS Dynamic Data (OPADD)' was developed for the benefit of the member States of the European Civil Aviation Conference (ECAC).

1.2.2 However, whilst elaboration of the document took place in the European context the world-wide implication of AIS has been borne in mind during its development. The Standards and Recommended Practices (SARPs) of the Annex 15 to the Chicago Convention on International Civil Aviation form the basis on which the Operating Procedures were detailed. Where elaboration of the definitions of the ICAO SARPs was found to be essential for the harmonised and coherent application of the Operating Procedures, these were collated to form ICAO Annex 15 Amendment Proposals and submitted to the ICAO EANPG.

1.2.3 The new version of ICAO Annex 15 and ICAO Doc 8126 (Ref [1] and [2]) reflected a number of OPADD-derived proposals. Other such proposals were however not accepted for global applicability. Edition 2 of this OPADD document reflects in its Chapter 2-NOTAM Creation and 3-NOTAM Processing those changes which were agreed globally. The changes not agreed globally have either been deleted or moved to a separate chapter at the end of the document

1.3 Purpose

1.3.1 These procedures correspond to the elaboration of the Specialist Task "Develop AIS Operating Procedures". Their objective is "*The provision of standardised*

procedures to improve the quality of AIS" and they concur with the overall objectives:

"To promote uniformity in the collection and dissemination of aeronautical information, in the interest of safety, quality, efficiency and economy" and,

"To improve overall efficiency of AIS, in terms of speed, accuracy and cost effectiveness, by the increased use of automation".

1.3.2 Whilst all ECAC States consider that they act in conformity with the Annex 15 Integrated Aeronautical Information Package provision, significant differences of interpretation of the SARPs had been identified and it was acknowledged that a common understanding of procedures for NOTAM creation was a prerequisite for successful automated processing.

1.3.3 Therefore, the Operating Procedures were developed to reach this common understanding.

1.3.4 This edition of the OPADD also provides enhanced explanations to better take account of the main deficiencies reported by users on PIB content [source: Airspace Infringements report]. Upon NOTAM creation and PIB production, awareness should be given to the following issues that have an impact on PIB readability and understanding:

- Reduction of irrelevant NOTAM: Publishing NOF not allocating proper qualifiers and rather take the default values given without taking into account actual situation as stated in item E.
- Lack of graphical presentation: description of active danger or other areas provided in numerical form (LAT/LONG) makes it difficult for pilots to understand the actual dimensions and location of the areas.
- Lack of integrated aeronautical information briefing facility: no single source (portal) for relevant information e.g. free of charge (or low cost?) on-line portal for GA pilots.
- Abbreviations: Use of national abbreviations which is not encouraged by ICAO.
- NOTAM difficult to read and to understand: Many problems are already dealt with in chapter 2 of OPADD but those rules are not consistently applied (e.g. text not clear without referring to the AIP; missing essential information e.g. which specific procedure is affected).
- Most users would appreciate a simpler NOTAM text.

1.4 Scope

1.4.1 The Operating Procedures for AIS Dynamic Data detail the procedures related to NOTAM, in general. Examples of SNOWTAM and ASHTAM as well as specific rules or guidance for harmonisation of these AIS Messages are also covered.

- 1.4.2 The ECAC States agree to follow them for NOTAM creation, as expressed in Chapter 2. The procedures are intended for guidance and may be implemented immediately – see applicability under 1.5.2.
- 1.4.3 The procedures for NOTAM creation detailed in Chapter 2 will also serve as a benchmark for the processing of incoming international NOTAM, in the sense that where incoming international NOTAM are not prepared in line with these procedures, they may be manually processed in accordance with the principles and procedures laid down in Chapter 3-NOTAM Processing. Chapter 3 is intended to be used as the default for harmonised NOTAM processing by a NOTAM Processing Unit (NPU).
- 1.4.4 The principles and procedures related to maintaining database completeness and coherence, along with the description of messages associated with this function, are provided in Chapter 1. These messages, such as request and reply messages are required to fulfil the maintenance function. These messages are based upon the use of AFTN, whereas the use of other communication means, using alternative formats, could be envisaged.

1.5 Applicability

- 1.5.1 Most changes in the guidelines are addressing procedural improvements and clarifications. Chapter 7 has been added for guidance only, however, the outlined propositions should be applied whenever possible to ensure harmonised provision of briefing services.
- 1.5.2 It is recommended that OPADD Edition 3.0 is implemented by the States' NOFs and relevant Service Providers (e.g. the EAD) as soon as possible. In order to ensure a harmonised application, the following common implementation dates have been established:
- Integration of procedural changes in working procedures and manuals, as required. To be implemented without delay with a recommended common application date of September 2009.
 - Items requiring system changes (see 1.5.3) in States' systems and the EAD with a recommended common application date of November 2010.
- 1.5.3 The introduction of OPADD Ed. 3.0 will not necessitate extensive system changes as the OPADD primarily introduces procedural modifications rather than new functions. However, following subjects may need system adaptations but those are not considered critical to the overall application of the OPADD or NOTAM operations, in general:
- FL Rounding: minor system impact, operator work around is possible.
 - Refinement of system messages (RQA for ASHTAM): revision to the automatic query/retrieval functions, addition of standard replies for database queries. Minor system impact as this procedure is used occasionally and operator work around maybe considered. If these messages are only manually processed, then it's only a procedural change.

- ASHTAM (auto-) processing: minor system impact.

- PIB chapter, default value set to Purpose letter 'M - Miscellaneous info': update to the default values to be applied by a briefing system; minor system impact expected as default values should be easily changeable.

1.6 Referenced Documents

The following documents were used during the production of this edition:

Nº	Title	Edition	Date
1	ICAO International Standards and Recommended Practices Aeronautical Information Services - Annex 15	Twelfth Amdt°34	22 November 2007
2	ICAO Aeronautical Information Services Manual – Doc 8126-AN/872	Sixth Amdt N°1	28 April 2006
3	ICAO Abbreviations and Codes – Doc 8400	Seventh	2007
4	EUROCONTROL Report on detailed NOTAM Processing Procedures		5 October 1996
5	EUROCONTROL Static Data Procedures	1.0	15 December 2002
6	ICAO Location Indicators – Doc 7910	Latest edition	2008
7	ICAO Manual on Volcanic Ash, Radioactive Material and Toxic Chemical Clouds, Appendix F - Doc 9691	Second edition	2007
8	ICAO Handbook on the International Airways Volcano Watch (IAVW), Operational Procedures and Contact List - Doc 9766	Second AMDT	05 November 2007

The following website contains the latest information related to operating procedures for AIS dynamic data:

<http://www.eurocontrol.int/aim/opadd>

2 NOTAM CREATION

2.1 Introduction

2.1.1 The international standard NOTAM format is contained in Annex 15 (Ref. [1]) to the ICAO Convention. It is the reference format for NOTAM and forms the baseline on which this document is developed.

2.1.2 The different types of NOTAM are identified by suffix letters 'N' (New), 'R' (Replacement) and 'C' (Cancellation) and the resulting identifier appears after the reference number as follows:

- NOTAMN (New NOTAM)
- NOTAMR (Replacement NOTAM)
- NOTAMC (Cancellation NOTAM)

Example: A0123/08 NOTAMN

2.1.3 Unless otherwise specifically stated in the text, the procedures described in this chapter refer to NOTAMN (New NOTAM); most of them also apply to NOTAMR and to NOTAMC.

2.1.4 However, there are some particulars specific to NOTAMR (Replacement NOTAM) and NOTAMC (Cancellation NOTAM) creation. These are described in this chapter, at paragraph 2.4.

2.1.5 This chapter contains the operating procedures to be applied for the creation of NOTAM, and provides:

- Basic rules for NOTAM creation (paragraph 2.2 refers)
- Detailed procedures relative to each NOTAM Item (paragraph 2.3 refers)
- Procedures for NOTAMR and NOTAMC creation (paragraph 2.4 refers)
- Procedures for Checklist production (paragraph 2.5 refers)
- Procedures for the publication of Permanent information (paragraph 2.6 refers)
- Procedures for Trigger NOTAM creation (paragraph 2.7 refers)
- Procedures for NIL Notification (paragraph 2.8 refers)

2.1.6 The procedures relative to the processing of NOTAM are described in Chapter 0.

2.2 Basic Rules for NOTAM Creation

2.2.1 The ICAO NOTAM format shall be strictly adhered to and the only NOTAM types allowed are NOTAMN, NOTAMR and NOTAMC.

- 2.2.2 NOTAM intended for international distribution shall include English text for those parts expressed in plain language.
- 2.2.3 Each NOTAM shall be transmitted as a single telecommunication message.
- 2.2.4 A NOTAM shall deal only with one subject and one condition of that subject [Note exception for Trigger NOTAM – paragraphs 2.7.2.10 - 2.7.2.14 refers].
- 2.2.5 Terms such as planned alternative date or alternative dates shall not be used in a NOTAM. Such dates shall be published as any normal date of activity [refer to paragraph 2.4 for NOTAMR].
- 2.2.6 Erroneous NOTAM shall be replaced; or they may be cancelled and a new NOTAM issued. No 'correct version' NOTAM shall be issued.
- 2.2.7 Renumbering of existing NOTAM (containing identical information, but with a new number) is not allowed. Renumbering at the beginning of each year is therefore also not permitted.
- 2.2.8 NOTAM are basically qualified according to the NOTAM Selection Criteria (NSC), as published in ICAO Doc 8126 (Ref. [2]) Chapter 6 Appendix B.
- 2.2.9 All published times shall be in UTC.
- 2.2.10 If Item C) contains 'EST', the NOTAM requires the later issue of a NOTAMR or NOTAMC.
- 2.2.11 A NOTAMR shall replace only one NOTAM. Both shall belong to the same NOTAM series.
- 2.2.12 A NOTAMC shall cancel only one NOTAM. Both shall belong to the same NOTAM series.
- 2.2.13 A NOTAM shall be cancelled only by a NOTAMC and never by a Checklist.
- 2.2.14 For NOTAMR and NOTAMC, the date/time in Item B) shall be equal to the actual date/time of creation of that NOTAMR and NOTAMC.
- 2.2.15 Item C) shall contain 'PERM' solely for NOTAM information that will be incorporated in the AIP. These NOTAM shall be cancelled according to the rules described in paragraph 2.6.3 when the AIP is updated.
- 2.2.16 Item E) should be composed by the Publishing NOF in such a way that it will serve for direct Pre-flight Information Bulletin entry without requiring additional processing by the receiving unit.

2.2.17 The following table shows the necessary data Items for each NOTAM type and for the Checklist:

	NOTAMN	NOTAMR	NOTAMC	Checklist
Series/Nr/Type	Yes	Yes	Yes	Yes
Ref to Series/Nr	No	Yes	Yes	Yes
FIR	Yes	Yes	Yes	Yes
NOTAM Code	Yes	Yes	Yes	Yes
'Traffic'	Yes	Yes	Yes	Yes
'Purpose'	Yes	Yes	Yes	Yes
'Scope'	Yes	Yes	Yes	Yes
Lower/Upper	Yes	Yes	Yes	Yes
Lat/Long/Radius	Yes	Yes	Yes	Yes
Item A)	Yes	Yes	Yes	Yes
Item B)	Yes	Yes	Yes	Yes
Item C)	Yes	Yes	No	Yes
Item D)	Optional	Optional	No	No
Item E)	Yes	Yes	Yes	Yes
Items F) & G)	Optional	Optional	No	No

Yes = Entry in Item is compulsory.

No = Entry in Item is not allowed.

Optional = Entry depending on the NOTAM contents.

2.3 Detailed Procedures

2.3.1 NOTAM Series Allocation

2.3.1.1 The use of a NOTAM Series identifier is always required, even for countries publishing only one single NOTAM Series.

2.3.1.2 Letters A to Z (1 character) are allowed, except S and T.

2.3.2 NOTAM Number

2.3.2.1 Consists of NOTAM number/year (4 digits/2 digits). For Multi-part NOTAM refer to procedures detailed in Chapter 1.

2.3.2.2 Each series will start on January 1st of each year with number 0001.

2.3.2.3 The NOTAM are issued in ascending and continuous sequence in each and every series.

2.3.3 NOTAM Type

2.3.3.1 Letters 'N' (new), 'R' (replace) and 'C' (cancel) are added as a suffix to the designator 'NOTAM' to indicate the NOTAM type or function.

Examples: A0123/08 NOTAMN;
A0124/08 NOTAMR A0123/08
A0125/08 NOTAMC A0124/08

2.3.4 NOTAM Qualification Item Q) – General Rules

- 2.3.4.1 The NOTAM Selection Criteria (NSC) tables form the basis for NOTAM qualification. Guidance for their use is contained in ICAO Doc 8126 (Ref. [2]) Chapter 6 Appendix B.
- 2.3.4.2 NSC are used for the following:
- a) the storage and retrieval of information;
 - b) to associate a NOTAM to particular purposes; and
 - c) to determine the relevance of a NOTAM for a given context (aerodrome, FIR, area, IFR or VFR flight, ...).
- 2.3.4.3 Publishing NOF shall normally apply the qualifiers associated with the NOTAM Code combinations in accordance with the NSC. Deviation from the corresponding 'Traffic', 'Purpose' and 'Scope' qualifiers is only allowed in exceptional cases; e.g. when required by National regulations or imposed by operational needs (refer to paragraphs 2.3.6.6-2.3.6.8, 2.3.7.3, 2.3.9.4 and 2.8.3 for guidance).
- 2.3.4.4 All fields of the Item Q) shall be completed for each NOTAM type.

2.3.5 Qualifier 'FIR'

- 2.3.5.1 This Item shall normally contain the ICAO Location Indicator of the FIR within which the subject of the information is located geographically or, if the NOTAM is issued by a regional non-governmental agency, the location indicator allocated by ICAO to that agency.

Example: Q) RJJJ/QWELW/... .
A) RJAA

- 2.3.5.2 If more than one FIR of the same country are concerned, the ICAO nationality letters of that country (e.g. ZX) shall be followed by 'XX'.

Example: Q) ZXXX/QWELW/... .
A) ZGZU ZSHA ZBPE... .

- 2.3.5.3 If more than one FIR of different countries are concerned (supra-national), the ICAO nationality letters of the responsible State (e.g. LI) shall be followed by 'XX'.

Example: Q) LIXX/QWELW/... .
A) LIRR LIBB LATI... .

- 2.3.5.4 A location indicator allocated exclusively to an overlying UIR shall not be used.

Example: If the information relates to Rhein UIR, the allocated indicator 'EDUU' is not to be used in Item Q):

- Q) EDXX/
- A) EDGG EDMM

- 2.3.5.5 When a subject aerodrome is situated within the overlying FIR of another State, Item Q) shall contain the code for that overlying FIR (paragraph 2.3.14.2 refers).

Example: Q) LMMM/
A) LICD

- 2.3.5.6 In the absence of a clear and positive alternative, the insertion of location indicators such as LIXX in Item Q) (paragraph 2.3.5.3 refers) enables identification of the Publishing NOF.

2.3.6 Qualifier 'NOTAM CODE'

- 2.3.6.1 This Item shall contain the ICAO Doc 8126 (Ref. [2]) rationalised versions of NOTAM Codes published in ICAO Doc 8400 (Ref. [7]).

- 2.3.6.2 The NOTAM Selection Criteria (NSC) set out in ICAO Doc 8126 (Ref. [2]) Chapter 6 Appendix B provide a subject-related association of NOTAM Codes with the qualifiers 'Traffic', 'Purpose' and 'Scope'.

- 2.3.6.3 If ICAO introduces new NOTAM Code subjects in Doc 8400 (Ref. [7]) (e.g. 'GA' and 'GW' for GNSS) before amending Doc 8126 (Ref. [2]), the allocation of qualifiers 'Traffic', 'Purpose' and 'Scope' shall be based on operational experience and orientated to similar subjects contained in the existing Doc 8126 NSC.

- 2.3.6.4 Publishing NOF shall ensure that the NOTAM Code selected from the NSC describes the most important information to be promulgated.

Example: If required text reads: 'parking area closed due work in progress'

Use QMKLC instead of QMKHW, i.e.:

Q) WSJC/**QMKLC**/IV/BO/A/

Instead of:

Q) WSJC/**QMKHW**/IV/**M**/A/

- 2.3.6.5 If the NSC tables do not contain an appropriate 'Subject/Condition' combination for the information to be promulgated, the letters 'XX' shall be used. However, every effort shall be made to use 'Subjects' and 'Conditions' that are listed in the NSC before deciding to use 'XX' as detailed in the following paragraphs.

- 2.3.6.6 If the Subject is not listed: use 'XX' as the 2nd and 3rd letters of the NOTAM Code. However, an overall term (such as 'FA' or 'CA') or a best fitting code shall be preferred whenever possible instead of 'XX'.

Example: QXXCS

When 'XX' is used as the 2nd and 3rd letter combination, free association is possible with the qualifiers 'Traffic', 'Purpose' and 'Scope'. These entries shall be selected with due regard to the qualifying NOTAM text.

- 2.3.6.7 If the Condition is not listed: use 'XX' as the 4th and 5th letters of NOTAM Code with the exception of Trigger NOTAM where 'TT' is always used (ref. 2.7.2.8).

Example 1: QFAXX

When 'XX' is used as the 4th and 5th letter combination, free association is possible with the qualifiers 'Traffic' and 'Purpose'. The 'Traffic' and 'Purpose' entries shall be selected with due regard to the qualifying NOTAM content and, by analogy, with the prevailing association of qualifiers to the respective subject (2nd and 3rd letters) in the NSC.

Association with 'Scope' is fixed by the NOTAM subject 2nd and 3rd letter combination taking into account the requirements mentioned in Para 2.3.9.4.

If the NOTAM contents do not justify the insertion of the prevailing qualifiers associated with the subject in the NSC, NOTAM shall be assigned the appropriate qualifiers taking into account the operational needs, especially for PIB output/query.

Example 2:

If required text reads: 'Grass cutting in progress on aerodrome', the prevailing qualifiers ('Traffic'/'Purpose'/'Scope') for 'QFA' (AD) are 'IV/NBO/A'.

But, depending on the activity's expected impact on manoeuvring area operations, Item Q) could read: '..../QFAXX/IV/M/A/.....'

Example 3:

If required text reads: 'RWY18 ILS localizer coverage reduced to 25 degrees either side of the front course along a radius 10NM from the antenna', the NOTAM Code and 'Traffic'/'Purpose'/'Scope' qualifiers in Item Q) may read: 'QILXX/I/BO/A/.....'

- 2.3.6.8 If, exceptionally, neither the Subject nor the Condition is listed: the code 'QXXXX' may be used.

When the NOTAM Code 'QXXXX' is used, free association of the qualifiers is possible. The qualifiers shall reflect the content of the NOTAM.

Example:

Q) EKDK/QXXXX/IV/M/E/000/999/5533N00940E999

E) ACCORDING TO RESOLUTION 781 UNITED NATIONS HAS DECIDED TO ESTABLISH A BAN ON MIL FLIGHTS IN

2.3.7 Qualifier 'TRAFFIC'

- 2.3.7.1 This qualifier relates the NOTAM to a type of traffic and thus allows retrieval according to the user requirements:

I = IFR Traffic

- V = VFR Traffic
 IV = IFR and VFR Traffic
 K = NOTAM is a checklist, see paragraph 2.5.

2.3.7.2 The appropriate type of traffic should be taken from the NOTAM Selection Criteria (NSC).

2.3.7.3 However, the NSC contains certain subjects (2nd and 3rd letters) where the NOTAM subject/text may demand a different choice of 'Traffic' qualifier (I, V or IV). In these cases, the correct 'Traffic' entry shall be determined by the Publishing NOF.

Example: NOTAM Code for 'VFR REPORTING POINT ID CHANGED' is 'QAPCI'

The given NSC 'Traffic' Qualifier for 'QAPCI' is 'IV'

But as the Reporting Point is for VFR use only;

Entry in Item Q) shall be: 'Q) LFFF/QAPCI/V/BO/E/000/200....'

2.3.8 Qualifier 'PURPOSE'

2.3.8.1 This qualifier relates a NOTAM to certain purposes (intentions) and thus allows retrieval according to the user's requirements.

2.3.8.2 The appropriate 'Purpose' qualifier(s) should be taken from the NSC.

2.3.8.3 'PURPOSE' entries:

N = NOTAM selected for the immediate attention of aircraft operators

Due to their importance these NOTAM require immediate attention of aircraft operators. Aircraft Operators may request specific delivery of such NOTAM or for their inclusion in specific Pre-flight Information Bulletins.

The NOTAM will appear in a specific Pre-flight Information Bulletin containing only NOTAM related to subjects of extreme importance selected for immediate attention. NOTAM qualified BO, B or M will not appear, so only NOTAM qualified NB¹ or NBO shall appear.

B = NOTAM selected for PIB entry

The NOTAM will appear in a Pre-flight Information Bulletin containing all NOTAM relevant to a general Pre-flight Information Bulletin query. NOTAM qualified B, BO, NB¹ or NBO shall appear in the Pre-flight Information Bulletin.

O = NOTAM concerning flight operations

The NOTAM will appear in a specific Pre-flight Information Bulletin containing only NOTAM related to subjects that concern flight operations. NOTAM qualified B, NB¹ or M will not appear, only NOTAM with BO or NBO shall appear.

M = Miscellaneous

The NOTAM is for a 'miscellaneous' purpose and will not appear in a Pre-flight Information Bulletin, unless specifically requested.

K = The NOTAM is a checklist (see para 2.5).

2.3.8.4 'PURPOSE' combinations:

The following combinations of one to three letters are permissible:

M, B, BO, NB¹ and NBO,

where the order in the list reflects the grading in terms of operational significance from the lowest to the highest.

For a NOTAM Checklist, only K shall be used.

2.3.9 Qualifier 'SCOPE'

2.3.9.1 This qualifier relates the NOTAM subject (2nd and 3rd letters) to a specific scope. This qualifier is used to determine under which category a NOTAM is presented in a Pre-flight Information Bulletin, i.e. under 'Aerodrome', 'Enroute' or 'Navigation Warning'.

2.3.9.2 The following entries are permissible:

A = Aerodrome

Relates the NOTAM to the scope of 'Aerodromes'. Entry of an aerodrome (e.g. EGLL) in Item A) is compulsory.

E = Enroute

Relates the NOTAM to the scope of 'Enroute information'. Entry of one or more FIR in Item A) is compulsory.

W = Warning

Relates the NOTAM to the scope of 'Navigation Warnings'. Entry of one or more FIR in Item A) is compulsory.

AE = Aerodrome/Enroute

Relates the NOTAM to both scopes 'A' and 'E'.

Scope 'AE' is used whenever an aerodrome-related NOTAM (e.g. certain Navaids) affects both aerodrome and Enroute operations. For navigation warnings refer to 'AW'.

¹ Note that, whilst change is expected, the use of 'NB' remains prescribed in the ICAO NSC at the time of writing this edition.

Item A) shall contain the location indicator of the Aerodrome (e.g. EHAM).

Example:

Q) EHAA/QNMAS/IV/BO/AE/000/999/5216N00442E025
 A) EHAM B) 0804170500 C) 0804170700
 E) VOR/DME AMS 113.95 MHZ/CH 96Y U/S

In this example, Item Q) shall contain geographical co-ordinates and a radius centred on the Navaid.

When such a Navaid is serving two or more aerodromes, only one NOTAM shall be published with scope 'AE'. NOTAM for other aerodromes concerned shall be published with scope 'A' only to prevent a duplication in the Enroute part of the PIB. All scope 'A' NOTAM, shall contain ARP as geographical reference.

In the rare case that a Navaid coverage affects more than one FIR, all affected aerodromes are issued with scope 'A' and with ARP as geographical reference. A separate NOTAM is issued with scope 'E' only, Item A to contain all affected FIR.

AW = Aerodrome/Warning

Relates the NOTAM to both scopes 'A' and 'W'.

Although scope 'AW' is not explicitly listed in the ICAO NSC tables, it shall be used whenever a single NOTAM is used for both aerodrome and Enroute traffic affected by a Navigation Warning taking place on or in the near vicinity of an aerodrome.

Item A) shall contain the aerodrome location indicator, and Item Q) shall contain the geographical co-ordinates of the location where the activity takes place, followed by the radius.

Example:

Q) LOVV/QWPLW/IV/M/AW/000/160/4720N01113E010
 A) LOWI B) 0810201400 C) 0810202200
 E) MIL PJE WILL TAKE PLACE WITHIN 10NM RADIUS CENTERED AT 471940N 0111300E (SEEFELD).
 F) GND G) FL160)

Note that co-ordinates for LOWI AD are 471539N0112040E, but the actual co-ordinates of the site where the activity takes place are entered in Item Q).

In the rare case that a Navigation Warning affects two or more aerodromes, only one NOTAM shall be published with scope 'AW' in order to prevent duplicated information in the Navigation Warnings section of the Enroute part of the PIB. NOTAM for other aerodromes concerned shall be published with scope 'A' only, ARP as geographical reference and NOTAM Code QFALT (aerodrome limited) and without Item F) and G). If required, the vertical limits are inserted in Item E).

When the area concerned affects one or several AD and more than one FIR, one NOTAM is issued with scope 'W', item A to contain all affected FIR. For every affected AD, a separate NOTAM with scope 'A' only is issued in order to provide correct information in all PIB sections for all concerned FIR and AD and to avoid duplications. All scope 'A' NOTAM to contain ARP as

geographical reference and NOTAM Code QFALT (aerodrome limited) without Item F) and G). If required, the vertical limits are inserted in Item E).

K = Checklist

Relates the NOTAM to a checklist, which will not appear in a Pre-flight Information Bulletin. Entry in Item A) of the FIR(s) valid for the Publishing NOF is compulsory (ref para 2.5).

2.3.9.3 The appropriate entries should be taken from the NOTAM Selection Criteria.

2.3.9.4 However, the NSC contains certain subjects (2nd and 3rd letters) where the 'Scope' (A, E, W, AE or AW) depends on the NOTAM text. In these cases, the correct 'Scope' entry shall be determined by the publishing NOF according to NOTAM text.

Examples: 'QOB . .' = Obstacle = 'AE' in NSC but could also be 'A' or 'E' only;

'QWA . .' = Air Display = 'W' in NSC but could also be 'AW';

'QNV . .' = VOR = 'AE' in NSC but could also be 'E'.

'QOA . .' = AIS = 'A' in NSC but could also be 'AE' (e.g. if AIS is also responsible for other aerodromes in the FIR) or 'E' if the NOTAM refers to national NOF or information provision.

'QST . .' = TWR = 'A' in NSC but could also be 'AE' (e.g. if TWR also serves Enroute traffic).

2.3.9.5 If the letters 'XX' are used as 2nd and 3rd letters of the NOTAM Code, the appropriate Scope must be derived from the text of the NOTAM. If the letters 'XX' are inserted as 4th and 5th letters of the NOTAM Code, the appropriate 'Scope' must be derived from the NOTAM-subject (2nd and 3rd letters of the NOTAM Code) according to the NSC.

2.3.9.6 Recapitulation of 'Scope' qualification possibilities and respective Item A) contents:

Qualifier 'SCOPE'	Item A) contents
A	Aerodrome
AE	Aerodrome
E	FIR(s)
W	FIR(s)
AW	Aerodrome
K	FIR(s)

2.3.10 Qualifiers 'LOWER/UPPER'

2.3.10.1 These qualifiers relate a NOTAM to a vertical section of airspace by reference to specific lower/upper limits. This allows lower/upper limits to be specified in requests for pre-flight information and, by doing so, any NOTAM not relating to all or part of the requested vertical section may be excluded from the retrieved Pre-flight Information Bulletin obtained.

2.3.10.2 The limits specified in these qualifiers are given as 'flight levels' only.

Example: 'Q) .../090/330/...' = from 'Lower' FL 090 up to 'Upper' FL 330

2.3.10.3 The 'Lower' limit shall be inferior or equal to the 'Upper' limit.

2.3.10.4 Whenever an airspace is affected (relevant scope: AE, E, AW and W) Lower and Upper limits shall be designated by the corresponding vertical values.

2.3.10.5 In the case of Navigation Warnings and Airspace Reservations, the values specified in 'Lower' and 'Upper' shall correspond to the values specified in Items F) and G) (paragraph 2.3.23 refers). The values entered in the qualifier 'Lower' shall be rounded down to the nearest 100 ft increment and the values entered in the qualifier 'Upper' shall be rounded up to the nearest 100 ft increment.

Examples:

Lower/Upper 1400ft/1900ft 1400/1900 = 014/019

Lower/Upper 1350ft/2000ft 1300/2000 = 013/020

Lower/Upper 1850ft/2020ft 1800/2100 = 018/021

2.3.10.6 The addition of 'buffers' to these qualifiers, either manually or within system software, which increases the airspace to be considered for PIB purposes, shall be avoided.

2.3.10.7 When the values in F) and G) are expressed as 'flight levels' (FL), then the same FL values will be entered respectively as the 'Lower/Upper' values in Item Q).

2.3.10.8 When the values in F) and G) are expressed as an 'altitude' (AMSL), then the corresponding FL values (based on the standard atmosphere) will be entered as the 'Lower/Upper' values in Item Q).

Example: F) 2000FT AMSL G) 7500FT AMSL

=> 'Lower/Upper' = '020/075'

2.3.10.9 When the values in F) and G) are expressed as a 'height' (AGL), and when the corresponding altitude can be calculated based on the terrain elevation of the affected area, then the corresponding FL values (based on the standard atmosphere and AMSL values) will be entered as the 'Lower/Upper' values in Item Q).

Example: F) 2000FT AGL G) 7500FT AGL

Lowest terrain elevation = 500FT AMSL

Upper terrain elevation = 1000FT AMSL

=> 'Lower/Upper' = '025/085'.

2.3.10.10 When the values in F) and G) are expressed as a 'height' (AGL), and no corresponding flight levels can be defined (i.e. the terrain elevation of the affected area is unknown to the Publishing NOF despite all possible action having been taken to obtain the data), then, the highest terrain elevation of the State, or the FIR, or the region concerned, shall be added to the value in Item G) for calculating the qualifier 'Upper' in Item Q) and the default value '000' shall be entered in the qualifier 'Lower' in Item Q).

Example: F) 2000FT AGL G) 7500FT AGL
Highest terrain elevation = 9000FT
= 'Lower/Upper': 000/165.

2.3.10.11 In the case of Airspace Organisation (NOTAM related to structure of ATS Routes, TMA, CTR, ATZ, etc.), the specified 'Lower/Upper' values shall correspond to the vertical limits of the airspace concerned. The use of default values 000/999 shall be avoided whenever possible.

Example:

Q) LFFF/QATCA/IV/NBO/AE/000/055/4929N00212E027
A) LFOB B) 0802010630 C) 0803262130
E) BEAUVAIS CTR, TMA 1, TMA 2 AND TMA 3 ACTIVATED 0630-2130
WHEN CREIL S/CTR DEACTIVATED, TMA 4 ACTIVATED DURING SLOTS
DESCRIBED ABOVE.

The upper limit of the BEAUVAIS TMA is FL055 as correctly reflected in the Q-line qualifier 'Upper'.

If the vertical limits of an Airspace organisation are only partly affected, lower and upper limits shall be limited to the affected part only.

Example:

Q) LFFF/QATCA/IV/NBO/AE/000/035/4929N00212E027
A) LFOB B) 0802010630 C) 0803262130
D) 0630-2130
E) BEAUVAIS CTR, TMA 1, TMA 2 AND TMA 3:
SPEED LIMITATIONS OF 250NM IN FORCE FOR ALL FLIGHTS BELOW
3500FT AMSL.

Refer to 2.3.10.12 for changes of vertical limits.

2.3.10.12 In the case of changes of vertical limits lower and upper limits shall cover the extended or not affected part.

Example:

Q) LFFF/QATCH/IV/NBO/AE/025/070/4935N00219E015
A) LFOB B) 0805100400 C) PERM
E) BEAUVAIS TMA 3.2 VERTICAL LIMITS CHANGED: LOWER LIMIT
RAISED TO 3000FT AMSL, UPPER LIMIT RAISED TO FL70.

Note: published lower/upper limit in AIP for TMA 3.2 is 2500FT AMSL/FL065.

2.3.10.13 In the case of Enroute obstacles (e.g. TV masts) no Items F) and G) are included, but appropriate values shall be used in Item Q), based on local elevation. Use of default value '000/999' shall be avoided.

If several (grouped) obstacles (in close proximity) are published with one NOTAM, the upper limit shall reflect the highest obstacle.

Example:

C0120/08 NOTAMN
 Q)LSAS/QOBCE/V/M/AE/000/030/4631N00839E005
 A) LSPM B) 0802250557 C) 0806300000 EST
 E) OBSTACLES ERECTED, 2.5KM 280DEG GEO ARP AMBRI-PIOTTA,
 463103N0083927E, 54.0M / 177.2FT AGL.

2.3.10.14 Most aerodrome-related information, 'Scope' 'A', refers to ground installations for which the insertion of an Upper Limit is not relevant. Therefore, if specific height indications are not required, these NOTAM shall include the default values '000/999'.

2.3.10.15 Whenever the aerodrome-related information also affects the overlying or surrounding airspace, the Lower/Upper Limits need to be specified; and the 'Scope' qualifier shall read 'AE' or 'AW'.

2.3.11 Qualifier 'GEOGRAPHICAL REFERENCE' – General Rules

2.3.11.1 This qualifier allows the geographical association of a NOTAM to a facility, service or area that corresponds to the aerodrome or FIR(s) given in Item A), and is composed of two elements.

2.3.11.2 The first element contains one set of co-ordinates comprising 11 characters rounded up or down to the nearest minute; i.e. Latitude (N/S) in 5 characters; Longitude (E/W) in 6 characters.

2.3.11.3 The second element contains a radius of influence comprising 3 figures rounded up to the next higher whole Nautical Mile encompassing the total area of influence; e.g. 10.2NM shall be indicated as 011.

Example: Q) EDWW/QWELW/IV/BO/W/000/310/5410N00845E011.

2.3.12 Qualifier 'GEOGRAPHICAL REFERENCE' – Co-ordinates

2.3.12.1 For NOTAM with 'Scope' 'A' the Aerodrome Reference Point (ARP) co-ordinates shall be inserted.

2.3.12.2 For NOTAM with 'Scope' 'AE' or 'AW' the appropriate co-ordinates shall be inserted. These co-ordinates may be different from the ARP.

E.g. a VOR situated at an aerodrome will not necessarily have the same co-ordinates as the ARP. The same applies for a Navigation Warning that affects the aerodrome traffic, at or in the close vicinity of an aerodrome, and whose co-ordinates may also be different from the ARP.

2.3.12.3 For NOTAM with 'Scope' 'E' or 'W' referring to a given/known point (Navaid, Reporting point, City, etc.) these co-ordinates shall be inserted.

- 2.3.12.4 If a NOTAM with 'Scope' 'E' or 'W' refers to an area (FIR, Country, Danger Area etc.), the co-ordinates represent the approximate centre of a circle whose radius encompasses the whole area of influence.
- 2.3.12.5 For NOTAM with 'Scope' 'E' or 'W' containing information that cannot be allocated a specific geographical position (e.g. VOLMET, Entry requirements, Communication failure, SRS publications etc.) the co-ordinates represent the approximate centre of a circle whose radius encompasses the whole area of influence (this may be the centre of an FIR or multiple FIR, e.g. for an entire State)

2.3.13 Qualifier 'GEOGRAPHICAL REFERENCE' – Radius

- 2.3.13.1 Radius shall be used in a way that it encompasses the total area of influence of the NOTAM. The radius entered shall be as precise as possible. Use of an excessive radius indication (e.g. by entering the default '999' instead of the actual radius) causes unnecessary PIB coverage and shall be avoided.
- 2.3.13.2 Whenever a NOTAM relates to an entire FIR or FIR group (e.g. for a State with more than one FIR or for those FIRs encompassed by the indicator of an organisation responsible for the provision of ANS in more than one State), then '999' shall be entered as the radius.

The use of the radius value '999' shall allow an automated system to retrieve such information only against the FIR(s) indicated in Item A). Adjacent FIR(s), even within the radius of influence, are never affected by this information.

Example:

```
Q) EDXX/QXXXX/IV/BO/E/000/999/5120N01030E999
A) EDWW EDGG EDMM B) 0801010000 C) PERM
E) FLIGHTS TO/FROM THE CONTRACTING STATES OF THE SCHENGEN
REGIME MAY BE CONDUCTED TO/FROM ANY AERODROME WITHIN THE
FEDERAL REPUBLIC OF GERMANY. THE OBLIGATION TO USE A
DESIGNATED CUSTOMS AERODROME IS WITHDRAWN.
```

- 2.3.13.3 For certain specific NOTAM subjects, the radius should be standardised for the sake of uniformity and simplicity. A list of default radius per NOTAM Code is given in the following table.

Table of Default Radius Indicators for NOTAM Creation

NOTAM Code	Plain Language	Radius (NM)
Q - - - -	All Aerodrome-related NOTAM and Navigation Aids with 'Scope A' only. The default value shall also be used for 'Scope' 'AE'/'AW', but only if appropriate values cannot be defined.	005 005 if no appropriate value can be found
QN - - -	All Navigation Aids (VOR/DME, NDB ...) Except for Long Range Navigation Systems.	025
QOB - -	OBST	005
QOL - -	OBST LIGHT	005
QPH - -	Holding Procedure	025
QPX - -	Minimum Holding Altitude	025
QAP - -	Reporting Point	005
QAX - -	Intersection	005

Note: Due to the dense network of ground-based navigation aids in Europe, these default values should be used by the Publishing NOF in order not to overload Pre-flight Information Bulletins with superfluous information.

Note: Full coverage of Navaid might be inserted instead of 025, in case of low density of Navaid coverage.

2.3.14 Item A) – Single Location (FIR or AD)

2.3.14.1 In the case of a single FIR, the Item A) entry must be identical to the 'FIR' qualifier entered in Item Q).

2.3.14.2 When an aerodrome indicator is given in Item A), it must be an aerodrome/heliport situated in the FIR entered in Item Q). This shall apply even when the aerodrome/heliport is situated within an overlying FIR of another State, e.g. NOTAM for EGJJ shall have LFRR in Item Q).

2.3.14.3 If no 4-letter ICAO location indicator for an aerodrome/heliport exists, Item A) shall contain either the two ICAO nationality letters + XX (EDXX) or the single ICAO nationality letter + XXX (KXXX); with the full name of the aerodrome/heliport as the first element in Item E).

2.3.14.4 States shall take urgent steps to ensure that:

- all aerodromes which may be the subject of international NOTAM have an ICAO location indicator;

- the same location indicator is not used for an aerodrome and an FIR;
- all NOTAM published with XX in Item A shall be cancelled (NOTAMC) and published as NOTAMN as soon as possible after the new location indicator has been published and reached its effective date.

Examples: A) EBBU (ICAO location indicator for a single FIR)

A) LFPO (ICAO location indicator for an Aerodrome)

A) EDXX

E) SACHSENRING-HOHENSTEIN-ERNSTTAL

<text to be continued in new line>

2.3.15 Item A) – Multi-Location (FIR or AD)

2.3.15.1 If more than one AD is involved, separate NOTAM shall be issued.

2.3.15.2 If more than one FIR is concerned:

(a) all FIR location indicators affected by the information shall be entered in Item A), each separated by a space;

(b) the number of FIR in Item A) is restricted to 7 by the current ICAO NOTAM format (length of an AFTN line). If more than 7 FIR are affected, the Publishing NOF or responsible non-governmental agency (paragraph 2.3.5 refers) may use a unique and unambiguous ICAO location indicator that serves the purpose of publication of NOTAM information related to more than 7 FIRs. If no such unique ICAO location indicator exists, additional NOTAM shall be published as required.

Example: UUUU is the ICAO location indicator for the Moscow AFTN COM Centre. This indicator is also used to represent all FIRs in the Commonwealth of Independent States included in the AIP of the Russian Federation. This unique location indicator can be used by the Moscow NOF to publish information that relates to all FIR, such as NOTAM Checklists.

In such cases both Item A) and Item Q) could read 'UUUU'

(c) in the case of multiple FIR in Item A), the FIR qualifier of the Item Q) contains the ICAO nationality letter(s) + XX (or XXX). For 'supra-national' information, i.e. more than 1 FIR belonging to several countries, the ICAO nationality letter of the Publishing NOF (followed by XX or XXX) must be entered as the 'FIR' qualifier in Item Q).

Example 1: Multiple FIRs in one country:

Item A) LFFF LFBB LFRR

Item Q) LFXX

Example 2: Multiple FIRs in different countries:

Item A) EDGG EBBU LFFF

Item Q) EDXX (*if the NOTAM is originated by the German NOF*)

Example 3: Multiple FIRs in different countries issued by a non-governmental agency:

Item A) EGGT EHAA EKDK

Item Q) EUXX (if the NOTAM is originated by a supra-national European Agency)

- 2.3.15.3 If referring to a navigation aid serving more than one AD or to a navigation warning affecting several AD, issue separate NOTAM for each AD.
- 2.3.15.4 NOTAM 'Scope' for navigation aid or navigation warning affecting more than one AD and ENR shall be 'AE' or 'AW' respectively for one AD and 'A' for the others (Refer to para 2.3.9.2 for details).
- 2.3.15.5 If referring to GNSS, insert the appropriate ICAO location indicator allocated for a GNSS element (system) or the common location indicator allocated for all elements of GNSS (except GBAS). If the outage of a GNSS element is of operational consequences, the operational limitations shall be published as well. The GNSS element and its consequence may be published in one NOTAM.

Example 1:

Q) EDMM/QPILT/IV/NBO/A/000/999/4930N01105E005
 A) EDDN B) 0811211551 C) 0811211556
 E) GPS APPROACH AND DEPARTURE PROCEDURES LIMITED

Example 2:

Q) KNMH/QGWXX/IV/NBO/E/000/999/3910N07640W999
 A) KNMH B) 0812191519 C) 0812221519EST
 E) GLOBAL POSITIONING SYSTEM PSEUDO RANDOM NOISE 9 U/S

Example 3:

Q) EDWW/QPIXX/I/NBO/A/000/999/5303N00847E005
 A) EDDW B) 0807130511 C) 0807141200
 E) GPS LDG SYSTEM (GLS) RWY 09/27 U/S

Example 4:

Q) KXXX/QGWLT/IV/NBO/E/000/400/3339N07522W447
 A) KZBW KZNY KZMA KZJX B) 0807210100 C) 0807290300
 D) 0100-0300
 E) GPS UNRELIABLE AND MAY BE UNAVAILABLE WITHIN A 447NM RADIUS OF 333900N 752200W AT FL400, DECREASING IN AREA WITH DECREASE IN ALTITUDE TO 402NM RADIUS AT FL250, 340NM RADIUS AT 10000FT AMSL AND 301NM RADIUS AT 4000FT AGL.
 F) SFC G) FL400

Note: In the case of GNSS, the location indicator KNMH is being used by USA NOF to notify a GNSS element outage.

2.3.16 Item B) – Start of Activity

- 2.3.16.1 Ten-figure date-time group giving year, month, day, hour and minutes at which the NOTAM comes in force.

Example: B) 0807011200 (1st of July 2008, 12:00 UTC)

- 2.3.16.2 Insertion of 'WIE' or 'WEF' is not permitted.
- 2.3.16.3 The start of a UTC day shall be indicated by '0000' (i.e. do not use '0001').

- 2.3.16.4 A NOTAM is 'valid' from the moment it is published, whereas it only becomes 'in force' at the date-time group specified in Item B).
- 2.3.16.5 The Item B) date/time group should be equal to or later than the actual date/time of creation of the NOTAM.
- 2.3.16.6 However, for NOTAMR and NOTAMC, the Item B) time shall correspond to the actual date/time of creation of that NOTAMR or NOTAMC. No future coming in force is permitted (paragraph 2.4.1.5 refers).

Note: The date/time of creation may precede the date/time of transmission by a few minutes, due to the time required for the full completion and review of the NOTAM data.

- 2.3.16.7 Refer to paragraph 2.3.18.19 for NOTAM advising changes to previously published operating or activity hours.

2.3.17 Item C) – End of Validity

- 2.3.17.1 For NOTAM of a known duration of validity, a ten-figure date-time group giving year, month, day, hour and minute at which the NOTAM ceases to be in force and becomes invalid. This date and time shall be later than that given in Item B).

Example: C) 0807022030

- 2.3.17.2 The end of a UTC day shall be indicated by '2359' (i.e. do not use '2400').

- 2.3.17.3 For NOTAM of uncertain duration of validity, the date-time group shall be followed by 'EST' (estimate).

Example: C) 0807031230EST

- 2.3.17.4 Insertion of 'UFN' or 'APRX DUR' are not permitted.

- 2.3.17.5 For NOTAM containing information of permanent validity that will be incorporated in the AIP, the abbreviation 'PERM' is used instead of a date-time group.

Example: C) PERM

- 2.3.17.6 Item C) shall not be included in a NOTAMC.

- 2.3.17.7 Refer to paragraph 2.3.18.19 for NOTAM advising changes to previously published operating or activity hours.

2.3.18 Item D) – Day/Time Schedule – General Rules

- 2.3.18.1 This Item needs to be inserted only when the information contained in a NOTAM is relevant for users only at certain periods within the overall 'in force' period, i.e. between the dates and times given in Items B) and C). In these cases, Item D) will detail the actual periods of activation with the exception referred to in para 2.3.18.19.

2.3.18.2 The start of the first activity in Item D) shall always correspond to the Item B) date and time. This period shall always appear as the first entry in Item D) – see para 2.3.21 Examples.

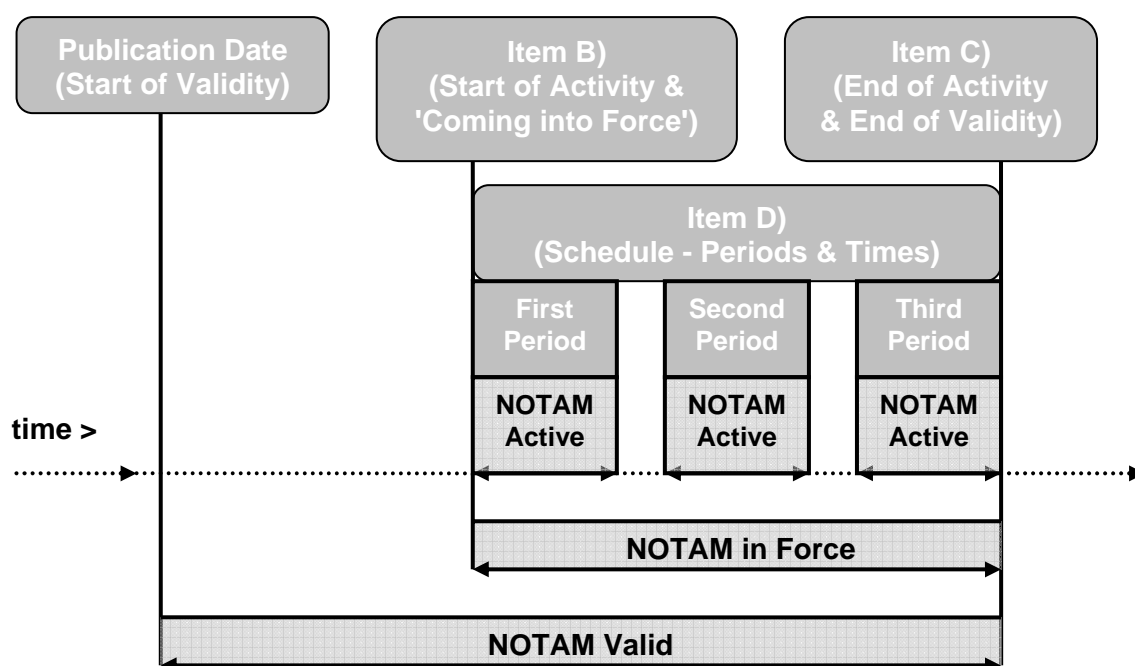
2.3.18.3 If the NOTAM is issued during an activity period that is defined by days of the week and that will be repeated, then the first day given in Item D) may not equate literally to the date in Item B).

Example: If D) = MON-FRI, the date in B) may be a WED (i.e. the first activity period starts on the WED and ends on the FRI, and subsequent periods run from MON to FRI).

2.3.18.4 The end of the latest activity period notified in Item D) shall always correspond to the end of the validity of the NOTAM given in Item C). Note that this period may not always be listed as the final entry in Item D) – see paragraph 2.3.21 Examples.

2.3.18.5 Syntaxes or rules referring to a date also apply to days of the week.

2.3.18.6 The following diagram illustrates the relationship between the time-related expressions used in the OPADD:



2.3.18.7 Automated processing (and to a certain extent manual processing) thus allows exclusion of a NOTAM from PIB whenever it is inactive between the dates and times given in Items B) and C).

2.3.18.8 Item D) shall be structured according to the following rules. These provide clear and unambiguous standard expressions allowing automated processing for Pre-flight Information Bulletin production, while maintaining a good and clear readability in manual environments.

2.3.18.9 A time indication shall be inserted for each period of activity. When the activity covers a full day, H24 shall be inserted after the date(s).

2.3.18.10 A date shall appear only once (refer to para 2.3.21 Example 16).

2.3.18.11 When the activity covers more than 24 hours, the following syntax is recommended:
(start date) (start time)-(end date) (end time)

2.3.18.12 When the activity covers less than 24 hours on particular days, the following syntax is recommended:
(date) (start time)-(end time)

2.3.18.13 When the activity is a succession of identical periods of less than 24 hours on consecutive days, the following syntax is recommended:

(start date)-(end date) (start time)-(end time)

2.3.18.14 When entering a succession of activities that span midnight UTC, the following syntaxes are recommended:

a) (start date) (start time)–2359 (end date) 0000-(end time)

b) (start date) (start time)-(end time)

Note that the end date is omitted from Item D) but that it will appear in Item C).

Example 1: a period 05 2200-0500 would mean from the 5th at 2200 until the 6th at 0500 (i.e. B) 0805052200 C) 0805060500).

Example 2: a period WED 2200-0500 would mean from WED at 2200 until THU at 0500.

2.3.18.15 When the activity spans midnight UTC on successive days, the following syntaxes are recommended:

a) (start date first period) (start time)–2359, (start date next period(s))-(end date next period(s) 0000-(end time) (start time)-2359, (start date last period) 0000-(end time)

b) (start date)-(start date of last period) (start time)-(end time)

Note that the period end dates are omitted from Item D) but that the last one will appear in Item C).

Example 1: a period 05-07 2200-0500 would mean from the 5th at 2200 until the 6th at 0500 and from the 6th at 2200 until the 7th at 0500 and from the 7th at 2200 until the 8th at 0500 (i.e. B) 0805052200 C) 0805080500).

Example 2: a period WED-FRI 2200-0500 would mean from WED at 2200 until THU at 0500 and from THU at 2200 until FRI at 0500 and from FRI at 2200 until SAT at 0500.

2.3.18.16 If all periods of activity start in the same month, it is not necessary to include the name of the month in Item D) – see para 2.3.21 Example 6.

2.3.18.17 Item D) shall not exceed 200 characters. If it exceeds 200 characters, additional NOTAM shall be issued.

2.3.18.18 The maximum time period between 2 consecutive activity periods shall not exceed 7 days. If the time gap between consecutive activity periods is 8 days or more, additional NOTAM shall be issued.

2.3.18.19 When a NOTAM is issued to notify a change to previously published operating or activity hours, the time range indicated by Items B) and C) shall, if necessary, combine the new and previous periods to encompass the widest time period. The new schedule shall be presented in Item E) and not in Item D).

Example 1: Operating hours of ATC are changed from **1000-2000** to 1200-1900:

- B) YYMMDD**1000**
- C) YYMMDD**2000**
- E) OPERATION HOURS OF ATC CHANGED TO 1200-1900

Example 2: Operating hours of ATC are changed from **1000-1800** to 1200-**1900**:

- B) YYMMDD**1000**
- C) YYMMDD**1900**
- E) OPERATION HOURS OF ATC CHANGED TO 1200-1900

Example 3: Operating hours of ATC are changed from 1000-1800 to **0800-1900**:

- B) YYMMDD**0800**
- C) YYMMDD**1900**
- E) OPERATION HOURS OF ATC CHANGED TO 0800-1900

2.3.19 Item D) – Day/Time Schedule – Abbreviations and Symbols Used

2.3.19.1 Standardised abbreviations and punctuation shall be used in Item D) as described in the following paragraphs.

2.3.19.2 Abbreviations for Dates and Times:

Year: The year shall not be inserted in Item D), as it is stated in Items B) and C).

When the planned time schedule goes from one year into another, the displayed data shall remain in chronological order; i.e. December of this year shall precede January of next year.

Months: JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Dates: 01 02 03 29 30 31

Days: MON TUE WED THU FRI SAT SUN

Times: Written as 4 digits (e.g.: 1030)

2.3.19.3 Abbreviations for Time Periods and associated text:

‘EXC’ for designating a full day or a series of full days when the NOTAM is NOT active.

‘DAILY’ is optional for a ‘daily’ schedule, the expression ‘nightly’ shall not be used.

‘EVERY’ for a schedule on fixed days.

- 'HJ' for the period from Sunrise (SR) till Sunset (SS).
- 'HN' for the period from Sunset (SS) till Sunrise (SR).
- 'H24' for the whole day/dates concerned. Not to be used as a single entry.
- 'SR' and/or 'SS' if appropriate to indicate Sunrise or Sunset.
- 'AND' if used, shall be included in front of the last date or the last group or time period specified in Item D).

2.3.19.4 Punctuation:

- ' , ' (comma) for separation of the schedule elements:
 - groups of dates or days to which the same time periods apply;
 - groups of time periods that all apply to the preceding and qualifying dates or days(refer to para 2.3.19.5 for the recommended syntax and para 2.3.21.1 for clarification)

The use of the comma for enumeration is not allowed.
- ' - ' (hyphen) means 'TO' or 'FROM-TO'
- ' ' (blank) is read as 'AND'. If appropriate, the last date or time period shall be preceded by the word 'AND' instead of a blank.
- ' / ' (oblique) shall not be used in Item D).

2.3.19.5 The use of the commas in Item D) is recommended as it helps both human and system readability. If used, a comma shall be placed, always and only, after a time schedule and only if the latter is immediately followed by a date. The last possible comma may be substituted by the word 'and'.

The following syntaxes are recommended. They are followed by examples (where dates could be presented as days of the week, two examples are given):

a) Separation of groups of dates to which the same time periods apply:

(start date) (start time)-(end date) (end time), (start date) (start time)-(end date) (end time)

Example: D) 04 1000-06 1200, 08 1200-10 0700

(date) (date) (start time)-(end time), (date) (date) (start time)-(end time)

Example: D) 12 14 15 0900-1300, 17 18 21 0800-2000

Example: D) MON WED THU 0900-1300, TUE FRI SAT 0900-2000

(start date)-(end date) (start time)-(end time), (start date)-(end date) (start time)-(end time)

Example: D) 13-18 0700-1000, 21-28 0800-1000

b) Separation of groups of time periods that all apply to the preceding and qualifying dates:

(date) (start time)-(end time) (start time)-(end time), (date) (start time)-(end time)
(start time)-(end time)

Example: D) 11 1000-1130 1230-1800, 14 0700-0800 1030-1145

Example: D) MON 0900-1300 1400-1430, TUE 0900-1000 1245-1400

(start date)-(end date) (start time)-(end time) (start time)-(end time), (date) (start
time)-(end time) (start time)-(end time)

Example: D) 23-26 1000-1130 1230-1800, 27 0730-0800 1200-1300

Example: D) MON-FRI 0800-1100 1230-1300, SAT 1000-1100 1230-
1300

(date) (date) (date) (start time)-(end time) (start time)-(end time), (date) (date)
(start time)-(end time) (start time)-(end time)

Example: D) 04 09 13 0900-1300 1400-1430, 07 10 14 16 0700-
0800 1030-1145

Example: D) MON TUE FRI 0900-1300 1400-1430, WED THU SUN 1000-
1100 1230-1300

c) Combinations regarding separation of several different types of activities:

(start date) (start time)-(end date) (end time), (date) (date) (date) (start time)-(end
time) (start time)-(end time), (start date)-(end date) (start time)-(end time)

Example: D) 06 0500-09 2000, 11 14 18 0930-1100 1600-2300, 22-
25 0300-0430

Example: D) 13 0800-14 1100, WED FRI 1000-1130 1230-1800, SAT-
SUN 1000-1100.

2.3.20 Item D) – Day/Time Schedule – Special Cases

2.3.20.1 Sunrise (SR) and Sunset (SS): If the active time of a NOTAM corresponds to sunrise or sunset, the actual times of sunrise on the first day of validity and of sunset on the last day of validity should be inserted in Items B) and C) respectively.

Examples: B) 0805150446 C) 0805201633 D) HJ

B) 0805151920 C) 0805200437 D) SS-SR

2.3.20.2 Twilight Periods: The keywords for expressing the beginning and end of twilight periods, are 'SR MINUS**' and 'SS PLUS**' (** = number of minutes up to a

maximum of 99). Note that there shall be a blank space after 'SR' and 'SS' and that the number of minutes shall be inserted immediately after 'MINUS' or 'PLUS'.

Example:

B) 0805110413 C) 0805211701 D) SR MINUS30-SS PLUS30

2.3.20.3 Processing of SR and SS Formats: Due to the daily variation of SR and SS times, it may not be possible to automatically interpret the special formats as actual times for PIB output. If this is the case, the NOTAM will be displayed in the PIB for the whole day concerned.

2.3.20.4 Legal or Public Holidays: The dates must be stated explicitly due to differences existing between States.

2.3.20.5 Long or Complicated Schedules: These should not be given in a structured Item D). Such schedules should be 'split' and separate NOTAM should be issued.

2.3.21 Item D) – Day/Time Schedule – Examples

2.3.21.1 The following examples pre-suppose a correct calendar and the application of the rule that the start of the first activity in Item D) coincides with the Item B) date and time, and the end of the last activity with that in Item C). Therefore, Items B) and C) (i.e. the defined time periods) are not shown in the examples unless required for clarification.

Example 1: Repetitive event active every day:

D) 0700-1000

or

D) DAILY 0700-1000

Example 2: Repetitive event active on a certain weekday:

B) 0803030000 C) 0803312359

D) EVERY MON H24

Example 3: Activity only on specific days within the period:

B) 0802070000 C) 0802112359

D) 07 09 AND 11 H24

Example 4: Various day-periods explained by FROM-TO:

D) 07-11 AND 16-18 H24

Example 5: Combination of day-periods and time-periods:

D) FEB 08-28 2000-2200 AND MAR 01-05 1800-2200

D) FEB 08-28 DAILY 2000-2200 AND MAR 01-05

DAILY 1800-2200

D) WED SAT 1000-1400 AND SUN-TUE 1500-1800

D) FEB 08 10 12 1000-1600 1800-2000, 13-28 1200-1900, MAR 01-05 1000-1300 AND 1500-1700

Example 6: Combination of whole day-periods (H24) with part day-periods:
Activity H24 on WED and FRI, and from 0600 to 1700 on SUN:

B) 0802100600 C) 0802292359

D) SUN 0600-1700, WED AND FRI H24

or

D) 13 20 0600-1700, 16 18 23 AND 25 H24

Example 7: Day-period and time-period with specific exceptions:

B) 0802020700 C) 0803161800

D) SAT-SUN 0700-1800 EXC FEB 17 AND MAR 09

or, for where alternative times apply on the excepted date:

1st NOTAM

B) 0802010300 C) 0802281200

D) MON-FRI 0300-1200 EXC FEB 15

2nd NOTAM

B) 0802151400 C) 0802151600

Exceptions with periods spanning midnight:

B) 0802041800 C) 0803150700

D) MON 1800-2359, TUE-FRI 0000-0700 1800-2359,
SAT 0000-0700

or

D) MON-FRI 1800-0700

Instead of:

D) 1800-0700 EXC SAT SUN

Example 8: Activity from WED 1900 to FRI 0600, during 2 consecutive weeks.

B) 0806041900 C) 0806130600

D) WED 1900-FRI 0600

or

D) 04 1900-06 0600 AND 11 1900-13 0600

Example 9: The activity takes place every day between 2300 and 0500. The periods start on April 30 at 2300 and ends on May 05 at 0500:

B) 0804302300 C) 0805050500
D) APR 30 2300-2359, MAY 01-04 0000-0500 2300-2359, 05 0000-0500

or
D) DAILY 2300-0500

or
D) 2300-0500

Instead of:
D) APR 30-MAY 04 2300-0500

Example 10: First period of activity starts on May 06 at 2300 and ends on May 07 at 0500 and a series of subsequent 2300-0500 periods start on May 10 at 2300 and ends on May 15 at 0500:

B) 0805062300 C) 0805150500
D) 06 2300-2359, 07 0000-0500, 10 2300-2359, 11-14 0000-0500 2300-2359, 15 0000-0500

or
D) 06 AND 10-14 2300-0500

A series of 2300-0500 periods starts on May 06 at 2300 and ends on May 10 at 0500 and the final period starts on May 10 at 2200 and ends on May 11 at 0600:

B) 0805062300 C) 0805110600
D) 06 2300-2359, 07-09 0000-0500 2300-2359, 10 0000-0500 2200-2359, 11 0000-0600

or
D) 06-09 2300-0500 AND 10 2200-0600

Example 11: If the more descriptive schedule is used, the periods of activity may have to be split into several NOTAM:

B) 0805062300 C) 0805101300
D) 06-09 2300-1300

or
D) 06 2300-2359, 07-09 0000-1300 2300-2359 AND 10 0000-1300

and

B) 0809112110 C) 0810310740
D) SEP 11 17-19 22 24 25 OCT 01 02 08-10 15 16 22 23 29 AND 30 2110-0740

or

NOTAM 1:

D) SEP 11 2110-2359, 12 0000-0740, 17 2110-2359,
18-19 0000-0740 2110-2359, 20 0000-0740, 22 2110-
2359, 23 0000-0740, 24 2110-2359

NOTAM 2:

SEP 25 0000-0740 2110-2359, 26 0000-0740, OCT 01
2110-2359, 02 0000-0740 2110-2359, 08 2110-2359,
09-10 0000-0740 2110-2359, 11 0000-0740

NOTAM 3:

15 2110-2359, 16 0000-0740 2110-2359, 17 0000-
0740, 22 2110-2359, 23 0000-0740 2110-2359, 24
0000-0740, 29-30 0000-0740 2110-2359, 31 0000-
0740

Instead of:

D) SEP 11 17-19 22 24 25 OCT 01 02 08-10 15 16 22 23
29 30 2110-2359, SEP 12 18-20 23 25 26 OCT 02 03 09-11
16 17 23 24 30 AND 31 0000-0740

Example 12: Description of a schedule omitting the unnecessary abbreviation for the month:

B) 0805051300 C) 0805271930

D) 05 07 09 1300-1600, 11-23 1330-1500 AND 24-27
1630-1930

Instead of:

D) MAY 05 07 09 1300-1600, MAY 11-23 1330-1500 AND MAY
24-27 1630-1930

Example 13: Activity relative to Sunrise and/or Sunset:

D) SR-SS

D) SR MINUS30-SS

D) SR MINUS30-1500

D) 0800-SS

D) 0800-SS PLUS30

Example 14: Periods of activity longer than 24 hours:

B) 0805050300 C) 0805201450

D) 05 0300-13 1400 AND 15 1800-20 1450

This Item D) indicates two periods of continuous activity: the first starting on the 5th at 0300 and ending on the 13th at 1400; the second from the 15th at 1800 to the 20th at 1450.

Example 15: Given the following Complex/Mixed schedule:

There are several alternative ways of presenting the following information more clearly and effectively by using more than one NOTAM.

B) 0803170700 C) 0804230900

D) MON TUE 0700-1000 1200-1300, WED 0700-0900,
APR 01-04 1800-2000, 08 09 1700-1900, 10 H24, 11
SR MINUS30-SS AND 15 2000-17 0900 EXC MAR 23 30

A preferred method is to divide it into two monthly periods and, to facilitate greater PIB clarity, create a third NOTAM for the period 01-04 April in which activities are not expressed using weekday abbreviations.

For the two elements using weekday abbreviations:

NOTAM 1:

B) 0803170700 C) 0803311300

D) MON TUE 0700-1000 1200-1300, WED 0700-
0900 EXC 23 30

NOTAM 2:

B) 0804070700 C) 0804230900

D) MON TUE 0700-1000 1200-1300, WED 0700-0900, 08
09 1700-1900, 10 H24, 11 SR MINUS30-SS AND 15
2000-17 0900

For the elements using dates:

NOTAM 3:

B) 0804011800 C) 0804042000

D) 1800-2000

Example 16: Repetitions of a date are not allowed to avoid that any activities following later for the same date are overlooked:

B) 0805050800 C) 0805231500

D) 05-08 0800-1100, 09 10 0800-1100 1300 1500,
11-20 1330-1500, 21-23 0800-1100 1330-1500

Instead of:

D) 05-10 0800-1100, 11-20 1330-1500, 21-23 0800-1100
1330-1500, 09 10 1300-1500

2.3.22 Item E) – NOTAM Text

2.3.22.1 Item E) is free text in plain language and does not contain NOTAM Code.

- 2.3.22.2 In NOTAM intended for international distribution the plain language text shall be in English. For the creation of the plain language text, the decoded standard expressions contained in the NOTAM Selection Criteria shall preferably be used.

Examples:

E) ILS RWY 14 U/S.
 E) ILS DME RWY 14 U/S.
 E) DVOR/DME ZUE 112.650 MHZ/CH 75X U/S.
 E) NDB MUR 310.5 KHZ FREQ CHANGED TO 312 KHZ.
 E) RWY 10/28 CLSD.
 E) RWY 07L/25R CLSD.
 E) TWY A, B AND T CLSD.
 E) ALS RWY 10 U/S.
 E) EDGE LGT RWY 10/28 U/S.
 E) CL LGT TWY A U/S.
 E) DME CVA 112.050 MHZ/CH 57Y U/S.

When one part of a collocated Navaid is unserviceable, use the following:

E) DVOR/DME ZUE 112.650 MHZ/CH 75X, DME PART U/S.
 E) TACAN BNK CH 47X (111.000 MHZ) U/S.

Note: For TACAN the ghost frequency shall also be provided.

- 2.3.22.3 The essentials of the information (i.e. translated and amplified NOTAM code Subject and Condition) shall be given in the beginning of Item E).

Example:

E) ACFT STANDS 25 TO 30 AND 37 TO 40 CLSD DUE TO WIP ON APRON 1.

Instead of:

E) USE CAUTION WHEN TAXIING DUE TO WIP BEHIND ACFT STANDS 37 AND 40 AND FM 30M EAST OF TWY E TO STAND 20. WIP ALSO BTN ACFT STANDS 25 AND EAST OF STAND 27 ON APRON 1. APRON 2 NOT AFFECTED. ACFT STANDS 25 TO 30 AND 37 TO 40 CLSD AS CONSEQUENCE.

- 2.3.22.4 Item E) text should be kept as short and concise as possible and so compiled that its meaning is clear without the need to refer to another document.

Publishing NOF should endeavour not to exceed 300 characters; whilst ensuring that all essential information needed for the safe conduct of flight is included.

Example 1:

E) MILAN LINATE CTR. SPECIAL VFR HEL OPS MET MINIMA REQUIREMENTS CHANGED: SPECIAL VFR HEL OPS ACCEPTED IF GND VIS IS NOT LESS THAN 3KM. REF AIP ENR 2.1.2.23-2 ITEM 7.3.

Note: Reference to AIP as NOTAM is of permanent character.

Instead of:

E) REF AIP ENR 1-1-4.3 ITEM 6.3. MILAN CTR. CANCEL THE REMARK.

Example 2:

E) CARRIAGE OF 8.33 CHANNEL SPACING RDO EQPT MANDATORY FOR ACFT OPR ABV FL195. REF AIP PAGE GEN 1.5-1 ITEM 3.

Note: Reference to AIP as NOTAM is of permanent character.

Instead of:

E) PLEASE MAKE HAND AMENDMENT IN AIP ON PAGE GEN 1.5-1 ITEM 3. RADIO EQUIPMENT REQUIREMENTS. DELETE: 'AND FURTHER TO THE EUROCONTROL DELAY DECISION AGREED ON 23 JUL 98' AND AMEND TO READ: 'CHAPTER 4.0 ON AIR-GROUND COMMUNICATIONS AND IN-FLIGHT REPORTING' DELETE: 'AS OF 7 OCT 99 FOR AIRCRAFT OPERATING ABOVE FL245' AND AMEND TO READ: 'AS OF 15 MAR 07 FOR AIRCRAFT OPERATING ABOVE FL195' LAST PARAGRAPH CHANGE, DELETE: 'FL245' AND AMEND TO READ: 'FL195'.

Example 3:

.... C) PERM

E) MISSED APCH **PROC** FOR **RWY 34 LOCALIZER** AND **ILS APCH CHANGED** AS FOLLOWS: CLIMB STRAIGHT AHEAD. INITIAL CLIMB TO 5000FT AMSL. AT DME 5.5 IZS PAST THE STATION TURN LEFT. CONTINUE CLIMB TO 7000FT AMSL. INTERCEPT RDL 261 FROM ZUE. PROCEED TO GIPOL. REF AIP PAGE LSZH AD 2.24.10.9-1 AND 2.24.10-1.

Instead of:

.... C) PERM

E) REF AIP PAGE LSZH AD 2-24.10.9-1 AND 2-24.10.10-1. MISSED APPROACH TO READ AS FOLLOWS: CLIMB STRAIGHT AHEAD. INITIAL CLIMB TO 5000FT. AT D5.5 IZS PAST THE STATION TURN LEFT. CONTINUE CLIMB TO 7000FT. INTERCEPT R261 FROM ZUE. PROCEED TO GIPOL.

2.3.22.5 Item E) text shall be related to one NOTAM subject only. (Except in case of a Trigger NOTAM, ref para 2.7.2.10-2.7.2.12).

Example 1:

NOTAM 1: E) PJE WILL TAKE PLACE ...

NOTAM 2: E) AWY G5 MINIMUM USABLE FL RAISED TO FL070.

Instead of:

E) PJE WILL TAKE PLACE WITHIN RADIUS 5KM CENTERED AT 4608N 00751E (HUTTWIL). AWY G5 MINIMUM USABLE FL RAISED TO FL070.

Example 2:

NOTAM 1: E) MINIMUM SECTOR ALTITUDE SW SECTOR RAISED TO 1700FT AMSL. REF AIP AD 2-9.

NOTAM 2: E) DECLARED DIST RWY 09 CHANGED AS FOLLOWS:
TORA 2450M
TODA 2450M
ASDA 2450M
TKOF FROM INTERSECTION WITH TWY C.
REF AIP AD 2-13.

Note: Reference to AIP as the NOTAM is of permanent character.

Instead of:

E) MINIMUM SECTOR ALTITUDE SW SECTOR RAISED TO 1700FT AMSL
 PLS ADD IN AIP XXXXXXXX, ON PAGE ZZZZ AD 2-9,
 ITEM ZZZZ AD 2.13(TABLE FOR DECLARED DISTANCES)
 A NEW ROW WITH FLW DATA:
 COLUMN 1- RWY 09
 COLUMN 2- TORA(M) 2450
 COLUMN 3- TODA(M) 2450
 COLUMN 4- ASDA(M) 2450
 REMARKS: TAKE-OFF FROM INTERSECTION WITH TWY C

- 2.3.22.6 Item E) may contain ICAO abbreviations (Doc 8400, Ref [7]), and other abbreviations used for directions and units of measurements (e.g. N, SE, FT, GND, AMSL, NM, DEG etc.). There shall be no blank between the value and the unit of measurement (e.g. 3000FT). But a reference datum shall be separated from the unit of measurement by a blank (e.g. 3000FT AMSL). No other character (e.g. "/", "-"...) shall be used.

Frequencies indicated in MHZ shall always display all seven characters e.g. 112.650MHZ.

Frequencies indicated in KHZ display up to five characters. The '0' after the dot may be omitted e.g. 312KHZ, 310.5KHZ.

Non-common abbreviations (e.g. those abbreviations listed at GEN 2.2 in AIP but marked as 'not included in Doc 8400') shall not be used. The NOTAM users' understanding shall always be considered (e.g. use of 'CW' and 'CCW' for 'clockwise' and 'counter-clockwise' is likely to result in user confusion/query).

Examples:

E) ILS DME RWY 25R U/S.

E) CRANE PSN 500545.12N 0141556.19E ERECTED 190M S OF RWY 13/31 AXIS, 1300M BEHIND THR RWY 31, MAX ELEV 390.3M, MAX HGT 20.7M AGL.

- 2.3.22.7 The cardinal points and their combinations shall not be abbreviated in connection with TWY.

Example:

E) TWY A AND C **EAST** OF RWY 10/28 CLSD.

Instead of:

E) TWY A AND C *E* OF RWY 10/28 CLSD.

- 2.3.22.8 The coordinates of known subjects shall not be provided. In the case of relocations, realignments and new installations the location is usually provided by coordinates. For these cases the coordinates shall be indicated in degrees, minutes and, if required, seconds. Degrees shall always be indicated by 2 digits for N/S and 3 digits shall be used for W/E. Minutes and seconds are displayed in 2 digits. If more precision is required, the seconds are followed by a dot and tenth of seconds. The resolution shall be in accordance with Annex 15 Appendix 7 aeronautical data quality requirements.

Examples 1:

P-Area outside CTA (resolution 1 min):	4635N 00825E
ARP PSN (required resolution 1 sec):	463542N 0082537E
Enroute VOR (required resolution 1 sec):	463542N 0082537E
Localizer PSN (required resolution 1/10 sec):	463542.3N 0082537.8E

Coordinates shall be converted to degrees, minutes and seconds for the publication in order to prevent misunderstanding.

Example 2:

4635**42N**

Instead of: 4635.7N

- 2.3.22.9 Areas are described by coordinates. For better visualisation, coordinates are separated by hyphens and should be accompanied by location indicators, navigation aids and geographical indications such as towns or mountains. Where there are no coordinates, the name of towns or mountains should be used. Geographical indications may only be indicated as displayed on aeronautical chart.
- 2.3.22.10 Geographical coordinates for the lateral limits of an area are expressed in accordance with Annex 15 minimum requirements for aeronautical data:
- if inside of CTA/CTR, with resolution of 1 second; e.g. 445600N 0200941E
 - if outside of CTA/CTR, with resolution of 1 minute; e.g. 4456N 02010E
- 2.3.22.11 If coordinates of an area are published in AIP or AIP SUP, the lateral limits shall not be repeated in Item E), the name of this area should be referred to, instead.

Example:

E) DANGER AREA LY D12 ACT.

Instead of:

E) DANGER AREA LY D12 PLACED WITHIN LATERAL LIMITS: 451700N 0201141E - 451600N 0201641E - 451300N 0201941E - 451400N 0201241E - 451700N 0201141E ACTIVE.

- 2.3.22.12 If coordinates of an area are not published in AIP or AIP SUP, the lateral limits should be expressed in accordance with the following:

a) Irregular shape area (defined by points)

Points defining lateral limits of an area should be enumerated in clockwise order, each point separated by a hyphen. The last and the first points of the list shall be the same. Coordinates may be followed, when available, by geographical indications between brackets (see paragraph 2.3.22.9).

Example:

E) AIR DISPLAY WILL TAKE PLACE WI LATERAL LIMITS: 443838N 0200818E (NDB OBR) - 444508N 0201455E (VILLAGE JAKOVO) - 443445N 0202447E - 443838N 0200818E (NDB OBR).
 F) GND G) 3000FT AMSL)

b) Circular shape area

One point defining center of the circle that may be complemented (in brackets) by geographical indications (see paragraph 2.3.22.9) and radius.

Example:

E) AIR DISPLAY WILL TAKE PLACE WITHIN RADIUS 5KM CENTERED AT 4645N 00705E (ECUVILLENS AD).
F) GND G) 5000M AMSL)

The lateral limits of the affected area can also be defined by the appropriate radial and distance from a Navaid.

2.3.22.13 Whenever an airspace is affected (relevant scope AE, E, AW and W), the location reference (e.g. aerodrome, identification, area) has to be mentioned in Item E.

2.3.22.14 For airspace organisation subjects, the name of airspace organisation has to be present whenever it is intended also as Enroute NOTAM (scope E and AE).

Examples:

E) TMA ZURICH SECTOR 14 DEACTIVATED.
E) CTR ZURICH SECTOR 2 ADDITIONALLY ACT.
E) APP GENEVA 131.325 MHZ NOT AVBL.
E) AWY G5 NOT AVBL BTN WIL AND FRI.
E) RNAV RTE N850 NOT AVBL BTN GERSA AND ODINA.

2.3.22.15 As entries in Items F) and G) are only required for Navigation Warnings (QW) and Airspace Reservations (QR) and the 'Lower/Upper' indication in Item Q) is usually not visible in a PIB, inclusion of applicable vertical limits in Item E) shall be considered whenever appropriate, e.g. for changes of the Airspace Organisation (QA subjects).

2.3.22.16 Until ICAO guidance is issued, when there is a need to include an e-mail address in the Item E) text, the @ symbol shall be represented by the word 'at' within brackets i.e. (AT).

2.3.22.17 Item E) should be composed by the Publishing NOF in such a way that it will serve for direct Pre-flight Information Bulletin entry without requiring additional processing by the receiving Unit.

2.3.22.18 Unclear and/or incomplete NOTAM Text shall be avoided.

Example 1:

... C) PERM
E) ULTRALIGHT AREA SAN TEADORA 5048N 09339E COMPLETELY WITHDRAWN. REF AIP ENR 5.5.3.

Instead of:

... C) PERM

E) WARNING WITHDRAWN REF AIP ENR 4-2-7.3 PARA 6.5.

2.3.22.19 AIP references, in NOTAM other than PERM, should be avoided (para 2.3.22.4 above also refers).

Example:

E) TACAN ALA CH 88X (114.100 MHZ) U/S.

Instead:

E) TACAN ALA CH 88X (114.100 MHZ) U/S. REF AIP ENR 4-1.

However, when required, AIP references shall include AIP section/sub-section/paragraph numbers and not the page number(s) alone.

2.3.22.20 Dates in Item E) shall be presented in day-month-year sequence DD MMM YYYY (e.g. for Trigger NOTAM, AIRAC NIL NOTAM) in the following understanding:

DD – to designate a day in a month, two digits shall always be used.

MMM – to designate the month with three-letter abbreviation from ICAO Doc 8400: JAN, FEB ... NOV, DEC.

YYYY – to designate the year with four digits: 2008, 2009, 2010 etc.

Example:

E) TRIGGER NOTAM - AIRAC AIP SUP 2/08 WEF
13 MAR 2008 TIL 09 APR 2008: ANNEX LY TO ROUTE AVAILABILITY
DOCUMENT.

2.3.22.21 Schedule inside Item E) shall be presented in accordance with Item D) rules.

Example:

E) ATC OPERATING HOURS CHANGED AS FOLLOWS:
JAN 01 03 05 1000-1600 JAN 02 04 06-31 0800-2200.

2.3.23 Items F) and G) – Lower and Upper Limit

2.3.23.1 Lower and Upper limits shall be inserted in Items F) and G) only for Navigation Warnings ('QW') and for Airspace Reservations ('QR').

2.3.23.2 If entries are required (ref 2.3.23.1), then both Items F) and G) shall always be included.

2.3.23.3 Items F) and G) shall contain an altitude (Above Mean Sea Level – AMSL) or a height (Above Ground or Sea or Surface Level – AGL) expressed in meters or feet, or a Flight Level (always expressed in 3 digits). In addition, SFC (surface) and GND (ground) may be used in Item F) as well as UNL (unlimited) in Item G).

2.3.23.4 Reference datum (AGL or SFC or AMSL) and units of measurement (FT or M) shall be clearly indicated.

- 2.3.23.5 Only a single entry is permitted in each Item, i.e. G) 10000FT (3280M) AGL shall not be used.
- 2.3.23.6 There shall be no blank between the value and the unit of measurement (e.g. 3000FT). But a reference datum shall be separated from the unit of measurement by a blank (e.g. 3000FT AMSL).
- 2.3.23.7 Abbreviations FT or M shall be divided from AGL or AMSL by a blank character. No other character (e.g. "/", "-"...) shall be used. Correct annotation is '3000FT AMSL' (i.e. '3000FT/AMSL' shall not be used).
- 2.3.23.8 Acceptable entries and formats are therefore as follows:

Item F):	Item G):
SFC	UNL
GND	
XXXXXXFT AGL	XXXXXXFT AGL
XXXXXXFT AMSL	XXXXXXFT AMSL
XXXXXXM AGL	XXXXXXM AGL
XXXXXXM AMSL	XXXXXXM AMSL
FLXXX (see 2.3.23.9)	FLXXX (see 2.3.23.9)

- 2.3.23.9 The Item Q) default FL values 000 and 999 shall not be used in Items F) and G). The abbreviations GND or SFC shall be used in Item F) and UNL in Item G) instead.
- 2.3.23.10 The values in qualifiers 'Lower' and 'Upper' of the Item Q) must correspond to the flight levels or altitudes specified in Items F) and G). If Items F) and/or G) are expressed as a height, the values specified in the 'Lower' or 'Upper' qualifiers in Item Q) shall indicate the equivalent FL and may therefore require calculation. For detailed conversion procedures see para 2.3.10.
- 2.3.23.11 Where an event is notified in a form such as 'ACTIVITY UP TO FL040, AFTER ATC APPROVAL UP TO FL080', the higher value (FL80) shall be used in Item G) and the 'Upper' qualifier in Item Q) shall read '080'.
- 2.3.23.12 Similarly, where the lower limit of activity is variable, the lowest limit shall be used in Items Q) and F).

2.4 Creation of NOTAMR and NOTAMC

2.4.1 General Procedures Related to NOTAMR and NOTAMC Creation

- 2.4.1.1 NOTAMR and NOTAMC are issued in the same series as the NOTAM to be replaced or cancelled.

- 2.4.1.2 NOTAMR and NOTAMC respectively replace and cancel only one NOTAMN or NOTAMR.

Example 1: A0124/08 NOTAMR A0106/08

Example 2: A0234/08 NOTAMC A4567/07

- 2.4.1.3 NOTAMR and NOTAMC deal with precisely the same subject as the NOTAM to be replaced or cancelled. Therefore the 2nd and 3rd letters of the NOTAM Code in Item Q) shall be the same as those in the NOTAM to be replaced or cancelled.

- 2.4.1.4 NOTAMR and NOTAMC have the same Item A) contents as the NOTAM to be replaced or cancelled.

- 2.4.1.5 The date-time group in Item B) of a NOTAMR or NOTAMC shall be the actual date and time that this NOTAMR or NOTAMC is created.

i.e. NOTAMR and NOTAMC shall take effect immediately and no future start of coming in force is permitted. The replaced or cancelled NOTAM cease to be valid from the very moment their replacing NOTAMR or NOTAMC are issued. This is done to assure the correct processing in all systems no matter their design.

- 2.4.1.6 One of the following procedures shall be applied instead of issuing a NOTAMR or NOTAMC with Item B) in the future.

- 2.4.1.7 If the condition described in a NOTAM to be replaced is to remain valid for a period before being changed, then a NOTAMR shall be issued for the period up to the intended date and time of the change provided the NOTAM to be replaced is in force at the time of replacement. This NOTAMR shall immediately replace the existing NOTAM and shall notify the same conditions but with a changed Item C). A NOTAMN detailing the intended change in condition shall then be issued with a future date and time in Item B).

Example:

```
261637 LIIAYNYX
(B1826/08 NOTAMN
Q) L IMM/QMRLT/IV/NBO/A/000/999/4525N01019E005
A) LIPO B) 0801150500 C) 0803311100 EST
E) RWY 14 DTHR 300 M. REVISED DECLARED DIST AS FLW: .....
```

On MAR 01 it is known that DTHR will be 200 M only from MAR 07 until about APR 15. NOTAM are issued as follows:

```
011035 LIIAYNYX
(B1893/08 NOTAMR B1826/08
Q) L IMM/QMRLT/IV/NBO/A/000/999/4525N01019E005
A) LIPO B) 0803011035 C) 0803062359
E) RWY 14 DTHR 300 M. REVISED DECLARED DIST AS FLW: .....
```

```
011035 LIIAYNYX
(B1894/08 NOTAMN
Q) L IMM/QMRLT/IV/NBO/A/000/999/4525N01019E005
A) LIPO B) 0803070000 C) 0804152359 EST
E) RWY 14 DTHR 200 M. REVISED DECLARED DIST AS FLW: .....
```

If the NOTAM to be replaced is not in force at the time of replacement, 2.4.1.9 applies.

- 2.4.1.8 If the condition described in a NOTAM to be cancelled is to remain valid for a period before Item C) is reached, then a NOTAMR shall be issued with the new end time in Item C).

Example:

```
261637 LIIAYNYX
(B1826/08 NOTAMN
Q) LIMM/QMRLT/IV/NBO/A/000/999/4525N01019E005
A) LIPO B)0801150500 C) 0803311100 EST
E) RWY 14 DTHR 300 M. REVISED DECLARED DIST AS FLW: .....)
```

On MAR 01 it is known that the RWY will be back to normal from MAR 07. NOTAM is issued as follows:

```
011035 LIIAYNYX
(B1893/08 NOTAMR B1826/08
Q) LIMM/QMRLT/IV/NBO/A/000/999/4525N01019E005
A) LIPO B) 0803011035 C) 0803062359
E) RWY 14 DTHR 300 M. REVISED DECLARED DIST AS FLW: .....)
```

- 2.4.1.9 If the condition described in a NOTAM to be replaced is a postponement, a correction of Item B), an interruption or a temporary suspension (taking place immediately) of the present situation, then a NOTAMC shall be issued to immediately cancel the NOTAM. This shall be followed by a NOTAMN dealing with the new situation and a new Item B).

Example:

```
(W0280/08 NOTAMN
Q) HECC/QRDCA/IV/BO/W/000/040/3024N03141E003
A) HECC B) 0806111300 C) 0806201500
D) 11-13 1300-1800, 15-20 0800-1500
E) D-AREA HE-D9 ACT.
F) GND G) FL040
```

On JUN 13 at noon D-Area is deactivated immediately and will be active again on Jun 15. NOTAM are issued as follows:

```
131213 HECAYNYX
(W0285/07 NOTAMC W0280/07
Q) HECC/QRDXX/IV/BO/W/000/040/3024N03141E003
A) HECC B) 0706131213
E) D-AREA HE-D9 DEACTIVATED.
```

```
121214 HECAYNYX
(W0286/07 NOTAMN
Q) HECC/QRDCA/IV/BO/W/000/040/3024N03141E003
A) HECC B) 0706150800 C) 0706181600
D) 15-18 0800-1600
E) D-AREA HE-D9 ACT.
F) GND G) FL040
```

- 2.4.1.10 If the condition described in a NOTAM to be replaced is a temporary suspension or change of the present situation for a certain period in the future, then a NOTAMR shall be issued to immediately replace the NOTAM. This shall be followed by a

NOTAMN dealing with the temporary change. NOTAMR to specify the dates/times of activation for the periods the situation is as in the replaced NOTAM and NOTAMN to cover dates/times dealing with the different situation. No NOTAMN is issued in the case of a temporary 'back to normal' situation.

Example for a temporary suspension taking place in the future:

```
261637 LIIAYNYX
(B1826/08 NOTAMN
Q) LIMM/QMRLT/IV/NBO/A/000/999/4525N01019E005
A) LIPO B) 0801150500 C) 0803311100 EST
E) RWY 14 DTHR 300 M. REVISED DECLARED DIST AS FLW: .....
```

On FEB27 it is known that the RWY will be made available for normal operations for the next weekend (MAR 01+02):

Option 1 (Item D) including dates after the suspension):

```
271035 LIIAYNYX
(B1893/08 NOTAMR B1826/08
Q) LIMM/QMRLT/IV/NBO/A/000/999/4525N01019E005
A) LIPO B) 0802271035 C) 0803312359
D) FEB 27 1035-2359, FEB 28-29 MAR 03-31 0000-2359
E) RWY 14 DTHR 300 M. REVISED DECLARED DIST AS FLW: .....
```

Option 2 (Separate NOTAM for dates after the suspension):

```
271035 LIIAYNYX
(B1893/08 NOTAMR B1826/08
Q) LIMM/QMRLT/IV/NBO/A/000/999/4525N01019E005
A) LIPO B) 0802271035 C) 0802292359
E) RWY 14 DTHR 300 M. REVISED DECLARED DIST AS FLW: .....
```

```
271036 LIIAYNYX
(B1894/08 NOTAMN
Q) LIMM/QMRLT/IV/NBO/A/000/999/4525N01019E005
A) LIPO B) 0803030000 C) 0803312359 EST
E) RWY 14 DTHR 300 M. REVISED DECLARED DIST AS FLW: .....
```

For option 2, the second NOTAM should also be issued as soon as possible but may also be done after FEB 27 (latest before Item B).

Depending on how well the situation is known, NOTAMR may deal only with the situation until the change occurs, followed by two NOTAMN. One to cover the period for the changed situation and one for the period afterwards.

Example for a temporary change taking place in the future:

```
261637 LIIAYNYX
(B1826/08 NOTAMN
Q) LIMM/QMRLT/IV/NBO/A/000/999/4525N01019E005
A) LIPO B) 0801150500 C) 0803311100 EST
E) RWY 14 DTHR 300 M. REVISED DECLARED DIST AS FLW: .....
```

On FEB27 it is known that the DTHR will be reduced to 150 M for the next weekend (MAR 01+02):

```
Option 1:
271035 LIIAYNYX
(B1893/08 NOTAMR B1826/08
```

Q) LIMM/QMRLT/IV/NBO/A/000/999/4525N01019E005
 A) LIPO B) 0802271035 C) 0803312359
 D) FEB 27 1035-2359, FEB 28-29 MAR 03-31 0000-2359
 E) RWY 14 DTHR 300 M. REVISED DECLARED DIST AS FLW:)

271035 LIIAYNYX
 (B1894/08 NOTAMN
 Q) LIMM/QMRLT/IV/NBO/A/000/999/4525N01019E005
 A) LIPO B) 0803010000 C) 0803022359
 E) RWY 14 DTHR 150 M. REVISED DECLARED DIST AS FLW:)

Option 2:
 271035 LIIAYNYX
 (B1893/08 NOTAMR B1826/08
 Q) LIMM/QMRLT/IV/NBO/A/000/999/4525N01019E005
 A) LIPO B) 0802271035 C) 0802282359
 E) RWY 14 DTHR 300 M. REVISED DECLARED DIST AS FLW:)

271035 LIIAYNYX
 (B1894/08 NOTAMN
 Q) LIMM/QMRLT/IV/NBO/A/000/999/4525N01019E005
 A) LIPO B) 0803010000 C) 0803022359
 E) RWY 14 DTHR 150 M. REVISED DECLARED DIST AS FLW:)

271035 LIIAYNYX
 (B1895/08 NOTAMN
 Q) LIMM/QMRLT/IV/NBO/A/000/999/4525N01019E005
 A) LIPO B) 0803030000 C) 0803312359 EST
 E) RWY 14 DTHR 300 M. REVISED DECLARED DIST AS FLW:)

2.4.1.11 Any NOTAM which includes an 'EST' shall be replaced by NOTAMR or cancelled by NOTAMC before the 'estimated' end date specified in Item C).

2.4.1.12 Refer also to the procedures for handling 'Multipart' NOTAM at Chapter 1.

2.4.2 Specific Procedures Related to NOTAMR Creation

2.4.2.1 NOTAMR are Replacement NOTAM.

2.4.2.2 NOTAM which are to become invalid before their given End of Validity, or did not have a defined End of Validity (i.e. have 'EST' or 'PERM' in Item C) may be replaced, provided they are 'in force' at the time of replacement.

2.4.3 Specific Procedures Related to NOTAMC Creation

2.4.3.1 NOTAMC are Cancellation NOTAM.

2.4.3.2 NOTAM which are to become invalid before their given End of Validity, or did not have a defined End of Validity (i.e. have 'EST' or 'PERM' in Item C) may be cancelled at any time.

2.4.3.3 NOTAMC shall be published whenever NOTAM are incorporated in an AIP AMDT (see chapter 2.6.3).

2.4.3.4 NOTAMC Qualifier 'NOTAM Code' shall be as follows:

Subject: 2nd and 3rd letters shall be identical to the original NOTAM (ref para 2.4.1.3)

Condition: permitted 4th and 5th letters are as follows:

Q - - AK = RESUMED NORMAL OPS

Q - - AL = OPERATIVE SUBJECT PREVIOUS CONDITION

Q - - AO = OPERATIONAL

Q - - CC = COMPLETED

Q - - XX = OTHER (Plain Language – ref para 2.4.3.8)

2.4.3.5 NOTAMC Qualifiers 'Traffic', 'Purpose', 'Scope', 'Lower/Upper' and 'Coordinates/Radius' shall be identical to the cancelled NOTAM. Maintaining the original qualifiers allows additional use of NOTAMC for the preparation of 'Updates' to Pre-flight Information Bulletins.

2.4.3.6 NOTAMC shall not contain Items C), D), F) and G).

2.4.3.7 For all NOTAMC, the text of the decoded NOTAM Code shall be inserted in Item E) together with details of the NOTAM subject.

Example: NOTAM Code = QNVAK

Item E) = VOR DKB RESUMED NORMAL OPS.

2.4.3.8 In order to facilitate work in manual environments, NOTAMC, which are to be followed immediately by a NOTAMN (instead of using a NOTAMR), shall contain XX as 4th and 5th letters of the NOTAM Code and, at the end of the text in Item E), the remark: 'NEW NOTAM TO FOLLOW'.

Example: NOTAM Code = QMRXX

Item E) = RWY 07L/25R NEW NOTAM TO FOLLOW.

2.4.3.9 Cancellation of NOTAM solely on the basis of a Checklist is not allowed (ref para 2.2.13).

2.4.3.10 Once the immediate cancellation has been effected, the cancelling NOTAMC ceases to have validity.

2.5 Checklist Production

2.5.1 Checklists – General

- 2.5.1.1 Checklists are issued as a NOTAM in the series that they refer to.
- 2.5.1.2 A separate Checklist shall be issued for each NOTAM Series.
- 2.5.1.3 The first Checklist in a new NOTAM series shall be issued as a NOTAMN.
- 2.5.1.4 Subsequent Checklists shall be issued as NOTAMR, replacing the previous Checklist with immediate effect. Consequently Item B) is the issuing time of the Checklist and supersedes the previous one immediately.
- 2.5.1.5 Item A) shall contain the FIR, or a list of all FIR, covered by the Checklist or the location indicator of the issuing non-governmental agency. Third and fourth letters 'XX' shall not be used.
- 2.5.1.6 Item C) shall contain the estimated (EST) end of validity, normally not more than one month after the Checklist is issued.
- 2.5.1.7 Checklists shall contain the numbers of the NOTAM incorporated in a normal AIP AMDT or AIP SUP until the time that these NOTAM are specifically cancelled by the publication of a NOTAMC.

2.5.2 Checklist Qualification – Item Q)

- 2.5.2.1 Qualifier 'FIR' shall be either:
 - the FIR indicator, or
 - the country or non-governmental agency nationality letters followed by 'XX' if there is more than one FIR concerned, or
 - the country or non-governmental agency nationality letters of the Publishing NOF followed by 'XX' if publishing for FIR in different countries.
- 2.5.2.2 Qualifier 'NOTAM Code' shall be the special dedicated code 'QK K K K K'.
- 2.5.2.3 Qualifiers 'Traffic', 'Purpose' and 'Scope' shall be given the artificial value 'K'.
- 2.5.2.4 Qualifiers 'Lower'/'Upper' shall be the default values '000/999'.
- 2.5.2.5 Qualifier 'Geographical Reference' shall always contain the geographical co-ordinates of the centre of the FIR(s) listed in Item A), followed by the default radius '999'.

Example: Q) LIXX/QK K K K K/K/K/K/000/999/4323N01205E999
- 2.5.2.6 Qualifiers 'QK K K K K' (NOTAM Code) and 'K' ('Traffic', 'Purpose', 'Scope') are used to allow selective retrieval of the Checklist. This also prevents the Checklist from appearing in a Pre-flight Information Bulletin.

2.5.3 Checklist Format – Item E)

2.5.3.1 Item E) shall be divided into two sections.

2.5.3.2 First Section, identified by the keyword 'CHECKLIST'

- a) This contains the list of the valid NOTAM numbers which have been promulgated in the same series as the Checklist, in a specific format. Note that the list shall not contain the number of the replaced NOTAM checklist nor its own NOTAM checklist number.
- b) The text in Item E) shall start with the word 'CHECKLIST'
- c) The numbering of NOTAM is grouped by year (indicated by 4 digits) using the word 'YEAR' plus '=' sign, followed by the year of publication without blanks (e.g. YEAR=1999)
- d) Each NOTAM number (always 4 digits) is separated by a blank with no other punctuation mark.
- e) Each indicator of a different year shall start on a new line.

2.5.3.3 Second Section, identified by the keywords 'LATEST PUBLICATIONS'

- a) This contains the list of the latest publications issued, in a format suitable for manual processing.

Example:

```
A0467/08 NOTAMR A0396/08
Q) LIXX/QK/000/999/4323N01205E999
A) LIBB LIMM LIRR B) 0803310900 C) 0804300900EST
E) CHECKLIST
YEAR=2006 0244 0288 0511
YEAR=2007 0104 0347 0601 0653 0687
YEAR=2008 0004 0073 0109 0256 0312 0315 0394 0418 0425 0447
0459 0464 0465
LATEST PUBLICATIONS
AIRAC AIP AMDT 4/08 EFFECTIVE 10 APR 2008
AIP SUP 27/08
AIP AMDT 513
AIC A012/08
```

- b) Additional possibilities to differentiate between IFR or VFR publications (volumes) can be stated, if so required:

```
AIP SUP VFR 015/08
```

```
AIP SUP IFR 38/08
```

```
AIRAC AIP AMDT IFR 5/08 EFFECTIVE 08 MAY 2008
```

Note: Whenever the numbering of AIP AMDT takes place on a yearly basis, a reference to the year of publication will be added to the number.

2.5.4 Checklist Errors

2.5.4.1 When the publication of the Checklist contains an error, the following procedures will apply.

2.5.4.2 Whenever a valid NOTAM number was omitted from the Checklist:

- a) if the omitted NOTAM is in force, a NOTAMR shall be issued replacing the omitted NOTAM with the new number;
- b) if the omitted NOTAM is not yet in force, a NOTAMC and NOTAMN shall be issued.

This procedure will allow consistency of the data in the database of all recipients, whatever the method of processing of Checklists.

2.5.4.3 Whenever an invalid NOTAM number was erroneously inserted in the Checklist, a revised Checklist (NOTAMR replacing the erroneous Checklist) will be published without the invalid NOTAM number (no correct version).

2.6 Publication of Information by NOTAM, AIP Amendment or AIP Supplement

2.6.1 Permanent information shall not be distributed by means of a NOTAM only. This information shall be incorporated in an AIP Amendment.

2.6.2 Publication of permanent information by NOTAM

2.6.2.1 When the urgency of publication of an Amendment to the AIP is such that the 'normal' AIRAC or Non-AIRAC Amendment publication is considered to be unsuitable, the responsible NOF will issue a NOTAM 'PERM' according to the following rules.

2.6.2.2 Item Q) shall be completed according to the NOTAM Selection Criteria.

2.6.2.3 Item B) of the NOTAM shall contain the effective date of the change.

2.6.2.4 Item C) of the NOTAM shall contain the term 'PERM' to indicate that the change itself is of a permanent nature. Note that Item C) shall never include the expected publication date or the effective date of the Amendment.

2.6.2.5 Item E) shall contain the operational changes as for normal NOTAM. Special care shall be taken to assure that the phrasing is clear without AIP consultation. For the benefit of users specifically interested in NOTAM that will later be transferred to the AIP, a reference to the AIP is added at the end of Item E).

AIP references shall include AIP section/sub-section/paragraph numbers, not the page number(s) alone.

For examples refer to paragraphs 2.3.22.4, 2.3.22.5 example 2, 2.3.22.18 and 2.3.22.19.

- 2.6.2.6 In cases where a NOTAM is issued to correct a mistake in an AIP AMDT, Item E) shall remind of the operational content of the AMDT and not only of the mistake.

Example text shall read correctly:

E) RWY 08/26 EXTENSION, AIRAC AIP AMDT 10/08 PART AD: EGNX 2-12 RWY 08 READ 1850M INSTEAD OF 1805M.

Instead of:

'E) AIRAC AIP AMDT 10/08 PART AD : EGNX 1-12 RWY 08 READ 1850M INSTEAD OF 1805M'

This allows users to be aware of the subject when reading the PIB and to refer to the AIP AMDT content only if necessary.

2.6.3 Incorporation of NOTAM information in AIP Amendment

- 2.6.3.1 Permanent information should be incorporated in AIP within 3 months after NOTAM publication. As re-issuing of NOTAM with the same contents is not permitted, the interim use of an AIP SUP should be considered. (ICAO Doc 8126 Ref. [2] paragraph 6.1.3 and Table 6-1 refers).

- 2.6.3.2 When permanent (PERM) information has been published in a NOTAM, the NOTAM will require cancellation after an appropriate AIP Amendment has been issued to formally amend the AIP (ref para 2.4.3.3).

In this case, the NOF shall issue a NOTAMC which cancels the NOTAM 'PERM', 15 days after the effective date of the AIP Amendment that contains the 'PERM' information.

Note 1: 'Effective date' in this instance can be equal to an AIP Amendment publication date. This broadens the Annex 15 use of this expression which relates currently to AIRAC AIP Amendments only.

Note 2: It is assumed that the AIP Amendments will be available at all receiving units by the time the NOTAMC is sent.

- 2.6.3.3 The NOTAMC shall contain in Item E) a reference to the AIP Amendment that incorporates the originally published NOTAM.

Example:

'INFORMATION INCORPORATED IN AIP AMDT 4/08 WEF 14 APR 2008

- 2.6.3.4 The numbers of the NOTAM incorporated in the AIP Amendment shall be published on the cover page of the AIP Amendment.

- 2.6.3.5 The date on which NOTAMC will be issued to cancel NOTAM incorporated in the AIP Amendment shall be published on the cover page of the AIP Amendment.

Example: 'NOTAM incorporated to this AMDT will be cancelled by NOTAMC on the 29 APR 2008'.

2.6.4 Incorporation of NOTAM information in AIP Supplement

- 2.6.4.1 Publication of an AIP Supplement to replace and/or modify information in an existing NOTAM may occur at any time. A Trigger NOTAMN shall be published to refer to this AIP Supplement (ref para 2.7.4).
- 2.6.4.2 The previously published NOTAM containing the affected information shall be cancelled by a NOTAMC.

2.7 Trigger NOTAM and Related Procedures

2.7.1 Trigger NOTAM – Definition

- 2.7.1.1 NOTAM used to announce the existence and subject contents of AIRAC AIP Amendments or AIP Supplements of operational significance are referred to as 'Trigger NOTAM'.
- 2.7.1.2 The text of Trigger NOTAM is included in Pre-flight Information Bulletins (PIB) to ensure that pilots and operators are advised or reminded that permanent changes of operational significance take effect from the given date or that details of temporary changes of operational significance are to be found in an AIP Supplement.

2.7.2 Trigger NOTAM – General Rules

- 2.7.2.1 AIRAC AIP Amendments and AIRAC AIP Supplements shall always be triggered by a NOTAM. Note that information concerning any circumstances listed in Annex 15 (Ref. [1]), Appendix 4, Parts 1 and 2, shall be disseminated under the regulated 'AIRAC' system, either as an AIRAC AIP Amendment or as an AIRAC AIP Supplement.
- 2.7.2.2 The text in Item E) should not exceed 300 characters and must always start with the words "TRIGGER NOTAM" (followed only in the case of an AIP Amendment by the abbreviation PERM), a reference number of the published AIP Amendment or AIP Supplement concerned, the effective date and a brief description of its content. Effective time will be omitted in Item E) unless it differs from the default AIRAC effective time of 0000 UTC.
- 2.7.2.3 Trigger NOTAM must come in force on the effective date and time of the Amendment or Supplement they refer to. The Trigger NOTAM shall be issued as soon as possible, preferably at the publication date of the AIRAC AIP Amendment or the AIP Supplement.
- 2.7.2.4 Trigger NOTAM shall remain in force for 14 days.

Example:

B) 0801170000 (AIRAC effective date and time)

C) 0801310000 (AIRAC effective date and time + 14 days)

- 2.7.2.5 Trigger NOTAM shall be issued in the appropriate NOTAM series, according to the information to be promulgated.
- 2.7.2.6 Trigger NOTAM shall follow the normal NOTAM procedures (but see following paragraphs for exceptions).
- 2.7.2.7 The NOTAM Code 2nd and 3rd letters (= 'Subject') shall be selected from the NSC and shall never be 'XX'. If no suitable 2nd and 3rd letter combination exists then use 'FA' for Aerodrome or 'AF' for FIR.
- 2.7.2.8 The NOTAM Code for a Trigger NOTAM shall always contain 'TT' as 4th and 5th letters (= 'Condition'). This exclusive 'TT' 'Condition' indicator shall be used with all subjects of the NOTAM Codes, even if not explicitly listed in the NSC tables.
- 2.7.2.9 The exclusive 'TT' 'Condition' indicator can be used to retrieve specific Trigger NOTAM from any Publishing NOF, and can additionally be used for the inclusion (or non-inclusion) of Trigger NOTAM in PIB, at a specific time before their effective date.
- 2.7.2.10 In the case of Amendments or Supplements containing information dealing with different subjects and/or locations, a single Trigger NOTAM dealing with multiple subjects and/or locations may be issued [Note exception to Basic Rule – ref para 2.2.4].
- 2.7.2.11 For FIR, Publishing NOF may group all the information that relates to one or several FIR, regardless of the subject, in order to reduce the amount of NOTAM to be published [Note exception to Basic Rule – ref para 2.2.4].

Example:

Q) LEXX/QAETT/IV/BO/E/065/660/4229N00152E999
A) LECB LECM B) 0702150000 C) 0703010000
E) TRIGGER NOTAM - PERM AIRAC AIP AMDT 2/07 WEF 15 FEB 2007.
CHANGES TO AIRSPACE CLASSIFICATION AND UPPER LIMIT OF
CONTROLLED AIRSPACE.

- 2.7.2.12 For Aerodromes, a separate Trigger NOTAM shall be issued for each aerodrome. Different subjects relating to the same aerodrome, may however be grouped in the same NOTAM [Note exception to Basic Rule – ref para 2.2.4].

Example:

Q) EFIN/QPATT/I/BO/A/000/999/6031N02216E005
A) EFTU B) 0702150000 C) 0703010000
E) TRIGGER NOTAM-PERM AIRAC AIP AMDT 2/07 WEF 15 FEB 2007.
CHANGES TO STAR and to WGS 84 coordinates.

- 2.7.2.13 In the case of Amendment or Supplements containing information about a new location indicator or a changed one, the related Trigger NOTAM has to be issued as FIR information: Scope E, Item A) location indicator of the FIR affected and Item E) information about the new or changed location indicator. Other information related to this aerodrome and subject to trigger procedures is published in accordance with 2.7.2.12, Item A to contain the new location indicator.
- 2.7.2.14 In the cases described in paragraphs 2.7.2.10-2.7.2.12, the NOTAM qualifiers 'Traffic', 'Purpose' and 'Scope' shall be filled according to the subject of highest operational importance.

When grouping different subjects it may happen that the subject of highest operational importance does not cover qualifiers 'Traffic' and 'Scope' for all the subjects. For example, the Q-lines for two AD subjects (ILS, VFR APCH PROC) read as following: .../QICTT/I/BO/A/... and .../QPKTT/V/BO/A.... Whichever is taken as highest, both traffic types (I and V) concerned are never covered. In this special case a deviation from NSC is permitted to guarantee necessary bulletin entries.

Example: In the following case, the 'Traffic' qualifier 'IV' is a combination to cover both subjects (QICTT and QPKTT):

Q) EFIN/QICTT/IV/BO/A/000/999/6240N02937E005
 A) EFJO B) 0801170000 C) 0801310000
 E) TRIGGER NOTAM - PERM AIRAC AIP AMDT 91/08 WEF 17 JAN 2008.
 INTRODUCTION OF ILS RWY 28 AND REVISED VFR APCH PROC.

2.7.3 Trigger NOTAM relative to AIRAC AIP AMDT

2.7.3.1 AIRAC Amendments represent permanent changes to the AIP on a predefined date.

2.7.3.2 Effective Date: AIRAC AIP Amendments become effective on the AIRAC cycle date. Item B) shall always contain the AIRAC effective date and time.

2.7.3.3 Example:

Q) LOVV/QARTT/I/BO/E/245/999/4720N01330E999
 A) LOVV B) 0801170000 C) 0801310000
 E) TRIGGER NOTAM - PERM AIRAC AIP AMDT 3/08 WEF 17 JAN 2008.
 IMPLEMENTATION OF NEW ATS ROUTE UA15.

Note that the term 'PERM' is inserted in Item E) to stress that Item C) contains an artificial end-date and that the information is of a permanent nature.

2.7.4 Trigger NOTAM relative to AIP SUP (AIRAC and Non-AIRAC)

2.7.4.1 Whilst current ICAO SARPs do not specify a requirement for Non-AIRAC AIP Supplements to be triggered, Publishing NOF shall trigger all Operationally Significant AIP SUP to ensure that all relevant elements of the integrated aeronautical information package are available for inclusion in PIB.

2.7.4.2 Effective Date: AIP Supplements become effective at the date and time stated in the Supplement. Information to be published under the AIRAC system does not always start on an AIRAC cycle date (e.g. major works, large air exercises etc. ...). Consequently, both the AIP Supplement and the Item B) of the Trigger NOTAM shall contain the effective date and time of the start of the information.

2.7.4.3 Triggering of AIRAC information in Non-AIRAC Supplements: Due to time constraints, AIP Supplements are sometimes published to promulgate information that should have been published as an AIRAC AIP Supplement. In such exceptional cases, the operational nature of the information shall prevail and a Trigger NOTAM shall be issued for this Non-AIRAC AIP Supplement. The 'Subject' and 'Condition' shall relate the information to at least the 'Purpose' 'BO', according to the NOTAM Selection Criteria.

2.7.4.4 Period of Validity: The general rule as stated in Para 2.7.2.4 will apply. However, if the information has a duration that is shorter than 14 days, Item C) shall reflect the date and time when the information published in the AIP Supplement will expire. If the information has a duration that is longer than 14 days, the period for which the SUP is in force shall be indicated in Item E).

2.7.4.5 Example 1:

Q)EFIN/QRDTT/IV/BO/W/000/040/6637N02825E016
A) EFIN B) 0702152200 C) 0702201200
E)TRIGGER NOTAM - AIP SUP 68/07 WEF 15 FEB 2007.
TEMPO DANGER AREA EF D148 SALLA ACT.
F) SFC G) 4000FT AMSL

Example 2:

Q) EFIN/QRDTT/IV/BO/W/000/040/6637N02825E016
A) EFIN B) 0801172200 C) 0801312200
E) TRIGGER NOTAM - AIP SUP 68/08 WEF 17 JAN 2008 TIL 20 FEB 2008. TEMPO DANGER AREA EF D148 SALLA ACT.
F)SFC G)4000FT AMSL

2.7.4.6 Supplements requiring activation: Some (AIRAC) SUP require activation by NOTAM, such as: description of major works at aerodromes, establishment of large-scale military exercise areas or other related (AIRAC) SUP covering work progress or modifications.

These SUP usually cover long periods and are published with remarks such as: 'detailed dates and times of activation will be published by NOTAM', 'individual phases will be activated by NOTAM', 'operational limitations will be published by NOTAM'.

Such (AIRAC) SUP are triggered according to procedures for Trigger NOTAM.

If required, one or more additional activation NOTAM are issued according to NOTAM procedures for the periods the restrictions apply.

2.7.5 Notification of changes to AIP SUP

2.7.5.1 Changes: Any change to an AIP Supplement and its associated Trigger NOTAM, shall be published by the Publishing NOF in a way that the information itself is always clear and without any ambiguities.

Normally, changes to an AIP Supplement (such as corrections) are announced by replacing the AIP Supplement in due time by another Supplement. The procedure described in 2.7.5.3 shall be applied to announce the cancellation of the replaced SUP. The new SUP will be triggered according to the normal procedure.

The same procedure applies to Supplements of 'unknown' or 'estimated' duration or in the case of notifications of a postponed end date/time.

If time constraints do not allow a replacement by another SUP, the change is published by NOTAM. Refer to 2.7.5.2 for details.

- 2.7.5.2 Notification of changes by NOTAM: Changes on short notice as well as temporary suspensions of a SUP are published by NOTAM. The Q-line is completed according to normal NOTAM rules. Item B) is the effective date of the Supplement or current date/time, Item C) the published end of validity of the SUP. If the change is only of temporary nature, Item C) is limited to the validity of the change. Apart from the change, Item E) contains a reference to the Supplement.

Example:

```
(A0115/08 NOTAMN
Q) ESAA/QMDCH/IV/BO/A/000/999/5739N01217E005
A) ESGG B) 0804120637 C) 0805112359
E) RWY 03/21 TORA 2800M. REF AIRAC AIP SUP 14/08.
```

Long-term changes issued by NOTAM shall be replaced by a SUP in due time.

- 2.7.5.3 Notification of an earlier end date or time: exceptionally, the original end date specified in the AIP SUP may be changed to an earlier date by NOTAM. If such earlier cancellations are known well in advance they are treated as changes to a SUP and the rules of paragraph 2.7.5.1 apply.

The cancellation of a SUP on short notice is always published by NOTAMN (ref 2.7.5.3.1). If necessary, in addition to the NOTAMN the associated Trigger NOTAM has to be cancelled or replaced (ref 2.7.5.3.2) and the validity of any other existing NOTAM referring to the SUP must be verified (ref 2.7.5.3.3).

- 2.7.5.3.1 A NOTAMN shall be issued according to NOTAM procedures to announce the cancellation of a SUP on short notice.

Item B) is the new expiring date/time of the SUP.

Item C) is the original end of validity of the SUP or the next AIP SUP checklist or printed plain-language list of valid NOTAM or AIP GEN 0.3 if it serves as checklist of SUP, whichever is the most suitable means.

Example:

```
NOTAMN 151830 EUECYIYN
A0127/08 NOTAMN
Q) ESAA/QFALT/IV/BO/A/000/999/5739N01217E005
A) ESGG B) 0804230000 C) 0805112359
E) REF AIRAC AIP SUP 14/08 WORKS COMPLETED. RESTRICTIONS ON
THE USE OF AERODROME NO LONGER IN FORCE.
```

Note that Item E) shall always contain text clearly indicating that the planned end date has been brought forward.

Note that if the AIP SUP was not originally triggered, a NOTAMN may also be issued exceptionally to announce the cancellation in accordance with the above validity and Item E) procedures.

Note the use of Condition 'LT' (instead of 'TT') in the NOTAMN to indicate more precisely the nature of the information.

- 2.7.5.3.2 If the Trigger NOTAM is still valid at the time the information about the early cancellation is received, the Trigger NOTAM is cancelled or replaced, depending on the new expiry date/time. The Trigger NOTAM is not affected by the

cancellation of the SUP if the new expiry date is later than Item C) of the Trigger NOTAM.

Example:

Original Trigger:

A0034/08 NOTAMN

Q) ESAA/QFATT/IV/BO/A/000/999/5739N01217E005

A) ESGG B) 0804100600 C) 0804240600

E) TRIGGER NOTAM - AIRAC AIP SUP 14/08 WEF 10 APR 2008 TIL 11 MAY 2008. USE OF AERODROME RESTRICTED DUE TO MAJOR CONSTRUCTION WORKS.

New end of SUP: after 24 April 2008: Trigger not affected.

New end of SUP: before 24 April 2008: Trigger replaced or cancelled

Example: Notification about early cancellation received 15 APR 2008, SUP cancelled as of 22 APR 2008 2359.

Replacement:

(APR 2008)

151828 EUECYIYN

A0126/08 NOTAMR A0034/08

Q) ESAA/QFATT/IV/BO/A/000/999/5739N01217E005

A) ESGG B) 0804151828 C) 0804222359

E) TRIGGER NOTAM - AIRAC AIP SUP 14/08 WEF 10 APR 2008. USE OF AERODROME RESTRICTED DUE TO MAJOR CONSTRUCTION WORKS. AIP SUP VALID TIL 22 APR 2008.

- 2.7.5.3.3 If the SUP is subject of a valid activation NOTAM or any other NOTAM referring to it (e.g. temporary suspensions, changes published by NOTAM), the validity of these NOTAM have to be verified. If necessary, these NOTAM are cancelled or replaced depending on the new expiry date and time. If an activation NOTAM or any other NOTAM referring to the SUP is not in force yet at the time the earlier end is known, the activation NOTAM is cancelled and a new one is published reflecting the new date/time.

Example:

151830 EUECYIYN

(A0128/08 NOTAMR A0115/08

Q) ESAA/QMDCH/IV/BO/A/000/999/5739N01217E005

A) ESGG B) 0804151830 C) 0804222359

E) RWY 03/21 TORA 2800M. REF AIRAC AIP SUP 14/08.

2.8 NIL Notification

- 2.8.1 A NIL Notification to announce that an AIRAC AIP Amendment will not be published at the established interval or publication date, shall be distributed by Trigger NOTAM or by NOTAM checklist or by both (ICAO Annex 15 para 4.3.7, para 5.2.13.3, para 6.1.3 - Ref. [1]).
- 2.8.2 The distribution of a NIL Notification shall be done at least 42 days in advance of the AIRAC date (compliant with ICAO Annex 15 para 6.2.1 - Ref [1]).
- 2.8.3 If the use of a Trigger NOTAM for the distribution of a NIL notification is preferred, this NOTAM shall use:

- NOTAM Code 2nd and 3rd letters 'OA'
- NOTAM Code 4th and 5th letters 'TT' to identify that it relates to information about the announcement of availability (in this case non-availability) of printed publication; and
- Purpose 'M' to ensure that it will not be included in the pre-flight information bulletin unless specifically required; and
- Scope 'E'; and
- Item B) shall contain the AIRAC effective date; and
- Duration shall be 14 days like for the regular Trigger NOTAM.

Note: The use of scope E for subject OA as well as purpose M for this type of message is an intentional deviation from the NSC for the benefit of PIB retrieval.

Example: Italian NOTAM issued in August

```
160900 LIIAYNYX
A1000/07 NOTAMN
Q) LIXX/QOATT/IV/M/E/000/999/4323N01205E999
A) LIMM LIBB LIRR B) 0709270000 C) 0710112359
E) AIRAC EFFECTIVE DATE 27 SEP 2007 NIL
```

2.8.4 If the use of a NOTAM checklist for the announcement of a NIL notification is preferred, this notification shall be included into NOTAM checklist with following guidance:

- be published at least 42 days before AIRAC effective date; and
- The text will clearly identify which AIRAC effective dates are affected by the NIL notification

Example: Latvian checklist issued in May

```
010920 EVRAYNYX
(A1000/07 NOTAMR A0890/07
Q) EVRR/QK/000/999/5702N02322E999
A) EVRR B) 0705010920 C) 0706011500EST
E) CHECKLIST
YEAR=2007 0016 0021 0023 0024 0025 0028 0029 0032 0036 0040
0042 0043 0044
LATEST PUBLICATIONS
AIRAC AIP AMDT 03/07 WEF 10 MAY 07
AIP AMDT 1/06
AIRAC AIP SUP 01/07 WEF 10 MAY 07
AIP SUP 8/06
AIC A 05/06 01 NOV 06
AIRAC EFFECTIVE DATE 07 JUN 07 - NIL
AIRAC EFFECTIVE DATE 05 JUL 07 - NIL.
```

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3 NOTAM PROCESSING

3.1 Introduction

- 3.1.1 The current standard NOTAM format was introduced in ICAO Annex 15, 8th Edition promulgated on 14th of November 1991. All NOTAM should be produced in this format, following the procedures on NOTAM creation explained in Chapter 2 of this Manual.
- 3.1.2 However, some NOTAM continue to be published in the former NOTAM Class I format and these need to be converted in order to allow their automatic processing.
- 3.1.3 Some States are also not adhering completely to the Integrated Aeronautical Information Package and do not publish Trigger NOTAM for operationally significant publications.
- 3.1.4 Other states are publishing those of their NOTAM selected for international distribution in an official ICAO language other than English. In order to make this information available to the NOTAM Processing Unit (NPU) Clients in accordance with Annex 15 (Ref [1]) paragraph 5.2.2.1, a translation into English is required.
- 3.1.5 Conclusively, there are differences in the interpretation of ICAO standards and recommended practices and guidelines causing inconsistent, inaccurate or even false PIB output.
- 3.1.6 As a result, differences and discrepancies exist internationally in published NOTAM. NOTAM have to pass through a series of phases where their conformity to the ICAO format is analysed and their contents are assessed prior to their storage in automated NOTAM processing systems. The purpose of this Chapter on NOTAM processing is to define and describe the principles and detailed procedures applied throughout these different phases.

3.2 Objective

- 3.2.1 The goal of NOTAM processing, is to process all received NOTAM in accordance with the procedures laid down in Chapter 2 of this Manual on NOTAM creation, so as to allow their storage in automated systems in order to provide correct and harmonised PIB output for the benefit of the end user.
- 3.2.2 Processed NOTAM shall be distributed or made available to NPU Clients as soon as possible after receipt of the original NOTAM by the NOTAM Processing Unit.
- 3.2.3 NOTAM processing should result in a standardised level of service, regardless of which Unit was responsible for the processing.
- 3.2.4 In order to ensure the quality of the NOTAM and the consistency of the database, Quality review procedures shall be agreed between Client NOF and NOTAM Processing Unit.

- 3.2.5 It is essential that NOTAM Processing Units ensure that their Clients are made fully aware of the NOTAM processing procedures being applied.
- 3.2.6 This Chapter addresses NOTAM processing principles and procedures which support NOTAM storage, their consequent potential retransmission and the production of harmonised pre-flight information bulletin.

3.3 Applicability

- 3.3.1 Chapter 3 links the NOTAM publication with the retrieval of NOTAM (chapter 7 PIB). The processing of incoming NOTAM constitutes therefore an essential part in order to achieve correct and harmonised PIB. Chapter 3 provides guidelines for the processing of NOTAM deviating from ICAO or OPADD standards as outlined in chapter 2 (NOTAM creation).
- 3.3.2 However, non-adherences vary a lot and not every specific case can be covered. Incoming messages must be modified whenever they cannot be processed or when they would otherwise have a negative impact on the production of the pre-flight information bulletin.
- 3.3.3 Compliance with chapter 3 is strongly recommended in order to assure harmonised system PIB output. This also requires a PIB system to be designed in line with OPADD chapters 2 and 7. For systems where this is not the case different procedures or workarounds may have to be applied in order to achieve the expected results.

3.4 Procedures for the processing of NOTAM

- 3.4.1 The procedures described in this Chapter refer to NOTAMN (New NOTAM). Most of them apply also to NOTAMR and NOTAMC.
- 3.4.2 Specific procedures relative to NOTAMR (Replacement NOTAM) and NOTAMC (Cancellation NOTAM) and the particulars of their processing are described in this Chapter after the NOTAMN procedures.

3.5 General Principles

- 3.5.1 Whilst it is expected that most Clients will work with the processed version of the NOTAM, the NOTAM Processing Unit shall be able to make the original version available in accordance with the requirements of its Clients.
- 3.5.2 The NOTAM Processing Unit shall keep track of any message (free text or 'correct version' NOTAM) which is related to the original NOTAM.
- 3.5.3 NOTAM processing functions are as follows:
 - conversion** into the standard format;
 - triggering** of information of operational significance;
 - translation** into English;

syntax correction of obvious detected mistakes in syntax;

data correction of detected mistakes in data;

editing text in order to clarify it;

3.5.4 A NOTAM Processing Unit shall perform all of the above listed functions.

3.5.5 The following table shows the applicable processing functions to be performed on the respective NOTAM data and Items (Note that the matrix is not applicable to Triggering):

NOTAM Items	Conversion	Translation	Syntax Correction	Data Correction	Editing
Series/Nr/Type	No	No	Yes	Yes	No
Ref Series/Nr	No	No	Yes	Yes	No
FIR	Yes	No	Yes	Yes	No
NOTAM Code	Yes	No	Yes	Yes	No
Traffic	Yes	No	Yes	Yes	No
Purpose	Yes	No	Yes	Yes	No
Scope	Yes	No	Yes	Yes	No
Lower/Upper	Yes	No	Yes	Yes	No
Lat/Long	Yes	No	Yes	Yes	No
Radius	Yes	No	Yes	Yes	No
Item A)	No	No	Yes	Yes	No
Item B)	No	No	Yes	Yes	No
Item C)	No	No	Yes	Yes*	No
Item D)	No	Yes**	Yes	Yes	No
Item E)	Yes	Yes	Yes	Yes	Yes
Items F) & G)	No	No	Yes	Yes	No

Yes = Processing function to be performed, if necessary

No = Processing function not applicable

* = exc. EST/PERM

** = Only if names of weekdays, months etc., are not used in English language

3.6 Conversion of original NOTAM Class I

3.6.1 **Conversion** - the transposition of a NOTAM received in the old format into a correctly formatted ICAO NOTAM.

3.6.2 On reception of NOTAM from countries that do not adhere to the NOTAM format, the NOTAM Processing Unit shall transform these into the correct ICAO Annex 15 (Ref. [1]) NOTAM format before storing and making them available.

3.6.3 In converted NOTAM, each Item of the original NOTAM shall be transposed into the appropriate standard NOTAM Item, and those not present (e.g. Item Q) shall be added.

- 3.6.4 Converted NOTAM shall be qualified according to the NOTAM Selection Criteria published in ICAO Doc 8126 (Ref. [2]). For this purpose, the NOTAM Code must be identified from Item E):
- 3.6.4.1 If the NOTAM Code is present in Item E), it shall be moved into the Item Q) for further qualification, and decoded in Item E) according to the text provided in the NOTAM Selection Criteria.
- 3.6.4.2 If no NOTAM Code is contained in Item E), the subject and condition shall be derived from the NOTAM contents.

Example 1: Incoming original NOTAM

A1324/08 NOTAMN
A) KJFK
B) 0807231000
C) 0807231700
E) QMRLC 13L/31R CLSD)

Corrected NOTAM

(A1324/08 NOTAMN
Q) KZNY/QMRLC/IV/NBO/A /000/999/4038N07347W005
A) KJFK B) 0807231000 C) 0807231700
E) RWY 13L/31R CLOSED)

Example 2: Incoming original NOTAM

231639 KDZZNAXX
(A1326/08 NOTAMC A1324/08
A) KJFK)

Corrected NOTAM

(A1326/08 NOTAMC A1324/08
Q) KZNY/QMRXX/IV/NBO/A /000/999/4038N07347W005
A) KJFK B) 0807231639
E) REF RWY 13L/31R
NOTAM CANCELLED)

3.7 Triggering of printed publications

- 3.7.1 **Triggering** - the issuing of a Trigger NOTAM in Series 'T', by the NOTAM Processing Unit, relative to AIRAC AIP Amendments and operationally significant AIP Supplements for which no Trigger NOTAM has been issued by the Publishing NOF.
- 3.7.2 The NOTAM Processing Unit cannot use any of the Publishing NOF's NOTAM series because the NOTAM numbering consistency would not be preserved. Therefore, the Series 'T' is allocated and reserved for this type of Trigger NOTAM.
- 3.7.3 A Trigger NOTAM in Series 'T' shall be created on the initiative of the NOTAM Processing Unit whenever an AIRAC AIP Amendment or AIP Supplement containing operationally significant information is received for which it is established that no associated Trigger NOTAM is normally issued by the responsible NOF (paragraph 2.7 refers).

- 3.7.4 The NOTAM Processing Unit shall provide its Clients with a clear indication of those States that do not normally issue their own Trigger NOTAM and for which the issue of these Trigger NOTAM in Series 'T' is to be expected.
- 3.7.5 Refer to paragraph 3.13.2 for details of the procedures to be applied.

3.8 Translation of NOTAM

- 3.8.1 **Translation** - rendering the text of a NOTAM originated in French or Spanish, into the English language, while maintaining the original sense of the text.
- 3.8.2 Translation shall be carried out in the same spirit as translation of a technical document. The objective is to provide a text in the English language which corresponds as closely as possible to the original.
- 3.8.3 In Europe, NOTAM received in a language other than French or Spanish are not usually translated and shall therefore be subject to the paragraph 3.12 procedures for 'NOTAM Subject to Query'.

3.9 Syntax correction

- 3.9.1 **Syntax correction** - changing the published format structure of the NOTAM where these are obviously wrong.

This may be carried out automatically by a system or manually by an operator.

- 3.9.2 Correction of syntax shall be based on the format described in ICAO Annex 15 (Ref. [1]) and in Chapter 2 of this Manual.

Example 1: Incoming original (incorrect) NOTAM

A00123/**2008** NOTARM A00122/08
 Q) EDGG/**Q**QMLRC/IV/NBO/A/000/999/4841N00913E005
 EDDS **A)** 0801121000 C) 0801131800
 E) RWY 17 CLOSED

Corrected NOTAM

A0123/**08** NOTAMR A0122/08
 Q) EDGG/QMRLC/IV/NBO/A/000/999/4841N00913E005
A) EDDS **B)** 0801121000 C) 0801131800
 E) RWY 17 CLOSED

Example 2: Incoming original (incorrect) NOTAM

A0101/08 NOTAMR A0100/08
 Q) OJAC/**QXXXX**/IV/M/E/000/999/3116N03706E999
 A) OJAC B) 0801010001 C) 0801310001EST
 E) **THE FOLLOWING NOTAM ARE STILL IN FORCE:**
2006 :- 0020.
2007 :- 0023.
2008 :- 0052 0066 0067 0068 0069 0070
LAST AIP AMDT :- 32/08.

Corrected NOTAM

A0101/08 NOTAMR A0100/08
Q) OJAC/~~QKKKK/K/K/K~~/000/999/3116N03706E999
A) OJAC B) 0801010001 C) 0801310001EST
E) **CHECKLIST**
YEAR=2006 0020
YEAR=2007 0023
YEAR=2008 0052 0066 0067 0068 0069 0070
LATEST PUBLICATIONS
AIP AMDT 32/08

3.10 Data correction**3.10.1 Data correction** - changing data elements where these are obviously wrong.

This may be carried out automatically by a system or manually by an operator (it does not include correction by the Publishing NOF).

3.10.2 Correction of data shall only be carried out when the error is such that there can be no possible ambiguity. Where appropriate, corrections will be made using validated Static data. Where there is ambiguity or any doubt whatsoever the Publishing NOF shall be consulted and the paragraph 3.12 procedures for 'NOTAM Subject to Query' shall be applied.Example: Incoming original NOTAM

A0100/08 NOTAMN
Q) EDGG/~~QMRXX/I/BO~~/A/000/999/4841N00913E999
A) **RDDS** B) 0801011000 C) 0801011800
E) RWY **007** AVAILABLE FOR LANDINGS ONLY

Corrected NOTAM

A0100/08 NOTAMN
Q) EDGG/~~QMRXX/I/BO~~/**QMRLT/IV/NBO**/A/000/999/4841N00913E**005**
A) **EDDS** B) 0801011000 C) 0801011800
E) RWY **07** AVAILABLE FOR LANDINGS ONLY

3.11 Editing**3.11.1 Editing** - changing the Item E) wording and/or layout to make it clearer or to more explicitly express ideas that are implicit in that text.

E.g. correcting spelling or abbreviation errors and editing layout or changing line length in order to make it more readable.

3.11.2 Editing might be carried out in order to clarify text, or to draw specific attention to important elements which are implied by the original text but not stated explicitly. Under no circumstances shall editing change the sense of the original NOTAM.Example: Incoming original NOTAM (Item E only)

*E) MIL PJE WILL TAK PLAC AT BLOHFELD 471940N
0111300E RDS 10NM. INF ABOUT THE DROPIING
ZONE MAY*

BE OBTAINED BY LOWI TWR 120.100MHZ OR BY WIEN INFORMATION ON 124.400MHZ.

Corrected NOTAM (Item E only)

E) MIL PJE WILL TAKE PLACE AT BLOHFELD 471940N0111300E RADIUS 10NM. INFORMATION ABOUT THE DROPPING ZONE MAY BE OBTAINED BY LOWI TWR 120.100MHZ OR BY WIEN INFORMATION ON 124.400MHZ.

Note: The line lengths in this example (maximum number of characters per line) do not reflect real NOTAM processing because of the format used to present the example; nevertheless, the erroneous carriage returns/line feeds in the example of the incoming NOTAM are made intentionally to show editing needs.

- 3.11.3 When the sense of the original NOTAM is not clear, the paragraph 3.12 procedures for 'NOTAM Subject to Query' shall be applied. For examples of unclear NOTAM refer to 2.3.22.18.

3.12 Procedures for dealing with NOTAM Subject to Query

- 3.12.1 If a received NOTAM contains ambiguities that cannot be clarified by the NOTAM Processing Unit, a query shall be addressed to the Publishing NOF. However, such NOTAM shall be stored and made available as 'NOTAM Subject to Query' by the NOTAM Processing Unit without delay to all relevant addressees.
- 3.12.2 The NOTAM Processing Unit shall add the reason for the query after the statement 'NOTAM Subject to Query' in Item E). In this case the original Item E) should not be altered until a clarification on the intended content and meaning has been reached with the publishing NOF.
- 3.12.3 If the Publishing NOF follows ICAO procedures the corrected version will consist of a NOTAMR (if the queried NOTAM is already in force) or a NOTAMC followed by a NOTAMN (if the queried NOTAM is not in force). In either case the new NOTAM shall be processed normally by the NOTAM Processing Unit.
- 3.12.4 If the reply is in the form of a 'Correct Version' NOTAM retaining the Series and Number of the queried NOTAM, the NOTAM Processing Unit shall store it overwriting the original NOTAM and make it available as an ordinary NOTAM. The words 'Correct Version' shall be removed.
- 3.12.5 When this newer version of the NOTAM is received by a Client, the latter must recognise that:
- it is a duplicate Series and Number; and
 - it was made available by a NOTAM Processing Unit; and automatically use it to overwrite the previous version in their NOTAM database.
- 3.12.6 If the reply is in the form of a free text message, the NOTAM Processing Unit shall edit the last processed version of the queried NOTAM in accordance with the information provided, and the statement 'NOTAM Subject to Query' shall be removed. The corrected NOTAM shall then be made available retaining the Series and Number of the original.

3.12.7 The Client shall treat this newer version of the NOTAM as in the previous case.

3.13 Procedures for the creation of NOTAM Series 'T'

3.13.1 General procedures

3.13.1.1 NOTAM Series 'T' shall be created by the NOTAM Processing Unit in accordance with OPADD rules.

3.13.1.2 The NOTAM Processing Unit is responsible for the follow-up of the NOTAM Series 'T' that it issues, and, if appropriate, may replace it with a NOTAMR and in due course shall cancel it with a NOTAMC unless the information time expires beforehand.

3.13.1.3 The NOTAM Processing Unit shall make NOTAM Series 'T' available to their Clients only.

3.13.1.4 No monthly checklist of Series 'T' NOTAM is issued by the NOTAM Processing Unit. Automatically produced 'ad hoc' Checklists, shall be made available upon request at any time.

3.13.1.5 In addition to normal NOTAM creation rules (Chapter 2 refers), the basic procedures listed in the following paragraphs (3.13.2 and 3.13.3) shall be observed:

3.13.2 Trigger NOTAM in Series 'T'

3.13.2.1 Trigger NOTAM in Series 'T' are created by the NOTAM Processing Unit to trigger specific printed AIS publications, for which no Trigger NOTAM is normally issued by the Publishing NOF.

3.13.2.2 The State to which the Trigger NOTAM Series 'T' relates shall be identified by the FIR in Item Q) and by the content of Item A).

3.13.2.3 Item B) of a Trigger NOTAM in Series 'T' for AIRAC AIP Amendments should contain the effective date of the Amendment. If the information is received after the effective date of the Amendment, the date in Item B) shall be the issue date of the Trigger NOTAM. In other words, the date in Item B) cannot be in the past, even when the information contained in the printed publication was already effective before the day of its triggering by the NOTAM Processing Unit.

3.13.2.4 Item C) of a Trigger NOTAM in Series 'T' for AIRAC AIP Amendments shall contain the effective date +14 days (or the issue date of the Trigger NOTAM +14 days if information is received after the effective date of the Amendment) (ref para 2.7.3).

3.13.2.5 Item C) of a Trigger NOTAM in Series 'T' for AIP Supplements shall contain the effective date + 14 days (ref para 2.7.4).

3.13.2.6 The Item Q) NOTAM Code shall be compiled in accordance with the guidance at paragraphs 2.7.2.8 and 2.7.2.7. The Qualifiers shall then be chosen according to the prevailing association.

3.13.3 NOTAM in Series 'T'

3.13.3.1 NOTAM in Series 'T' are created by the NOTAM Processing Unit to deal with exceptional formatting errors, if the format of a received NOTAM does not allow standard processing.

3.13.3.2 The Original Publishing NOF shall be identified by the FIR in Item Q) and by the content of Item A).

3.13.3.3 A reference to the original NOTAM shall be included at the end of Item E).

3.13.3.4 A NOTAM series 'T' shall be system linked to the original NOTAM to keep track of the source and to assure its replacement or cancellation.

3.13.3.5 If multiple aerodrome location indicators are listed in Item A), the original NOTAM shall be processed keeping only the first AD. In addition, NOTAM Series 'T' shall be created for the remaining aerodromes with data identical to the original NOTAM.

3.13.3.6 If more than 7 FIR are listed in Item A), the original NOTAM shall be processed keeping the first 7 FIR. In addition, NOTAM Series 'T' shall be created for the remaining FIR, with data identical to the original NOTAM.

3.13.3.7 If combinations of Aerodrome and FIR are listed in Item A), the original NOTAM shall be processed, according to the relevance of the NOTAM and based on the operational experience, for the FIR or aerodromes. In addition, NOTAM Series 'T' may be created for the other entities, if applicable.

Example: Incoming original NOTAM:

```
(A0131/08 NOTAMN
Q) LSAS/QNMAS/IV/BO/AE/000/999/4628N00627E100
A) LSAS LSGG LSGC LSGS B) 0804210700 C) 0804211400
E) ST PREX VOR/DME SPR 113.900 MHZ/CH86X U/S)
```

This original NOTAM is “**subject to query**” as 3 aerodromes and 1 FIR are stated in Item A).

Corrected NOTAM:

```
(A0131/08 NOTAMN
Q) LSAS/QNMAS/IV/BO/AE/000/999/4628N00627E100
A) LSGG B) 0804210700 C) 0804211400
E) NOTAM SUBJECT TO QUERY. MULTIPLE LOCATIONS IN
ITEM A) ST PREX VOR/DME SPR 113.900 MHZ/CH86X U/S.
```

```
(T0009/08 NOTAMN
Q) LSAS/QNMAS/IV/BO/A/000/999/4628N00648E005
A) LSGC B) 0804210700 C) 0804211400
E) ST PREX VOR/DME SPR 113.900 MHZ/CH86X U/S
REF NOTAM A0131/08)
```

(**T0010/08** NOTAMN
Q) LSAS/QNMAS/IV/BO/A/000/999/4627N00640E005
A) **LSGS** B) 0804210700 C) 0804211400
E) ST PREX VOR/DME SPR 113.900 MHZ/CH86X U/S
REF NOTAM A0131/08)

- 3.13.3.8 In the example at paragraph 3.13.3.7, NOTAM A0131/08 was processed in accordance with the paragraph 3.12 'NOTAM Subject to Query' procedure for AD LSGG and FIR LSAS ('Scope' 'AE') and the 2 NOTAM Series 'T' were created for AD LSGC and LSGS ('Scope' 'A') giving a reference to the original at the end of Item E).
- 3.13.3.9 Note that, in the example at paragraph 3.13.3.7, if the FIR stated in Item A) of the original NOTAM is identical to the one in the Item Q) and the aerodromes are located in this FIR, then the NOTAM Processing Unit shall delete it.
- 3.13.3.10 When a NOTAM Series 'T' is published by a NOTAM Processing Unit, the related Publishing NOF shall be informed.

3.14 Procedures for Correction of NOTAM

- 3.14.1 If an error is detected by the NOTAM Processing Unit, appropriate action shall be taken to correct the received NOTAM and a query shall additionally be sent to the Publishing NOF.
- 3.14.2 If the NOTAM Processing Unit detects re-occurring errors, it shall inform the Publishing NOF, indicating the correct procedure.
- 3.14.3 If a NOTAM Processing Unit is alerted that an error has occurred in a NOTAM that it has processed, the NOTAM Processing Unit shall determine the origin of the error, and:
- if the error was made by the NOTAM Processing Unit: re-send the NOTAM after correction; or
 - if the error was already contained in the original NOTAM: proceed with a request to the Publishing NOF (Paragraph 3.12 rules for 'NOTAM Subject to Query' shall be applied).
- 3.14.4 All NPU Clients shall be aware that only the last version received from the NOTAM Processing Unit is the valid version.

3.15 NOTAM Verification

- 3.15.1 All NOTAM Items shall be checked according to the rules described in Chapter 2 on NOTAM Creation.
- 3.15.2 In addition to the rules described in Chapter 2, the following general verification shall be performed by the NOTAM Processing Unit:
- a) Check if the NOTAM has already been received and differentiate between a 'Dupe' and a 'Correct Version' NOTAM.

b) Check if there is a logical sequence in the origin time of the AFTN messages whenever an 'identical' NOTAM is received.

c) NOTAM Series/Number/Year/Sub-number, relative to the Publishing NOF, are valid and in logic ascending sequence. If not, appropriate request for missing NOTAM is sent by the NOTAM Processing Unit to the Publishing NOF (see Chapter 1).

d) NOTAM Number referred to in a NOTAMR or NOTAMC is a valid NOTAM from the same Publishing NOF.

3.15.3 Additional specific verification shall be performed as explained in the following subparagraphs.

3.16 NOTAM Identification

3.16.1 For storage in automated systems, the NOTAM identification consists of establishing the relation between the NOTAM series, number and the "Numbering Reference" it refers to, which is the issuing publishing NOF.

Establishing correct relations and storage allows a unique identification of a NOTAM and easy tracking of missing numbers.

3.16.2 Publishing NOF Identification

3.16.2.1 The identification of the Publishing NOF is not straightforwardly contained in the NOTAM format but is usually identified by the Publishing NOF's AFTN message origin (a 4-letter location indicator).

3.16.2.2 Whenever third parties are transmitting or making available a NOTAM via AFTN on behalf of the publishing NOF, that station enters its own AFTN address into the message origin line according to ICAO Annex 10 SARPs. As a consequence, the information about the 'Numbering reference' is not present in the origin. For such NOTAM, the information about the 'Numbering reference' must be deduced from the FIR Qualifier in the Q) line and Item A) of the NOTAM instead. Additionally, the NOTAM number sequence and/or NOTAM series in use by a publishing NOF may provide further help when allocating the NOTAM to the publishing NOF.

Similar identification and allocation procedures may have to be applied for NOTAM issued by a publishing NOF not in possess of a unique designated 4-letter location indicator or for states also using origins other than that of the publishing NOF.

3.16.3 NOTAM Series Allocation

3.16.3.1 The NOTAM Processing Unit retains the Series and NOTAM Number of the original NOTAM when transmitting it or making it available.

3.16.3.2 If the NOTAM Series letter has been omitted, the NOTAM Processing Unit shall try to derive it from the NOTAM sequence number and include this series.

3.16.3.3 If the Publishing NOF does not use a NOTAM Series letter, the NOTAM Processing Unit shall automatically allocate a Series letter (normally 'A') for such NOTAM.

3.16.4 NOTAM Number

3.16.4.1 If a NOTAM is received that is out of the numerical sequence, a query for the missing NOTAM number(s) shall be initiated, according to Chapter 1 procedures (Database Completeness and Coherence Messages).

3.16.4.2 If the NOTAM number consists of less than 4 digits the NOTAM Processing Unit shall add the leading zeros. If the 'Year' indicator is missing, it shall also be added.

3.16.4.3 If a NOTAM with the same number is received twice but with different contents, paragraph 3.12 rules for 'NOTAM Subject to Query' shall be applied.

3.16.5 NOTAM Sub-Number (Multi-part NOTAM)

3.16.5.1 If a Multi-part NOTAM is received without having the format specified in paragraph 6.1.2, it shall be converted into this format by the NOTAM Processing Unit if the AFTN is to be used when transmitting or making available the processed NOTAM.

3.17 NOTAM Type

3.17.1 If the Publishing NOF did not include the NOTAM type in the original NOTAM, the NOTAM Processing Unit shall insert the appropriate NOTAM type letter.

3.17.2 If the Publishing NOF wrongly allocated the NOTAM type in the original NOTAM, the NOTAM Processing Unit shall insert the appropriate type.

3.17.3 In both cases, the Publishing NOF shall be informed about the change.

3.18 NOTAM Qualification (Item Q)

3.18.1 General rule

3.18.1.1 If the Item Q) is missing, it shall be inserted by the NOTAM Processing Unit.

3.18.1.2 If Item Q) is obviously wrong, it shall be changed by the NOTAM Processing Unit in accordance with the following paragraphs (3.18.2 to 3.18.8).

3.18.2 Qualifier 'FIR'

3.18.2.1 Item Q) may contain Location Indicators that indicate applicability to more than one FIR. In this case, the ICAO location indicators of all FIR concerned should appear in Item A).

- 3.18.2.2 The NOTAM Processing Unit shall check that this field correctly applies to the location indicator(s) of the FIR(s) entered in Item A). If not, the correct location indicator will be inserted.
- 3.18.2.3 Note that 'dummy' FIRs, such as UUUU, ZBBB, KFDC and KNMH, may sometimes be used for those countries with more than 7 FIR (i.e. the permitted maximum in Item A).

3.18.3 Qualifier 'NOTAM CODE'

- 3.18.3.1 The NOTAM Selection Criteria are the basis for NOTAM Code allocation and qualification as described in paragraph 2.3.6.
- 3.18.3.2 If the NOTAM Code is not entered in the Item Q), the NOTAM Processing Unit shall include the NOTAM Code, corresponding to the Item E) content, together with the appropriate Qualifiers.
- 3.18.3.3 If the NOTAM Code does not correspond to the text of Item E), and the text of Item E) is clear and unambiguous, the Code may be brought into line with the text, provided that this does not imply a downgrading of the 'Purpose' Qualifier.

Example: Incoming original NOTAM

Q) EDXX/~~QAFXX~~/I/B/W/000/120/5023N01021E030
 A) EDGG EDMM B) 0803011000 C) 0804011800
 E) ATS ROUTE XYZ11 CLOSED BETWEEN XXX and YYY BETWEEN GND AND FL120

Corrected NOTAM

Q) EDXX/~~QARLC~~/IV/NBO/E/000/120/5023N01021E030
 A) EDGG EDMM B) 0803011000 C) 0804011800
 E) ATS ROUTE XYZ11 CLOSED BETWEEN XXX and YYY BETWEEN GND AND FL120

- 3.18.3.4 Overwriting of the original Qualifiers ('Traffic', 'Purpose' and 'Scope') (in accordance with paragraphs 3.18.4 to 3.18.6) should be avoided, unless to correct obvious mistakes.
- 3.18.3.5 If the original NOTAM has been coded 'QXXXX' and a more appropriate NOTAM Code exists, the NOTAM Processing Unit shall replace the Code and its associated Qualifiers (subject to the limitations specified in paragraphs 3.18.4 to 3.18.8).
- 3.18.3.6 The NOTAM Processing Unit may also use 'QXXXX' to upgrade 'Scope' and 'Purpose' Qualifiers or for NOTAM where 'AG', 'CO' or 'RC' have been used as 2nd and 3rd letters (Note also the possibility of using 'FA' for Aerodrome or 'AF' for FIR).
- 3.18.3.7 For NOTAM received with a NOTAM Code that is not contained in the NSC, the NOTAM Processing Unit shall allocate a Code in accordance with the subject and the condition of that subject specified in the Item E) text (refer to paragraph 2.3.6 for further guidance).
- 3.18.3.8 If a Trigger NOTAM is received without the 4th and 5th letter 'Condition' indicator 'TT', the NOTAM Processing Unit shall replace it with 'TT'. Similarly, if the 2nd and

3rd letter 'Subject' indicator is received as 'XX', the NOTAM Processing Unit shall change it in accordance with paragraph 2.7.2.7 (Note also the guidance at paragraphs 2.7.2.8 and 2.7.2.14).

Example: Incoming original NOTAM

Q) EDMM/~~QXXTT~~/I/BO/E/000/240/4841N00913E250
A) EDMM B) 0805080100 C) 0805220100
E) TRIGGER NOTAM - PERM AIRAC AMDT 05/08 WEF 08 MAY
2008: NEW ATS ROUTE XYZ123 ESTABLISHED.

Corrected NOTAM

Q) EDMM/~~QXXTT~~**QARTT**/I/BO/E/000/240/4841N00913E250
A) EDMM B) 0805080100 C) 0805220100
E) TRIGGER NOTAM - PERM AIRAC AMDT 05/08 WEF 08 MAY
2008: NEW ATS ROUTE XYZ123 ESTABLISHED.

3.18.4 Qualifier 'TRAFFIC'

3.18.4.1 If the 'Traffic' Qualifier is missing, it shall be filled according to the NOTAM Selection Criteria, or, if not specified therein, according to the NOTAM contents.

3.18.4.2 If the 'Traffic' Qualifier is not according to the NOTAM Selection Criteria, the NOTAM Processing Unit may adapt it to the NSC, taking into account the entry in Item E) and guidance at paragraphs 2.3.7.3 and 2.7.2.14.

3.18.5 Qualifier 'PURPOSE'

3.18.5.1 If the 'Purpose' Qualifier is missing, it shall be filled according to the NOTAM Selection Criteria, or, if not specified therein, according to the NOTAM contents.

3.18.5.2 The 'Purpose' Qualifier of a NOTAM shall not be modified by a NOTAM Processing Unit, unless it implies an upgrading. i.e. Purpose 'M' may be changed to 'B', 'BO', 'NB'² or 'NBO'; Purpose 'B' may be changed to 'BO', 'NB'² or 'NBO'; purpose 'BO' may be changed to 'NB'² or 'NBO'; and purpose 'NB'² may be changed to 'NBO'.

3.18.6 Qualifier 'SCOPE'

3.18.6.1 If the 'Scope' Qualifier is missing or is not filled according to the NOTAM Selection Criteria, it shall be filled according to the NOTAM contents, following the procedures described in para 2.3.9.

3.18.7 Qualifiers 'LOWER/UPPER'

3.18.7.1 The logical order of the vertical limits indicated in Qualifiers 'Lower' and 'Upper' shall be verified and corrected; these should also correspond to the values specified in Items F) and G) for Navigation Warnings and Airspace Reservations.

² Note that, whilst change is expected, the use of 'NB' remains prescribed in the ICAO NSC at the time of writing this edition.

Example: 'F) GND' and 'G) 7500FT AMSL' = 'Q) (Lower/Upper) 000/075'

3.18.7.2 If vertical limits have been entered in Items F) and G) and:

- the limits in Item Q) extend beyond those given in Items F) and G), they shall be left unchanged unless the 000/999 default has been used;
- the limits in Item Q) do not equate but lie between the limits given in Items F) and G), they shall be modified to correspond to Items F) and G);
- if the limits in Item Q) are 000/999, they shall be modified to correspond to Items F) and G) if the actual limits stated there are in FL or in FT or M AMSL (i.e. not for those stated in FT or M AGL – see below);
- if the limits in Items F) and G) are given as FT or M AGL (or FT or M SFC), Item Q) shall be left unchanged unless the LOWER/UPPER limits are obviously wrong or are missing, then the default value 000/999 shall be inserted.

Example: Incoming original NOTAM:

A0564/08 NOTAMN
 Q) EDGG/QXXCA/IV/NBO/W/**000/200**/4841N00900E050
 A) EDGG B) 0803011000 C) 0804011800
 E) AREA XYZ11 ACTIVATED
 F) **5500FT** G) **12000FT** AGL

Corrected NOTAM

A0564/08 NOTAMN
 Q) EDGG/QXXCA/IV/NBO/W/**055/200**/4841N00900E050
 A) EDGG B) 0803011000 C) 0804011800
 E) AREA XYZ11 ACTIVATED
 F) 5500FT **AMSL** G) 12000FT AGL

3.18.7.3 The NOTAM Processing Unit shall define the values used to amend NOTAM in accordance with the procedures specified in para 2.3.10.

3.18.7.4 If vertical limits also appear in Item E), these shall be cross-checked and consolidated with Items Q), F) and G).

Example: Incoming original NOTAM:

A0564/08 NOTAMN
 Q) EDXX/QARLC/IV/NBO/E/000/**999**/5023N01021E030
 A) EDGG EDMM B) 0803011000 C) 0804011800
 E) ATS ROUTE XYZ11 CLOSED BETWEEN XXX and YYY BETWEEN **FL055**
 AND **FL120**

Corrected NOTAM

A0564/08 NOTAMN
 Q) EDXX/QARLC/IV/NBO/E/**055/120**/5023N01021E030
 A) EDGG EDMM B) 0803011000 C) 0804011800
 E) ATS ROUTE XYZ11 CLOSED BETWEEN XXX and YYY BETWEEN FL055
 AND FL120

3.18.8 Qualifier 'GEOGRAPHICAL REFERENCE'

- 3.18.8.1 The Geographical Reference shall be present in each NOTAM made available by a NOTAM Processing Unit. If this value is not contained in a received NOTAM, the NOTAM Processing Unit has to add it, following the procedures described in para 2.3.11 (General Rules), 2.3.12 (Co-ordinates) and 2.3.13 (Radius).
- 3.18.8.2 If co-ordinates and radius are given, the NOTAM Processing Unit shall only change the entry if it contains an obvious error and the area covered by the given values is greater or less than necessary (e.g. when the whole FIR default 999 is used for a small danger area located within it or when an insufficient radius is used for a Navaid coverage).
- 3.18.8.3 If a NOTAM is received without geographical reference, and no positional information appears in Item E), the entry in Item A) should permit the coordinates to be derived from the Unit's available Static Data.
- 3.18.8.4 If a NOTAM is received without a radius, it shall be derived from the Static Database whenever possible. If the radius cannot be derived, the NOTAM Processing Unit shall include a default radius, as specified in the table at para 2.3.13.3 for Europe and dense areas or '999' for other areas.
- 3.18.8.5 If Item E) contains a reference to a published area or facility or the definition of a temporary area or facility, this shall be used to correct or determine an appropriate entry in Item Q).

3.19 NOTAM Items

3.19.1 Item A) – Location 'FIR/AD' – General

- 3.19.1.1 The given aerodrome or FIR(s) should be valid for the country and for the Publishing NOF. If not, the para 3.12 'NOTAM Subject to Query' procedure shall be applied.
- 3.19.1.2 If the location indicator is not filled or contains a typing error, the NOTAM Processing Unit shall try to deduce it from the Item Q) and from the Item E) content. The para 3.12 'NOTAM Subject to Query' procedure shall be applied.
- 3.19.1.3 If the location indicator is unknown to the NOTAM Processing Unit (i.e. the aerodrome location indicator is not listed in ICAO Doc 7910 or the national AIP, SUP or NOTAM), the NOTAM Processing Unit shall replace the location indicator by the nationality indicator followed by 'XX' or 'XXX' (e.g. EDXX or CXXX). The para 3.12 'NOTAM Subject to Query' procedure shall be applied, mentioning 'ICAO LOCATION INDICATOR UNKNOWN'.
- 3.19.1.4 If a new location indicator or a change of a location indicator is announced by a NOTAM, the Processing Unit shall proceed as follows:
 - 1. Store NOTAM with scope E to assure that users are informed about the change. Item A) to contain the location indicator of the FIR and Item E information about the new or changed location indicator as well as other information from NOTAM. Additionally, insert an instruction in Item E to retrieve NOTAM by selecting the new

and old location indicator until all valid NOTAM have been replaced or cancelled by the publishing NOF.

2. Add the new or changed location indicator to the database.

3. Delete old location indicator from database as soon as there are no more valid NOTAM for this Item A and delete retrieval instruction from the NOTAM announcing the change of location indicator.

3.19.1.5 If the Publishing NOF has no discrete FIR (e.g. Swaziland FD, Lesotho FX, Macau VM), Item Q) shall contain the appropriate overlying FIR Indicator. If an aerodrome is used in Item A) and the NOTAM subject/contents is Enroute or nav-warning, the NOTAM Processing Unit shall also change Item Q) 'Scope' to read 'AE' or 'AW'.

3.19.1.6 If a CTA or TMA indicator is used as pseudo FIR in Item A), the NOTAM Processing Unit shall replace it with an indicator that reflects the Item E) text (for example by using the main aerodrome within a TMA or the area affected).

Example: Incoming original NOTAM:

A7333/08 NOTAMN
 Q) RJJJ/QRACH/IV/NBO/**EW**/220/230/
 A) **RJTD** B) 0812272315 C) 0812280515
 E) FUKUOKA FIR MULTIPLE U.S.MIL ACT WILL BE CONDUCTED WI
 FUKUOKA FIR AS FLW, BOUNDED BY THE POINTS 3201N12633E,
 3230N12650E, 3230N12712E, 3025N12752E, 3015N12708E, TO POINT
 OF ORIGIN. ATC WILL NOT CLEAR NON-PARTICIPATING IFR FLT THRU
 THIS AREA.
 F) FL220 G) FL230)

Corrected NOTAM

A7333/08 NOTAMN
 Q) RJJJ/QRACH/IV/NBO/**W**/220/230/3533N15022E999
 A) **RJJJ** B) 0812272315 C) 0812280515
 E) FUKUOKA FIR MULTIPLE U.S.MIL ACT WILL BE CONDUCTED WI
 FUKUOKA FIR AS FLW, BOUNDED BY THE POINTS 3201N12633E,
 3230N12650E, 3230N12712E, 3025N12752E, 3015N12708E, TO POINT
 OF ORIGIN. ATC WILL NOT CLEAR NON-PARTICIPATING IFR FLT THRU
 THIS AREA.
 F) FL220 G) FL230

3.19.1.7 If a NOTAM is received with 'Scope' 'A' and an FIR in Item A), and if Item E) confirms the NOTAM applicability to an FIR, the NPU shall modify the 'Scope' to 'W' or 'E', whichever is more appropriate. If the NSC do not provide for 'Scope' 'W' or 'E' to be applied, the 2nd and 3rd letters shall be modified to read 'XX'. However, if Item E) indicates applicability to an Aerodrome, changes to Item A) and to Item Q) ('Scope' 'AE' or 'AW') might be necessary.

3.19.1.8 If a NOTAM is received with 'Scope' 'E' or 'W' and an aerodrome in Item A), and if Item E) confirms the NOTAM applicability to an aerodrome, the NPU shall modify the 'Scope' to 'AW' or 'AE', whichever is more appropriate. However, if Item E) indicates applicability to an FIR, a change to Item A) might be necessary.

Example: Incoming original NOTAM:

A2222/08 NOTAMN
 Q) MUFH/QRACA/IV/BO/**W**/000/180/1918N10013W025
 A) **MUHA** B) 0801211500 C) 0801312359

- D) DAILY 1500-2359
 E) AIRSPACE RESERVATION BTN UNG AND UCA, ACTIVITY COORD. WITH TWR MUHA.
 F) GND G) 18000FT AMSL

Corrected NOTAM

- A2222/08 NOTAMN
 Q) MUFH/QRACA/IV/BO/~~AW~~/000/180/1918N10013W025
 A) ~~MUHA~~ B) 0801211500 C) 0801312359
 D) DAILY 1500-2359
 E) AIRSPACE RESERVATION BTN UNG AND UCA, ACTIVITY COORD. WITH TWR MUHA.
 F) GND G) 18000FT AMSL

3.19.2 Item A) – Location ‘FIR/AD’ – Single-Location NOTAM

- 3.19.2.1 This shall always be the ICAO Location Indicator of one aerodrome or FIR.
- 3.19.2.2 In the case of one FIR, the entry must be identical to the Qualifier ‘FIR’ in the Item Q). If not, this entry shall be corrected by the NOTAM Processing Unit.
- 3.19.2.3 If an aerodrome indicator is given, it must be an aerodrome situated in the FIR inserted in the Item Q). If not, the FIR in the Item Q) shall be changed according to the Static Database.
- 3.19.2.4 For aerodromes without ICAO location indicator Item A) shall contain the nationality indicator followed by ‘XX’ or ‘XXX’ (e.g. EDXX or CXXX), with the full name of the aerodrome as first element in Item E).
- 3.19.2.5 If Item A) of a received NOTAM contains the full name of an aerodrome, the NOTAM Processing Unit shall replace it by a 4-letter code consisting of the nationality indicator followed by ‘XX’ or ‘XXX’ (e.g. LFXX or CXXX), and shall enter the full name in Item E).

Examples: A) EBBU (ICAO location indicator for a single FIR)

A) LFPO (ICAO location indicator for an aerodrome)

A) FBXX (no location indicator published by Botswana)

In the latter example, Item E) shall contain the full name of the aerodrome as its first element, e.g.:

E) BOTTLEPAN

3.19.3 Item A) – Location ‘FIR/AD’ – Multi-Location NOTAM

- 3.19.3.1 According to the current NOTAM format there can be only up to 7 FIR location indicators in Item A). If more than 7 FIR were entered, only the first 7 listed shall remain in Item A). One or more NOTAM Series ‘T’ shall be issued with identical data as in the original NOTAM until all original FIR have been covered.

- 3.19.3.2 If multiple aerodromes are inserted in Item A), the NOTAM Processing Unit shall retain only the first indicated aerodrome. For the remaining aerodromes, one or more NOTAM Series 'T' shall be issued with identical data as in the original NOTAM until all original indicated aerodromes are covered.
- 3.19.3.3 Such NOTAM Series 'T' shall follow the rules described in paragraph 3.13.
- 3.19.3.4 In cases where a NOTAM contains 'supra-regional' information covering several FIR belonging to more than 1 country, the Qualifier 'FIR' in Item Q) shall contain the Publishing NOF's nationality Code followed by 'XX' or 'XXX' (e.g. EDXX or CXXX). If this procedure is not applied by the Publishing NOF, the NOTAM Processing Unit shall correct the Item Q).

3.19.4 Item B) – Start of Activity

- 3.19.4.1 This shall be a 10-figure date-time group, giving year, month, day, hour and minutes at which the NOTAM comes in force (paragraph 2.3.16 refers).
- 3.19.4.2 If 'WIE' (With Immediate Effect) appears in Item B), the NOTAM Processing Unit shall replace it with a 10 figure date/time group corresponding to the time of origin of the original NOTAM.
- 3.19.4.3 If Item B) contains 'SR' or 'SS' and the NOTAM Processing Unit can calculate an actual time, it shall replace the letters with that time. If, however, the actual time cannot be calculated, the NOTAM Processing Unit shall insert '0000' and add or complete an Item D) with the given 'SR' or 'SS'.

3.19.5 Item C) – End of Validity

- 3.19.5.1 This shall be a 10-figure date-time group, giving year, month, day, hour and minutes at which the NOTAM ceases to be in force and becomes invalid (ref para 2.3.17).
- 3.19.5.2 If 'UFN' (Until Further Notice) appears in Item C), the NOTAM Processing Unit shall process the NOTAM with an Item C) changed to an 'EST' time of 48 hours added to the DTG indicated in Item B).
- 3.19.5.3 If 'APRX DURATION' appears in Item C), the NOTAM Processing Unit shall change it into a Date/Time Group of 10 figures, corresponding to the approximate duration given, followed by 'EST'.
- 3.19.5.4 If the end of the day is expressed as '2400', the NOTAM Processing Unit shall change it to read '2359' (in accordance with ICAO Annex 5 provisions).
- 3.19.5.5 If Item C) contains 'SR' or 'SS' and the NOTAM Processing Unit can calculate an actual time, it shall replace the letters with that time. If, however, the actual time cannot be calculated, the NOTAM Processing Unit shall insert '2359' and add or complete an Item D) with the given 'SR' or 'SS'.
- 3.19.5.6 NOTAM containing 'EST' or an approximate duration should, at the end of the estimated validity, be replaced by NOTAMR or cancelled by NOTAMC. If the Publishing NOF does not react at the end of the estimated validity, the NOTAM

Processing Unit shall request action from all Publishing NOF concerned at least once a month.

3.19.6 Item D) – Day/Time Schedule

- 3.19.6.1 If the Item D) of the original NOTAM is not structured according to the procedures as detailed in para 2.3.18 till 2.3.21, and if no ambiguity about the originator's intention is present (for example Item E) may contain clear specification), it shall be edited by the NOTAM Processing Unit in accordance with these specifications.
- 3.19.6.2 If PIB service is provided based on active NOTAM, it is recommended to assure that Item D) does not contain operating hours or other dates/times where the NOTAM would appear at date/times for which there is no restriction.
- 3.19.6.3 Item D) shall not exceed 200 characters. If it does, then the Item D) time schedule shall be removed and inserted at the end of Item E). This procedure will however, exclude automatic retrieval into Pre-flight Information Bulletins on the specified days and times.

3.19.7 Item E) – NOTAM Text

- 3.19.7.1 The NOTAM Processing Unit shall check the correspondence between the Item E) text and the NOTAM Code.
- 3.19.7.2 If a NOTAM is received in a non-standard format, the NOTAM Processing Unit must identify the subject and select the relevant NOTAM Code. If Item E) contains more than one subject, the subject of highest operational importance, based on the appropriate 'Purpose' Qualifier, shall be inserted in Item Q).
- 3.19.7.3 If the NOTAM Code is already present in Item E) of the original NOTAM, it shall be moved to Item Q) and decoded in Item E); using the text provided in the NOTAM Selection Criteria.
- 3.19.7.4 If the text in Item E) contains clear restrictions or limitations for an aerodrome or FIR not covered by Item A), the NOTAM Processing Unit shall add the missing FIR in Item A and/or shall issue one or more NOTAM Series 'T' with identical data as in the original NOTAM until all originally indicated aerodromes and/or FIR are covered and with reference to the original NOTAM. Refer also to para 3.13 for the creation of NOTAM Series 'T'.
- 3.19.7.5 All navigational data, navigation aids, frequencies, location indicators, heights and any logical combinations shall be verified.
- 3.19.7.6 If the text in the Item E) is ambiguous, the NOTAM Processing Unit shall make the original NOTAM available with the text 'NOTAM Subject to Query' added to the beginning of Item E) according to the procedures described in paragraph 3.12.

3.19.8 Items F) and G) – Lower and Upper Limit

- 3.19.8.1 If Item F) and G) appear in the NOTAM, refer to guidance at paragraph 2.3.23.

- 3.19.8.2 NOTAM Processing Unit shall make sure that Lower and Upper limits in Items F) and G) are inserted for Navigation Warnings and Airspace Reservations (NOTAM Codes 'QW...' or 'QR...'). If these Items are missing, the NOTAM Processing Unit shall add them after verification of the data in Item E), or in the Item Q) 'Lower/Upper' Qualifiers, or in the Static Database, and/or after consultation with the Publishing NOF. Use of the paragraph 3.12 'NOTAM Subject to Query' procedure may be required.
- 3.19.8.3 If NOTAM other than Navigation Warnings and Airspace Reservations are received with Items F) and G), the vertical limits shall be transferred to Item E) using the keywords 'FROM' and 'TO' followed by the appropriate values (e.g. 'FROM 1000FT AMSL TO FL100').
- 3.19.8.4 If the values specified in Items F) and G) do not cover the limits mentioned in Item E), the NOTAM Processing Unit shall:
- change the values in Item F) or in Item G) to correspond to the lowest (Item F) or the highest (Item G) value mentioned Item E); and
 - the paragraph 3.12 'NOTAM Subject to Query' procedure shall be used, and the Publishing NOF shall be contacted to clarify the content of the NOTAM.
- 3.19.8.5 The values specified in Items F) and G) shall not be changed, whenever the limits in Item F) or G) are respectively lower or higher than the limits specified in Item E).
- 3.19.8.6 If no Item F) (Lower limit) has been specified in a NOTAM that contains an Item G), but from Items Q) or E) it is obvious that the Lower limit is sea or ground, then the term 'SFC' (surface) shall be inserted in Item F). 'SFC', will be used instead of 'GND' because precise topographic information concerning the area of influence of the NOTAM may not be available.
- 3.19.8.7 If 'AGL' or 'AMSL' is omitted and the datum cannot be determined, the NOTAM Processing Unit shall add 'AMSL' to the lower limit and 'AGL' to the upper limit.

3.20 Procedures Related to NOTAM 'R' Processing

- 3.20.1 NOTAMR should be issued in the same series as the NOTAMN or NOTAMR referred to. If this is not the case, the NOTAM Processing Unit shall verify whether the Items of the 'to be replaced' NOTAM correspond to the NOTAMR. If the Items correspond, the NPU shall make the NOTAM available as a NOTAMN and shall delete the 'to be replaced' NOTAM. The paragraph 3.12 procedure for 'NOTAM Subject to Query' shall be applied.
- 3.20.2 NOTAMR should replace only one NOTAMN or NOTAMR. If more than one NOTAM are replaced by one NOTAMR, the NOTAM Processing Unit shall change the NOTAMR to replace only the first one in the list and shall delete all the others. If it is identified that this is a recurring error, the Publishing NOF shall be requested to adhere to the published ICAO standards (ICAO Annex 15, Ref [1] para 5.2.7 and Doc 8126, Ref [2] Table 6-1 refer).
- 3.20.3 NOTAMR should relate to the same subject (2nd and 3rd letters of the NOTAM Code) as the NOTAMN or NOTAMR referred to. If this is not the case the NOTAM Processing Unit shall compare the two NOTAM subjects, and make the potential necessary changes, when these are obvious from the message contents.

3.20.4 NOTAMR shall have the same Item A) content as the NOTAMN or NOTAMR referred to. If this is not the case, the NOTAM Processing Unit shall compare the Item A) of both NOTAM with the data in Item E) and make any necessary changes. If Item A) of the NOTAMR should be changed to the same value as the NOTAM it replaces, the change will be done in the processed NOTAMR. If however, Item A) of the NOTAMR cannot be changed (e.g. if the activity has moved to a separate FIR), this NOTAMR shall be processed as a NOTAMN and the 'to be replaced' NOTAM shall be deleted. If Item Q) 'Scope' contains 'A', the paragraph 3.12 procedure for 'NOTAM Subject to Query' shall be applied.

3.20.5 According to 2.4.1.5, Item B of a NOTAMR is equal to the date/time the NOTAMR is created. The NOTAM replaced by a NOTAMR ceases to exist the moment its replacing NOTAM is received.

ICAO currently allows the creation of NOTAMR that come in force at a future date/time but does not provide clear rules regarding the status of the replaced NOTAM. If a NOTAMR is received that contains an Item B) in the future, an automated processing of the NOTAM shall be discontinued for further analysis and to assure correct database storage.

3.20.5.1 In a first step, NOTAM Items B, C, D and E (and F/G if present) of the new NOTAM shall be compared with the replaced or cancelled NOTAM to analyse the intention of the originator with respect to the validity of the replaced or cancelled NOTAM. The following possibilities exist:

a) Case 1:

The replaced NOTAM ceases to exist the very moment the NOTAMR is created. The replaced NOTAM does not appear in a PIB or checklist anymore.

Case 1 usually applies if item B) of the replaced NOTAM and Item B) of the NOTAMR are identical or if no other changes can be identified apart from the changes in Item B (and D) between the replaced NOTAM and the NOTAMR. The NOTAM can be considered as referring to a situation where the activity is suspended.

b) Case 2:

The replaced NOTAM remains valid until item B of the NOTAMR/C is reached. In PIB, the replaced NOTAM will appear until item B of the replacing NOTAM is reached. Item C) of the replaced NOTAM shows the new end date/time. Both NOTAM appear in a checklist created before Item B) of the NOTAMR.

Example:

```
012056 OSDIYNYX
(A0111/07 NOTAMN
Q) OSTT/QXXXX/IV/M/E/000/999/.....
A) OSTT B)0711010001 C) 0803312359 EST
E) WINTER LOCAL TIME UTC PLUS 2HR WILL BE USED.)
```

NOTAM created 29 MAR 2008:

```
290908 OSDIYNYX
(A0038/08 NOTAMR A0111/07
Q) OSTT/QXXXX/IV/M/E/000/999/.....
A) OSTT B) 0804032200 C) 0810312100 EST
```

E) SUMMER LOCAL TIME UTC PLUS 3HR WILL BE USED.)

In this specific example case 1 can be excluded as the content of the NOTAM describes a phenomena that is globally known, the NOTAMR can be considered as referring to a situation where the condition in the replaced NOTAM remains valid for a certain period before being replaced by a new situation and that the new situation ends earlier or later than originally planned. Case 2 has to apply or no time is applicable between MAR 29 0908 and APR 03 2200 or the time published in AIP which is not likely to be the case.

Note: for the example provided, this means that as soon as A0038/08 is stored in the database, Item C of A0111/07 is replaced by item B of the NOTAMR and shows the new expiring date C) 0804032200.

c) Case 3:

The situation is unclear. The operator is unable to identify if case 1 or 2 applies and the originator's system design is unknown.

Example:

NOTAM created 26 DEC 2007:

261637 LIIAYNYX
 (B3326/07 NOTAMN
 Q) LIMM/QMRLT/IV/NBO/A/000/999/4525N01019E005
 A) LIPO B)0801150500 C) 0803311100 EST
 E) RWY 14 DTHR 300 M. REVISED DECLARED DIST AS FLW:)

NOTAM created 01 MAR 2008:

011035 LIIAYNYX
 (B1893/08 NOTAMR B1826/07
 Q) LIMM/QMRLT/IV/NBO/A/000/999/4525N01019E005
 A) LIPO B)0803070000 C) 0804101800
 E) RWY 14 DTHR 200 M. REVISED DECLARED DIST AS FLW:)

Note: The situation could refer to a situation where the condition in the replaced NOTAM remains valid for a certain period before being replaced by a new situation and that the new situation ends later than originally planned or it could refer to a situation where the planned works are suspended (or item B was incorrect) and restart from a later date with changed limitations (or 300 M was a typing error).

- 3.20.5.2 In a second step appropriate action is taken by the operator to assure correct storage. Different procedures apply for cases 1 and 2. No specific further procedures are provided for these cases as all actions depend on what the system is designed to do without operator intervention and on the extend of manual intervention a system allows. Any operator action should be traceable.

For case 3, the 'NOTAM Subject to query' procedure shall be applied to clarify the situation. Depending on the analysis, clarification must be reached with the originating NOF whether the NOTAMR was intended to be a continuation of the NOTAM to be replaced, a suspension, an error, a completely different time schedule etc.

- 3.20.6 In case a NOTAMR is received that replaces only an individual part of a Multi-part NOTAM, the NOTAM Processing Unit shall amend the original Multi-part NOTAM and make all parts of it available to its Client as NOTAMR. If ambiguity is detected the paragraph 3.12 procedure for 'NOTAM Subject to Query' shall be applied.

- 3.20.7 In case of a NOTAMR replacing an AIP Supplement, the NOTAM Processing Unit shall change the original NOTAMR into a NOTAMN; and, if appropriate, issue a NOTAMC in Series 'T' to cancel any previously issued Trigger NOTAM in Series 'T'.

3.21 Procedures Related to NOTAM 'C' Processing

- 3.21.1 NOTAMC should be issued in the same series as the NOTAMN or NOTAMR referred to. If this is not the case, the NOTAM Processing Unit shall verify whether the Items of the 'to be cancelled' NOTAM correspond to the NOTAMC. If the Items correspond, the NPU shall make the NOTAM available as a NOTAMN and shall delete the 'to be cancelled' NOTAM.
- 3.21.2 NOTAMC should cancel only one NOTAMN or NOTAMR. If more than one NOTAM are cancelled by one NOTAMC, the NOTAM Processing Unit shall change the NOTAMC to cancel only the first one in the list and shall delete all the others.
- 3.21.3 NOTAMC should come in force at the time they are issued, and immediately cancel the NOTAMN or NOTAMR referred to.
- 3.21.4 According to 2.4.1.5, Item B of a NOTAMC is equal to the date/time the NOTAMC is created. The NOTAM replaced by a NOTAMC ceases to exist the moment its cancelling NOTAM is received.

ICAO currently allows the creation of NOTAMC that come in force at a future date/time. If a NOTAMC contains an Item B) in the future, an automated processing of the NOTAM shall be discontinued.

- 3.21.4.1 Contrary to NOTAMR with an Item B) in the future, a NOTAMC with Item B) in the future is always a change of item C of the cancelled NOTAM and may be a prolongation or a shortening. Item B) of the NOTAMC is equal to or later than Item B) of the cancelled NOTAM.

Similar procedures as for case 2 for NOTAMR with Item B) in the future can be applied (the cancelled NOTAM remains valid until Item B) of the NOTAMC is reached).

However, 'NOTAM Subject to query' procedure shall be applied to obtain confirmation from the publishing NOF and to exclude that item B) of the NOTAMC had been a typing error.

- 3.21.4.2 If Item B) of the NOTAMC is later than the date/time of reception but earlier than Item B) of the cancelled NOTAM, procedures in force for case 1 have to be applied and the cancelled NOTAM is cancelled with immediate effect. The NOTAMC was obviously issued in error or should have been a NOTAMR instead. 'NOTAM Subject to query' procedure applies to clarify the status of the cancelled NOTAM with the publishing NOF.

If clarification results in a reply that the NOTAMC should have been a NOTAMR instead, a NOTAM series 'T' has to be issued if the publishing NOF does not correct the erroneous NOTAMC by publishing a NOTAMN. The same applies if a 'correct version' is published instead of NOTAMN. The series 'T' NOTAM contains

all data from the erroneously cancelled NOTAM, Item B) the date and times from the NOTAMC.

- 3.21.5 For all NOTAMC, the text of the decoded NOTAM Code shall be inserted in Item E) together with details of the NOTAM subject. If no text is inserted by the Publishing NOF, the NOTAM Processing Unit shall insert a reference to the cancelled NOTAM subject followed, in a new line, by the text 'NOTAM CANCELLED'.
- 3.21.6 If a NOTAMC contains an Item A) but does not contain Items Q), B) or E), the NOTAM Processing Unit shall fill the missing compulsory Items.
- Item Q) NOTAM Code 2nd and 3rd letters shall be derived from the NOTAM to be cancelled.
 - Item Q) NOTAM Code 4th and 5th letters shall be 'XX' (unless an Item E) text had been provided to confirm use of 'AK', 'AL', 'AO' or 'CC').
 - Item Q) other Qualifiers shall be identical to those in the cancelled NOTAM (ref para 2.4.3.5).
 - Item B) shall be the date and time of filing of the NOTAMC.
 - Item E) shall contain a reference to the cancelled NOTAM subject followed, in a new line, by the text 'NOTAM CANCELLED'.

Example: Incoming original NOTAM

231639 KDZZNAXX
A1326/08 NOTAMC A1324/08
A) KJFK

Corrected NOTAM

A1326/08 NOTAMC A1324/08
Q) KZNY/QMRXX/IV/NBO/A/000/999/4038N07347W005
A) KJFK B) 0807**231639**
E) RWY 13L/31R
NOTAM CANCELLED

- 3.21.7 In case of a NOTAMC cancelling an AIP Supplement, the NOTAM Processing Unit shall:
- change the original NOTAMC into a NOTAMN;
 - insert an Item C) according to para 2.7.5.3.1;
 - issue a NOTAMR or a NOTAMC in Series 'T' in accordance with the rules described in para 2.7.5 to cancel previously issued Trigger NOTAM in Series 'T', if any.

3.22 Checklist Processing

3.22.1 General Principles

- 3.22.1.1 A received Checklist shall be processed and, unless otherwise agreed, made available to all Clients by the NOTAM Processing Unit without undue delay.
- 3.22.1.2 NOTAM Processing Units shall advise their Clients that certain States (which shall be specified) may issue Checklists that relate to more than one NOTAM Series.
- 3.22.1.3 Checklists may also be received as NOTAMN and/or without an 'EST' indication in Item C) (ref para 2.5.1.6 and 3.22.2.9).
- 3.22.1.4 Checklists are edited and corrected and presented in the correct format to the Client.
- 3.22.1.5 In case of any ambiguities, e.g.:
- a valid NOTAM is not included in the Checklist; or
 - a NOTAM included in the Checklist is not in the database, etc.

The NOTAM Processing Unit shall request clarification from the Publishing NOF and analyse the differences (paragraph 3.12 procedures for 'NOTAM Subject to Query' refers).

Procedures described in 3.23 and 3.24 are applied in order to resolve the ambiguities.

3.22.2 Checklist Received as a NOTAM

- 3.22.2.1 If a Checklist is received as a NOTAM, but it is not in the agreed NOTAM Checklist format (paragraph 2.5 refers), the NOTAM Processing Unit shall convert it as described hereafter:
- 3.22.2.2 NOTAM Series, Number and Type shall be retained.
- 3.22.2.3 Item Q) 'FIR' Qualifier shall be:
- the FIR of the Publishing NOF, if responsible for only 1 FIR; or
 - the 2-letter country indicator of the Publishing NOF followed by 'XX', if the Publishing NOF is responsible for multiple FIR (in the same or in different countries).
- 3.22.2.4 The NOTAM Code shall always be 'QK K K K K'.
- 3.22.2.5 Item Q) 'Traffic', 'Purpose' and 'Scope' Qualifiers shall be given the artificial value 'K', even if another Qualifier was included by the Publishing NOF.
- 3.22.2.6 Item Q) 'Lower/Upper' Qualifiers shall be the default values '000/999'.

3.22.2.7 Item Q) geographical reference and radius Qualifiers are required and, if missing, they shall be entered by the NOTAM Processing Unit.

3.22.2.8 Item A) should contain the list of all valid FIR for the Publishing NOF and, if any are missing, they shall be added by the NOTAM Processing Unit.

However, for States with a NOF but no own FIR (e.g. Swaziland, Lesotho, Macao), the location indicator of the main aerodrome will be entered in Item A). Otherwise the Checklist cannot be associated to the publishing NOF (e.g. Lesotho would have a Series A Checklist with Q-FIR + Item A FAJS which is the same as for South African A series).

3.22.2.9 Item C) should indicate the estimated time of validity, usually exactly one month after the date and time of the publication of the current Checklist, followed by 'EST'. Whenever another date/time group is entered by the Publishing NOF, the NOTAM Processing Unit shall not change it.

3.22.2.10 Item E) should be divided into two parts:

NOTAM Number Part, identified by 'CHECKLIST'

Should contain a list of the valid NOTAM issued in a particular series, in a format suitable for automatic and manual processing as described in paragraph 2.5.

If necessary, the NOTAM Processing Unit shall convert the Checklist into this format.

Latest Publication Part, identified by 'LATEST PUBLICATIONS'

Should contain a list of the latest publications (Amendments, Supplements and AIC).

This part shall be made available as received. If this part is not present in the original NOTAM, the NOTAM Processing Unit shall make the Checklist available without this Latest Publication Part.

3.22.3 Checklist Not Received as a NOTAM

3.22.3.1 If a NOTAM Checklist is not received as a NOTAM (i.e. when no NOTAM number has been allocated to the Checklist), the NOTAM Processing Unit shall adapt the received AFTN message to the 'ad-hoc' Checklist format, as described in paragraph 4.6.

3.22.3.2 The processed checklist shall also be made available as an AFTN message. The message shall start with the word 'Checklist', the 4-letter indicator of the Publishing NOF or any other location indicator to which the numbering of the NOTAM refers and the corresponding NOTAM Series. The valid NOTAM numbers shall be included in the next line(s) according to the format described in para 2.5.3, but retaining the latest publication part only if included in the original message.

Example:

```
CHECKLIST RJAA A
YEAR=2007 1678 1789
```

```
YEAR=2008 0012 0022 0056 0057 0058 0073 0099 0102 0123 0124
0125
LATEST PUBLICATIONS
AIRAC AIP AMDT 5/08 EFFECTIVE 20 APR 2008
AIP SUP 1/08
AIP AMDT 413
AIC A001/08
```

3.23 Missing NOTAM

- 3.23.1 If NOTAM are missing, the NOTAM Processing Unit shall request them from the Publishing NOF using a Request message. Chapter 1 refers but the syntax requirements of the Publishing NOF shall be observed.
- 3.23.2 Time parameters for initiating the first request message and succeeding repetition of the message shall be defined by the NOTAM Processing Unit and may vary depending on the Publishing NOF.

3.24 NOTAM Deletion

- 3.24.1 The processing of NOTAM not adhering to the ICAO Standard may force a NOTAM Processing Unit to delete NOTAM by means other than a NOTAMR or a NOTAMC if:
- a) the NOTAM is cancelled by a printed publication (AIP AMDT, AIP SUP, etc.);
 - b) the NOTAM is cancelled by a checklist;
 - c) the NOTAM is cancelled by an AFTN free text message from the Publishing NOF;
 - d) the NOTAM is cancelled or replaced by a NOTAMC or a NOTAMR with more than one NOTAM to be cancelled or replaced;
 - e) the NOTAM is deleted because an updated/corrected version of the NOTAM shall follow.
- 3.24.2 NPU Clients shall receive notification of deletion of a NOTAM (see chapter 1 for notification mechanism).

4 DATABASE COMPLETENESS AND COHERENCE MESSAGES

4.1 General Principles

- 4.1.1 The maintenance of dynamic data is essential for the efficient operation of a NOTAM Processing Unit, a Publishing NOF or for an aeronautical database administrator. The application of 'query messages' is required to ensure the database completeness and coherence. Query messages based upon the use of AFTN (but not restricted to AFTN) are described in this Chapter. They were developed so as to permit automatic and manual processing of queries.
- 4.1.2 The basic requirements for messages destined for the maintenance of the dynamic data are:
- request for one or more NOTAM;
 - request for the original version of a NOTAM;
 - request for an intermediate Checklist of valid NOTAM.
- 4.1.3 In order to facilitate automatic processing, the requests and the replies to the requests are identified by means of 3-letter identifiers.
- | | |
|--|-------|
| Request for NOTAM: | 'RQN' |
| Request for 'original version' NOTAM: | 'RQO' |
| Request for ASHTAM: | 'RQA' |
| Request for an intermediate Checklist: | 'RQL' |
| Reply to these requests: | 'RQR' |
- 4.1.4 For the avoidance of network overload, the number of requested NOTAM in a single request message shall be limited in 'RQN' or in 'RQO'. It is recommended that the maximum is set to 100.
- 4.1.5 Request shall include the 4-letter indicator of the Publishing NOF or any other location indicator to which the numbering of the required NOTAM refers (e.g. USA).
- 4.1.6 A reply message shall contain only one NOTAM (or several messages in case of a multi-part NOTAM), or a status text regarding the requested NOTAM, normally followed by the requested NOTAM.
- 4.1.7 Request shall refer to only one Publishing NOF.
- 4.1.8 If a request contains a syntax error, the recipient of the request will inform the originator that an error has been detected in the request message.

4.2 Request for the Repetition of NOTAM (RQN)

4.2.1 Codes and Symbols used

4.2.1.1 Note that no brackets will be used when transmitting a 'Request NOTAM' message. The following codes and symbols are used in requests for repetition:

'RQN'	is the designator for 'Request NOTAM'.
'LFFA'	4-letter indicator of the Publishing NOF or other location indicator to which the numbering of the NOTAM refers.
'A0123/00'	NOTAM Series Identifier and NOTAM Number.
' - '	(hyphen) is used to indicate 'TO' or 'FROM-TO'.
' '	(blank) is interpreted as 'AND'.
'RQR'	is the designator for the reply.

4.2.2 Examples of the Request for NOTAM

4.2.2.1 Request of a single NOTAM

Example 1: French NOF requests from Italian NOF the Italian NOTAM A0123/08.

```
Request:  ZCZC ...
          GG LIIAYNYX
          160830 LFFAYNYX
          RQN LIIA A0123/08

Reply:    ZCZC ...
          GG LFFAYNYX
          160835 LIIAYNYX
          RQR LIIA A0123/08
          (A0123/08 NOTAMN
          Q) .../..../..... etc.)
```

Example 2: French NOF requests from German NOF the Polish NOTAM A1253/08.

```
Request:  ZCZC ...
          GG EDDZYNXX
          160900 LFFAYNYX
          RQN EPWW A1253/08

Reply:    ZCZC ...
          GG LFFAYNYX
          160905 EDDZYNXX
          RQR EPWW A1253/08
          (A1253/08 NOTAMN
          Q) .../..../..... etc.)
```

4.2.2.2 Request of several NOTAM with continuous numbering

Example 3: French NOF requests from German NOF the Cypriot NOTAM between A0199/08 and A0210/08.

Request: ZCZC ...
GG EDDZYNXX
281030 LFFAYNYX
RQN LCNC A0199/08-A0210/08

Reply: ZCZC ...
GG LFFAYNYX
281035 EDDZYNXX
RQR LCNC A0199/08
(A0199/08 NOTAMN
Q) .../.../... etc.)

Note: The full Reply consists of 12 messages containing one NOTAM each.

4.2.2.3 Request of several NOTAM with discontinuous numbering

Example 4: French NOF requests from German NOF the Russian Federation NOTAM A0400/08, A0410/08 and NOTAM between A0420/08 and A0425/08.

Request: ZCZC ...
GG EDDZYNXX
281530 LFFAYNYX
RQN UUUU A0400/08 A0410/08 A0420/08-
A0425/08

Reply: ZCZC ...
GG LFFAYNYX
281540 EDDZYNXX
RQR UUUU A0400/08
(A0400/08 NOTAMN
Q) .../.../... etc.)

Note: The full Reply consists of 8 messages containing one NOTAM each.

4.3 Request for the original version of NOTAM (RQO)

4.3.1 General Specification

- 4.3.1.1 A NOTAM Processing Unit will normally transmit only the processed version of NOTAM to its clients. Whenever a NPU client needs the original version of a NOTAM, it can be obtained by sending a 'Request for Original NOTAM' message (RQO) to the NOTAM Processing Unit.
- 4.3.1.2 RQO is only to be used in data exchange between NPU Client and NOTAM Processing Unit.
- 4.3.1.3 A reply message shall contain the 'status line': 'ORIGINAL NOTAM', followed by a single NOTAM.

4.3.1.4 The reply message of an original NOTAM shall always include the original origin line (DTG + Publishing NOF address).

4.3.2 Codes and Symbols used

4.3.2.1 The following Codes and Symbols are used in requests for the original version:

'RQO'	is the designator for 'Request Original NOTAM'.
'LFFA'	4-letter indicator of the Publishing NOF or other location indicator to which the numbering of the NOTAM refers.
'A0123/00'	NOTAM Series Identifier and NOTAM Number.
' - '	(hyphen) is used to indicate 'TO' or 'FROM-TO'.
' '	(blank) is interpreted as 'AND'.
'RQR'	is the designator for the reply.

4.3.3 Example of the Request for Original NOTAM

Example 5: French NOF requests from German NOF the Original NOTAM KJFK A0553/08.

Request:	ZCZC ... GG EDDZYNYX 160900 LFFAYNYX RQO KJFK A0553/08
Reply:	ZCZC ... GG LFFAYNYX 160910 EDDZYNYX RQR KJFK A0553/08 ORIGINAL NOTAM 052255 KDZZNAXX (A0553/08 NOTAMN A) KJFK B) WIE C) UFN E) ...etc.

4.4 Request for the Repetition of ASHTAM (RQA)

4.4.1 Codes and Symbols used

4.4.1.1 Note that no brackets will be used when transmitting a 'Request ASHTAM' message. The following codes and symbols are used in requests for repetition:

'RQA'	is the designator for 'Request ASHTAM'.
'SAEF'	4-letter indicator of the FIR to which the numbering of the ASHTAM refers.

- '0134' ASHTAM Number.
- ' - ' (hyphen) is used to indicate 'TO' or 'FROM-TO'.
- ' ' (blank) is interpreted as 'AND'.
- 'RQR' is the designator for the reply.

4.4.1.2 RQA followed by the 4-letter indicator of an FIR will result in the repetition of all valid ASHTAM for the FIR requested.

4.4.1.3 RQA followed by the 4-letter indicator of an FIR and ASHTAM number will result in the repetition of the requested ASHTAM only.

4.4.2 Examples of the Request for ASHTAM

4.4.2.1 Request of all valid ASHTAM for an FIR

Example 6: French NOF requests from Italian NOF all valid ASHTAM for SAVF.

```
Request:  ZCZC ...
          GG LIIAYNYX
          161600 LFFAYNYX
          RQA SAEF

Reply:    ZCZC ...
          GG LFFAYNYX
          161601 LIIAYNYX
          RQR SAEF
          VASA0123 SAEF 08161515
          ASHTAM 0123
          A) ... etc.

          ZCZC ...
          GG LFFAYNYX
          160835 LIIAYNYX
          RQR SAEF
          VASA0121 SAEF 08152225
          ASHTAM 0121
          A) ... etc.
```

Example 7: French NOF requests from Italian NOF all valid ASHTAM for WAAF.

```
Request:  ZCZC ...
          GG LIIAYNYX
          161600 LFFAYNYX
          RQA WAAF

or ..... /
Reply:    ZCZC ...
          GG LFFAYNYX
          161601 LIIAYNYX
          RQR WAAF
          NO VALID ASHTAM IN DATABASE
```

4.4.2.2 Request of a single ASHTAM

Example 8: French NOF requests from Italian NOF the SAEF ASHTAM 0123.

```
Request:  ZCZC ...
          GG LIIAYNYX
          161600 LFFAYNYX
          RQA SAEF 0123

Reply:    ZCZC ...
          GG LFFAYNYX
          161601 LIIAYNYX
          RQR SAVF 0123
          VASA0123 SAEF 08161515
          ASHTAM 0123
          A) ... etc.
```

4.5 Content of the Reply Messages (RQR)

4.5.1 General Specification

- 4.5.1.1 A Reply message to RQN and RQO contains only one NOTAM (or one part of a Multi-part NOTAM).
- 4.5.1.2 A single 'RQN' or 'RQO' request for multiple NOTAM shall result in multiple reply messages unless the requested NOTAM are not available for a reply (exception 4.5.1.7 refers).
- 4.5.1.3 In reply to a RQN, if the NOTAM queried has been processed by the NPU, the reply message shall contain the location indicator of the NPU as the originator instead of the code of the Publishing NOF.
- 4.5.1.4 In reply to a RQO, the status line with the status expression 'ORIGINAL NOTAM' shall precede the original NOTAM. No additional information about the current status/validity of this NOTAM shall be provided.
- 4.5.1.5 If the queried NOTAM is no longer valid or not available, this status will be communicated through the reply as follows:
 - a) if the NOTAM is no longer valid, a 'Status line' will precede the transmission of the requested NOTAM.
 - b) if the NOTAM is not available, only a relevant 'Status line' will be transmitted.
- 4.5.1.6 Only one 'Status line' shall be included in the reply and it shall contain only one status expression.
- 4.5.1.7 In order to limit the number of RQR messages in reply to a RQN for more than one NOTAM and when these NOTAM are not available in the NPU's database, the RQR shall contain all NOTAM numbers concerned by the same reply: 'NOTAM REQUESTED' or 'NOTAM NO LONGER IN DATABASE' or 'NOTAM NOT ISSUED'. For example, instead of 99 RQR messages with 'NOTAM NOT ISSUED', only one RQR shall be sent.

- 4.5.1.8 Database should allow repetition of no longer valid NOTAM for a period of 3 months.
- 4.5.1.9 NOTAM Processing Unit shall provide their NPU Clients with a list of the available NOTAM series for each Publishing NOF. This list shall contain the 4-letter indicators that uniquely identify the Publishing NOF or any other location indicator to which the numbering of the NOTAM in the series refers to.

4.5.2 Standard Expressions in Reply Messages

- 4.5.2.1 The following mandatory statements shall be mentioned in the reply when appropriate:

'NOTAM EXPIRED'	Item C time was reached
'NOTAM REQUESTED'	The NOTAM Processing Unit has requested the requested NOTAM but not yet received it.
'NOTAM CANCELLED BY A1324/08'	NOTAM was cancelled by a NOTAMC
'NOTAM DELETED'	NOTAM was deleted by the NOTAM Processing Unit. Reasons for deletion might be for example that the NOTAM was omitted from Checklist, deleted by printed publication, or other information received from publishing NOF.
'NOTAM NO LONGER IN DATABASE'	NOTAM was either expired, replaced, cancelled or deleted since more than 3 months
'NOTAM NOT ISSUED'	The Publishing NOF has not issued the requested NOTAM
'NOTAM REPLACED BY C3042/08'	NOTAM was replaced by a NOTAMR
'ORIGINAL NOTAM'	Original version of the NOTAM
'NO VALID NOTAM IN DATABASE'	For reply on a RQL if no valid NOTAM is available.
'NO VALID ASHTAM IN DATABASE'	For reply on a RQA if no valid ASHTAM is available.

4.5.3 Examples for Status of NOTAM

Example 9: The requested Egyptian NOTAM A0400/08 is expired.

Reply: ZCZC ...
GG LFFAYNYX
281600 LIIAYNYX
RQR HECA A0400/08
NOTAM EXPIRED
(A0400/08 NOTAMN
Q) .../.../.... etc.)

Example 10: The requested Senegal NOTAM A0213/08 was not received at the NOTAM Processing Unit.

Reply:

If a gap in the NOTAM numbers is detected :

ZCZC ...
GG EDDZYNXX
091430 LFFAYNYX
RQR GOOO A0213/08
NOTAM REQUESTED

or if the NOTAM number is greater than the last one received :

ZCZC ...
GG EDDZYNXX
091430 LFFAYNYX
RQR GOOO A0213/08
NOTAM NOT ISSUED

or if the NOTAM was cancelled, replaced or deleted

ZCZC ...
GG EDDZYNXX
091430 LFFAYNYX
RQR GOOO A0213/08
NOTAM CANCELLED BY A0222/08
or ... NOTAM REPLACED BY A0233/08
or ... NOTAM DELETED

Example 11: The requested Tahiti NOTAM A0021/08 was cancelled.

Reply: ZCZC ...
GG LIIAYNYX
301235 LFFAYNYX
RQR NTAA A0021/08
NOTAM CANCELLED BY A0023/08
(A0021/08 NOTAMR A0017/08
Q) .../.../.../ etc.

Example 12: The requested Cuban NOTAM A1577/08 was not issued.

Reply: ZCZC ...
GG EDDZYNYX
110925 LEANYNYX
RQR MUHA A1577/08
NOTAM NOT ISSUED

Example 13: The requested Korean NOTAM A0449/08 was replaced.

Reply: ZCZC ...
GG LFFAYNYX
282055 LIIAYNYX
RQR RKRR A0449/08
NOTAM REPLACED BY A0452/08
(A0449/08 NOTAMN
Q) ../..../.../ etc.)

The importance of transmitting the requested NOTAM is emphasised, even when it is already cancelled, replaced or deleted. Otherwise, there might be inconsistencies in the database, as NOTAM could not be removed then, (NOTAM A0017/08 in Example 8).

In the exceptional case that a cancelled, replaced or deleted NOTAM was not received the RQR shall contain the status line only.

Example 14: The requested (RQO) United States NOTAM A0092/08 is an Original NOTAM.

Reply: ZCZC ...
GG LIIAYNYX
031755 EDDZYNYX
RQR KJFK A0092/08
ORIGINAL NOTAM
010025 KDZZNAXX
(A0092/08 NOTAMN
A) KJFK B) ...C) ... etc.)

4.6 Request for a List of valid NOTAM (RQL)

4.6.1 General Specification

- 4.6.1.1 The 'List of valid NOTAM' is a free text message. Contrary to the regular checklist, this intermediate checklist is not a NOTAM itself, as it does not receive a number of the series it refers to.
- 4.6.1.2 Note that the last regular checklist is a valid NOTAM and therefore, its number shall appear in the RQL.
- 4.6.1.3 Multiple series of the same Publishing NOF may be requested in one message.
- 4.6.1.4 A reply message shall contain the checklist of only one NOTAM Series.

- 4.6.1.5 A request for multiple NOTAM series shall result in multiple reply messages each containing one series checklist.
- 4.6.1.6 The reply message is identified by the unique 4-letter indicator and the NOTAM series identifier. The 'List of valid NOTAM' according to the NOTAM Processing Unit database content is provided in a way similar to the structure of Item E of a regular NOTAM checklist, without the latest publication part.
- 4.6.1.7 Whenever the regularly published NOTAM checklist is requested, the Client should use the RQN procedure, clearly indicating both NOTAM series and number.

4.6.2 Codes and Symbols used

- 4.6.2.1 The following Codes and Symbols are used in requests for a list of valid NOTAM:

'RQL'	is the designator for 'request list'.
'LFFA'	4-letter indicator of the Publishing NOF or other location indicator to which the numbering of the NOTAM refers to.
'A'	NOTAM Series Identifier.
' '	(blank) is interpreted as 'AND'.
'RQR'	is the designator for the reply.

4.6.3 Examples of the request for a List of valid NOTAM

4.6.3.1 Request of a single NOTAM Series

Example 15: French NOF requests from Italian NOF the list of valid Cypriot NOTAM in series Alpha:

```
Request:  ZCZC ...
          GG LIIAYNYX
          281040 LFFAYNYX
          RQL LCNC A

Reply:    ZCZC ...
          GG LFFAYNYX
          281055 LIIAYNYX
          RQR LCNC A
          YEAR=2007 0322 0452
          YEAR=2008 0001 0006 0010 0015 0016
          0021 0035 0039

or ..... /
Reply:    ZCZC ...
          GG LFFAYNYX
          281055 LIIAYNYX
          RQR LCNC A
          NO VALID NOTAM IN DATABASE
```

Example 16: French NOF requests from Italian NOF the list of valid Guyana NOTAM in series Alpha, but last Checklist A0011/08 is the only valid NOTAM.

Request: ZCZC ...
GG LIIAYNYX
281040 LFFAYNYX
RQL SYCJ A

Reply: ZCZC ...
GG LFFAYNYX
281055 LIIAYNYX
RQR SYCJ A
YEAR=2008 0011

4.6.3.2 Request of multiple NOTAM Series

Example 17: Italian NOF requests from German NOF the list of valid NOTAM from the United Kingdom in series Bravo and Golf:

Request: ZCZC ...
GG EDDZYNXX
310840 LIIAYNYX
RQL EGGN B G

Reply: ZCZC ...
GG LIIAYNYX
310850 EDDZYNXX
RQR EGGN B
YEAR=2007 1678 1789
YEAR=2008 0012 0022 0056 0057 0058
0123 0124 0125

The full Reply consists of 2 Messages containing one NOTAM Series in each.

4.7 Incorrect Requests (RQN, RQO, RQL)

4.7.1 General Specification

4.7.1.1 If a RQN, RQO, RQA or RQL message has been received that does not adhere to the published syntax format or content, the recipient of the request will send a reply message informing about the error.

4.7.2 Standard Expressions

4.7.2.1 For a request received with an incorrect format

INCORRECT REQ MSG FORMAT PLEASE
CORRECT AND RPT. FOR DETAILS SEE
<http://www.eurocontrol.int/aim/opadd>

The recipient of the request
has detected an error in the
format of the RQ message

4.7.2.2 For a request received referring to an unknown or incorrect NOF designator or series

REQUESTED NOF OR SERIES NOT
MANAGED

The recipient of the request has received a request for a NOF or series which is not contained in the database

4.7.2.3 For a request exceeding maximum number allowed for a single request

YOUR REQ MSG EXCEEDS MAX NR OF
100

Number of requested NOTAM limit is exceeding.

4.7.2.4 Examples

Example 18:

Request: ZCZC ...
GG LEANYNYX
151030 EDDZYNYX
RQN LEMD LEBL

Reply: ZCZC ...
GG EDDZYNYX
151035 LEANYNYX
RQR
RQN LEMD LEBL
INCORRECT REQ MSG FORMAT PLEASE CORRECT AND
RPT. FOR DETAILS SEE
<http://www.eurocontrol.int/aim/opadd>

Example 19:

Request: ZCZC ...
GG EBBRYNYN
151030 LOWWYNYX
RQN EBBR A0523/08-A0626/08

Reply: ZCZC ...
GG LOWWYNYX
151035 EBBRYNYN
RQR
RQN EBBR A0523/08-A0626/08
YOUR REQ MSG EXCEEDS MAX NR OF 100 NOTAM

Example 20:

Request: ZCZC ...
GG EBBRYNYN
151030 LOWWYNYX
RQN EBBA A0523/08-A0626/08

Reply: ZCZC ...
 GG LOWWYNYX
 151035 EBBRYNYN
 RQR
 RQN EBBA A0523/08-A0626/08
 REQUESTED NOF OR SERIES NOT MANAGED

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5 PROCEDURES FOR SNOWTAM, ASHTAM AND SPECIAL CONDITIONS

5.1 Introduction

5.1.1 Two types of operationally relevant messages are described in ICAO documentation and distributed via the AFS. As these messages are operationally relevant, their processing is required to enable database storage and consequently further retrieval for their incorporation in PIB. The concerned messages are:

SNOWTAM and

ASHTAM

5.1.2 SNOWTAM and ASHTAM are expected to be received in their defined format. Therefore, it is anticipated that they shall neither be edited nor corrected nor summarised. If a message is detected as received obviously incorrect (e.g. garbled), a query shall be addressed to the originator for clarification. This processing can be done by individual or centralised Units.

5.1.3 Hazardous winter conditions or bird hazards (if operationally significant) can also be published by means of NOTAM.

5.2 SNOWTAM

5.2.1 Definition

5.2.1.1 'A special series NOTAM notifying the presence or removal of hazardous conditions due to snow, ice, slush or standing water associated with snow, slush and ice on the movement area by means of a specific format.'³

5.2.1.2 During periods when deposits of snow, ice, slush or water associated with these conditions remain on the aerodrome pavements, information on such conditions should be disseminated to all to whom the information is of direct operational significance. Use of the ICAO Doc 8400 abbreviations (Ref [7]) and plain language is also permissible.

5.2.1.3 For details of SNOWTAM Items refer to the ICAO Annex 15 (Ref. [1]), Appendix 2 and Doc 8126 (Ref [2]), Ch 6 Appendix A.

Note: For details on clearing requirements refer to ICAO Doc 9137 AN/898/Airport Service Manual, Part 2.

³ Source: Annex 15, 12th Edition, chapter 2.

5.2.2 Procedures for SNOWTAM creation

- 5.2.2.1 SNOWTAM identification shall appear in the first line of the AFTN message text and shall start with the SNOWTAM indicator 'SW' followed by the designator for the State e.g. 'EF', and a serial number in a four-figure group. The aerodrome to which the SNOWTAM refers to is indicated with its four-letter location indicator. The observation time is shown as an eight-figure group.

Example: SWEF0001 EFTP 11250800

- 5.2.2.2 The maximum validity of an SNOWTAM is 24 hours.

- 5.2.2.3 Examples

Example 1:

```
GG EFCC...
291225 EFTPZTZX
SWEF0587 EFTP 11291215
(SNOWTAM 0587
A) EFTP B) 11291215 C) 06 E) 40
F) 47/47/47 G) 3/3/3 H) 75/78/75 SKH N) 7 R)47
T) RWY CONTAMINATION 100 PER CENT. SURFACE FRICTION:
ON TWY MEDIUM TO GOOD, ON APRON MEDIUM TO POOR)
```

Where the header is composed of:

GG	= priority indicator.
EFCC....	= addresses.
291225	= origin time.
EFTPZTZX	= originator.
SWEF0587	= SW is the data designator for SNOWTAM; EF are the nationality letters for the state (in this case Finland); 0587 is a four digits serial number.
EFTP	= 4-letter location indicator of the aerodrome to which the SNOWTAM refers.
11291215	= date/time of observation as month, day, hour and minute in UTC, all by two digits (in this case 29th of November, 1215 UTC).

Where the message is composed of:

SNOWTAM	= designator for the SNOWTAM.
0587	= the SNOWTAM number (the same four digits serial number as in the header).
A) EFTP	= Item A) aerodrome location indicator (the same as in the header).
B) 11291215	= Item B) date/time of observation (same as in the header section).
C) 06	= Item C) lower runway designator number (for RWY 06/24 the lower runway designator number is 06).
E) 40	= Item E) cleared runway width in metres, if less than published width (in this case, the published width is 45 metres and cleared width is 40 metres only).

- F) 47/47/47 = Item F) deposits over the total runway length, observed on each third part of the runway starting from the threshold with lower runway designator number (in this case a combination of dry snow (4) and ice (7) on each third part).
- G) 3/3/3 = Item G) depth of the deposit(s) in millimetres for each third of the total runway length (in this case the mean depth of the deposits is 3 millimetres on each third part).
- H) 75/78/75 SKH = Item H) friction measurements on each third of the runway and friction measuring device (in this case the measured friction coefficient values for each third part of the runway are 75, 78 and 75 - starting from the threshold with lower runway designator - and the measurement device used is skiddometer with high-pressure tyre)
- N) 7 = Item N) taxiway conditions (in this case ice – deposit code for ice is 7 as described in Item F of the SNOWTAM format)
- R) 47 = Item R) apron conditions (in this case a combination of dry snow and ice – deposit codes for dry snow (4) and ice (7) as described in Item F of the SNOWTAM format)
- T) RWY CONTAMINATION 100 PER CENT. SURFACE FRICTION: ON TWY MEDIUM TO GOOD, ON APRON MEDIUM TO POOR
= Item T) plain language field for any additional information (in this case the extent of the runway contamination (Item F above) is between 51 and 100 %. The estimated surface friction for taxiways and apron are also given)

Example 2:

‘When reporting on two or three runways, repeat Items C) to P) inclusive’⁴

```
GG EDZZ.... ..
300645 EDDKYDYX
SWED0012 EDDK 12300630
(SNOWTAM 0012
A) EDDK B) 12300630
C) 14L F) 2/2/2 G) 30/30/40 H) 5/5/5
C) 14R F) 5/5/5 G) 30/30/40 H) 9/9/9
C) 07 F) 5/5/5 G) 40/30/30 H) 9/9/9
R) 2 S) 12300800
T) RWY CONTAMINATION 100 PERCENT. SNOW REMOVAL IN
PROGRESS)
```

Example 3:

```
GG EKZZ.... ..
130429 ESSAYNYX
SWES0051 ESSA 01130400
(SNOWTAM 0051
A) ESSA B) 01130400
C) 01L E) 50 F) 17/17/17 G) 01/03/02 H) 74/70/73 SFH
L) TOTAL M) 0500 N) 127/GOOD
C) 08 D) 2300 E) 30 F) 17/17/17 G) 01/01/01 H) 71/72/66 SFH
J) 60/5LR K) YESL L) 2500/45 M) 0500 N) 127/GOOD P) YES8
R) 127/MEDIUM-GOOD S) 01131000
T) RWY 01L CONTAMINATION 10 PERCENT, RWY EDGES CONTAMINATION 60
PERCENT F) 5 G) 30,
RWY 08 CONTAMINATION 50 PERCENT UNCLEARED PARTS CONTAMINATION
100 PERCENT F)5 G) 50,
TWY CONTAMINATION 10 PERCENT IMM.
```

⁴ Doc 8126 (Ref [2]) page 6-A-14 para 1 a).

TWY S CONTAMINATION 50 PERCENT F)56 G)20 H)40 SFL,
APRON CONTAMINATION 25 PERCENT 1MM.
DEICING CHEMICALS USED ON RWY 01L AND 08. RWY 01R CLSD.

Note: Item D is rarely used in SNOWTAM as the RWY is normally cleared full length. A reduction in length for IFR RWY affects declared distances.

5.2.3 Procedures for SNOWTAM processing

- 5.2.3.1 The format detailed in Annex 15 (Ref [1]) Appendix 2 shall be strictly adhered to.
- 5.2.3.2 A list of aerodromes for which SNOWTAM are likely to be issued shall appear in an AIS publication (AIP, AIP SUP or AIC) together with details of the originators and of the numbering system to be used.
- 5.2.3.3 It is recommended to adopt a numbering sequence starting at the beginning of the year.
- 5.2.3.4 It will be necessary for systems to identify the latest SNOWTAM for each affected aerodrome by reference to the serial number and observation time.
- 5.2.3.5 Only one SNOWTAM can be valid for each affected aerodrome at any one time.
- 5.2.3.6 The next planned observation may be declared in Item S), but whenever a significant change of the weather condition occurs, a new SNOWTAM shall be published and will completely replace any SNOWTAM previously issued.
- 5.2.3.7 On aerodromes where snow removal is not organized and not expected to be performed (e.g. in maritime climate areas), information about hazardous winter conditions may be issued by NOTAM.
- 5.2.3.8 The maximum validity of a SNOWTAM is 24 hours.
- 5.2.3.9 The incorporation of SNOWTAM in PIB is highly recommended, as it improves pre-flight briefing and provides airline operators with more comprehensive information.

5.3 ASHTAM

5.3.1 Definition

- 5.3.1.1 “A special series NOTAM notifying by means of a specific format change in activity of a volcano, a volcanic eruption and/or volcanic ash cloud that is of significance to aircraft operations.”⁵
- 5.3.1.2 When notification of such activity is made, the ASHTAM provides information on the status of activity using a ‘volcano level of alert colour code’.
- 5.3.1.3 The ASHTAM also provides information on the location, extent and movement of the ash cloud and on the air routes and flight levels affected.

⁵ Source: Annex 15 (Ref [1]), 12th Edition, chapter 2.

Example:

```

161143 WRRRYNYX
VAWR0004 WAAF 05161137
(ASHTAM 0004
A) WAAF
B) 0805161137
C) AWU 0607-04
D) 0340N12530E
E) YELLOW
F) 1320M/4331FT
G) SFC/FL100 WINDS SFC/FL100 260/10KT
I) CTN ADZ OVERFLYING FOR R590 R342
J) YMMCYMYX

```

5.3.1.4 For details of the format refer to ICAO Annex 15 (Ref. [1]), Appendix 3.

5.3.2 Procedures for ASHTAM creation

5.3.2.1 ASHTAM identification shall appear in the first line of the AFTN message text and shall start with the ASHTAM indicator 'VA' followed by the designator for the State e.g. 'LI', and a serial number in a four-figure group. The FIR to which the ASHTAM refers is indicated with its four-letter location indicator. The observation time is shown as an eight-figure group.

Example: VALI0001 LIRR 11250800

5.3.2.2 Item C) shall contain both, volcano name and its unique identification number as contained in ICAO Doc. 9691 (Ref. [7]), Manual on Volcanic Ash, Radioactive Material and Toxic Chemical Clouds, Appendix F.

Name and identification number shall be separated by one blank.

Example: C) AWU 0607-04

5.3.2.3 The maximum validity of an ASHTAM is 24 hours.

5.3.2.4 Whenever there is a change in the level of alert, a new ASHTAM shall be published.

5.3.2.5 If an ASHTAM has to be created for a volcano not listed in ICAO Doc. 9691, the 'existence' of the volcano shall be promulgated by normal NOTAM, Item C) to contain PERM.

Any observations on its volcanic activities shall also be published by normal NOTAM until ICAO Doc. 9691 (Ref. [7]), Appendix F is updated. NOTAM on observations remains in force for 24 hours (Item C) as for ASHTAM.

In the case that information on observations are nevertheless intended to be published by means of ASHTAM instead, this intention shall be clearly stated in the NOTAM containing the general information of the volcano, so that the list of existing volcanoes can be manually updated in processing systems to allow auto-processing.

5.3.2.6 Information about volcanic activity or the presence of volcanic ash plumes may also be reported by NOTAM.

Item B) actual date/time of NOTAM creation;

Item C) actual date/time of NOTAM creation + 24 hours;

Item E) the relevant information as contained in the ASHTAM.

To ensure speedy transmission of initial information to aircraft, the first ASHTAM or NOTAM issued may simply contain information that an eruption and/or ash cloud has been reported and the date/time and location. For further details and additional distribution addresses refer to ICAO Doc 9766 (Ref. [8]) International Airways Volcano Watch, part 4.

5.3.3 Procedures for ASHTAM processing

5.3.3.1 The incorporation of ASHTAM in PIB is highly recommended, as it improves pre-flight briefing and provides airline operators with more comprehensive information.

5.3.3.2 An ASHTAM is normally auto-processed. Its abbreviated heading, Item C) and Item A) are checked before storage.

5.3.3.3 The identification (name and number) of the volcano in Item C) of an incoming new ASHTAM is compared with the volcanoes listed in ICAO Doc. 9691 (Ref. [7]), Appendix F.

5.3.3.4 A volcano is identified if name and identification number refer to the same volcano. The ASHTAM is stored in the database and made available for the FIR indicated in the abbreviated heading. Its storage will completely replace any ASHTAM previously issued for the same volcano. ASHTAM of other volcanoes remain valid instead.

5.3.3.5 An incorrect syntax in an ASHTAM Item used for the identification or storage is corrected before further processing.

5.3.3.6 Item A) is roughly checked by the system before storage. If the system recognises FIR location indicator(s) in Item A rather than plain-language, automated processing of ASHTAM is discontinued if the FIR location indicator is different from the one in the abbreviated heading or if Item A) contains more than one FIR.

If the location indicator indicated is different, it is either corrected or 'NOTAM SUBJECT TO QUERY' procedure applies. If the ASHTAM is received with more than one FIR in Item A, a NOTAM series T shall be created for all FIR except for the one given in the abbreviated heading. Item E) of this series T NOTAM shall contain all Items from and incl. A) to and incl. K). Items not completed by the publishing NOF in the original ASHTAM shall be left blank.

5.3.3.7 An ASHTAM is self-expiring 24 hours after its creation unless it is replaced earlier by a new ASHTAM.

5.3.3.8 If the volcano can not be clearly identified, 'NOTAM SUBJECT TO QUERY' procedure shall be applied by a new Ashtam for the same volcano.

5.4 Bird Hazards

5.4.1 Definition

- 5.4.1.1 A bird hazard designates the presence of birds constituting a potential hazard to aircraft operations.
- 5.4.1.2 The permanent presence of birds is contained in the AIP, whereas the notification of such activities on short notice shall be published by NOTAM.

5.4.2 Procedure

- 5.4.2.1 Bird hazards, if published, can be communicated by means of NOTAM.
- 5.4.2.2 The 4th and 5th letter 'HX' of the NOTAM Code serves as means of identification for the publication of bird hazards, e.g. QFAHX.
- 5.4.2.3 Item E shall contain clear text with standard ICAO abbreviations. Specific bird related abbreviations should be avoided to facilitate readability and to prevent queries.

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6 OTHER PROCEDURES

6.1 Multi-Part NOTAM

6.1.1 General Principles

6.1.1.1 'Each NOTAM shall be as brief as possible'⁶. However, there are cases where a NOF wishes to produce a NOTAM exceeding the AFTN message length (normally 1800 characters including non-printing characters, but as few as 1200 in some countries). In these cases, a Multi-part NOTAM may be unavoidable.

6.1.1.2 Even though the recommendation is that every endeavour should be made in order to avoid the creation of Multi-part NOTAM, a standard numbering scheme will facilitate the processing of Multi-part NOTAM when they are used.

6.1.2 Procedures for Multi-Part NOTAM

6.1.2.1 Each part of the Multi-part NOTAM is a separate NOTAM Message with each Item present from Item Q) to Item D) (if present) inclusive, and Item E) continuing text. Each part shall have the same NOTAM type and has the same NOTAM number followed by a sub-number. If present, Items F), G) and X) are transmitted with the last part only.

6.1.2.2 NOTAMR is not permitted for the replacement of an individual part of a Multi-part NOTAM.

6.1.2.3 In case of cancellation of a Multi-part NOTAM, all parts are cancelled by the NOTAMC. Cancellation of individual parts is not permitted.

6.1.2.4 The sub-number is placed immediately behind the year of the number/year combination, without a space.

6.1.2.5 The sub-number is identified by one letter ('part identifier' e.g. A = Part 1, B = Part 2, etc.) and a number, always consisting of 2 digits ('number of parts', e.g. 05 = 5 parts). This enables up to 26 part Multi-part NOTAM.

6.1.3 Examples

A1234/08A02(means Part 1 of 2)

B1235/08B05(means Part 2 of 5)

A5678/08C03(means Part 3 of 3)

B6453/08D06(means Part 4 of 6)

⁶ ICAO Annex 15 (Ref [1]) para 5.2.9.

The following example shows the NOTAM Identification of a Multi-part NOTAM consisting of 4 parts.

```
(A1234/08A04 NOTAMN
Q) .....
A) .....
B) .....
C) .....
E) ..... )
```

```
(A1234/08B04 NOTAMN
Q) .....
A) .....
B) .....
C) .....
E) ..... )
```

```
(A1234/08C04 NOTAMN
Q) .....
A) .....
B) .....
C) .....
E) ..... )
```

```
(A1234/08D04 NOTAMN
Q) .....
A) .....
B) .....
C) .....
E) .....
X) ..... )
```

7 GUIDELINES FOR THE CREATION AND PROVISION OF PRE-FLIGHT INFORMATION BULLETINS (PIB)

7.1 Introduction

This chapter is intended to present guidelines concerning the provision of Briefing primarily in form of the PIB, to elucidate on:

- Bulletin types;
- filtering for NOTAM based on the NSC and other related filters; and the
- main PIB structure and layout when integrating various messages into the PIB.

Additionally, some aspects in relation to 'Integrated Briefing' are presented in order to enable addressing key user requirements for enhanced briefing services.

Relevant links are provided to existing EUROCONTROL documents covering the function of 'Integrated Briefing'. Requirements for automated aeronautical information systems are contained in ICAO Annex 15 (Ref. [1]) paragraphs 3.1, 8.1, 8.2 and ICAO Doc 8126 (Ref. [2]) chapter 9. Where chapter 9 did not provide any guidelines, chapter 8 has been taken into consideration even though primarily intended for manual or semi-automated environment.

7.1.1 Understanding and Background

An aeronautical information service (AIS) is obliged to provide relevant aeronautical information (AI) which is mainly available in the form of the Integrated Aeronautical Information Package (IAIP). The pilot is obliged to obtain and prepare him/herself before conducting a flight.

The process where a user, depending on flight intent or an ad-hoc need, is supplied with or supplies himself with all relevant aeronautical information (AI) in order to plan or to execute a flight or to obtain generic information related to flight operations, is known as briefing. The facts and knowledge obtained support the process of taking the decision if a flight or flight related action can be performed safely and efficiently or not.

Note: Refer to 'Integrated Briefing High-Level Concept Document' chapter 2.2. Reference material at: http://www.eurocontrol.int/aim/public/standard_page/interop_ib_intro.html

In an automated environment, AIS is often not personally present at aerodromes and the provision of relevant data is assured through (self) briefing systems supported by means of consultation.

The typical system output of a briefing process concerning dynamic data (NOTAM and related special series NOTAM such as SNOWTAM and ASHTAM) is the 'Pre-flight Information Bulletin (PIB)'. Additionally, static data such as AIP, AIP SUP or AIC is either provided through consultation or in electronic form through briefing systems or is made available in paper form at the AIS or/and ARO offices.

7.1.2 The basic user requirements related to Briefing

Many users are currently 'over-supplied' with a large amount of information. Therefore, the duty for any briefing function, whether automated or not, is to be able to support the pilot (user) with specific and relevant information whilst avoiding information overload through maximum customisation support.

The basic user requirements for a briefing facility/service can be summarised as follows:

- Enable a standard product to be produced as a minimum service.
- Provide the pre-flight information which is relevant to a flight (user), on request.
- Enable the pilot to obtain a briefing that is structured to suit their particular needs.
- Improve the ways briefings are conducted and delivered.
- Reduce the amount of time taken to obtain a briefing.
- Provide easy access to information incl. updates thereafter.
- Provide this information at any time and location the pilot wishes.

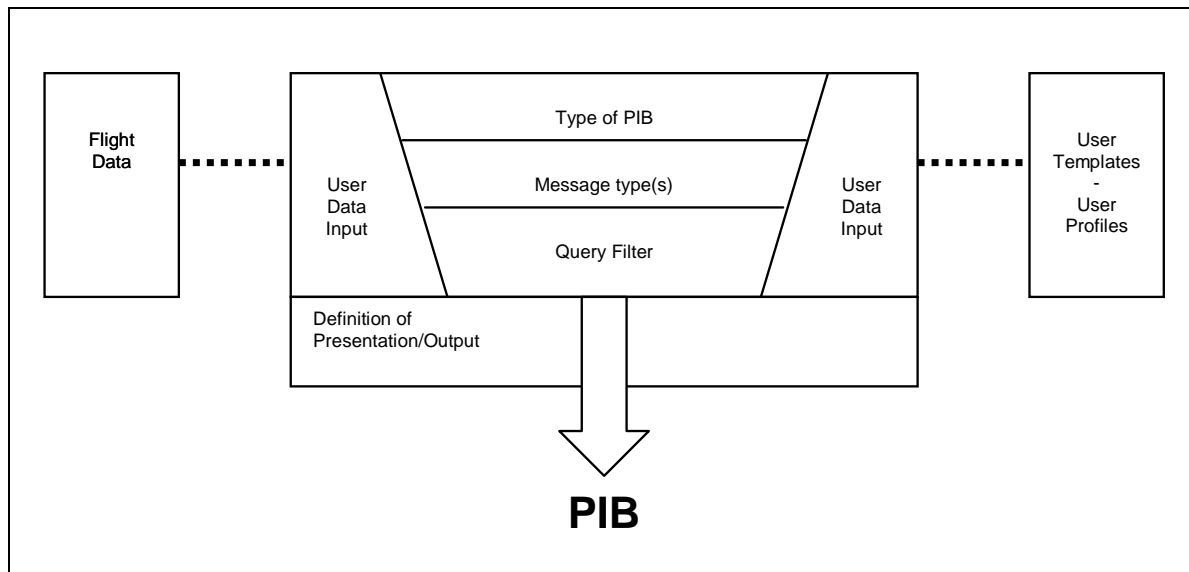
Note: Based on the European Convergence and Implementation Plan (ECIP) objective INF04 'Integrated Briefing' (and to some extent Annex 15 para 8.2.2 and Doc 8126 para 9.6 and Appendix B, page 9-B-2) services go beyond this scope in order to integrate several data sources, namely: AIS, ARO, MET and ATFCM information. Any detail is beyond the scope of this chapter, however, some more information is contained in paragraph 7.12 addressing 'Integrated Briefing'.

7.2 Data Selection Layers

The user will be able to select the information that will be included in the PIB at various levels. Those levels are:

- PIB type
- Message types
- Message filters
- User data / input.

In order to retrieve NOTAM from a database a range of criteria and so-called filters shall be applied to enable customised and tailored briefing output based on individual user requirements. On top of that, default settings would cater for standardised / generic output. The following figure shows the relationship between the different information selection levels that may be employed by the User for the retrieval of a PIB.



7.3 Types of Bulletins - PIB

Following main bulletin types are defined by ICAO.

- Area type Bulletin;
- Route type Bulletin;
- Aerodrome type Bulletin;
- Administrative Bulletins.

A general description of each of these types is given below. For further reference see ICAO Doc 8126, chapter 8.

7.3.1 Area type Bulletin

Area or FIR type bulletins consist of relevant information such as NOTAM, SNOWTAM, ASHTAM containing information on facilities, services, procedures and possible hazards related to FIR(s) or country or specified area. It may also include selected aerodromes situated inside a selected area. The PIB will only present NOTAM inside the selected FIR(s) or country or area.

An Area type PIB may present:

- An FIR or selected FIRs
- Groups of FIRs or pre-defined (adjustable) areas or groups of countries (e.g. Benelux, Alpine, Central Europe).
- A user defined area by:
 - Given airspace or special areas (special areas, TMA, CTR, ACC sectors etc.).

Note 1: Such areas are only available for selection if defined by coordinates in the database of the PIB system.

- single aerodrome information plus information from surrounding vicinity (selection of AD, range plus ground up to selected flight level). If range is requested, NOTAM irrespective of national boundaries are to be provided, including those of relevant 'dummies'.
- coordinates or AD names or AD location indicators plus radius.
- a polygon defined by coordinates, AD names, AD location indicators or Nav aids.

Note: An area type PIB provides at least the options: area info only, area info and AD info for selected area, AD info for selected AD within the area.

Concerning NOTAM, PIB will present NOTAM containing, if selected:

- NSC scope for Enroute information: E, W, AE, AW
- NSC scope for aerodrome information: A, AE, AW
- Requested FIR or country location indicator in Item A) or a geographical reference intersecting with the defined area.
- Qualifying criteria in accordance with the filters applied (refer to 7.5)
- For inclusion of Aerodrome information refer to 7.3.3.

Note: When a 'dummy' FIR is selected or if an area intersects an FIR that is part of a 'dummy' FIR location indicator (e.g. UUUU, ZBBB, KFDC or KNMH), the information of the dummy FIR shall be provided (dummy FIR see 3.18.2.3).

7.3.2 Route type Bulletin

Route type bulletin is a bulletin based on a generalised route of flight that may also be the route information as contained in FPL field 15. It provides relevant messages such as NOTAM, SNOWTAM and ASHTAM containing information on facilities, services, procedures and possible hazards along the specific route flown. It presents the crossed FIRs in the sequence of flight plus the selected aerodromes.

For route type bulletins based on FPL for IFR and mixed FPL, the acknowledged (ACK) route shall be taken into account, whenever possible.

A Route PIB presents information based on the following principle:

- Aerodrome information: aerodrome of departure, destination, alternate(s).
- Route information. FIR or the sequence of FIRs crossed by the intercepted flight route (source FPL/RPL or user input).

Concerning NOTAM, PIB will present NOTAM containing, if selected:

- NSC scope for Enroute information: E, W, AE, AW
- NSC scope for aerodrome information: A, AE, AW
- Requested FIR or country location indicator in Item A)
- Qualifying criteria in accordance with the filters applied (ref. 7.5)

For inclusion of Aerodrome information refer to 7.3.3.

Note: When selecting 'dummy' FIRs this shall be taken into account by the system (ref. 7.3.1).

7.3.2.1 Narrow Route type Bulletin:

A Narrow Route Bulletin is a bulletin based on a specific route of flight usually based on the route information as contained in FPL field 15. It may also be based on a flight path with a defined width along: significant points, airways, Navaids, coordinates, direct between aerodrome of departure (DEP) and aerodrome of destination (DEST). Only NOTAM that intersect with the narrow route path and meet other related filter criteria are included in the 'Narrow Route (path) PIB'.

The recommended default value for a route width is 20 NM (meaning 10NM left and right of the calculated flight path).

A Narrow Route PIB presents information based on the following principle:

- Aerodrome information: aerodrome of departure, destination, alternate(s).
- Route information (source FPL/RPL or user input).

Concerning NOTAM, the PIB will present only those NOTAM containing:

- A geographical reference intersecting with the defined route corridor
- NSC scope for Enroute information: E, W, AE, AW
- NSC scope for aerodrome information: A, AE, AW
- A geographical reference intersecting with the route to the first alternate AD (ALTN) if not on the intersected flight path (by user input unless RIF/ is indicated in FPL/RPL).
- Qualifying criteria in accordance with the filters applied (refer to 7.5).

For inclusion of Aerodrome information refer to 7.3.3.

Note: Departure and Arrival aerodrome must be taken into account. Depending on the level of the briefing system, special filtering is to be applied so that either the flight level filtering takes full account of the SID/STAR flown, or within a radius or cylinder around the AD of DEP/DEST the flight level limitation is neglected (irrespective of FIR boundaries).

Note: When selecting 'dummy' FIRs this shall be taken into account by the system (ref 7.3.1).

7.3.3 Aerodrome type Bulletin

Aerodrome type bulletins consist of dynamic messages such as NOTAM and SNOWTAM containing information on facilities, services and procedures related to an aerodrome or its vicinity.

This bulletin provides messages for aerodromes at least covering following options:

- single aerodrome information only (selecting aerodrome name or location indicator)
- all aerodromes within an FIR (or other predefined area) or a group of FIRs
- a list of all or specified aerodromes within a given airspace or special area, e.g. ACC sector (aerodrome information only).

Concerning NOTAM, the PIB will present only those NOTAM containing:

- NSC scope for aerodrome information: A, AE, AW.
- an aerodrome indicator in Item A) plus those with country code and XX in item A. Refer to 7.7.3 for the selection of aerodromes with country code and XX.
- if selected, NSC scope AE, AW if the geographical reference is intersecting with the defined area surrounding an AD.
- qualifying criteria in accordance with the filters applied (refer to 7.5).

Note 1: When selecting 'dummy' FIRs this shall be taken into account by the system (ref 7.3.1).

Note 2: The term 'aerodrome(s)' includes heliport(s).

7.3.4 Administrative Bulletins

Administrative bulletins are reports for specialised users and provide a list of valid NOTAM offering further selection options. This type of bulletins is foreseen mainly for AIS/NOF officers but also other specialised users who are familiar with NOTAM procedures, the NOTAM format and the query procedures for PIB/reports.

Specialised functions should allow additional filter criteria enabling to retrieve by e.g.:

- NOTAM number or range of numbers
- All NOTAM in force
- Country(ies)
- NOF
- NOTAM series
- all PERM NOTAM
- Trigger NOTAM (all valid; effective from (AIRAC date or user defined)
- Obstacle NOTAM (subject codes 'OB' and 'OL')
- Company profile (or as option in user profiles)
- NOTAM by subject
- EST NOTAM.
- Checklist
- NOTAM processed (since a specified date-time group / by whom)
- History: system history of changes, retrieved bulletins/ID
- Administrator functions.

7.4 Types of Messages/elements to be included in the PIB

Following types of dynamic messages shall be selectable for inclusion in the PIB.

- Civil / Military NOTAM (if available), or combinations;

- International series or national series, or combinations;
- National NOTAM in national language;
- Types of messages:
 - NOTAM
 - SNOWTAM
 - ASHTAM
 - Other (pre-defined service notes)
- Other elements such as predefined maps or local information.

7.5 Criteria for PIB Customisation – Query Filters

Apart from the selection based on PIB types and type specific entries (FIR(s) and/or AD, selection or definition of area or route), the following filters are applied to reduce the PIB output:

- Time window for PIB validity
- NSC qualifiers applied
 - Related PIB output
- Vertical criteria (flight levels)
- Geographical criteria

7.5.1 Time window for PIB validity:

- At a given date and time = current.
 - Content: NOTAM valid.
 - Main purpose: overview/general planning.
 - Main users: airport authorities and other NOTAM originators, dispatcher/station manager/business aviation and other long term planning units, NOF, CAA.
 - PIB types: all PIB types and administrative bulletins (e.g. checklists).
- FPL based, i.e. for a given EOBT, all NOTAM active between this time and in the next given number of hours.
 - Content: NOTAM active.
 - Main purpose: performing a flight.
 - Main users: crew/pilots.
 - PIB types: FPL based PIB (usually Route or Narrow Route PIB).
 - Possible default setting for a FPL based time window:
 - PIB validity by default: (EOBT-1 HR) till (ETA + 4HR).
 - A system should offer the possibility to adjust the default for a FPL based time window.

- For time periods e.g. current date/time plus 'x' hours, from-to.
Content: NOTAM active.
Main purpose: performing a flight, specific overview.
Main users: crew/pilots, dispatcher/station manager/business aviation for short-term planning.
PIB types: all PIB types except for administrative bulletins.

Note 1: For administrative bulletins the default values depend on the type of bulletin.

Note 2: For systems not offering the query of active NOTAM, all NOTAM in force for the selected time window may be provided instead, irrespective if active or not during the requested time window.

Further selection options for PIB types:

- Excluding those NOTAM active since more than a given time period.
Note: This option shall not be available if the filtering is done based on active NOTAM.
- Including those NOTAM that expired since a given number of hours.

7.5.2 NSC qualifiers applied

For NOTAM, NSC qualifiers and NOTAM code act as retrieval filters to tailor PIB content.

- Traffic:
 - IFR: IFR PIB to include all NOTAM with traffic I and IV;
 - VFR: VFR PIB to include all NOTAM with traffic V and IV;
 - Combination IFR/VFR: PIB to include all NOTAM with traffic I, V and IV;
 - Mixed flight rules (ref. FPL): for each portion of the flight only NOTAM with the traffic corresponding to the flight rules of the respective portion of flight shall be included.
- Purpose:
 - N - NOTAM for the immediate attention of aircraft operators,
 - B - NOTAM for standard PIB entry,
 - O - NOTAM concerning flight operations,
 - M - NOTAM carrying miscellaneous information.
- Scope:

This qualifier relates the NOTAM subject (2nd and 3rd letter) to a specific scope. This qualifier is used to determine under which category/section a NOTAM is presented inside a PIB.

 - A (Aerodrome information) refers the NOTAM to the scope of aerodromes.
 - E (Enroute) refers the NOTAM to the scope of 'Enroute information'.
 - W (Warning) refers the NOTAM to the scope of 'Navigation Warnings'.

- or the combinations AE, AW.
- Exclusion of Trigger NOTAM as option (system selection by condition 'TT').
- Exclusion of obstacles (system selection by subjects 'OB' and 'OL').

7.5.2.1 Purpose related PIB output

- Immediate Notification: filters set to NBO, (NB⁷);
- Operationally significant information: filters set to NBO, BO;
- Bulletin: filters set to B, BO, NBO, (NB);
- All NOTAM: filters set to B, BO, NBO, (NB), M;
- Miscellaneous: filters set to M.

In a 'default briefing' (default filter setting; modifiable by a user) no filtering is performed by the system on the qualifier 'Purpose' and the PIB will display all NOTAM (M, B, BO, (NB), NBO).

Note: NSC in their current form raise numerous concerns with service providers and users. Shortcomings have been observed with respect to the qualification of the purpose for some subjects and revisions have been identified and were forwarded to ICAO with pending global resolution. For example: 'Rapid Exit Taxiways' according Doc 8126 need to be qualified as Taxiway with 'M' only. Due to this fact OPADD, for the time being, suggests providing 'all NOTAM' as default PIB setting with a possibility that users may change the setting at any time on their own discretion. The application of this default is left to the individual service provider at their own discretion in interaction with their clients.

7.5.3 Vertical Criteria (Flight Levels)

Flight levels will enable to tailor the PIB content whenever appropriate (lower/upper). System selection is based on lower and upper limits of the Q-Line.

7.5.3.1 Departure and Arrival

Departure and Arrival aerodrome must be taken into account. Depending on the briefing system, special filtering is to be applied so that either the flight level filtering takes full account of the SID/STAR flown, or within a radius or cylinder around the AD of DEP/DEST the flight level limitation is neglected (irrespective of FIR boundaries).

7.5.4 Geographical criteria

System selection is done by the geographical reference of the Q-Line (coordinate and radius) and applies only to those area or route type PIB requiring more precise information about the location than Item A) provides, e.g. Narrow Route, user or system defined areas. NOTAM

⁷ Whilst change is expected, the use of 'NB' remains prescribed in the ICAO NSC at the time of writing this edition.

are only provided if the geographical reference intersects with the location of the selected area.

'Dummy' FIRs or NOTAM applicable to a whole country (radius 999) shall also be taken into account by the system if the area or route intersects with this country.

Note: For systems supporting PIB types based on the geographical reference, plausibility check of the geographical reference is recommended before NOTAM storage.

7.6 Principle structure of a PIB

A PIB (report) should be structured into the following main sections/parts and sequence:

- The PIB header:

PIB header informs about the service provider, date and time of the PIB query, PIB validity, requested PIB type and content (e.g. requested aerodromes), selection criteria/filters applied as well as any other information regarding the PIB content, special symbols used, if applicable, e.g. PIB ID.

The chosen time window must be clearly indicated in the PIB header as PIB validity, e.g.: From 10 DEC 2008 11:55 To 12 DEC 2008 06:00

For examples of a possible PIB Header refer to chapter 4 of Integrated Briefing – iPIB Guide [AIM/AEP/BRIEF/0029] available on http://www.eurocontrol.int/aim/gallery/content/public/pdf/ib_ipib.pdf

- The Aerodrome section:
 - Departure
 - Destination
 - Alternate(s) according the FPL
- The Enroute (FIR) section:
 - FIR of departure
 - FIRs in sequence of the flight
 - FIR of destination
- Additional Information (further Enroute alternates etc.).

7.6.1 NOTAM sorting

Based on the above main PIB sections further default sorting criteria apply:

- NOTAM shall be grouped inside the PIB section: Aerodrome, FIR, Additional Information.
- According to user requirements the newest NOTAM shall be given on top.
- Enroute NOTAM to be differentiated between enroute NOTAM (scope E and AE) and navigation warnings (scopes W and AW).

- The same NOTAM text should appear only once (no duplicates over different FIRs). In further FIRs, if relevant, only a reference to the NOTAM number shall be provided. The (online) system may offer a hyperlink to this NOTAM.
- On top of the default settings further sorting options shall be offered for all PIB types e.g.: sorting according to effective date, NOTAM Codes' by subject groups, by flight route, default by briefing type or user preferences etc.

7.7 PIB - specific presentation considerations

PIB sections cluster the message sub-sections (see also 7.12.2.2) which themselves contain the message groups. Messages are integrated depending on the actual PIB type e.g. a RWY NOTAM does not appear in the FIR section.

7.7.1 General layout considerations

The PIB shall be produced based on queried types of messages/elements, selected PIB type on the basis of the chosen time window, other customisation criteria and query filters applied.

In general all Items are presented in a self-explanatory form with the following exceptions:

- the Q-line which only serves as filtering feature and may be confusing for users; and
- Item A which is already present in the header and/or item E).

For the printed PIB, the pages have to be clearly indicated in the form of 'page of pages' e.g. 01/15.

If no NOTAM is valid for a requested aerodrome or FIR, the PIB would indicate 'no data available' for a requested aerodrome or FIR or area.

A 'disclaimer' section at the end of the PIB should remind of other parts of the IAIP also clearly indicating that trigger NOTAM will be listed for a period of 14 days only. Afterwards other means than the PIB will have to be used to get access to the IAIP full information.

Example: 'Permanent and long term information as well as short term information containing extensive text and/or charts are not included. Consult AIP and AIP SUP in force for this type of information. A reminder (trigger NOTAM) of such data is usually only provided in PIB for 14 days.'

'End of PIB' is to be indicated.

7.7.2 Presentation of dates/times

Dates/times shall be generally encoded, example: 8th August 2008 at 6h35 in the morning would be displayed in the PIB as: 08 AUG 2008 06:35.

7.7.3 Location Indicators

Those should be translated into plain language whenever possible. System help functions must be provided to enable flexible entry of: plain name or ICAO code or IATA code supported by search features.

Aerodromes without allocated location indicator can not be identified by Item A) of the NOTAM (country code and XX/XXX). They are stored by their plain name which is provided on the first line of Item E). Selection is in this case done by the aerodrome's plain name. System features may also allow entering a country code and XX and provide a list of available aerodromes for further selection.

7.8 Delivery of PIB

A choice of different ways or interfaces for (automatic) PIB delivery shall be provided to the customers e.g.:

- Fax
- World Wide Web
- Email
- Remote print
- Scheduled delivery for large scale customers.

7.9 PIB - additional elements to be considered

7.9.1 Provision of AIP-SUP in relation to PIB

In order to remain compliant with Annex 15 pilots need access to relevant AIP-SUP. Different means may apply and in the first instance it is the briefing officer who selects those elements for a briefing. However, considering extensive use of location independent means or selfbriefing systems, a more user friendly approach is required.

Recommendation: The system shall enable the user to select further elements such as AIP SUP.

In relation to automated systems it is to be noted that SUP do not have a structured field usable by a system which enables selective retrieval of this kind of information for a given pre-flight information bulletin.

The eAIP may be serving such a need concerning rapid and easy access enabled by hyperlinked information. However, this is only relevant if those elements are integrated through the selfbriefing system or relevant portal. On the contrary, it may be that a briefing service pre-selects specific SUP which may then be automatically annexed to PIB.

Further considerations should be given as to whether special selection features can be provided to enable an end user to access SUP directly e.g. through the inclusion of an URL in Trigger NOTAM.

7.9.2 Special areas

Special areas (incl. shooting areas) in graphical form may either be directly attached to the PIB by default or may be referred through the system via web links, trigger NOTAM or by

storing SUP in briefing systems including associated criteria such as NOTAM subject code(s) and traffic for direct inclusion in PIB if SUP selected.

7.9.3 User information

An automated PIB system shall provide at least user information on: service provision, available PIB types, default settings and explanations of selection options. Further useful information should be considered e.g. explanation of IAIP package, list of subjects (plain name) included in the available PIB types indicating the NSC qualifier purpose, list of ICAO abbreviations, NOTAM/SNOWTAM/ASHTAM explanations. For systems allowing FPL filing, other information may be of help, e.g. ICAO aircraft type abbreviation, Route Availability Document (RAD), explanations on the FPL form.

Help desk: contact details shall be provided for further enquiries and/or where relevant parts of the IAIP not contained in the briefing system may be obtained from.

7.10 Update Services

7.10.1 Notification

An immediate automatic notification service may either be offered to supplement a PIB or for the provision of specific messages. It covers messages issued since the retrieval of a PIB or since subscribing to the notification service and consists of single messages informing users directly for example about a hazard.

If a 'notification service' is available, it will provide single messages received after the initial briefing (lag time). For example a NOTAM received after the initial PIB production, which fits the filtering criteria, will automatically be forwarded via the means specified by the user. The end date/time of the notification service is based upon the initial PIB query. All underlying notification criteria (type of message, type of event, filter, scope, end of notification period etc.) must be defined by the user through an appropriate user profile. It should be possible to specify the transmission means for the notification e.g. Fax, SMS, e-mail or even data link once available.

The maximum lag time should be limited to a certain (default) number of hours and be adjustable by the user.

A typical example may be the event of a Runway closure at a defined aerodrome or a SNOWTAM published for a defined aerodrome. Automatic notification also will provide NOTAMR and NOTAMC, in the case of NOTAM being selected. They are forwarded displaying also the relevant NOTAM number of the replaced/cancelled NOTAM.

Note: The ICAO term used for 'update notification service' is 'Immediate automatic notification of items of urgent operational significance'. This term suggests a limitation to NOTAM containing purpose 'N' only and would exclude other NOTAM of operational impact. Using the more general term 'Update Services' better reflects the use of the purpose letters and allows a wider, more user friendly provision of such a customised service.

7.10.2 Update PIB

More sophisticated systems should support updates to previously requested PIBs in form of an update briefing. If 'Update PIB' is selected the user will have to specify the 'Master PIB reference' for which the update shall be generated.

Creation of an Update PIB will only be possible if:

- The same briefing system has been used for production of the Master PIB.
- the Master PIB has not been retrieved longer than a certain number of hours or days in the past (e.g. 12 hours or 1 day).
Note: The definition of hours/days will depend on storage capabilities of the Master PIB and the relevant underlying NOTAM. Considering the mass of messages published, maximum should be limited to a few days.
- the basic filter settings are unchanged (e.g. traffic, route or level bands).
- the user specifies the criteria and type of transmission inside the master PIB.

For Update briefings NOTAMR as well as NOTAMC will have to be displayed with relevant numbers of the replaced/cancelled NOTAM.

7.11 User specific Data

Modern briefing facilities are capable of providing a vast amount of information. It is essential to avoid overloading users as preparation time is limited.

This may be achieved by providing means whereby users may pre-select the type of information they receive in response to PIB query. For example, high-level wind information is not likely to be of any interest to a pilot flying VFR, whereas visibility condition information is essential.

Once set-up by a user, such settings should be maintained as part of the 'user's profile' so that this user can apply them again for any next briefing. Profiling addresses:

- Personal Information (e.g. contact details).
- Product relevant information (e.g. predefined PIB queries, sorting criteria) in the form of templates accessible at any time to the user.
- Standard message types being part of the PIB.
- Default filters applied.
- Display Format of messages and PIB structure (specific sorting of main parts e.g. AD of DEP – ENR – AD of DEST, ALTN etc.)
- Notification/Update criteria.

More detailed reference on those data may be found in chapter 5.3 of 'Integrated Briefing - Technical Concept Document' [AIM/AEP/BRIEF/0025] available at:

http://www.eurocontrol.int/aim/gallery/content/public/pdf/ib_technical.pdf

7.12 Possible Evolution of Briefing services

7.12.1 Integrated Briefing - the Concept of the 'One Stop Shop'

Integrated Briefing is a system or service fulfilling the generic Briefing process and enhancing it by integrating access to and provision of additional data elements such as AIS, ARO (FPL), MET, ATFCM or other information, as required.

Note: By providing Integrated Briefing the process will appear to the end user to function as "single entity".

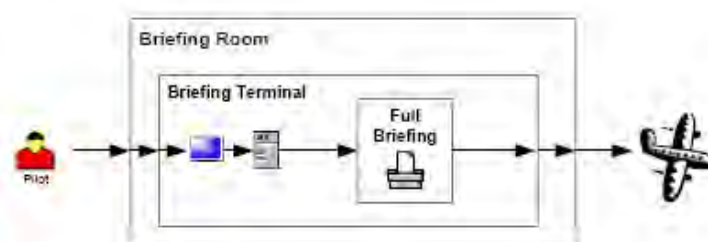
Today, the following briefing infrastructure prevails and it maybe described as 'Distributed Briefing Service':

- Facilities / services are often in different locations (offices);
- Each 'facility' has to be visited at least once;
- Time taken to visit each facility may be extensive;
- Multiple entry of flight details may lead to errors;
- Multiple (briefing) reports are complex for a user.



The ultimate future solution may be the 'Integration' of services at the system layer (portals) having the following advantages:

- Facilities / services with one application at one terminal (on-stop-shop);
- Single entry of flight details reducing the possibility of errors;
- Enabled user profiling and online services;
- Single, tailored briefing reports.



7.12.2 The following data elements should be integrated:

- AIS (NOTAM, SNOWTAM, ASHTAM, Static data elements of AIP, SUP etc.);
- ARO (flight plan and all related messages);
- MET (SIGMET, METAR, SPECI, TAF, Upper Wind and temperature, etc.);
- ATFCM (Flow messages related to the flight plan such as AIM, CRAM or flightplan updates); if update notification service or update briefing is available this would include also slot messages (SAM, SRM, FLS etc.).
- Other information such as local service notes etc.

7.12.2.1 Integrating AIS and MET messages

The different message entities are selected differently for PIB entry.

For example:

- SNOWTAM and METAR are retrieved on the basis of their existence for a specific aerodrome and are presented in the PIB section for that specified aerodrome.
- SIGMET and TAF are retrieved on the basis of their existence for a specific area or FIR and are presented in the PIB section for that specified area/FIR.
- NOTAM allow most selective retrieval, such as Area (Aerodrome and FIR), Traffic, Purpose, Scope. They also allow specific output based on message, subject or condition if required as defined by the NOTAM selection criteria.

Note: The MET data/messages required for Integrated Briefing are described in EUROCAE standards (ED151) which should be applied for system development.

7.12.2.2 Message subsections and the relevant message groups

Messages are integrated depending on the actual PIB type e.g. a METAR does not appear in the FIR section.

A user may prefer to sort subsections differently. Following default structure applies but should be customisable through user profiles.

For examples of a possible integrated PIB refer to 'Integrated Briefing – iPIB Guide' [AIM/AEP/BRIEF/0029] available on:

http://www.eurocontrol.int/aim/gallery/content/public/pdf/ib_ipib.pdf

7.12.2.2.1 MET messages:

- METAR
- SPECI
- TAF
- SIGMET
- GAMET

- AIRMET (IFR, Turbulence, Icing).

7.12.2.2.2 AIS messages:

- SNOWTAM
- ASHTAM
- NOTAM

7.12.2.2.3 ATFCM information:

- CRAM
- AIM
- ANM

7.12.2.2.4 Other information:

- Specific message text (domestic procedures, Local service notes etc.)
- Charts MET charts and AIP charts
- Etc.

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APPENDIX A1 – SYSTEM PARAMETERS

Data Definition

In order that procedures for NOTAM Creation (Chapter 2), NOTAM Processing (Chapter 0) and NOTAM storage can be performed, the associated database must contain the necessary data.

Static Data

The data usually designated by the term 'Static Data' is the Data known to the aviation world and documented in publications like AIP, e.g. FIR(s), Aerodromes, Nav aids, Areas, Maps, Rules, Subjects to which a NOTAM may be related and other aeronautical information like AIC etc.

and,

Data required to enable NOTAM creation and processing, e.g. reference lists, standard routes, distribution files, selection criteria, association criteria etc.

Dynamic Data

The data usually designated by the term 'Dynamic Data' is the data conveyed by the means of NOTAM, SNOWTAM, ASHTAM, Checklists received or coherence messages.

The list of static data which might be used for NOTAM processing is contained in Chapter 9.5 'database content' of ICAO Doc 8126 (Ref. [2]). Elements of this list will also be used for NOTAM Creation, as well as for ASHTAM and SNOWTAM.

System Parameters

NOTAM database management is governed by a certain number of system parameters.

System Parameters for Data Storage

NOTAM are stored in the database from their publication/reception until their indicated end of validity, replacement or cancellation (including. removal from the monthly checklist).

Expired, replaced or cancelled NOTAM shall no longer appear in Pre-flight Information Bulletins, nor in the checklist.

Expired, replaced or cancelled NOTAM shall remain available from the database for a period of at least 30 days after their deletion. Note that for NOTAM Processing Units this period shall be at least 60 days.

SNOWTAM and ASHTAM shall also be stored for a period of at least 30 days from their expired validity.

System Parameters for Data Archiving

When NOTAM and other Messages are no longer valid for operational database needs (e.g. Pre-flight Information Bulletin production) storage is required to comply with legal obligations.

Long-term storage is possible on various media. The duration of the storage can vary from one Administration to another, depending upon the type of data and upon national legal requirements.

It is recommended that a NOTAM Processing Unit will store NOTAM for a period of time (one to several years) to be defined, depending upon the source of information, i.e.:

- NOTAM produced by a client-NOF and retransmitted by the NPU;
- Original NOTAM received from non-client NOF;
- Processed NOTAM version from the NOTAM Processing Unit.

Processing of 'EST' NOTAM by the Publishing NOF

NOTAM that contain 'EST' in the Item C (end of validity) require an action by the Publishing NOF for their replacement or cancellation before the 'EST' time is reached.

The NOF System shall ensure that a reminder is provided before the 'estimated' end of validity, to produce a NOTAMR or a NOTAMC. Individual parameters can be installed, depending upon the type of information, and the operational possibilities of the Unit.

The following parameters are indicative, depending on the estimated validity of the NOTAM:

- up to 1 day : 6 hours before EST time
- more than 1 day and up to 1 month : 1 day before EST time
- more than 1 month and up to 3 months : 3 days before EST time

Processing of 'EST' NOTAM by a NOTAM Processing Unit

See Chapter 0.

APPENDIX A2 - GLOSSARY

ACTIVE NOTAM

A NOTAM is active between the dates and times stated in Items B) and C) subject to the time schedule in Item D).

AIRAC AIP AMENDMENT

Permanent changes to operationally significant information contained in the AIP which are published in accordance with AIRAC procedures.

AIRAC AIP SUPPLEMENT

Temporary changes to operationally significant information contained in the AIP which are published by means of special pages in accordance with AIRAC procedures.

AIRSPACE RESERVATION

Term used in the NSC to define a group of Navigation Warning activities.

AIRSPACE RESTRICTION

Any changes to the limits, structure and/or availability of airspace.

AIS MESSAGE

AFTN Message composed according to the rules in Annex 10, made up of a maximum of 1800 characters and containing a single NOTAM or an ASHTAM or a SNOWTAM or an unformatted service message inherent to AIS operative requests interchanged between NOF, originators, clients and/or NPU

AUTOMATIC PROCESSING

The processing and storing of NOTAM received from Publishing NOF without any human intervention.

CANCELLED NOTAM

A NOTAM that has been cancelled by another NOTAM before the Item C) date and time has been reached.

CFMU

Central Flow Management Unit (Europe).

CHECKLIST

A NOTAM published regularly in each NOTAM series containing a list, grouped by year, of valid NOTAM numbers promulgated in that series.

CONVERSION

Transposition of a NOTAM received in the old format into a correctly formatted ICAO NOTAM.

DATA CORRECTION

Changing data elements where these are obviously wrong.

DEFAULT VALUES

A predetermined and agreed value to be inserted in fields that need to be filled but for which a specific value could not be defined.

EAD

European AIS Database.

EDITING

Changing the Item E) wording and/or layout of a NOTAM to make it clearer or to more explicitly express ideas that are implicit in that text.

END OF VALIDITY (NOTAM Item C)

The ten figure date-time group at which the NOTAM ceases to be in force and valid.

EST

Suffix added to the ten figure date-time group in Item C) for NOTAM with an estimated date and time of end of validity.

EXPIRED NOTAM

A NOTAM whose date and time of end of validity stated in Item C) has been reached.

GEOGRAPHICAL REFERENCE

Eighth field of the NOTAM Item Q) which contains one set of co-ordinates and a radius. Associates the NOTAM with the geographical co-ordinates of a centre point and a radius (to a precision of 1 nautical mile) that defines the sphere of influence to which the NOTAM refers.

MULTI-PART NOTAM

A NOTAM exceeding the AFTN message length (normally 1800 characters) and therefore requiring more than one message.

NOF

A NOTAM Office.

NOTAM CODE

A code group containing a total of five (5) letters, always starting with 'Q', to indicate the coding of information regarding the establishment, condition or change of radio aids, aerodrome and lighting facilities, dangers to aircraft in flight, or search and rescue facilities.

NOTAM CONDITION

Defined by the 4th and 5th letters of the NOTAM Code, which decode to describe the status of the NOTAM Subject (2nd and 3rd letters of the NOTAM Code) being reported on.

NOTAM IN FORCE

A NOTAM is in force once it has reached the date stated in Item B) and has neither been cancelled nor replaced nor reached its end of validity stated in Item C).

NOTAM PROCESSING UNIT (NPU)

Any Unit that is responsible for the reception, processing and further distribution of AIS Messages to its Clients.

Note that this Unit may perform these functions for its own purposes only or may act on behalf of one or more Client.

The EAD (European AIS Database) is an example of a NOTAM Processing Unit.

NOTAM SELECTION CRITERIA (NSC)

The basis for the assignment of NOTAM Codes. The association criteria defined provide a subject related association of NOTAM with the qualifiers 'Traffic', 'Purpose' and 'Scope'.

NOTAM SUBJECT

Defined by the 2nd and 3rd letters of the NOTAM Code, which decode to identify the facility, service or hazard being reported upon.

NOTAM SUB-NUMBER

In the case of Multi-part NOTAM, a 3-character group placed immediately behind the year of the number/year combination and composed of one letter and a number consisting of 2 digits.

NPU

See 'NOTAM PROCESSING UNIT'.

NPU CLIENT

Any organisation which has subscribed to the services provided by a NOTAM Processing Unit.

NSC

See 'NOTAM SELECTION CRITERIA'.

OPERATIONAL SIGNIFICANCE

Information essential for the safe and efficient conduct of a flight.

ORIGINAL NOTAM

A NOTAM as received by the NOTAM Processing Unit.

PROCESSING

The examination of NOTAM received from Publishing NOF in order to verify suitability for acceptance into an automated AIS system; undertaking conversion, translation, syntax correction, data correction, editing and/or summarising as required.

PUBLISHING NOF

The NOF (NOTAM Office) or non-governmental agency responsible for the creation of the original NOTAM.

QUALIFIER LINE (NOTAM Item Q).

This Item is divided into eight fields, each separated by a stroke, and contains the necessary qualifiers to facilitate data retrieval.

RADIUS

A three digit figure in Nautical Miles to be used in Item Q) that, together with the co-ordinates, defines a circle which encompasses the whole area of influence of the NOTAM.

REPLACED NOTAM

A NOTAM that has been replaced by another NOTAM before the Item C) date and time has been reached.

SUMMARISING

Reducing text in order to make it more readable in a Pre-flight Information Bulletin (PIB).

SUPRA-NATIONAL INFORMATION

Information concerning an activity or condition which affects the airspace/FIR of two or more States.

SYNTAX CORRECTION

Changing the published format structure of the NOTAM where these are obviously wrong.

START OF ACTIVITY

The ten figure date-time group indicating the date and the time at which the NOTAM comes in force.

START OF VALIDITY

The date and time at which the NOTAM message is published or issued.

TRANSLATION

Rendering the text of a NOTAM originated in French or Spanish, into the English language, while maintaining the original sense of the text.

TRIGGER NOTAM

A NOTAM alerting recipients and PIB users of the existence and subject content of AIP Amendments and Supplements.

VALID NOTAM

A NOTAM which has been published and has not yet reached the end of its validity and has neither been cancelled nor replaced.

- End of Document -



AIRSERVICES AUSTRALIA

The aim is “AIM”

The AIM Roadmap

The Mercury Project



MERCURY

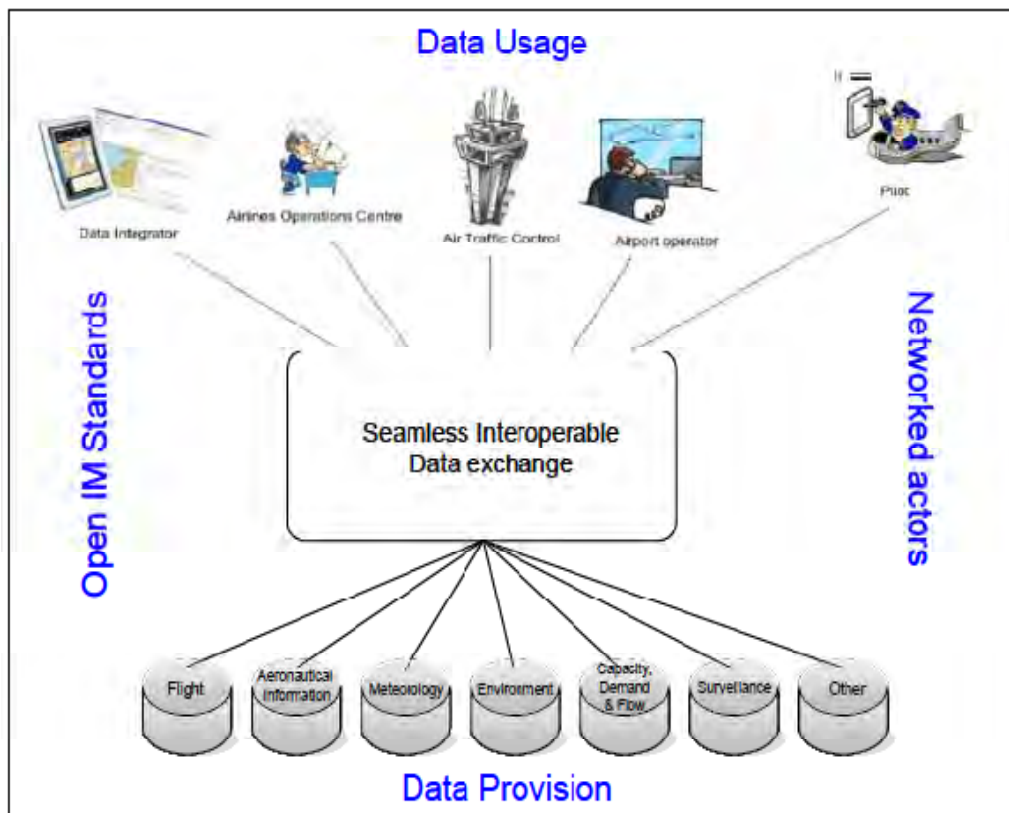
Strategic Context

Implementation Strategies

ICAO Global ATM Operational Concept

↑ Key enabler of the GATMOC

S.W.I.M – System Wide Information Management



APPLICATIONS

- Represents the User side of **SWIM**;
- Collaborative sharing of information through **partners in the community**;
- Providing access to available, quality assured, timely and standardised information;
- Will evolve to include more complex collaborations across the whole ATM business chain

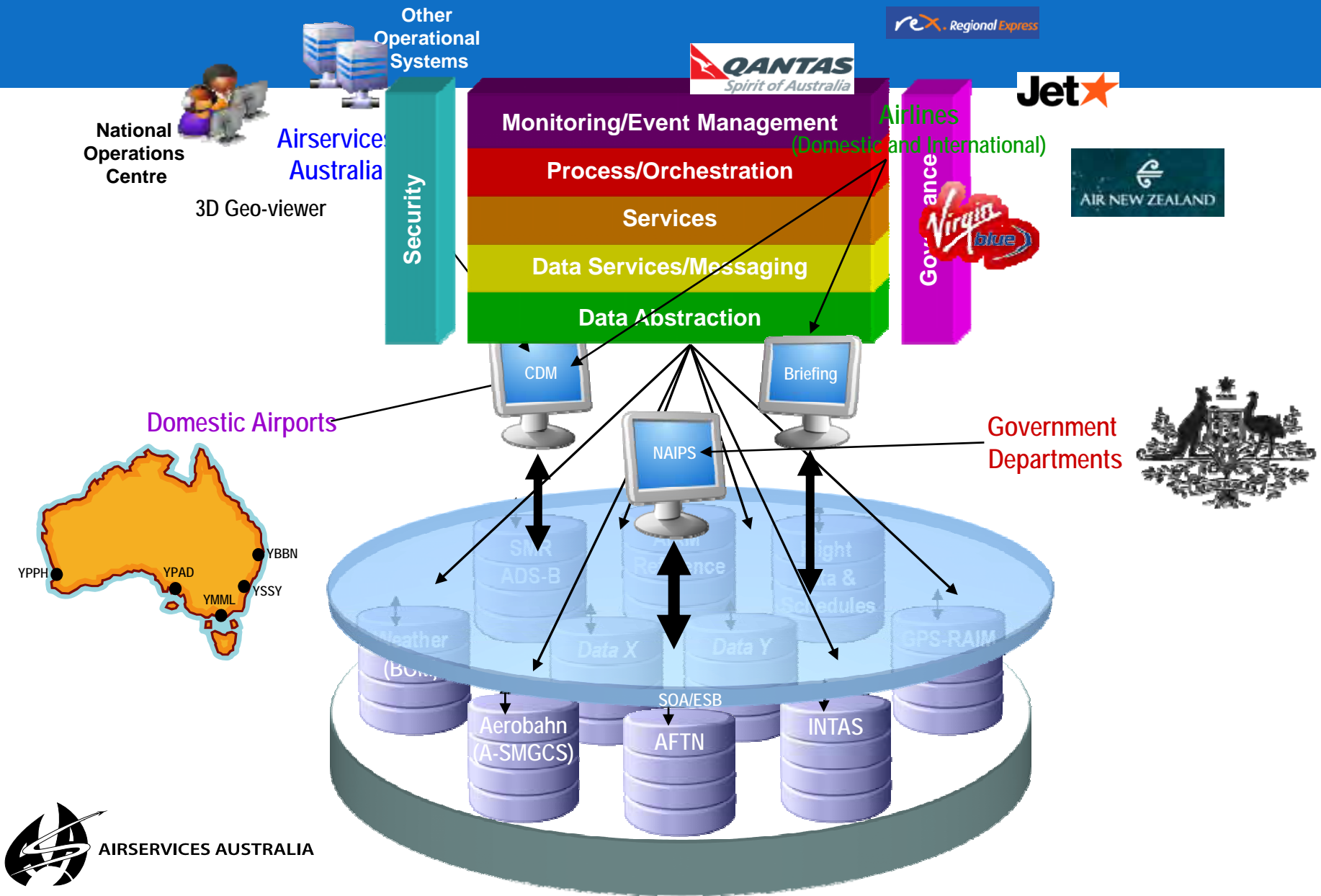
INFORMATION

- International information management and exchange standards (e.g. **AIXM**);
- New technologies to deliver the distribution, quality, maintenance, management and security objectives;
- Facilitating the exchange and sharing of information within a **community of interest**, and between communities, and independent of the underlying communication infrastructure;

INFRASTRUCTURE

- Deals mainly with the connectivity aspects;
- Will be based on a "Services Oriented Architecture (SOA)" to facilitate open interoperability between systems and users;

Strategic Context - Airservices Australia - SWIM



Strategic Context



ICAO Global ATM Operational Concept

↑ Key enabler of the GATMOC

S.W.I.M – System Wide Information Management

↑ Key enabler of SWIM

AIM – Aeronautical Information Management

What is AIM

The dynamic, integrated management of aeronautical information services – safely, economically and efficiently, through the provision and exchange of quality assured digital aeronautical data in collaboration with all parties;

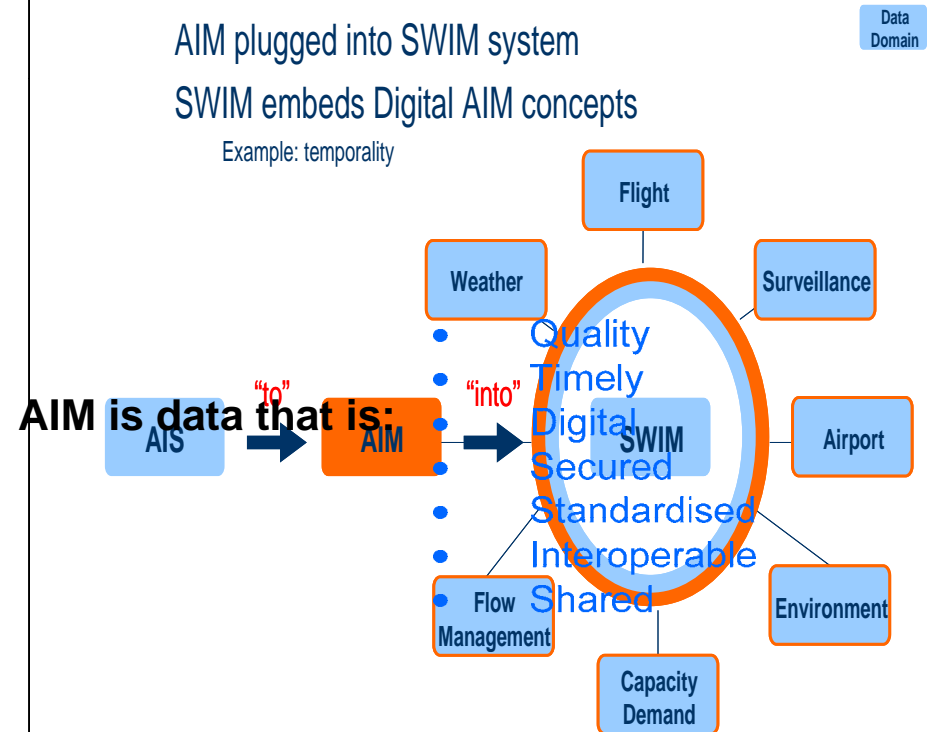
(source ICAO AISAIM Study Group)

Transition to SWIM
The AIM perspective

AIM plugged into SWIM system

SWIM embeds Digital AIM concepts

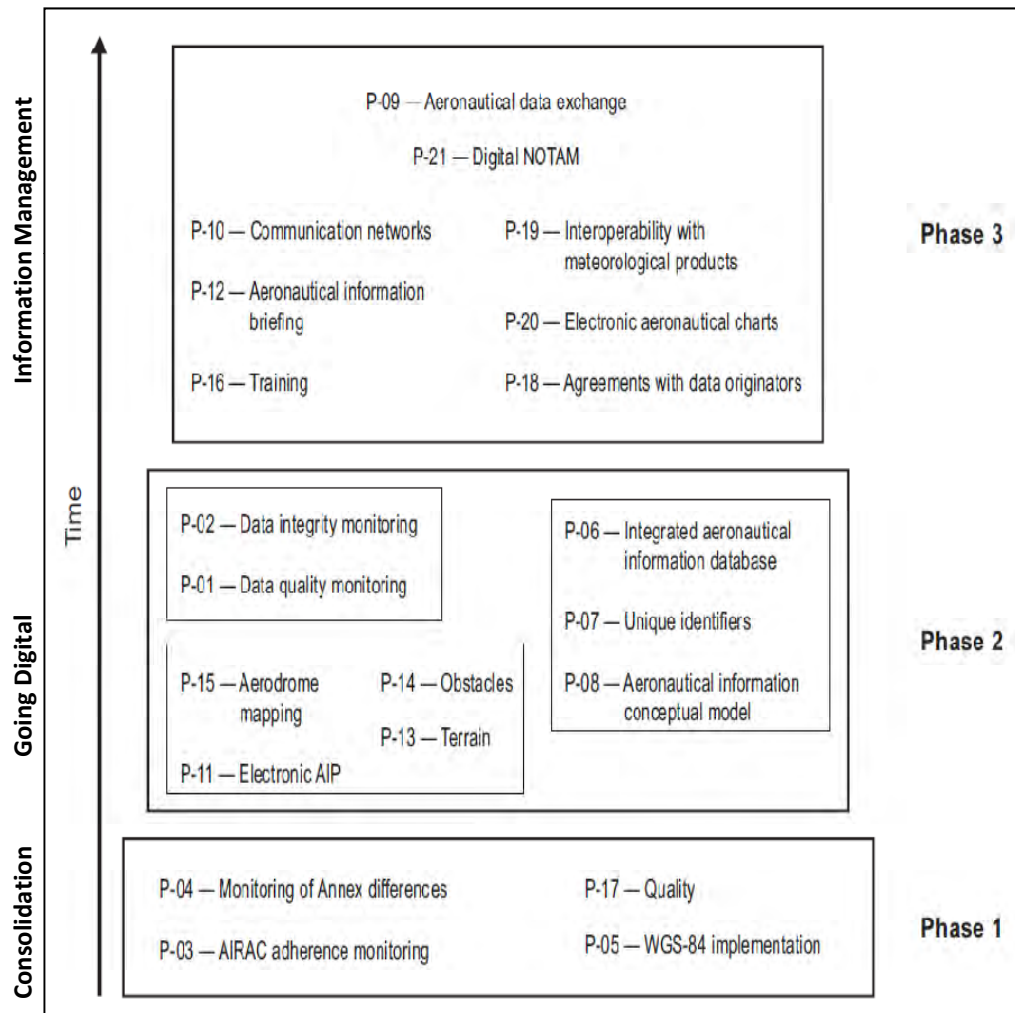
Example: temporality



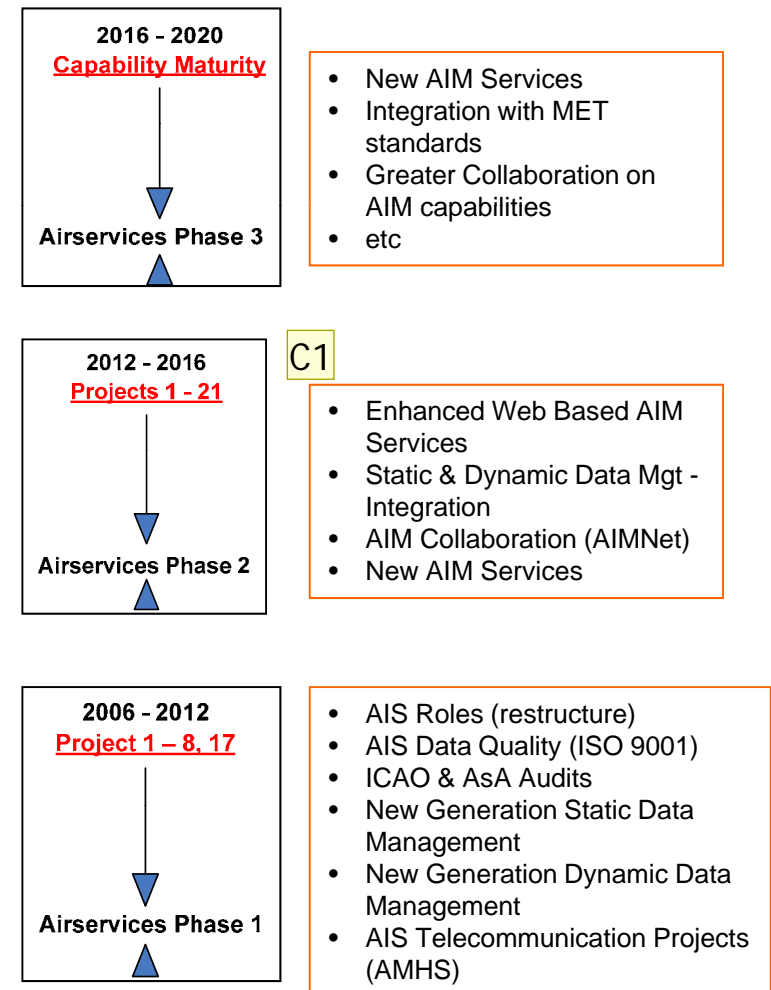
Strategic Context



ICAO's AIS-AIM Transition Strategy



Airservices AIM Strategy Timeline



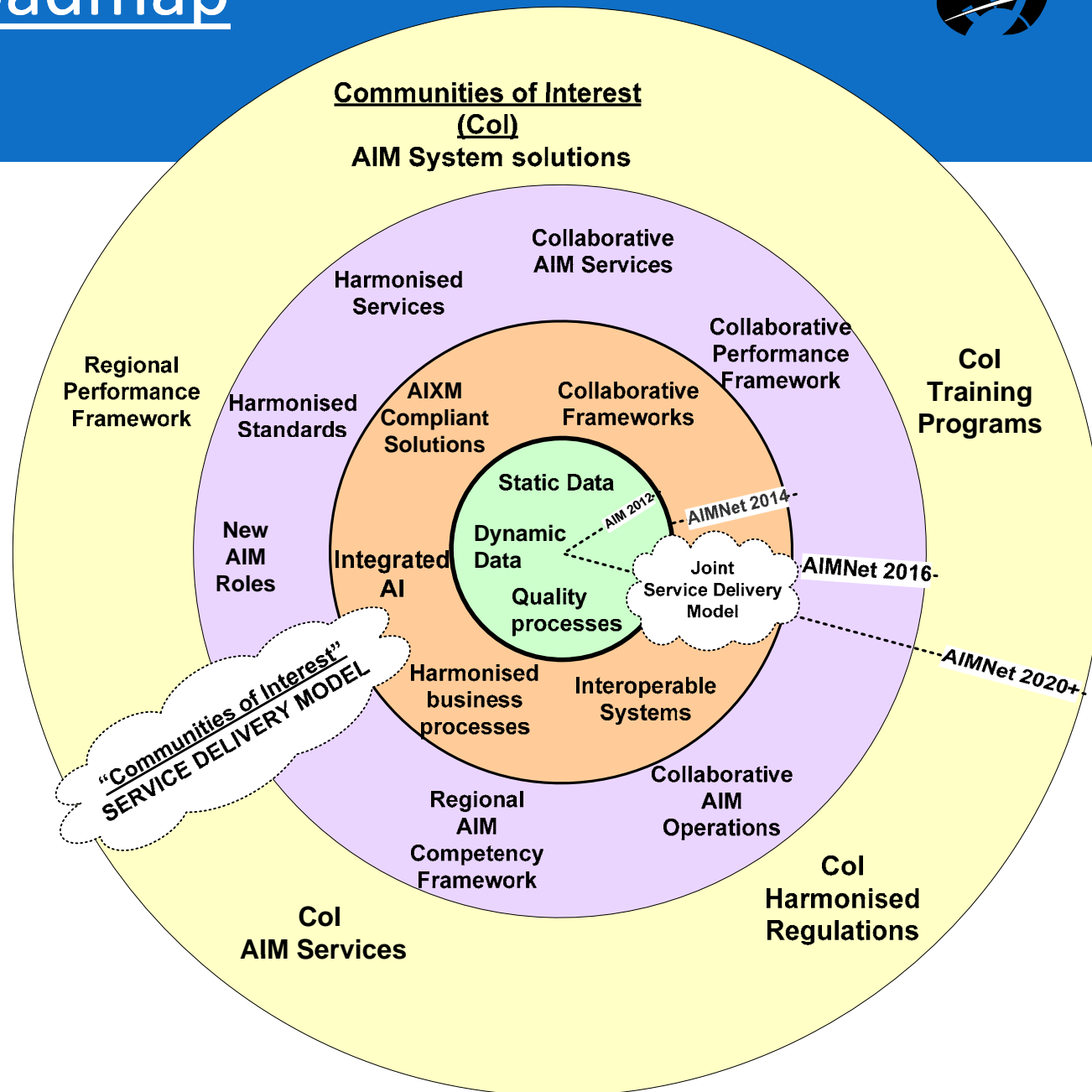
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C1

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COGAN_JM, 6/22/2010

AIM Roadmap



Mercury Project



- 1. What is the Mercury Project?**
- 2. What will be implemented?**
- 3. Key challenge areas.**
- 4. Implementation schedule.**
- 5. Implementation considerations.**
- 6. AIM considerations**



Mercury Project



What is the Mercury Project?

The Mercury Vision

As a foundation enabler of the “System Wide Information Management” objective, Mercury provides an Aeronautical Information Management (AIM) capability in which quality assured data is managed in a digital form, and exchanged in accordance with international standards for aeronautical information (AIXM).

As an integrated AIM system, Mercury shall provide greater automation and flexibility to the design, capture, management, storage, compilation and distribution of AIM products and services. In summary, Mercury will enable the provision of information services in a secure, timely, and flexible way, ensuring Airservices Australia’s ability to adapt and respond to the changing needs of the aviation industry.

Mercury Project



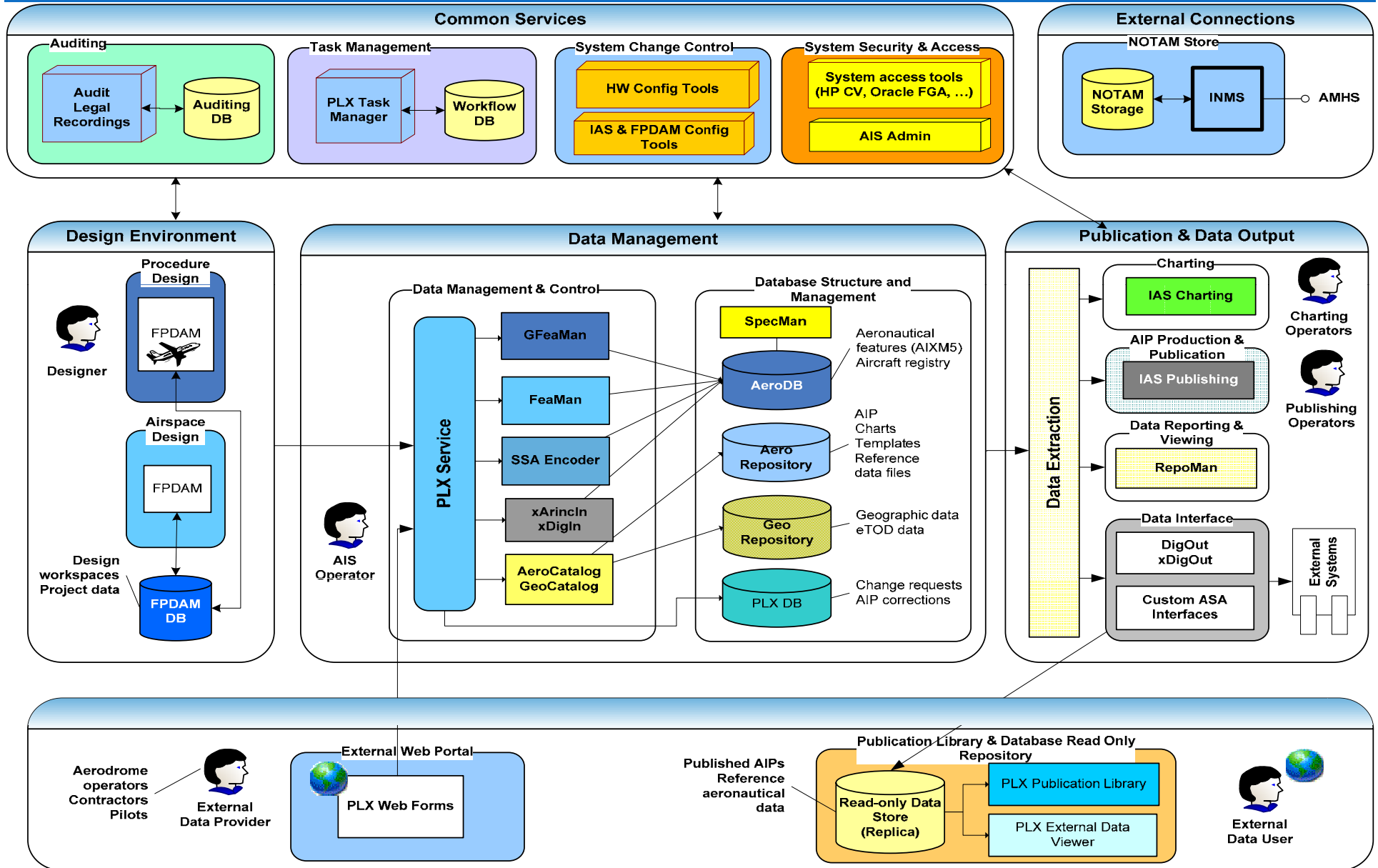
What will be implemented?

The Mercury System will deliver:

- A single data repository for managing static aeronautical data (AIXM v5.1), which includes:
 - Integrated system management & control functions (security, auditing, etc)
 - Flexible data specification tools
 - Flexible work flow & task management tools
 - Geospatial & eTOD management tools
 - Reporting tools
- Advanced design and publication tools for:
 - AIP
 - Charting
 - Procedure Design
 - Airspace Design
- A Publication library for managing *Published AIPs*
- A web-based data entry tool for external data originators to enter a configurable set of data (PLX)

Mercury Project

What will be implemented?



Mercury Project

Key challenge areas



Challenge Area	Issue	Description	Strategies
Resources	Scope of skills	<ul style="list-style-type: none">• Range of AIS disciplines being addressed (Procedure Design, Airspace Design, Charting, Data Mgt, etc)• Specialised Subject Matter Experts (SMEs) required• Big project – lots of support staff required	<ul style="list-style-type: none">• Plan ahead• Increase staffing levels in preparation• Gain commitment from AIS team on SME availability• Business liaison representative
	Availability	<ul style="list-style-type: none">• Consistency of team (Project Manager, Commercial Advisors, etc)• Facilities	<ul style="list-style-type: none">• Plan / manage risk• Backup staff• Consult – look for opportunities
Statement of Requirements	Changing today's processes	<ul style="list-style-type: none">• Next Generation, not like for like (digital data management)!	<ul style="list-style-type: none">• Don't rely on what we do today• Research, consult, imagine
	Complexity	<ul style="list-style-type: none">• Large, detailed set of requirements• Multiple specialisation areas• Move towards automation of functions and processes	<ul style="list-style-type: none">• Form a cohesive, collaborative Project Team• Regular communication / SME involvement• Review, review, review

Mercury Project

Key challenge areas



Challenge Area	Issue	Description	Strategies
Tender	SME input	<ul style="list-style-type: none">• Level of involvement• Communication	<ul style="list-style-type: none">• Ensure resources and time are allowed for this activity (don't leave it too late!)
	Timing	<ul style="list-style-type: none">• Period of evaluation – and its impact on resource availability	<ul style="list-style-type: none">• Plan, plan, plan• Don't underestimate time required• Negotiate early for extensions
Solution design	SOE versus Thin Client	<ul style="list-style-type: none">• Untried but attractive	<ul style="list-style-type: none">• Ensure you have alternative strategies and make the vendor responsible for proving it can work
	SOE change during implementation (Windows 7)	<ul style="list-style-type: none">• Change not anticipated	<ul style="list-style-type: none">• Identify all project dependencies and ensure you are aware of all planned configuration changes• Ensure vendor can accommodate change
Enterprise Architecture	Lack of a clear EA strategy	<ul style="list-style-type: none">• Unable to define specific requirements• EA must now encompass Mercury design	<ul style="list-style-type: none">• Ensure you have a clear EA strategy and a defined set of requirements to deliver SWIM
RAAF Synergies	Requirement timing	<ul style="list-style-type: none">• Alignment of strategies	<ul style="list-style-type: none">• Early consultation with the military• Ongoing involvement• Relationship management

Mercury Project

Implementation Schedule



Project Milestones

Milestone Description	Est. Delivery
Effective Date	ED
Early Implementation of Procedure Design Tools (FPDAM)	ED+3M
Design Activities Complete	ED+5M
End of Training for early implementation of FPDAM	ED+7M
Pre-Factory Acceptance Testing (PFAT), Early Charting – Delivery, Development of Business and Process Rules	ED+8M
Data Conversion Control	ED+11M
Early Charting – End of Training	ED+12M
FAT Complete	ED+13M
Installation Complete	ED+14M
System Setup and Configuration Completion for SAT	ED+15M
Early FPDAM – Data Encoding and Commissioning, SAT Complete	ED+18M
Disaster Recovery Test	ED+20M
Training Complete	ED+21M
Commissioning and System acceptance, Final acceptance review	ED+24M

Mercury Project

Implementation Considerations



Challenge Area	Issue	Description
Resources	Availability	<ul style="list-style-type: none"> • SME availability against key activities (peaks and troughs) • Facilities (resources provided by supplier)
Data Mapping	Fragmentation of data	<ul style="list-style-type: none"> • Disparate data sources (charts, designs, excel spreadsheets etc)
	Complex issues to resolve	<ul style="list-style-type: none"> • Certain data conversion issues are very complex and difficult to resolve
	Configuration Management	<ul style="list-style-type: none"> • Freezing changes made to legacy system (i.e. structural)
Data Migration	Validation	<ul style="list-style-type: none"> • Comprehensiveness • Time consuming • Resource intensive
	Timing	<ul style="list-style-type: none"> • Alignment with AIRAC cycles • Maintain Service Delivery / Business Continuity
Testing	Comprehensiveness	<ul style="list-style-type: none"> • Part COTS / part customised • Test all functions that have an impact on Safety • Finding the right balance
Communication	Stakeholder	<ul style="list-style-type: none"> • Project, issues, risks, milestones, progress, etc
Supplier	Partnership	<ul style="list-style-type: none"> • This is a collaboration / alliance

AIM Considerations

Two arguments to support the AIM decision

1. Operational Efficiencies

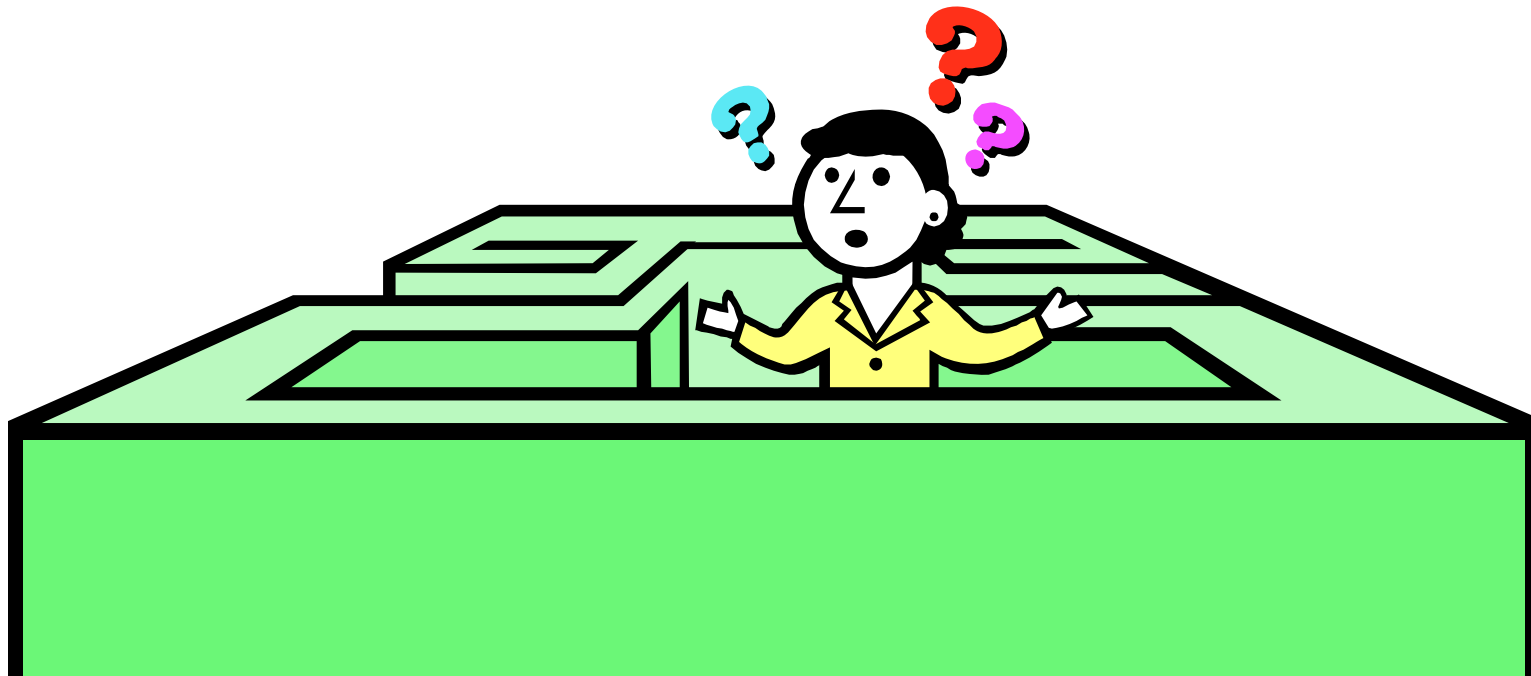
- Automation and Self-Service capabilities
- Rationalisation of functions – improved job satisfaction
- Customer satisfaction
- Cost effective services

2. Interoperability

- Seamless Skies objective
- Interoperability between business groups, systems, industries, organisations, countries and regions



Questions?



AAITF TASK LIST

(Last updated February 2009)

	ACTION ITEM	TIME FRAME	RESPONSIBLE PARTY	Status	REMARKS
1.	Prepare a working/information paper to examine AIRAC system adherence in India	AAITF/5	India	Open	Raised at AITF/3
2.	Report on the outcome of the AIS-AIM Study Group	AAITF/5	China/Japan	Ongoing	Raised at AAITF/4
3	Provide an update on its AIS automation project Mercury and also inform the Task Force regarding collaboration with other States that may have emerged	AAITF/5	Australia	Completed	Raised at AAITF/4
4	Lead further discussion and research regarding AIRAC time in Asia and Pacific Regions	AAITF/5	Chairman	Completed	Raised at AAITF/4
5	Prepare PFF for the AAITF		Chairman	Open	
6	Prepare monitoring framework to track the States progress for the implementation of AIM	AAITF/6	Australia, ROK	Open	