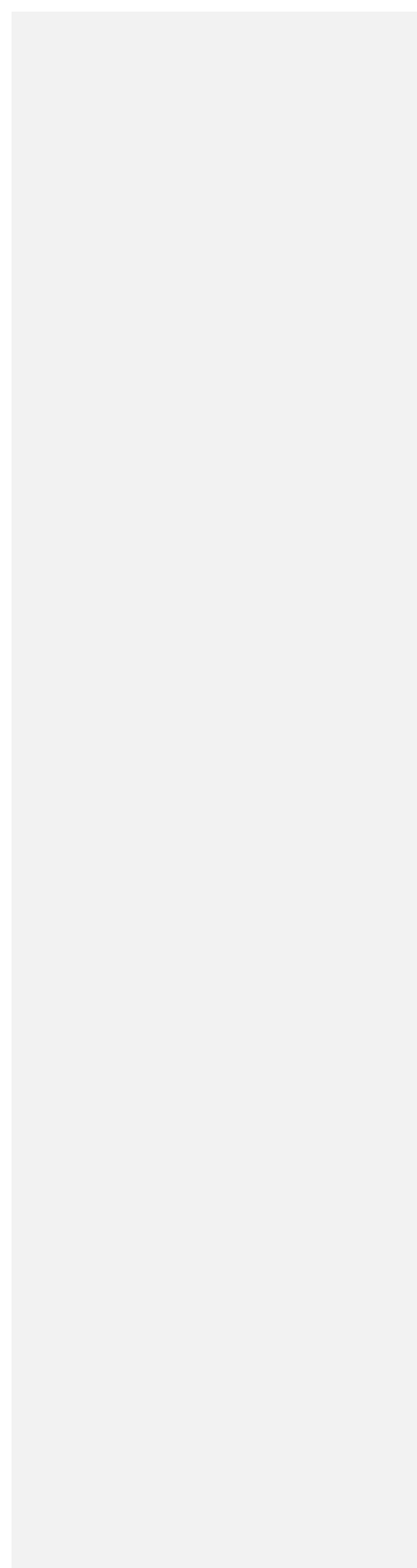




# Pan Regional Interface Control Document for Oceanic ATS Interfacility Data Communications (PAN ICD)

Coordination Draft  
Version 0.4 — November, 2011

Sponsored by the North Atlantic Systems Planning Group (NAT SPG) and  
Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG)



### Amendments to the PAN ICD

The following table will be used to track updates to the PAN ICD by the Ad Hoc Working Group. This document contains procedures material from the *Asia/Pacific Regional ICD for AIDC* and the *North Atlantic Common Coordination ICD*. The working method was to port material from both documents with differences between the two original documents highlighted as follows:

*Procedures material from the Asia/Pacific Regional ICD for AIDC is highlighted in green.*

*Procedures material from the North Atlantic Common Coordination ICD is highlighted in blue.*

*Procedures material from the NAT CC ICD new version 1.2.9 is highlighted in yellow*

*Procedures material from the NAT CC ICD new version 1.3.0 is highlighted in pink*

*Procedures material contained in both the NAT ICD and APAC ICD is not highlighted.*

Amendment	Source	Subject(s)	Date
0.1		Not used	
0.2	Pre-PAN ICD	Annotated outline incorporated into document structure	May 2010
0.3	PAN ICD	The draft document at this stage is focused on populating the outline with relevant material. Document style, formatting, and presentation of material are still to be considered.	20-Oct-10
0.4	PAN ICD	<u>Comments inserted from v0.3 comment forms</u> <u>Changes inserted from NAT CC ICD new v1.2.9 to reflect editorial changes and corrections</u> <u>Changes inserted from NAT CC ICD new v1.3.0 to reflect changes specified in Amendment 1, effective 15 Nov 2012, to the ICAO Doc 4444 Procedures for Air Navigation Services-Air Traffic Management, Fifteenth Edition</u>	<u>Nov 2011</u>

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### AMENDMENTS

The issue of amendments is announced by the ICAO Regional Offices concerned, which holders of this publication should consult. The space below is provided to keep a record of such amendments.

#### RECORD OF AMENDMENTS AND CORRIGENDA

No.	Date Applicable	Date Entered	Entered By	Description of Change

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Procedures material from the North Atlantic Common Coordination ICD is highlighted in blue.  
Procedures material contained in both the NAT ICD and APAC ICD is not highlighted.

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## FOREWORD.

### 1. Historical background

1.1 The *Pan Regional Interface Control Document* (PAN ICD) for Oceanic ATS Interfacility Data Communications (AIDC) is the result of the progressive evolution of the *Asia/Pacific Regional ICD for AIDC*, issued by the ICAO Asia/Pacific Regional Office on behalf of the Asia Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG), and the *North Atlantic Common Coordination ICD*, published by the ICAO European and North Atlantic Office, on behalf of the North Atlantic Systems Planning Group (NAT SPG).

1.2 Each of the two founding documents provided guidance on a regional basis. However, in recognition of the need to provide globally harmonized guidance, the PAN ICD became effective on [date].

1.3 This edition provides for a consolidation of the founding documents which includes material from each of the regional documents taking into account lessons learned, global implications and guidance on more recent initiatives.

### 2. Scope

2.1 This document specifies the facilities and messages to be used within the *Asia/Pacific (APAC)* and *North Atlantic (NAT)* regions for the exchange notification, coordination, transfer and related data between automated air traffic service (ATS) systems.

2.2 The messages defined in this document are used during the various stages of the flight. Though outside the scope of the AIDC application, the Emergency Flight Planning and Supplementary Message Categories as defined in ICAO Doc 4444 Appendix 3 will continue to be used to perform functions not provided by the AIDC application.

2.3 In particular, the Flight Planning function is required and will be required in the future to support operations within the APAC and NAT Regions. The ICAO messages FPL (Filed Flight Plan), CHG (Modification), DLA (Delay), DEP (Departure), ARR (Arrival), CNL (Cancel) and RQP (Request Flight Plan) will be used to support this function.

2.4 There is a great need for a communications and data interchange infrastructure to significantly reduce the need for verbal coordination between Oceanic Area Control Centres. AIDC standards, as defined in this document, provide a harmonised means for data interchange between ATS units during the notification, coordination, and transfer of control phases of operations.

2.5 The message sets and procedures described in the ICD have been designed for use with the existing Aeronautical Fixed Telecommunications Network (AFTN) and the future Aeronautical Telecommunication Network (ATN). In the interest of global standardisation, ICAO agreed methods and messages were used wherever possible. Where ICAO methods and messages do not meet requirements, new messages were identified using existing ICAO field definitions to the extent possible. Specifically, the ICD defines the following:

- a) Basic communications and support required to coordinate implementation of AIDC throughout the *ASIA-PACAPAC* and NAT Regions; Basic communications and support mechanisms required to

Comment [ATO2]: NEW TEXT

Comment [ATO3]: APAC ICD, PART I, PARA 2.1

Comment [ATO4]: APAC ICD, PART I, PARA 2.2

Comment [ATO5]: APAC ICD, PART I, PARA 2.3

Comment [ATO6]: APAC ICD, EXECUTIVE SUMMARY, PARA 0.3

Comment [ATO7]: APAC ICD, EXECUTIVE SUMMARY, PARA 0.4

Comment [ATO8]: APAC ICD, EXECUTIVE SUMMARY, PARA 0.4(a)

Comment [ATO9]: NAT ICD EXECUTIVE SUMMARY, PARA 3

## PAN ICD

underpin the coordinated implementation of on-line data interchange throughout the ~~North Atlantic~~~~NAT~~ and ~~Asia-Pacific~~~~APAC~~ Regions;

- b) Common boundary agreements between all the area/oceanic control centres concerned;
- c) Implementation guidance material;
- d) NAT/EUR ATS interface messages; and
- e) Relationship to the ICAO OPLINKP (formerly the ADS Panel) AIDC message set. Relationship to the ICAO ADS Panel AIDC message set.

2.6 The ICD also describes a configuration management process which will ensure stability in the design and implementation of the messages described herein. As agreed, this process is applicable and adopted by ~~Asia-Pacific~~~~APAC~~ and ~~North Atlantic~~~~NAT~~ Provider States along with the ICD guidance material. Finally, in order to ensure stability in the design and implementation of the messages listed herein, a configuration management process has been agreed to which is applicable to all ~~North Atlantic~~~~NAT~~ and ~~Asia-Pacific~~~~APAC~~ Provider States.

### 3. Document amendment

3.1 This ICD is under configuration control and is administered by the ICAO European and NAT Regional Office and the ICAO APAC Regional Office.

3.2 Changes to the document shall only be made as a result of agreement by all States in the Region. The ICAO regional office will coordinate the change proposal within its own region, other regions, and ICAO HQ, to determine the acceptability of the change proposal. Once the ICAO regional office has completed coordination and the participating PIRGs accept the change proposal, the change is concluded by each of the PIRGs.

Comment [ATO10]: NAT ICD, EXECUTIVE SUMMARY, PARA 3, APAC ICD, EXECUTIVE SUMMARY, PARA 0.4(b)

Comment [ATO11]: NAT ICD, EXECUTIVE SUMMARY, PARA 3, APAC ICD, EXECUTIVE SUMMARY, PARA 0.4(c)

Comment [ATO12]: NAT ICD, EXECUTIVE SUMMARY, PARA 3

Comment [ATO13]: APAC ICD, EXECUTIVE SUMMARY, PARA 0.4(d)

Comment [ATO14]: NAT ICD, EXECUTIVE SUMMARY, PARA 3

Comment [ATO15]: APAC ICD, EXECUTIVE SUMMARY, PARA 0.5

Comment [ATO16]: NAT ICD, EXECUTIVE SUMMARY, PARA 4

Comment [ATO17]: NEW TEXT

### Amendments to the PAN ICD

Amendment	Source(s)	Subject(s)	Approved applicable
1 <sup>st</sup> Edition ([date])	Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/ – [year]) North Atlantic Systems Planning Group (NAT SPG/ – [year])	<i>Pan Regional ICD</i> (PAN ICD)	Applicable within participating Regions on [date].



**Chapter 1. List of Acronyms**

When the following acronyms are used in the present document they have the following meanings.

**Acronym**

**ABI.** Advance Boundary Information (AIDC message)

**ACARS.** Aircraft Communication Addressing and Reporting System.

**ACC.** Area Control Centre

**ACI.** Area of Common Interest

**ACP.** Acceptance (AIDC message)

**ADS.** Automatic Dependent Surveillance

**ADS-B.** Automatic Dependent Surveillance – Broadcast

**ADS-C.** Automatic Dependent Surveillance – Contract

**AFN.** ATS Facilities Notification

**AFTN.** Aeronautical Fixed Telecommunications Network

**AIDC.** ATS Inter facility Data Communications

**AOC.** Airline Operational Control (also stands for Assumption of Control)

**AMHS.** ATS Message Handling System

**APANPIRG.** Asia Pacific Air Navigation Planning and Implementation Regional Group

**ARINC.** Aeronautical Radio Inc.

**ARTCC.** Air Route Traffic Control Center

**ASIA/PAC.** Asia/Pacific

**ASM.** Application Status Monitor (AIDC message)

**ATC.** Air Traffic Control

**ATFM.** Air Traffic Flow Management

**ATSC.** Air Traffic Service Center

**ATM.** Air Traffic Management

**Comment [ATO18]:** APAC ICD, CHAPTER 2, PARA 2.5, LIST OF ACRONYMS – NAT ICD, LIST OF ACRONYMS  
*Procedures material from the Asia/Pacific Regional ICD for AIDC is highlighted in green.*  
*Procedures material from the North Atlantic Common Coordination ICD is highlighted in blue.*  
*Procedures material contained in both the NAT ICD and APAC ICD is not highlighted.*

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**Acronym**

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**ATMOC.** Air Traffic Management Operations Center

**ATN.** Aeronautical Telecommunications Network

**ATS.** Air Traffic Services

**ATSU.** Air Traffic Service Unit

**CADAG.** Communications, Automation, and Data Link Applications Group

**COMAG.** Communications and Automation Group

**C-ATSU.** Controlling ATSU

**CDN.** Coordination (AIDC message)

**CHG.** ICAO Modification Message

**CPDLC.** Controller Pilot Data Link Communications

**CPL.** Current Flight Plan (AIDC message)

**CRC.** Cyclic Redundancy ~~Check~~ Check

**D-ATSU.** Downstream ATSU

**DIA.** Coordination Dialogue

**EMG.** Emergency (AIDC message)

**EST.** Coordination Estimate (AIDC message)

**ETX.** End of Text

**FAN.** FANS Application Message (AIDC message)

**FANS.** (also FANS-1/A) Future Air Navigation System

**FCN.** FANS Completion Notification (AIDC message)

**FCO.** Facilities Notification Contact

**FDPS.** Flight Data Processing System

**FI.** Flight Identifier

**FIC.** Flight Information Centre

## Acronym

**FIR.** Flight Identification Region

**FMC.** Flight Management Computer

**FMD.** Flight Management Computer (Selected)

**FMH.** Facilities Notification Message Header

**FML.** Flight Management Computer (Left)

**FMR.** Flight Management Computer (Right)

**FN CAD.** Contact Advisory

**FPL.** Filed Flight Plan

**FPPS.** Flight Plan Processing System

**FPO.** Facilities Notification Current Position

**GOLD.** Global Operational Data Link Document

**IA-5.** International Alphabet 5

**ICAO.** International Civil Aviation Organization

**ICD.** Interface Control Document

**IGM.** Implementation Guidance Material

**IMI.** Imbedded Message Identifier

**LAM.** Logical Acknowledgement Message (AIDC message)

**LOA.** Letter of Agreement

**LRM.** Logical Rejection Message (AIDC message)

**MAC.** Coordination Cancellation (AIDC message)

**MIS.** Miscellaneous (AIDC message)

**MLF.** Master List of Fixes

**MTI.** Message Type Identifier

**NAT.** North Atlantic

Comment [ATO19]: NEW TEXT. ICAO GLOBAL OPERATIONAL DATA LINK DOCUMENT (GOLD), EDITION 1.0

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**Acronym**

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**NAT SPG.** North Atlantic Systems Planning Group

**NAT ID.** North Atlantic Implementation Document

**NDA.** Next Data Authority (CPDLC message); or Next Data Authority (Next unit that will communicate with the aircraft using CPDLC)

**OAC.** Oceanic Area Control Centre

**OCS.** Oceanic Control System

**ODF.** Optional Data Field

**OLDI.** On-Line Data Interchange

**OPLINKP.** Operational Data Link Panel

**OSI.** Open System Inter-connection

**PAC.** Pre-activation (AIDC message)

**PANS-ATM.** Procedures for Air Navigation Services – Air Traffic Management

**REJ.** Rejection (AIDC message)

**R-ATSU.** Receiving ATSU

**RNP.** Required Navigation Performance

**SARPs.** Standards and Recommended Practices

**SITA.** Societe Internationale de Telecommunications Aeronautiques

**SMI.** Standard Message Identifier

**SOH.** Start of Header

**SOTA.** Shannon Oceanic Transition Area

**STX.** Start of Text

**TCP.** Transfer of Control Point

**TDM.** Track Definition Message (AIDC message)

**TEI.** Text Element Identifier



**Acronym**

---

**TOC.** Transfer of Control (AIDC message)

**TRU.** Track Update (AIDC message)

**UTC.** Universal Coordinated Time

**VSP.** Variable System Parameter

**WGS/84.** World Geodetic System 1984

## Chapter 2. Purpose, Policy and Units of Measurement

### 2.1 Purpose

2.11 The purpose of the ICD is to ensure that data interchange between units equipped with automated ATS systems used for air traffic management (ATM) is to a common base standard, and that the evolutionary development is coordinated and implemented through the APANPIRG and the NAT SPG. Therefore, the PAN ICD was developed to preserve the common base standard set out in the Automatic Dependent Surveillance (ADS) Panel Guidance Material, while allowing for regional differences as required. It also provides a description of the message types and methods of communication.

2.12 In the context of this document, the definition of AIDC is as follows:

2.12.1 The AIDC application supports information exchanges between ATC application processes within automated ATS systems located at different ATSUs. This application supports the Notification, Coordination, and the Transfer of Communications and Control functions between these ATSUs.

2.12.2 In the interest of global standardization, ICAO agreed methods and messages are used wherever possible. Where ICAO methods and messages do not meet requirements, new messages were identified using existing ICAO field definitions to the extent possible.

2.13 In the context of this document, the definition of OLDI is as follows:

2.13.1 The reception and transmission of ATS data and messages required to ensure the integrity of FDPS/FPPS data bases.

2.14 This document specifies the facilities and messages to be used for the exchange of notification, coordination, transfer and related data between automated ATS systems.

2.15 The messages defined in this document are used during the active phase of flight. Though outside the scope of the AIDC application, the Emergency, Flight Planning and Supplementary Message Categories as defined in ICAO *Procedures for Air Navigation Services – Air Traffic Management* (PANS-ATM) Appendix 3 will continue to be used to perform functions not provided by the AIDC application.

2.16 In particular, the Flight Planning function is required and will be required in the future to support operations. The ICAO messages FPL (Filed Flight Plan), CHG (Modification), DLA (Delay), DEP (Departure), ARR (Arrival), CNL (Cancel) and RQP (Request Flight Plan) will be used to support this function.

### 2.2 Policy

2.21 The application of AIDC and OLDI shall be based on a step-by-step data distribution scheme comprising three (3) phases: NOTIFICATION, COORDINATION and TRANSFER OF CONTROL. In support of all the operational phases, application management messages are required to support application level dialogue between automated ATS systems.

2.21.1 The Advance Boundary Information (ABI) message shall normally be used for notification, subject to bi-lateral agreement.

Comment [ATO20]: APAC ICD, PART I - NAT ICD, PART I

Comment [ATO21]: APAC ICD, PART I, PARA 1 - NAT ICD, PART I, PARA 1

Comment [ATO22]: APAC ICD, EXECUTIVE SUMMARY, PARA 0.2 – NAT ICD PART I, PARA 1.1

Comment [ATO23]: APAC ICD, PART I, PARA 1.2

Comment [r24]: APAC ICD, PART I, PARA 1.2

Comment [ATO25]: APAC ICD, PART I, PARA 1.3

Comment [ATO26]: NAT ICD, PART I, PARA 1.2

Comment [ATO27]: NAT ICD, PART I, PARA 1.2

Comment [r28]: APAC ICD, PART I, PARA 2.1

Comment [r29]: APAC ICD, PART I, PARA 2.2

Comment [r30]: APAC ICD, PART I, PARA 2.3

Comment [ATO31]: APAC ICD, PART I, SYSTEM PHILOSOPHY  
NAT ICD, PART I, SYSTEM PHILOSOPHY

Comment [ATO32]: NAT ICD, PART I, PARA 2.2.1

Comment [ATO33]: NAT ICD, PART I, PARA 2.2.1

2.21.2 For the coordination phase, The Current Flight Plan (CPL) message shall act as the initial cleared profile coordination message and the Coordination (CDN) message shall be used to negotiate changes. Coordination dialogues must be terminated using an Accept (ACP) or a Reject (REJ) message.

Comment [ATO34]: NAT ICD, PART I, PARA 2.2.1

2.21.3 Automated Transfer of Control (TOC) and Acceptance of Control (AOC) procedures shall be supported.

Comment [ATO35]: NAT ICD, PART I, PARA 2.2.1

~~2.21.4 A functional address, which refers to a function within an OAC/ACC (e.g., an ATC watch supervisor), may be substituted in certain messages for the aircraft identification found in Field 7. Where such an address is used, it is preceded by an oblique stroke (/) to differentiate it from aircraft identification.~~

Comment [ATO36]: APAC ICD, PART I, PARA 3.2.4

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2.232.22 The capability to revert to verbal coordination and manual transfer of control shall be retained.

Comment [ATO37]: NAT ICD, PART I, PARA 2.2.1

~~2.232.23~~ Flight plans shall continue to be filed in accordance with existing procedures. Finally, it is understood that operators shall continue to file flight plans in accordance with existing procedures and they shall make every effort to ensure that flight plans are disseminated to all the correct addresses.

Comment [ATO38]: APAC ICD, PART I, PARA 3.2.3

Comment [ATO39]: NAT ICD, PART I, PARA 2.2.4

### 2.3 Units of measurement

Comment [ATO40]: APAC ICD, PART I, PARA 4 – NAT ICD, PART I, PARA 3

2.31 In general the AIDC ICD messages support different units of measurement. Bilateral agreements should determine the units to be transmitted.

Comment [ATO41]: APAC ICD, PART I, PARA 4.1.1

2.32 Time and date.

2.32.1 All times shall be expressed in UTC as four digits rounded to the nearest whole minute, with midnight expressed as 0000. Subject to bilateral agreement, time can be expressed in 6 digits as hours, minutes and seconds. Dates, when used, shall be in the form of YYMMDD.

Comment [ATO42]: APAC ICD, PART I, PARA 4.2 – NAT ICD, PART I, PARA 3.1

Comment [ATO43]: NAT ICD, PART I, PARA 3.1.1

2.33 Geographic position information.

Comment [ATO44]: APAC ICD, PART I, PARA 4.2.1

2.33.1 Geographic position information shall be in accordance with the provisions contained in the *Procedures for Air Navigation Services Air Traffic Management (PANS-ATM, Doc 4444)*.

Comment [ATO45]: APAC ICD, PART I, PARA 4.3. – NAT ICD PART I, PARA 3.2

2.34 Level and speed information.

Comment [ATO46]: APAC ICD, PART I, PARA 4.3.1 – NAT ICD PART I, PARA 3.2.1

2.34.1 All level information shall be specified as flight level(s) or altitude(s) expressed in hundreds of feet. Speed information shall be expressed as true airspeed in knots or as a Mach number. Level and speed information shall be specified in accordance with ICAO PANS-ATM Doc 4444 with the following exceptions applying only to Field 14 or the Track Data field in a TRU message.

Comment [ATO47]: APAC ICD, PART I, PARA 4.4 – NAT ICD, PART I, PARA 3.3

Comment [ATO48]: NAT ICD, PART I, PARA 3.3.1

2.34.1.1 When including more than one of the optional formats described below in the same AIDC message, the order that the data is incorporated into Field 14 is the order that it is described below. For example, if an AIDC message was to include a block level and an assigned Mach Number, the block level information would precede the Mach Number information.

Comment [ATO49]: APAC ICD, PART I, PARA 4.4.1

Comment [ATO50]: APAC ICD, PART I, PARA 4.4.1

2.34.2 Block level information

Comment [ATO51]: APAC ICD, PART I, PARA 4.4.1.1

2.34.2.1 In certain circumstances, a vertical range of levels may be transmitted. Where a vertical range of levels is used, it shall be specified as a lower level followed by the upper level.

Comment [ATO52]: APAC ICD, PART I, PARA 4.4.1.1.1

Example

Comment [ATO53]: APAC ICD, PART I, PARA 4.4.1.1.1, EXAMPLE 1

MINNY/2125F320F340

The aircraft is operating in a block of levels between F320 and F340 (inclusive).

2.34.2.2 When transmitting a level restriction, only a single level may be included within the restriction.

*Example*

ELMER/0244F310F350F290A

The aircraft is cleared to operate in a block of levels between F310 and F350 and will cross ELMER at or above F290.

2.34.2.3 The coordination of a vertical range of levels by AIDC should only be made following bilateral agreement.

2.34.3 Mach Number Technique Information

2.34.3.1 The boundary estimate may contain additional clearance information describing a Mach Number that has been assigned to an aircraft. If transmitted, the Mach Number information shall always follow directly after the level information and be separated from the level information by a forward slash delimiter (/). This information shall contain:

2.34.3.1.1 A single character providing advice as to whether an aircraft will be maintaining the notified Mach Number or less (L), the notified Mach Number or greater (G), or exactly the notified Mach Number (E); and

2.34.3.1.2 Four characters defining the notified Mach Number, expressed as the letter M followed by 3 numerics.

*Example*

BUGGS/0349F350F370/GM085

The aircraft is operating in a block of levels between F350 and F370 (inclusive) maintaining M0.85 or greater. ~~The in a block of levels between F350 and F370 (inclusive) maintaining M0.85 or greater aircraft is operating.~~

PLUTO/0215F310/EM076

The aircraft is maintaining M0.76

2.34.3.2 The absence of speed information in the boundary estimate data of an AIDC message indicates that the previously assigned speed has been cancelled.

*Example*

SPEDY/1237F310F330B/LM083

The aircraft is cleared to F310 and will cross SPEDY at or below F330, maintaining M0.83 or less; subsequently followed by:

SPEDY/1238F310

The aircraft will no longer be on descent at SPEDY, and has resumed normal speed (and one minute later than previously coordinated)

2.34.3.3 The format described for the notification and coordination of Mach Number in this section applies to Field 14 – boundary estimate data – only. It may be transmitted in any AIDC message containing Field 14.

2.34.3.4 The coordination of Mach Numbers by AIDC should only be made following bilateral agreement.

2.35 Offset and Weather Deviation Information

Comment [ATO54]: APAC ICD, PART I, PARA 4.4.1.1.2

Comment [ATO55]: APAC ICD, PART I, PARA 4.4.1.1.2, EXAMPLE 2

Comment [ATO56]: APAC ICD, PART I, PARA 4.4.1.1.3

Comment [ATO57]: APAC ICD, PART I, PARA 4.4.1.2

Comment [ATO58]: APAC ICD, PART I, PARA 4.4.1.2.1

Comment [ATO59]: APAC ICD, PART I, PARA 4.4.1.2.1

Comment [ATO60]: APAC ICD, PART I, PARA 4.4.1.2.1

Comment [ATO61]: APAC ICD, PART I, PARA 4.4.1.2.1, EXAMPLE 1

Comment [ATO62]: APAC ICD, PART I, PARA 4.4.1.2.1, EXAMPLE 2

Comment [ATO63]: APAC ICD, PART I, PARA 4.4.1.2.2

Comment [ATO64]: APAC ICD, PART I, PARA 4.4.1.2.2, EXAMPLE 3

Comment [ATO65]: APAC ICD, PART I, PARA 4.4.1.2.2, EXAMPLE 4

Comment [ATO66]: APAC ICD, PART I, PARA 4.4.1.2.3

Comment [ATO67]: APAC ICD, PART I, PARA 4.4.1.2.4

Comment [ATO68]: APAC ICD, PART I, PARA 4.5

2.35.1 Where bilaterally agreed, the boundary estimate may contain additional clearance information describing an offset or weather deviation that has been issued to an aircraft. If transmitted, the offset and weather deviation information shall always be the last information in the group and shall be separated from preceding information by a forward slash delimiter (/). This information shall contain:

Comment [ATO69]: APAC ICD, PART I, PARA 4.5.1 – NAT ICD, PART I, PARA 8.1

2.35.1.1 A single character providing advice as to whether the clearance is an offset (O) or a weather deviation (W); and,

Comment [ATO70]: APAC ICD, PART I, PARA 4.5.1 – NAT ICD, PART I, PARA 8.1

2.35.1.2 One to three characters indicating an off track distance associated with this clearance (leading zeros shall not be used); a single character indicating the weather deviation (W). ~~An off-track distance associated with this clearance; and~~

Comment [ATO71]: NAT ICD, PART I, PARA 8.1

2.35.1.3 A direction, indicating left (L), right (R) or either side of track (E).

Comment [ATO72]: APAC ICD, PART I, PARA 4.5.1

**Example**

GOOFY/2330F310/GM084/O30R

The aircraft is offsetting 30NM right of track, maintaining M0.84 or greater.

Comment [ATO73]: APAC ICD, PART I, PARA 4.5.1 – NAT ICD, PART I, PARA 8.1

DAFFY/0215F310F350/W25E

The aircraft is operating in a block of levels between F310 and F350 (inclusive) deviating up to 25NM either side of track.

Comment [ATO74]: APAC ICD, PART I, PARA 4.5.1, EXAMPLE 1

DAFFY/0215F310F350/W5E The aircraft is operating in a block of levels between F310 and F350 (inclusive) deviating up to 5NM either side of track.

Comment [ATO75]: APAC ICD, PART I, PARA 4.5.1, EXAMPLE 2

DAFFY/0215F310F350/W100E The aircraft is operating in a block of levels between F310 and F350 (inclusive) deviating up to 100NM either side of track.

Comment [ATO76]: APAC ICD, PART I, PARA 4.5.1, EXAMPLE 3

41N040W/0215F310/W25E

The aircraft is maintaining F310 deviating up to 25NM either side of track.

The absence of weather deviation data in the boundary estimate data of an AIDC message indicates that the deviation clearance no longer applies.

Comment [ATO77]: APAC ICD, PART I, PARA 4.5.1, EXAMPLE 4

34N040W/1519F330/W15R

The aircraft is deviating up to 15NM right of track, subsequently followed by:

Comment [ATO78]: NAT ICD, PART I, PARA 8.1, EXAMPLE 1

34N040W/1520F330

The aircraft is back on track (and one minute later than previously coordinated).

The deviation clearance format described in this section applies to Field 14 – boundary estimate data –only. It may be transmitted in any AIDC message containing Field 14.

Comment [ATO79]: NAT ICD, PART I, PARA 8.1, EXAMPLE 2

Comment [ATO80]: NAT ICD, PART I, PARA 8.1, EXAMPLE 3

2.35.2 The absence of offset or weather deviation data in the boundary estimate data of an AIDC message indicates that the off track clearance no longer applies.

Comment [r81]: APAC ICD, PART I, PARA 4.5.2

**Example**

MICKY/1519F330/W15R

The aircraft is deviating up to 15NM right of track subsequently followed by:

Comment [ATO82]: APAC ICD, PART I, PARA 4.5.2, EXAMPLE 5

MICKY/1520F330

The aircraft is back on track (and one minute later than previously coordinated).

Comment [ATO83]: APAC ICD, PART I, PARA 4.5.2, EXAMPLE 6

2.35.3 The off-track clearance format described in this section applies only to Field 14 – boundary estimate data – or the Track Data field in a TRU message only. It may be transmitted in a TRU message or any AIDC message containing Field 14.

Comment [r84]: APAC ICD, PART I, PARA 4.5.3

2.35.4 When an aircraft is offsetting or deviating, the coordination point shall be the coordination point based on the nominal route rather than the offset route.

Comment [r85]: APAC ICD, PART I, PARA 4.5.4 – NAT ICD, PART I, PARA 8.2

2.35.5 When transmitting an AIDC message containing Offset information, the direction “E” (either side of track) shall not be used coordinating an Offset, the direction “E” (either side of track) shall not be used.

Comment [r86]: APAC ICD, PART I, PARA 4.5.5

2.35.6 Valid “off track” distance values are integers between 1 and 250, with no leading zeros. The off track distance is measured in nautical miles (NM).

Comment [ATO87]: APAC ICD, PART I, PARA 4.5.6

2.35.7 The coordination of offsets and weather deviations by AIDC should only be made following bilateral agreement.

Comment [r88]: APAC ICD, PART I, PARA 4.5.7

2.36 Functional addresses.

Comment [ATO89]: NAT ICD, PART I, PARA 3.4

2.36.1 A functional address, which refers to a function within an OAC/ACC (e.g. an ATC watch supervisor), may be substituted in certain messages in the MIS and EMG messages for the aircraft identification found in Field 7. Where such an address is used, it is preceded by an oblique stroke (/) to differentiate it from aircraft identification.

Comment [ATO90]: NAT ICD, PART I, PARA 3.4.1 – APAC ICD, PART I, PARA 3.2.4

## 2.4 Restriction formats

2.41 Principles

Comment [ATO91]: APAC ICD, PART I, PARA 5 – NAT ICD, PART I, PARA 4

2.41.1 The restriction information provided by the controlling centre to the downstream centre shall be limited to the flight profile at and beyond the ACI boundary.

Comment [ATO92]: NAT ICD, PART I, PARA 4.1

2.41.2 The cleared level, supplementary crossing data and crossing conditions in field 14 shall be based on the conditions at the ACI boundary.

Comment [ATO93]: NAT ICD, PART I, PARA 4.1, 1.

2.41.3 If a fix other than a filed route point is used in the level and/or speed clearance at and beyond the ACI boundary, it shall be part of the appropriate flight profile in field 15.

Comment [ATO94]: NAT ICD, PART I, PARA 4.1, 2.

2.42 Level and speed restrictions.

Comment [ATO95]: NAT ICD, PART I, PARA 4.1, 3.

2.42.1 Use of restrictions is not mandatory. If they are used, the following convention shall be used.

Comment [r96]: APAC ICD, PART I, PARA 5.1, NAT ICD, PART I, PARA 4.2

2.42.2 Route, speed and level information contained in the Route field (ICAO ATS Field 15) represent the current cleared profile of the aircraft. Where a clearance requires a speed/level change subsequent to a route point, then the ICAO convention of route point followed by an oblique stroke and the new speed/level will be used:

Comment [r97]: APAC ICD, PART I, PARA 5.1.1

Comment [r98]: APAC ICD, PART I, PARA 5.1.2 – , NAT ICD, PART I, PARA 4.2.1

*Example*

60N010W/M084F350

Comment [ATO99]: APAC ICD, PART I, PARA 5.1.3, EXAMPLE 1 – , NAT ICD, PART I, PARA 4.2.2, EXAMPLE 1

2.42.3 Where a clearance requires a speed/level change to be completed by a route point, then the items will be reversed:

Comment [r100]: APAC ICD, PART I, PARA 5.1.2 – , NAT ICD, PART I, PARA 4.2.1

*Example*

M084F350/62N020W

Comment [ATO101]: APAC ICD, PART I, PARA 5.1.3, EXAMPLE 2 – , NAT ICD, PART I, PARA 4.2.2, EXAMPLE 2

2.42.4 A combination of these two conventions will describe a clearance with a defined starting and completion point:

Comment [r102]: APAC ICD, PART I, PARA 5.1.3 – , NAT ICD, PART I, PARA 4.2.2

*Example*

60N010W/M084F350/62N020W

Comment [ATO103]: APAC ICD, PART I, PARA 5.1.3, EXAMPLE 3 – , NAT ICD, PART I, PARA 4.2.2, EXAMPLE 3

## PAN ICD

2.43 Time restrictions.

2.43.1 There are three types of time restrictions describing when an aircraft should arrive at a fix:  
 AT/ (UNTIL);  
 AT OR BEFORE; or,  
 AT OR LATER.

2.43.2 A suffix will be added to the four digit time to denote the restriction type, as follows:

AT: 'A', e.g. 1230A;

AT OR BEFORE: 'B', e.g., 1230B; or,

AT OR LATER: 'L', e.g., 1230L.

2.43.3 The restriction itself will begin with a slash (/), e.g., /1230B, and will appear after the fix with which it is associated. For example, 49N050W/1230L signifies that the aircraft should arrive at 49N 50W at or later than 12:30 P.M.Z.

2.43.4 A time restriction may be used in conjunction with speed/level restrictions as follows:

~~60N010W/1230L/M084F350~~~~60N010W/M084F350/1230L~~

After 60N010W cleared M084 FL350 and cross 60N010W at or later than 1230Z

~~M084F350/62N020W/1230A~~

Cleared M084 FL350 to be maintaining at or before 62N020W and cross 62N020W at time 1230Z

~~60N010W/M084F350/62N020W/1230B~~

After 60N010W cleared M084 FL350 to be maintaining at or before 62N020W.

Cross 62N020W at or before 1230Z

2.43.5 Time restrictions may only appear in the Route field (Field 15)

2.43.6 The use of time restrictions shall be bilaterally agreed between ATS providers.

2.44 Time restrictions related to level and speed.

2.44.1 There are three types of time restrictions, describing when an aircraft should commence or terminate a level and/or speed change. A suffix will be added to the four digit time to denote the restriction type, as follows:

UNTIL: ("A", e.g. 1230A)

AT or BEFORE: ("B", e.g., 1230B); or AT or

LATER: ("L", e.g., 1230L)

2.44.2 The restriction itself will begin with a slash, i.e., "/", e.g., /1230B, and will appear ~~directly~~ after ~~directly~~ after the element with which it is associated. For example, M080F350/1230L signifies that the aircraft should cruise M080 at F350 at or later than time 1230Z.

2.44.3 A time restriction related to level and speed may be used in conjunction with a fix restriction as follows:

Example:

M080F350/1135A/M080F370/1220B 53N030W

Maintain M080 F350 until 1135Z then cleared M080 F370 to be level at or before 1220Z

Comment [r104]: APAC ICD, PART I, PARA 5.2 – NAT ICD PART I, PARA 4.3

Comment [ATO105]: APAC ICD, PART I, PARA 5.2.1, EXAMPLES a) b) c)

Comment [ATO106]: APAC ICD, PART I, PARA 5.2.2, EXAMPLES a), b), c) – NAT ICD PART I, PARA 4.3.1, EXAMPLES a) b) c)

Comment [ATO107]: APAC ICD, PART I, PARA 5.2.3, – NAT ICD, PART I, PARA 4.3.2

Comment [ATO108]: APAC ICD, PART I, PARA 5.2.4 – NAT ICD PART I, PARA 4.3.3, EXAMPLES 1, 2, 3

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Comment [r109]: APAC ICD, PART I, PARA 5.2.5

Comment [r110]: APAC ICD, PART I, PARA 5.2.6 – NAT ICD PART I, PARA 4.1, 4.

Comment [ATO111]: NAT ICD, PART I, PARA 4.4

Comment [ATO112]: NAT ICD, PART I, PARA 4.4.1

Comment [ATO113]: NAT ICD, PART I, PARA 4.4.1 a)

Comment [ATO114]: NAT ICD, PART I, PARA 4.4.1 b)

Comment [ATO115]: NAT ICD, PART I, PARA 4.4.1 c)

Comment [ATO116]: NAT ICD, PART I, PARA 4.4.2

Comment [ATO117]: NAT ICD, PART I, PARA 4.4.3

Comment [ATO118]: NAT ICD, PART I, PARA 4.4.3, EXAMPLE 1

M080F330/1135A/M080F370 53N030W  
Maintain M080 F330 until 1135Z then climb to F370

Comment [ATO119]: NAT ICD, PART I,  
PARA 4.4.3, EXAMPLE 2

60N010W/M084F350/1230B  
After 60N010W cleared M084 FL350 to be maintaining at or before 1230Z

Comment [ATO120]: NAT ICD, PART I,  
PARA 4.4.3, EXAMPLE 3

M083F330/1135L/60N020W  
At 1135Z or later cleared M083 FL330 to be maintaining by 60N020W

Comment [ATO121]: NAT ICD, PART I,  
PARA 4.4.3, EXAMPLE 4

M083F330/1135L  
At 1135Z or later cleared M083 F330

Comment [ATO122]: NAT ICD, PART I,  
PARA 4.4.3, EXAMPLE 5

Comment [ATO123]: NAT ICD, PART I,  
PARA 6

## 2.5 Boundary positions in messages

- 2.51 The point used in field 14, Estimate Data, will normally be a boundary point but may also be an agreed point close to, rather than on, the FIR boundary.

Comment [ATO124]: NAT ICD, PART I,  
PARA 6.1

Comment [ATO125]: NAT ICD, PART I,  
PARA 7

## 2.6 Coordination of aircraft occupying blocks of levels

- 2.61 While the validity of flights occupying blocks of flight levels is recognised by ICAO Doc 4444 both in its voice phraseology section and in the CPDLC message set, no provision is made for the representation of such blocks in any of the ATS messages described by the document.

Comment [ATO126]: NAT ICD, PART I,  
PARA 7.1

- 2.62 In order to ensure compatibility with other regions the following notation will be used in field 14:

Comment [ATO127]: NAT ICD, PART I,  
PARA 7.2

### Example

F310F350  
Aircraft occupying a block spanning F310 to F350

Comment [ATO128]: NAT ICD, PART I,  
PARA 7.2, EXAMPLE 1

F310F350F290A  
Aircraft at or above F290 climbing towards the block described above

Comment [ATO129]: NAT ICD, PART I,  
PARA 7.2, EXAMPLE 2

Comment [ATO130]: NAT ICD, PART I,  
PARA 8

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Comment [ATO131]: NAT ICD, PART I,  
PARA 8.1

## 2.7 Weather deviation information

- 2.71 Where bilaterally agreed, the boundary estimate may contain additional clearance information describing a weather deviation that has been issued to an aircraft (cf. PANS/ATM paragraph 15.3.2.3.2.2.a). This information shall contain:

- 2.71.1a single character indicating the weather deviation (W); and

Comment [ATO132]: NAT ICD, PART I,  
PARA 8.1

- 2.71.2an off track distance associated with this clearance (until three digits); and

Comment [ATO133]: NAT ICD, PART I,  
PARA 8.1

- 2.71.3a direction, indicating left (L), right (R) or either side of track (E).

Comment [ATO134]: NAT ICD, PART I,  
PARA 8.1

### Example

41N040W/0215F310/W25E

The aircraft is maintaining F310 deviating up to 25NM either side of track.

Comment [ATO135]: NAT ICD, PART I,  
PARA 8.1, EXAMPLE 1

The absence of weather deviation data in the boundary estimate data of an AIDC message indicates that the deviation clearance no longer applies.

34N040W/1519F330/W15R

The aircraft is deviating up to 15NM right of track, subsequently followed by:

Comment [ATO136]: NAT ICD, PART I,  
PARA 8.1, EXAMPLE 2



~~34N040W/1520F330~~  
~~The aircraft is back on track (and one minute later than previously coordinated).~~  
~~The deviation clearance format described in this section applies to Field 14 — boundary estimate data only. It may be transmitted in any AIDC message containing Field 14.~~  
~~2.72 When an aircraft is deviating, the coordination point shall be the coordination point based on the nominal route rather than the offset route.~~

Comment [ATO137]: NAT ICD, PART I, PARA 8.1, EXAMPLE 3

Comment [ATO138]: NAT ICD, PART I, PARA 8.2

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## Chapter 3. Communications and Support Mechanisms

### 3.1 Introduction

- 3.1.1 Coordination communications are divided into two areas: one addresses the need for voice communications between ATSUs, whereas the other addresses the need for data communications. It is anticipated that the continuing implementation of automated data communications between ATSUs will result in a reduction in the utilization of voice communications.

Comment [ATO139]: APAC ICD, PART II – NAT ICD PART III

### 3.2 Message headers, timers and ATSU indicators

- 3.2.1 Message headers.

Comment [r140]: APAC ICD, PART II, PARA 2.1 – NAT ICD PART III, PARA 2.1

- 3.2.1.1 The AFTN IA-5 Message Header, including the use of the Optional Data Field defined in ICAO Annex 10, Vol II and herein, will be employed for the exchange of all ATS data. The AFTN priority indicator FF shall normally be used for all data exchanges. The AFTN date time group may be used by administrations to monitor end to end delay performance of the data exchanges.

Comment [r141]: APAC ICD, PART II, PARA 2 – NAT ICD PART III, PARA 2

- 3.2.1.2 Optional data field.

Comment [ATO142]: APAC ICD, PART II, PARA 2.1 – NAT ICD PART III, PARA 2.1

- 3.2.1.2.1 The optional data field provides a flexible way to convey information from end-to-end, undisturbed by the communication processes along the path. Since the information is optional it is necessary to specify a unique number and ending for each defined use. Option 1 has already been allocated for additional addressing use, and will be found in ICAO Annex 10, Vol II. Option numbers 2 and 3 have been defined for computer applications to convey message/data unit identification and message/data unit reference information, respectively, and are adopted in this ICD. Other options can be defined and added as the need arises. The proposed encoding would have no impact on AFTN switching centers as they ignore this part of the origin line.

Comment [ATO143]: APAC ICD, PART II, PARA 2.1.0 – NAT ICD PART III, PARA 2.1.1

Comment [ATO144]: APAC ICD, PART II, PARA 2.1.1 – NAT ICD PART III, PARA 2.1.2

Comment [ATO145]: APAC ICD, PART II, PARA 2.1.1 – NAT ICD, PART III, PARA 2.1.2

- 3.2.1.3 Addressing.

Comment [r146]: APAC ICD, PART II, PARA 2.1.1

- 3.2.1.3.1 The Source and Destination addresses of the AFTN header convey the direction and logical identity of the application processes exchanging AIDC data information. The application process must be aware of the AFTN addresses that are used for this function. The first four characters form the location, while the next three characters specify an office/agency or a processor at the given location. The eighth character of the address indicates the end system application and details of the naming assignment are contained in Chapter 6, *ATM Application Naming Conventions*. This approach allows up to 26 multiple applications to be co-hosted in the same processor, each having its own unique address. This implementation will make the addressing consistent with Open System Inter-connection (OSI) parameters and simplify the transition to the ATN.

Comment [ATO147]: APAC ICD, PART II, PARA 2.1.2 – NAT ICD, PART III, PARA 2.1.3

Comment [ATO148]: APAC ICD, PART II, PARA 2.1.2 – NAT ICD, PART III, PARA 2.1.3

- 3.2.1.4 Message/data identification number.

Comment [r149]: APAC ICD, PART II, PARA 2.1.3 – NAT ICD, PART III, PARA 2.1.4

- 3.2.1.4.1 The message/data identification number is a six digit number, taken from a single application pool of available numbers. The identification of the sending and receiving units would use the normal eight character addresses of the AFTN header.

Comment [ATO150]: APAC ICD, PART II, PARA 2.1.3 – NAT ICD, PART III, PARA 2.1.4

- 3.2.1.4.2 The message/data identification number is encoded and conveyed in the AFTN message header Optional Data Field (ODF), option 2. The AFTN implementation provides functionality consistent with the OSI primitive/parameter structure.

Comment [ATO151]: APAC ICD, PART II, PARA 2.1.3.1 – NAT ICD PART III, PARA 2.1.4 a)

3.21.4.3 A message/data identification number will be assigned to each message/data unit requiring confirmation of receipt by the initiating processor. This number will be assigned by the application process basis in such a way as to guarantee a unique identification number for a period of time as specified in paragraph 3.21.6–7 below. For messages/data not requiring confirmation the message/data identification parameter shall not be used.

Comment [ATO152]: APAC ICD, PART II, PARA 2.1.3.2 – NAT ICD, PART III, PARA 2.1.4 b)

3.21.5 Reference Information.

Comment [ATO153]: APAC ICD, PART II, PARA 2.1.4 – NAT ICD, PART III, PARA 2.1.5

3.21.5.1 The message/data reference information is a way of linking a message/data unit to a previously sent message. This function is encoded and conveyed in the AFTN ODF, option 3. This implementation would make the linking information consistent with the abstract OSI protocol primitive/parameter structure. The reference information consists of the message/data identification number of the previously sent message/data unit being referenced. As the previous message being referenced could have been originated by either processor, the location indicator of the message source shall be used as a prefix to the reference number. Examples are found in paragraph 3.22.5 below.

Comment [ATO154]: APAC ICD, PART II, PARA 2.1.4 – NAT ICD, PART III, PARA 2.1.5

3.21.6 Time stamp.

Comment [r155]: APAC ICD, PART II, PARA 2.1.5 – NAT ICD, PART III, PARA 2.1.6

3.21.6.1 The time stamp is expressed as 12 digits in year, month, day, hours, minutes, and seconds (YYMMDDHHMMSS). The precision (seconds) of the time stamp will support computation of transmission delays. This data item is conveyed as option 4 of the ODF.

Comment [ATO156]: APAC ICD, PART II, PARA 2.1.5 – NAT ICD, PART III, PARA 2.1.6

3.21.7 Cyclic Redundancy Check (CRC).

Comment [ATO157]: APAC ICD, PART II, PARA 2.1.6 – NAT ICD, PART III, PARA 2.1.7

3.21.7.1 The CRC is a four digit hexadecimal number that is used to ensure end-to-end message integrity. The CRC employed is the CRC-CCITT. The CRC is computed over the message text, from the beginning left parenthesis to the closing right parenthesis, inclusive. Non printable characters such as line feeds and carriage returns shall be excluded from the CRC calculation. This data item is conveyed as option 5 of the ODF.

Comment [ATO158]: APAC ICD, PART II, PARA 2.1.6 – NAT ICD, PART III, PARA 2.1.7

Comment [r159]: APAC ICD, PART II, PARA 2.1.6

3.22 Timers.

Comment [ATO160]: APAC ICD, PART II, PARA 2.1.6 – NAT ICD, PART III, PARA 2.1.7

3.22.1 In order to guarantee the uniqueness of the message/data identification number, and yet allow for the efficient reuse of the numbers in the pool, two timers are required for each message/data unit requiring confirmation: accountability and reuse.

Comment [ATO161]: APAC ICD, PART II, PARA 2.2 – NAT ICD, PART III, PARA 2.1.8

Comment [r162]: APAC ICD, PART II, PARA 2.2.1 – NAT ICD, PART III, PARA 2.1.8

3.22.2 Accountability timer.

Comment [ATO163]: APAC ICD, PART II, PARA 2.2.2 – NAT ICD, PART III, PARA 2.1.9

3.22.2.1 The accountability timer determines the maximum period of time for the responding application to confirm receipt of a given message/data unit. The default value for this timer nominally shall be three minutes. If there is no valid response from the responding application, the initiating processor shall retransmit the message/data unit and reset the timer, or initiate local recovery procedures. When local procedures allow retransmission, a maximum value, such as three, must be determined before local recovery procedures are initiated. The accountability timer shall be cancelled by the receipt of any message with the appropriate message/data reference identifier, which will typically be a LAM or LRM. Retransmissions use the same message/data identification number as the original message/data unit.

Comment [ATO164]: APAC ICD, PART II, PARA 2.2.2 – NAT ICD, PART III, PARA 2.1.9

3.22.3 Reuse timer.

Comment [ATO165]: APAC ICD, PART II, PARA 2.2.3 – NAT ICD, PART III, PARA 2.1.10

3.22.3.1 The reuse timer function employs two timers that determine the minimum period of time during which a message/data identification number is guaranteed to be unique. Reuse timer A shall be set for exchanges not involving dialogues between processors. The range for reuse timer A shall be from 1 to 30 minutes, in one minute increments. The default value for reuse timer A shall be 5

Comment [ATO166]: APAC ICD, PART II, PARA 2.2.3 – NAT ICD, PART III, PARA 2.1.10

minutes, or as agreed by the concerned ATSUs. Reuse timer B shall be set for exchanges where a dialogue is involved in the exchange. The range for reuse timer B shall be 2 to 90 minutes, in one minute increments. The default value for reuse timer B shall be 10 minutes, or as agreed for communicating applications by the concerned administrations. A given message/data identification number can be reused when an ACP, AOC, or REJ response message is received or the reuse timer has expired.

### 3.22.4 System Failure Timer Procedures.

3.22.4.1 In the event of system failure, the accountability and reuse timers will be reset and resume timing upon completion of system recovery.

3.22.5 The following examples depict two APAC and two NAT Core-AIDC Messages encoded in accordance with the previous procedures. The second message is a reference to the first message. SOH, STX, message ending and ETX characters are omitted for clarity, as are the alignment functions. The proposed encoding would have no impact on AFTN switching centres as they ignore this part of the origin line.

FF NFFFZOZO

122145 KZOA ZOZO 2.000033-4.940412214523-5.A34B

(CPL-UAL714-IS-B747/H-S/C-KLAX-05S179W/2220F370-M082F370(route data) -YSSY-0)

**Explanation:** Sending an initial coordination message (number 000033 from Oakland Air Route Traffic Control Center (KZOA ZOZO) to Nadi ACC (NFFFZOZO) at time 940412 214523.

FF KZOA ZOZO

122147 NFFFZOZO 2.000044-3.KZOA000033-4.940412214703-5.DE6A

(ACP-UAL714-KLAX-YSSY)

**Explanation:** Nadi ACC (NFFFZOZO) accepts the proposed coordination condition received from Oakland Air Route Traffic Control Center (KZOA ZOZO) by sending message number 000044 from NFFFZOZO to KZOA ZOZO at 940412214703. The message refers to message 000033 sent earlier by KZOA ZOZO

FF KZNY ZOZO

122145 CZQM ZOZO 2.000033-4.940412214523-5.A34B-

(CPL-UAL714-KJFK- etc.)

**Explanation:** Sending Message number 000033 from CZQM ZOZO to KZNY ZOZO at time 940412 214523

FF CZQM ZOZO

122147 KZNY ZOZO 2.000044-3.CZQM000033-4.940412214703-5.DE6A-

(ACP-UAL714-KJFK-EGLL)

**Explanation:** Sending message number 000044 from KZNY ZOZO to CZQM ZOZO at 122147 and the data refers to message 000033 sent earlier by CZQMZRZO

### 3.22.6 ATSU location indicators.

3.22.6.1 ICAO location indicators must be used by automated ATSUs in AIDC messages.

3.22.6.2 The following ATS unit ICAO locations indicators will be used within the NAT region:

Bodø OAC - ENOB

Gander OAC - CZQX

New York OAC - KZWY

Comment [ATO167]: APAC ICD, PART II, PARA 2.2.4 – NAT ICD, PART III, PARA 2.1.11

Comment [ATO168]: APAC ICD, PART II, PARA 2.2.4 – NAT ICD, PART III, PARA 2.1.11

Comment [ATO169]: APAC ICD, PART II, PARA 2.2.5 – NAT ICD, PART III, PARA 2.1.12

Comment [ATO170]: NAT ICD, PART III, PARA 2.1.12

Comment [r171]: APAC ICD, PART II, PARA 2.2.5

Comment [ATO172]: APAC ICD, PART II, PARA 2.2.5

Comment [ATO173]: NAT ICD, PART III, PARA 2.1.12

Comment [ATO174]: NAT ICD, PART III, PARA 2.1.12

Comment [ATO175]: APAC ICD, PART II, PARA 2.3 – NAT ICD, PART III, PARA 2.2

Comment [ATO176]: APAC ICD, PART II, PARA 2.3.1

Comment [ATO177]: NAT ICD, PART III, PARA 2.2.1

Reykjavik OAC	-	BIRD
Santa Maria OAC	-	LPPO
Shannon ACC	-	EISN
Shanwick OAC	-	EGGX
Søndre Strømfjord FIC	-	BGGL

3.22.6.3 The ATS unit organization code for the oceanic ATC application will be ZOZO. This organization code, when used with the ICAO location, forms the full ICAO address.

Comment [ATO178]: NAT ICD, PART III, PARA 2.2.2

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Comment [ATO179]: APAC ICD, PART II, PARA 3 – NAT ICD, PART III, PARA 3

### 3.3 Engineering considerations

3.31 Future communications.

3.31.1 The future data communications infrastructure should be compatible with the ICAO ATN. The ground-ground logical connectivity table is at Appendix B Table 3-1.

Comment [r180]: APAC ICD, PART II, PARA 3.1

Comment [ATO181]: APAC ICD, PART II, PARA 3.1.1 – NAT ICD, PART III, PARA 3.1

3.31.2 Until the ATN becomes available, the engineering details needed to implement the exchange of messages contained in Appendix A Part II Chapter 4, *ATS Coordination Messages*, will need to be agreed to bilaterally and identified in Appendix C Attachment 1 Chapter 7, *Implementation Guidance Material*.

Comment [ATO182]: APAC ICD, PART III, PARA 3.1.2

**Table 3-1. Logical Connectivity Table**

	BGGL	BIRD	CZQX	EGGX	ENOB	KZWY	LPPO
BGGL		X			X		
BIRD	X		X	X	X		
CZQX		X		X		X	X
EGGX		X	X				X
ENOB	X	X					
KZWY			X				X
LPPO			X	X		X	

Comment [ATO183]: NAT ICD, APPENDIX B

3.32 ATN transition support.

3.32.1 The AFTN will provide the underlying communications network and services in the near-term. Communication services provided by the ground element of the ATN will be eventually employed by the AIDC application.

Comment [r184]: APAC ICD, PART II, PARA 3.2

Comment [r185]: APAC ICD, PART II, PARA 3.2.1

3.32.2 The APANPIRG ATN Implementation Coordination Group (ICG) is currently considering the continued use of AFTN format for AIDC application in the Asia/Pacific region. When the ATS Message Handling System (AMHS) is implemented, the exchanges of AFTN messages on ATN

Comment [ATO186]: APAC ICD, PART II, PARA 3.2.2

can be accomplished using the AFTN/AMHS gateway function of the AMHS application. This mechanism can be used to exchange the AFTN AIDC messages provided that the connection has been tested to meet the recommended performance criteria in Chapter 7, *Implementation Guidance Material*.

3.32.3 The APAC region will comply with ATN SARPs. A summary of these SARPs specifically relevant to ASIA/PAC operations, including addressing conventions and encoding rules, will be included within the document.

Comment [ATO187]: APAC ICD, PART II, PARA 3.2.3

### 3.33 Performance Criteria

Comment [r188]: APAC ICD, PART II, PARA 3.3

3.33.1 If AIDC messages are not transmitted and received in a timely manner between automation systems, aircraft can potentially cross boundaries without coordination or transfer of control responsibility taking place. The benefits of AIDC are reduced if link speeds and transit times are inadequate.

Comment [r189]: APAC ICD, PART II, PARA 3.3.1

3.33.2 In order to effectively use the AIDC application for the interchange of ATC coordination data, performance requirements need to be specified. These specified performance requirements need to be agreed to by neighboring states implementing AIDC. Recommended performance figures are specified in Chapter 7, *Implementation Guidance Material*, paragraph 7.23.1.

Comment [r190]: APAC ICD, PART II, PARA 3.3.2

### 3.34 Recording of AIDC data

Comment [r191]: APAC ICD, PART II, PARA 3.4

3.34.1 The contents and time stamps of all AIDC messages shall be recorded in both end systems in accordance with the current requirements for ATS messages.

Comment [r192]: APAC ICD, PART II, PARA 3.4.1

3.34.2 Facilities shall be available for the retrieval and display of the recorded data.

Comment [r193]: APAC ICD, PART II, PARA 3.4.2

Comment [ATO194]: NAT ICD, PART III, PARA 4

## 3.4 Test considerations

3.41 Many new oceanic ATC automation systems will be going on-line within the NAT in the later half of the 1990s. These systems will have to exchange critical ATC data among themselves, using the messages described in the NAT Common Coordination PAN ICD.

Comment [ATO195]: NAT ICD, PART III, PARA 4.1

3.42 Support for testing shall be provided. Test messages shall have the same format as existing NAT Core messages, but shall be distinguished by special callsigns. A test callsign shall begin with the letter 'Z', followed by the four-letter ICAO ATS Unit location indicator, as defined in Paragraph 2.2-3.22.6-4 above. The last two characters shall be numeric. The following are examples of valid test callsigns:

Comment [ATO196]: NAT ICD, PART III, PARA 4.2

ZEGGX01

ZCZQX87

ZKZWY45

3.43 Testing shall be bi-laterally agreed between NAT ATS Providers.

Comment [ATO197]: NAT ICD, PART III, PARA 4.3

## Chapter 4. ATS Coordination Messages

### 4.1 Introduction

- 4.1.1 The following sections describe those messages used by **ASIA/PAC** ATS systems for **OLDI**. These core messages are a selection from the AIDC message set developed by the ICAO OPLINKP panel. Unless otherwise indicated in this document, message fields will conform to ICAO field definitions in PANS-ATM, and are referred to by field number. All ATS data shall be enclosed between parentheses. Only one ATS message shall be included within a transmission. An overview of core messages and their composition can be found in **Table A-2, ASIA/PAC Core Messages**, **Table 4-4, AIDC Messages and their Field Composition**. The following sections describe those messages used by **NAT**, **APAC** and **NAT** ATS systems for On-Line Data Interchange (**OLDI**). Message fields will conform to ICAO field definitions (PANS-RAC 4444, **Twelfth Edition current version**), and are referred to by field number. It should be noted that with respect to ATS Field 3, only Field 3 a), message type, shall be used. Information defined in Fields 3 b) and 3 c) is to be conveyed in the Optional Data Fields of the AFTN header as defined in **Part III of this ICD**, Chapter 3, *Communications and Support Mechanisms*. In respect of ATS Field 13, only Field 13 a), the departure aerodrome designator, is required. Field 13 b) is not to be transmitted. All ATS data shall be enclosed between parentheses. Only one ATS message shall be included within a transmission. An overview of all NAT core messages and their composition can be found in **Table 2**, **Table 4-4, AIDC Messages and their Field Composition**.

- 4.1.2 Coordination and the further route of flight.

- 4.1.2.1 Field 15 will describe the route beginning with the route point on or preceding the ACI boundary. It will contain the cleared route followed by the remaining route to destination. When a rerouting creates a discontinuity, the route will be terminated at that point and the truncation indicator "T" appended. Subject to bilateral agreement, Field 15 in CPL messages may always be limited to the cleared route (followed by the truncation indicator). Field 15 shall include subfields 15a, 15b, and 15c. It shall describe the cleared route, beginning with the last significant route point preceding the coordination point. It will contain all known cleared route information. As a minimum, it shall contain the first route significant point in the adjacent ATSUs airspace. If the cleared route of flight is not known completely to destination, the truncation indicator shall appear after the last known cleared significant route point. For example:

M083F340 SALAG B333 PUGEL/M083F360 T

M083F300 DCT FICKY B200 TATAS T

**Note:** In accordance with PANS-ATM Doc 4444 the truncation indicator shall only follow a significant point or significant point/Cruising Speed and Cruising level in Field 15 and shall not follow an ATS Route designator.

**Note:** ATSUs should be aware of the risks associated with simply deleting an unknown waypoint or route without using correct truncation procedures. Deletion of a waypoint or route will result in erroneous route information being transmitted to downstream ATSUs.

- 4.1.3 Field 3 requirements.

- 4.1.3.1 All messages shall use field 3a only.

Comment [ATO198]: APAC ICD, APPENDIX A – NAT ICD, PART II

Comment [ATO199]: APAC ICD, APPENDIX A, PARA 1 – NAT ICD, PART II, PARA 1

Comment [ATO200]: APAC ICD, APPENDIX A, PARA 1.1

Comment [ATO201]: NAT ICD, PART II, PARA 1.1

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Comment [ATO202]: APAC ICD, APPENDIX A, PARA 1.2 – NAT ICD, PART I, PARA 5

Comment [ATO203]: NAT ICD, PART I, PARA 5.1

Comment [ATO204]: NAT ICD, PART I, PARA 5.2

Comment [r205]: APAC ICD, APPENDIX A, PARA 1.2.1

Comment [ATO206]: APAC ICD, APPENDIX A, PARA 1.2.1, EXAMPLE 1

Comment [ATO207]: APAC ICD, APPENDIX A, PARA 1.2.1, EXAMPLE 2

Comment [r208]: APAC ICD, APPENDIX A, NOTE 1

Comment [r209]: APAC ICD, APPENDIX A, NOTE 2

Comment [r210]: APAC ICD, APPENDIX A, PARA 1.3

Comment [r211]: APAC ICD, APPENDIX A, PARA 1.3.1

4.13.2 Fields 3b and 3c are not used since, for AIDC, these reference numbers are included in the ODF option 3. See Part 2, paragraph 2.1.4 Chapter 3, para 3.21.5.

4.14 Field 7 requirements.

4.14.1 Where Field 7 is required to be present mandatory in a message, Field 7a (Aircraft Identification) shall be mandatory always be included. Fields 7b (SSR Mode) and 7c (SSR Code) are optional but shall always should be present included where if the information is available and applicable.

Comment [r212]: APAC ICD, APPENDIX A, PARA 1.3.2

Comment [r213]: APAC ICD, APPENDIX A, PARA 1.4

Comment [r214]: APAC ICD, APPENDIX A, PARA 1.4.1

Comment [ATO215]: APAC ICD, APPENDIX A, PARA 2 – NAT ICD, PART II, PARA 2

4.21 The core messages shown in Table A-1 4-1 below are to be supported by all ASIA/PACAPAC and NAT ATS providers using automated data interchange.

Comment [r216]: APAC ICD, APPENDIX A, PARA 2.0 – NAT ICD, PART II, PARA 2

4.22 Optional messages may be supported by ATS providers. Such messages will be detailed in bilateral agreements.

Comment [r217]: APAC ICD, APPENDIX A, PARA 2.0.1

Table 4-1. AIDC Messages

Core	Opt	Message Class	Message
X		Notification	ABI (Advance Boundary Information)
X		Coordination	CPL (Current Flight Plan)
X			EST (Coordination Estimate)
X			MAC (Coordination Cancellation)
	X		PAC (Pre-activation)
X			CDN (Coordination Negotiation)
X			ACP (Acceptance)
X			REJ (Rejection)
	X		TRU (Track Update)
X		Transfer of Control	TOC (Transfer of Control)
X			AOC (Assumption of Control)
X		General Information	EMG (Emergency)
X			MIS (Miscellaneous)
X	X		NAT (Organized Tracks)
	X		TDM (Track Definition Message)
X		Application Management	LAM (Logical Acknowledgement Message)
X			LRM (Logical Rejection Message)
X	X		ASM (Application Status Monitor)
X	X		FAN (FANS Application Message)
X	X		FCN (FANS Completion Notification)
	X	Surveillance Data Transfer	ADS (Surveillance ADS-C)

Comment [ATO218]: APAC ICD, APPENDIX A, TABLE A-1, ASIA/PAC AIDC MESSAGES – NAT ICD, PART II, TABLE 1, NAT CORE MESSAGES

Procedures material from the Asia/Pacific Regional ICD for AIDC is highlighted in green.  
Procedures material from the North Atlantic Common Coordination ICD is highlighted in blue.  
Procedures material contained in both the NAT ICD and APAC ICD is not highlighted.

### 4.3 Notification messages

4.31 ABI (Advance Boundary Information).

Comment [ATO219]: APAC ICD, APPENDIX A, PARA 2.1 – NAT ICD, PART II, PARA 2.1

Comment [ATO220]: APAC ICD, APPENDIX A, PARA 2.1.1 – NAT ICD, PART II, PARA 2.1



## PAN ICD

### 4.31.1 Purpose.

4.31.1.1 Used to give advance information on flights and shall be transmitted at a bilaterally agreed time or position (Variable System Parameter) before the common boundary. Changes to a previously transmitted ABI shall be communicated by means of another ABI. Changes to the cleared route of flight will result in the retransmission of an ABI.

### 4.31.2 Message format.

ATS Field	Description
3a	Message type
7a	Aircraft identification
13a	Departure aerodrome
14abcde	Boundary estimate time
16a	Destination aerodrome
22	Amendment

Field 22 shall contain as a minimum the following fields:

9abc	Number, type of aircraft and wake turbulence category
15abc	Route (see <a href="#">Appendix A, paragraph 1.2</a> —Chapter 4, <i>ATS Coordination Messages</i> , para 4.12.1)

Field 22 may also optionally include any or all of the following fields:

8ab	Flight rules
10ab	Equipment and capabilities
18	Other information as contained in the original flight plan must be transmitted, with the sole exception of the EET sub-field, which is optional. Note that this field shall contain information as received by the sending centre or a subset thereof as agreed between the parties

#### Example

(ABI-IBE6175-LEMD-41N040W/0700F330-KMIA-8/IS-9/B744/H-10/SABDIJ2RGXW/SB2C-15/M084F350  
41N030W 41N040W 41N050W 40N060W 38N065W DANER A699 NUCAR DCT HEATT-18/0/PBN/DISI NAV/GBAS SBAS)  
An aircraft containing full route details until destination.

(ABI-ICE615-BIKF-62N030W/0700F350F310A-KJFK-8/IS-9/B752/M-10/SDIJ5RXW/SD1C-15/M080F350 62N030W 60N040W 57N050W DCT OYSTR DCT STEAM T -18/0/PBN/A1L1)  
An aircraft cleared to F350 but entering the ACI at or above F310. Field 15 is truncated.

(ABI-VIR2-KEWR-55N040W/2323F330-EGLL-8/IS-9/B744/H-10/SABDE1GHII2MIRXW/ES-15/M085F330 55N040W NATY NURSI UN551 BEL UL10 HON BNN2A-18/0/PBN/A1L1OIT1 NAV/GBAS SBAS)  
Field 15 containing a NAT track.

(ABI-BAW242-MMMX-42N050W/0623F330-EGLL-8/IS-9/B744/H-10/SIRWXY/SB2C-15/M082F330 42N050W 45N040W 47N030W 49N020W BEDRA UN491 GUNSO UM197 GAPLI UR8 GIBSO-18/PBN/A1 DOF/121130 REG/GBNL/ /EET/KZHU0054 CZQX0546 45N040W0556 EGGX0643 49N020W0732 BEDRA0757 GUNSO0813 EGTT0833

Comment [ATO221]: APAC ICD, APPENDIX A, PARA 2.1.1.1 – NAT ICD, PART II, PARA 2.1

Comment [r222]: APAC ICD, APPENDIX A, PARA 2.1.1.2 – NAT ICD, PART II PARA 2.1

Comment [ATO223]: NAT ICD new v1.3.0 - From Amendment 1, Table 1.2

Comment [ATO224]: NAT ICD new v1.2.9 - The clause was NOT intended to prohibit the inclusion of the EET section, just indicate that it was optional because of the perceived lack of relevance.

Comment [ATO225]: NAT ICD, PART II, PARA 2.1, EXAMPLE 1

Comment [ATO226]: NAT ICD new v1.3.0 - Realistic equipage for an aircraft on a transatlantic flight should include "R" in field 10a, indicating PBN capability. This will also require a PBN/indicator in field 18, making the example more relevant to 2012 changes. Updating 10b to reflect advanced surveillance equipment is useful in showing the new letter/number codes.

Comment [ATO227]: NAT ICD v1.2.9 - B747 is no longer a valid type designator---changed to B744.

Comment [ATO228]: NAT ICD, PART II, PARA 2.1, EXAMPLE 2

Comment [ATO229]: NAT ICD new v1.3.0 - Realistic equipage for an aircraft on a transatlantic flight should include "R" in field 10a, indicating PBN capability. This will also require a PBN/indicator in field 18, making the example more relevant to 2012 changes. Updating 10b to reflect advanced surveillance equipment is useful in showing the new letter/number codes.

Comment [ATO230]: NAT ICD new v1.2.9 - B757 is no longer a valid type designator---changed to B752; removed dash prior to the Mach number; added DCT between fixes.

Comment [ATO231]: NAT ICD, PART II, PARA 2.1 EXAMPLE 3

Comment [ATO232]: NAT ICD new v1.3.0 - Realistic equipage for an aircraft on a transatlantic flight should include "R" in field 10a, indicating PBN capability. This will also require a PBN/indicator in field 18, making the example more relevant to 2012 changes. Updating 10b to reflect advanced surveillance equipment is useful in showing the new letter/number codes. ... [1]

Comment [ATO233]: NAT ICD new v1.2.9 - B747 is no longer a valid type designator---changed to B744.

Comment [ATO234]: NAT ICD, PART II, PARA 2.1 EXAMPLE 4

Comment [ATO235]: NAT ICD new v1.3.0 - Updated example to include new equipment and capabilities in field 10ab, new order of field ... [2]

Comment [ATO236]: NAT ICD new v1.2.9 - OPR/ is only required if different than the ID in Item 7.—deleted

SEL/BPCEOPR/BAW ORGN/EGLLBAWH RALT/CYQX EIDW REG/GBNLI-RMK/TCAS  
SEL/BPCE DOF/040212)

Field 18 from the original FPL message included in the ABI.

Subject to bilateral agreement, the following field may also be included in Field 22:

Text Amended Destination

- 4.31.3 Amended Destination is a free text field that may be used in the ABI message to notify an amended destination aerodrome. The field consists of an identifier (“DEST”) followed by a delimiter “/” character, followed by the name or the location of the new destination. When used, the Amended destination field is the last field with Field 22.

Example

(ABI-THA179-EGLL-15N0090E/0700F330-VTBD-8/IS-9/B747/H-10/S/C-15/14N093W  
13N097W YAY T-18/0)

(ABI-QFA43-YSSY-ESKEL/0300F330-NZAA-8/IS-9/B747/H-10/SIDHJRW/CD-15/SY L521  
ESKEL TANEN WN-DEST/NZWN)

The second example shows an ABI following a diversion from the original destination (NZAA) to a new destination (NZWN).

- 4.31.4 More information concerning the usage of the Amended Destination field is contained in Appendix D Chapter 7, *Implementation Guidance Material*.

#### 4.4 Coordination messages

- 4.4.1 CPL (Current Flight Plan)

- 4.4.1.1 Purpose

- 4.4.1.1.1 Used to initiate the initial coordination dialogue between automated ATS systems for a specific flight. Used to inform the receiving centre of the clearance issued to a flight. The receiving centre shall signal its acceptance by issuing an ACP, else the coordination dialogue will be continued using a CDN message.

- 4.4.1.2 Message format

ATS Field	Description
3a	Message type
7a	Aircraft identification
8ab	Flight rules and type of flight
9abc	Aircraft type Number and type of aircraft and wake turbulence category
10ab	Navigation Equipment and capabilities
13a	Departure aerodrome
14abcde	Boundary estimate data
15abc	Route (see Appendix A, paragraph 1.2.1 Chapter 4, <i>ATS Coordination Messages</i> , paragraph 4.12.1)
16a	Destination aerodrome

Comment [r237]: APAC ICD, APPENDIX A, PARA 2.1.1.3

Comment [r238]: APAC ICD, APPENDIX A, PARA 2.1.1.4

Comment [ATO239]: APAC ICD, APPENDIX A, PARA 2.1.1.4 (i)

Comment [ATO240]: APAC ICD, APPENDIX A, PARA 2.1.1.4 (ii)

Comment [r241]: APAC ICD, APPENDIX A, PARA 2.1.2

Comment [ATO242]: APAC ICD, APPENDIX A, PARA 2.2 – NAT ICD, PART II, PARA 2.2

Comment [ATO243]: APAC ICD, APPENDIX A, PARA 2.2.1 – NAT ICD, PART II, PARA 2.2, PG 12

Comment [ATO244]: APAC ICD, APPENDIX A, PARA 2.2.1.1 – NAT ICD, PART II, PARA 2.2

Comment [r245]: APAC ICD, APPENDIX A, PARA 2.2.1.1

Comment [ATO246]: NAT ICD, PART II, PARA 2.2, PG 12

Comment [r247]: APAC ICD, APPENDIX A, PARA 2.2.1.2 – NAT ICD, PART II, PARA 2.2, PG 12

Comment [ATO248]: NAT ICD new v1.3.0 - From Amendment I, Table 1.2

18

Other information as contained in the original flight plan must be transmitted, with the sole exception of the EET sub-field, which is optional

Example

(CPL-QFA811-IS-B767/H-S/C-WSSS-20N070E/1417F350-M080F350 30N060E 40N090E  
YAY T-EGLL-0)

(CPL-UAL815-IS  
-B773/H-SDJ5RXW/CSDI  
-LFPG-54N030W/1417F350  
-M080F350 54N020W 54N030W 54N040W 52N050W DCT CRONO DCT DOTTY YAY T  
-KIAD  
-0PBN/A1L1 REG/N456UA SEL/KLBF)

An aircraft in level flight. The route in field 15 is truncated.

(CPL-ICE615-IS  
-B753/H-SWX/C  
-BIKF-62N030W/1701F350F310A  
-M080F350 62N030W 60N040W 57N050W DCT OYSTR DCT STEAM T  
-KJFK  
-0)

An aircraft cleared to F350 but entering the ACI at or above F310

(CPL-IBE6123-IS  
-B744/H-SXWC/C  
-LEMD-41N030W/1325F350  
-M084F350 41N030W 41N040W 41N050W 40N060W 38N065W DANER A699 NUCAR DCT  
HEATT  
-KMIA  
-0)

The coordination point preceding the boundary as per bilateral agreement and also shows a full route to destination.

(CPL-VIR2-IS  
-B744/H-SXW/C  
-KEWR-55N040W/2323F330  
-M085F330 55N040W NATY NURSI UN551 BEL UL10 HON BNN2A  
-EGLL  
-0)

Field 15 containing a NAT track.

(CPL-BAW242-IS  
-B744/H-SIRWXY/C  
-MMM-42N050W/0623F330  
-EGLL  
-M082F330 42N050W 45N040W 47N030W 49N020W BEDRA UN491 GUNSO UM197  
GAPLI  
UR8 GIBSO  
-EGLL  
-EET/KZHU0054 CZQX0546 45N040W0556 EGGX0643 49N020W0732 BEDRA0757

**Comment [ATO249]:** NAT ICD new v1.2.9 - The clause was NOT intended to prohibit the inclusion of the EET section, just indicate that it was optional because of the perceived lack of relevance.

**Comment [r250]:** APAC ICD, APPENDIX A, PARA 2.2.1.3

**Comment [ATO251]:** NAT ICD, PART II, PARA 2.2, EXAMPLES, PG 12-13

**Comment [ATO252]:** NAT ICD new v1.3.0 - Realistic equipage for an aircraft on a transatlantic flight should include "R" in field 10a, indicating PBN capability. Includes a PBN/indicator in field 18, making the example more relevant to 2012 changes. Updating 10b to reflect advanced surveillance equipment is useful in showing the new letter/number codes.

**Comment [ATO253]:** NAT ICD new v1.2.9 - B777 is not a valid type designator, changed to B773. Added RVSM qualifier in 10a. Corrected points in route; added DCT where needed.

**Comment [ATO254]:** NAT ICD new v1.2.9 - B757 is no longer a valid type designator---changed to B753; added DCT between fixes

**Comment [ATO255]:** NAT ICD new v1.2.9 - B747 is no longer a valid type designator---changed to B744

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**Comment [ATO256]:** NAT ICD new v1.2.9 - B747 is no longer a valid type designator---changed to B744

**Comment [ATO257]:** NAT ICD new v1.2.9 - OPR/ is only required if different than the ID in Item 7.-deleted

GUNSO0813 EGT0833 ~~OPR/BAW~~ ORGN/EGLLBAWH RALT/CYQX EIDW REG/GBNLI  
 RMK/TCAS SEL/BPCE DOF/040212)  
 Field 18, other information.

#### 4.4.2 EST (COORDINATION ESTIMATE)

##### 4.4.2.1 Purpose

4.4.2.1.1 Used to inform the receiving centre of the crossing conditions for a flight and to indicate that the conditions are in compliance with agreements between the two parties. An ACP message shall be transmitted to complete the coordination process. The only valid response to an EST is an ACP.

Comment [r258]: APAC ICD, APPENDIX A, PARA 2.2.2 – NAT ICD, PART II, PARA 2.2, PG 13

Comment [ATO259]: APAC ICD, APPENDIX A, PARA 2.2.2.1

Comment [r260]: APAC ICD, APPENDIX A, PARA 2.2.2.1

##### 4.4.2.2 Message Format

ATS Field	Description
3a	Message type
7a	Aircraft identification
13a	Departure aerodrome
14	Boundary estimate data
16a	Destination aerodrome

Comment [r261]: APAC ICD, APPENDIX A, PARA 2.2.2.2 – NAT ICD, PART II, PARA 2.2, PG 14

##### Example

(EST-DLH454-EDDF-BOPUT/1248F360-KSFO)  
 (EST-QFA811/A2277-WSSS-20N070E/1417F350-YAYT)

Comment [r262]: APAC ICD, APPENDIX A, PARA 2.2.2.3 – NAT ICD, PART II, PARA 2.2, PG 14

#### 4.4.3 PAC (PREACTIVATION)

##### 4.4.3.1 Purpose

4.4.3.1.1 Used to inform the receiving centre of the crossing conditions for a flight which has not yet departed and to indicate that the conditions are in compliance with agreements between the two parties. Normally it is only used when the departure point is close to the FIR boundary and preflight coordination is required.

Comment [r263]: APAC ICD, APPENDIX A, PARA 2.2.3

Comment [r264]: APAC ICD, APPENDIX A, PARA 2.2.3.1

Comment [r265]: APAC ICD, APPENDIX A, PARA 2.2.3.1

**Note:** On receipt of a PAC message and ACP message is required to be transmitted to complete the coordination process. The only valid response to a PAC is an ACP.

##### 4.4.3.2 Message Format

ATS Field	Description
3	Message type
7	Aircraft identification
13	Departure aerodrome
14	Boundary estimate data
16	Destination aerodrome
22	Amendment (optional field)

Comment [r266]: APAC ICD, APPENDIX A, PARA 2.2.3.2

Field 22 may optionally include any or all of the following fields

8	Flight rules
9	Number, type of aircraft and wake turbulence category
10	Equipment

Comment [ATO267]: APAC ICD, APPENDIX A, PARA 2.2.3.2

- 15 Route (see Appendix A, paragraph 1.2.1) (see Chapter 4, *ATS Coordination Messages*, paragraph 4.12.1)
- 18 Other information. Note that this field shall contain information as received by the sending centre or a subset thereof as agreed between the parties.

*Example*

(PAC-QFA811/A2277-WSSS-20N070E/1417F250-YAYT-10/S/C)

## 4.4.4 MAC (COORDINATION CANCELLATION)

## 4.4.4.1 Purpose

- 4.4.4.1.1 Used specifically to indicate to a receiving centre that all notification and/or coordination received for a flight is no longer relevant to that centre. This message is not to be considered as a CNL message.

## 4.4.4.2 Message Format

ATS Field	Description
3a	Message type
7a	Aircraft identification
13a	Departure aerodrome
16a	Destination aerodrome
22	Amendment (optional field)

Field 22 may contain the following fields:

14	Boundary Estimate Data
18	Other information

Field 14 may be transmitted containing the boundary estimate data previously transmitted. It may be used if required, to correctly identify the flight concerned by the MAC, when appropriate. If a MAC is transmitted as a result of a diversion to a new destination (i.e. such that the receiving ATSU is no longer affected by the flight), Field 16 – Destination aerodrome – should contain the destination contained in the original Notification and/or coordination messages.

*Example*

(MAC-BCA789-EGKK-KLAX)  
 (MAC-ICE234-BIKF-EGPF)  
 (MAC-SIA286-NZAA-WSSS)  
 (MAC-THA989-VTBD-YMML-18/RMK/DIVERTED TO YPDN)  
 (MAC-FJI910-YSSY-NFFN-14/DUBEV/2330F370)

## 4.4.5 CDN (COORDINATION NEGOTIATION)

## 4.4.5.1 Purpose

- 4.4.5.1.1 Used to propose changes to the coordination conditions agreed to in a previously transmitted CPL, EST, PAC, or CDN message. Only one CDN dialogue can be active per flight at any given time between the same two ATSU's (refer App D paragraph 3.2.5) (refer Chapter 7, *Implementation Guidance Material*, para 7.33.5). The initial coordination dialogue is always

Comment [r268]: APAC ICD, APPENDIX A, PARA 2.2.3.3

Comment [ATO269]: APAC ICD, APPENDIX A, PARA 2.2.4 – NAT ICD, PART II, PARA 2.2, PG 14

Comment [ATO270]: APAC ICD, APPENDIX A, PARA 2.2.4.1 – NAT ICD, PART II, PARA 2.2, PG 14

Comment [ATO271]: APAC ICD, APPENDIX A, PARA 2.2.4.1 – NAT ICD, PART II, PARA 2.2, PG 14

Comment [r272]: APAC ICD, APPENDIX A, PARA 2.2.4.2 – NAT ICD, PART II, PARA 2.2, PG 14

Comment [ATO273]: APAC ICD, APPENDIX A, PARA 2.2.4.2

Comment [ATO274]: APAC ICD, APPENDIX A, PART 2.2.4.2

Comment [ATO275]: APAC ICD APPENDIX A, PARA 2.2.4.3 – NAT ICD, PART II, PARA 2.2, PG 14

Comment [ATO276]: APAC ICD, APPENDIX A, PARA 2.2.5 – NAT ICD, PART II, PARA 2.2, PG 14

Comment [ATO277]: APAC ICD, APPENDIX A, PARA 2.2.5.1 – NAT ICD, PART II, PARA 2.2, PG 14

Comment [r278]: APAC ICD, APPENDIX A, PARA 2.2.5.1

terminated by an ACP message; otherwise a unit receiving a CDN can indicate that the coordination conditions should be left as previously agreed by transmitting an REJ message. CDN dialogues should be closed prior to the Transfer of Control occurring.

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4.4.5.1-14.4.5.1.2 ATSUs should ensure that appropriate procedures are defined in bilateral Letters of Agreement for dealing with CDN messages containing a number of revisions (e.g. a revised estimate and level). There may be occasions when the receiving ATSU can accept one of the amendments but not the other. ~~Used to propose changes to the conditions specified in a previously issued CPL or CDN message. Only one CDN can be active at any given time per flight. The initial coordination dialogue is always terminated by an ACP message. Should the coordination dialogue be re-opened, either centre can indicate that the cleared profile should be left as previously agreed by transmitting an REJ message.~~

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Comment [ATO279]: NAT ICD, PART II, PARA 2.2, PG 14

#### 4.4.5.2 Message Format.

ATS Field	Description
3a	Message type
7a	Aircraft identification
13a	Departure aerodrome
16a	Destination aerodrome
22	Amendment

Comment [r280]: APAC ICD, APPENDIX A, PARA 2.2.5.2 – NAT ICD, PART II, PARA 2.2, PG 15

Under normal circumstances, Field 22 may only contain fields 14, 15, and 18. ~~Subject to bilateral agreement, the following fields may also be included in Field 22.~~

Comment [ATO281]: APAC ICD, APPENDIX A, PARA 2.2.5.2 – NAT ICD, PART II, PARA 2.2, PG 15

10 Equipment

Text Amended Destination

4.4.5.3 Amended Destination is a free text field that may be used in the CDN message to propose the coordination of a new destination aerodrome. The field consists of an identifier ("DEST") followed by a "/" character, followed by the name or location of the destination. When used, the Amended destination field is the last field within Field 22.

Comment [r282]: APAC ICD, APPENDIX A, PARA 2.2.5.3

#### Example

Comment [r283]: APAC ICD, APPENDIX A, PARA 2.2.5.4 – NAT ICD, PART II, PARA 2.2, PG 15

(CDN-NWA36-KBOS-EDDF-14/54N030W/0446F370)

Example of a CDN message with a route change

(CDN-BAW32N-KMIA-EGGL-14/37N040W/0201F360-15/M085F360  
32N050W 37N040W 42N030W 45N020W OMOKO GUNSO GAPLI  
UL620 GIBSO)

Comment [ATO284]: NAT ICD new v1.2.9 - Added CDN example for better message definition

Example of a CDN message containing changes in field 18:

(CDN-BAW242-MMMX-EGLL-14/43N040W/0308F380-18/PBN/A1  
DOF/120412 REG/GBNLI  
EET/KZHU0054 LPPO0546 CZQX0606 EGGX0643 49N020W0732  
BEDRA0757  
GUNSO0813 EGTT0833 SEL/BPCE ORGN/EGLLBAWH RALT/CYQX  
EIDW RMK/TCAS)

Comment [ATO285]: NAT ICD new v1.2.9 - Added CDN example for better message definition

(CDN-NWA36-NFFN-RJTT-14/20N150E/0446F370)

(CDN-QFA1-YSSY-WSSS-10/SDGHIJRYZ/SD)

(CDN-KAL823-RJAA-NZCH-15/L TO G591 AA-DEST/NZAA)

(CDN-MAPLE1-PKMJ-ZZZZ-14/MARTI/2200F310-15/MARTI 02N168E-DEST/0150N16745E)

4.4.5.4 The last two examples demonstrate a CDN proposing a new route to an amended destination. In example iii, there is no change to Field 14 – Boundary estimate data. ~~Example iv~~ The last example shows a change of route with a corresponding change to Field 14. The “DEST/” included in ~~Example iv~~ this example refers to the proposed destination, rather than the original “ZZZZ” destination. Refer to ~~Appendix D~~ Chapter 7, *Implementation Guidance Material*, for the methodology in proposing a diversion to a new destination.

Comment [r286]: APAC ICD, APPENDIX A, PARA 2.2.5.5

#### 4.4.6 ACP (ACCEPTANCE)

##### 4.4.6.1 Purpose

Comment [ATO287]: APAC ICD, APPENDIX A, PARA 2.2.6 – NAT ICD, PART II, PARA 2.2, PG 15

4.4.6.1.1 Used to confirm that the ~~contents of conditions contained in~~ a received CPL, CDN, EST or PAC message are accepted. ACP messages may be generated automatically or manually.

Comment [ATO288]: APAC ICD, APPENDIX A, PARA 2.2.6.1 – NAT ICD, PART II, PARA 2.2, PG 15

##### 4.4.6.2 Message Format.

ATS Field	Description
3a	Message type
7a	Aircraft identification
13a	Departure aerodrome
16a	Destination aerodrome

Comment [r289]: APAC ICD, APPENDIX A, PARA 2.2.6.1 – NAT ICD, PART II, PARA 2.2, PG 15

Comment [r290]: APAC ICD, APPENDIX A, PARA 2.2.6.2 – NAT ICD, PART II, PARA 2.2, PG 15

##### Example

(ACP-ACA860-NZAA-KSFO)

Comment [r291]: APAC ICD, APPENDIX A, PARA 2.2.6.3 – NAT ICD, PART II, PARA 2.2, PG 15

#### 4.4.7 REJ (REJECTION)

##### 4.4.7.1 Purpose

Comment [r292]: APAC ICD, APPENDIX A, PARA 2.2.7 – NAT ICD, PART II, PARA 2.2, PG 15

4.4.7.1.1 Used to reject a clearance proposed by a CDN to a previously coordinated flight and terminate the coordination dialogue. The ~~clearance coordination~~ remains as was previously agreed.

Comment [ATO293]: APAC ICD, APPENDIX A, PARA 2.2.7.1 – NAT ICD, PART II, PARA 2.2, PG 15

Comment [ATO294]: APAC ICD, APPENDIX A, PARA 2.2.7.1 – NAT ICD, PART II, PARA 2.2, PG 15

##### 4.4.7.2 Message Format.

ATS Field	Description
3a	Message type
7a	Aircraft Identification
13a	Departure Aerodrome
16a	Destination Aerodrome

Comment [r295]: APAC ICD, APPENDIX A, PARA 2.2.7.2 – NAT ICD, PART II, PARA 2.2, PG 16

##### Example

(REJ-AAL780-KJFK-EGLL)  
(REJ-AAL780-KSFO-RJAA)

Comment [r296]: APAC ICD, APPENDIX A, PARA 2.2.7.3 – NAT ICD, PART II, PARA 2.2, PG 16

#### 4.4.8 TRU (TRACK UPDATE)

Comment [r297]: APAC ICD, APPENDIX A, PARA 2.2.8

##### 4.4.8.1 Purpose

Comment [r298]: APAC ICD, APPENDIX A, PARA 2.2.8.1

4.4.8.1.1 Used to permit the coordination of coordinate amendments to previously agreed coordination conditions where prior coordination of the changes is not required. Because there is no operational response to the TRU message, use of this message must be in strict accordance with bilateral agreements between ATSUs concerned.

Comment [r299]: APAC ICD, APPENDIX A, PARA 2.2.8.1

#### 4.4.8.2 Message Format

Comment [r300]: APAC ICD, APPENDIX A, PARA 2.2.8.2

ATS Field	Description
3	Message type
7	Aircraft Identification
13	Departure Aerodrome
16	Destination Aerodrome
Text	Track Data

4.4.8.3 Track data is a free text field used in the TRU message to permit the transfer of updated clearance information from one ATSU to another. This field contains a number of elements which are described below. Each element consists of an “identifier” and a value which are separated by a “/” character.

Comment [r301]: APAC ICD, APPENDIX A, PARA 2.2.8.3

4.4.8.4 All of the elements within the Track data field are optional, and multiple elements may be included, separated by a single <space> character. Track data will contain at least one element. When multiple elements are to be transmitted in a single TRU message, the order of the elements within the Track data field is the order in which they are listed below. Unused elements are not included in the Track data field.

Comment [r302]: APAC ICD, APPENDIX A, PARA 2.2.8.4

#### 4.4.8.5 Heading (HDG)

4.4.8.5.1 This optional element is preceded by the identifier ‘HDG’ and contains the magnetic heading that has been assigned to the aircraft, expressed as a three digit number between 001 and 360.

Comment [ATO303]: APAC ICD, APPENDIX A, PARA 2.2.8.5

Comment [ATO304]: APAC ICD, APPENDIX A, PARA 2.2.8.5

*Example*

Comment [ATO305]: APAC ICD, APPENDIX, PARA 2.2.8.5

HDG/080

#### 4.4.8.6 Cleared Flight Level (CFL)

Comment [r306]: APAC ICD, APPENDIX A, PARA 2.2.8.6

4.4.8.6.1 This optional element is preceded by the identifier ‘CFL’ and contains the amended level that the aircraft has been assigned. Block levels in accordance with Part 1, Paragraph 4.4.1.1 Chapter 2, *Purpose, Policy and Units of Measurement*, para 2.34.2, are also supported.

Comment [ATO307]: APAC ICD, APPENDIX A, PARA 2.2.8.6

*Example*

Comment [ATO308]: APAC ICD, APPENDIX A, PARA 2.2.8.6

CFL/F330

CFL/F310F330

CFL/F310F330F210A

#### 4.4.8.7 Speed (SPD)

Comment [r309]: APAC ICD, APPENDIX A, PARA 2.2.8.7

4.4.8.7.1 This optional element is preceded by the identifier ‘SPD’ and contains details of the speed (Mach Number or Indicated airspeed) that the aircraft has been assigned.

Comment [r310]: APAC ICD, APPENDIX A, PARA 2.2.8.7

Mach numbers are expressed as “M” followed by 3 numeric giving the true Mach Number or to the nearest .01 Mach.

Comment [ATO311]: APAC ICD, APPENDIX A, PARA 2.2.8.7

Indicated airspeeds are expressed as “I” followed by 4 numeric giving the Indicated Airspeed in knots.

Comment [ATO312]: APAC ICD, APPENDIX A, PARA 2.2.8.7



4.4.8.7.2 To cancel an assigned speed that had been previously coordinated, the SPD identifier is followed by a “/” character, followed by a zero (0).

*Example*

SPD/M084  
SPD/I0250  
SPD/0

Comment [r313]: APAC ICD, APPENDIX A, PARA 2.2.8.7.1

Comment [ATO314]: APAC ICD, APPENDIX A, PARA 2.2.8.7.1

4.4.8.8 Direct to (DCT)

4.4.8.8.1 This optional element is preceded by the identifier “DCT” and contains the position that the aircraft has been cleared directly to.

*Example*

DCT/MICKY  
DCT/30S160E

Comment [r315]: APAC ICD, APPENDIX A, PARA 2.2.8.8

Comment [r316]: APAC ICD, APPENDIX A, PARA 2.2.8.8

Comment [ATO317]: APAC ICD, APPENDIX A, PARA 2.2.8.8

4.4.8.9 Off track deviation (OTD)

4.4.8.9.1 This optional element is preceded by the identifier “OTD” and contains the details of any off track clearance that has been issued to the aircraft. The format of the off track deviation is as described in Part I paragraph 4.5 Chapter 2, Purpose, Policy and Units of Measurement, para 2.44-435; i.e.

a single character providing advice as to whether the clearance is an offset (O) or a weather deviation (W); and

an off track distance associated with this clearance;

a direction, indicating left (L) or right ~~W~~ (R) or, in the case of weather deviation, either side of track (E); and

when including Offset information in and AIDC message, the direction “E” (either side of track) shall not be used

Comment [r318]: APAC ICD, APPENDIX A, PARA 2.2.8.9

Comment [r319]: APAC ICD, APPENDIX A, PARA 2.2.8.9

Comment [ATO320]: APAC ICD, APPENDIX A, PARA 2.2.8.9

Comment [ATO321]: APAC ICD, APPENDIX A, PARA 2.2.8.9

Comment [ATO322]: APAC ICD, APPENDIX A, PARA 2.2.8.9

Comment [ATO323]: APAC ICD, APPENDIX A, PARA 2.2.8.9

4.4.8.9.2 To cancel a previously coordinated off track deviation, the OTD identifier is followed by a “/” character, followed by a zero (0).

*Example*

OTD/W20R  
OTD/O30L  
OTD/0

Comment [r324]: APAC ICD, APPENDIX A, PARA 2.2.8.9.1

Comment [ATO325]: APAC ICD, APPENDIX A, PARA 2.2.8.9.1

4.4.8.10 Depending on automation, the receiving ATSU may automatically update their flight plan data, or simply display the message to the responsible controller.

*Example*

(TRU-UAL73-NTAA-KLAX-CFL/F280 OTD/W20R)  
(TRU-QFA43-YSSY-NZAA-HDG/115 CFL/F270)

Comment [r326]: APAC ICD, APPENDIX A, PARA 2.2.8.10

Comment [r327]: APAC ICD, APPENDIX A, PARA 2.2.8.11

## 4.5 Transfer of control messages

4.5.1 TOC (TRANSFER OF CONTROL)

Comment [r328]: APAC ICD, APPENDIX A, PARA 2.3, NAT ICD, PART II, PARA 2.3, PG 16

Comment [ATO329]: APAC ICD, APPENDIX A, PARA 2.3.1 – NAT ICD, PART II, PARA 2.3, PG 16

## 4.5.1.1 Purpose

4.5.1.1.1 Used to offer the receiving centre executive control of a flight

## 4.5.1.2 Message Format

ATS Field	Description
3a	Message type
7a	Aircraft identification
13a	Departure aerodrome
16a	Destination aerodrome

## Example

(TOC-TAP451-LPPT-KJFK)  
(TOC-TAP451/A2217-YMML-NZCH)

## 4.5.2 AOC (ASSUMPTION OF CONTROL)

## 4.5.2.1 Purpose

4.5.2.1.1 Sent in response to a TOC to indicate acceptance of executive control of a flight.

## 4.5.2.2 Message Format

ATS Field	Description
3a	Message type
7a	Aircraft identification
13a	Departure aerodrome
16a	Destination aerodrome

## Example

(AOC-TAP451-LPPT-KJFK)  
(AOC-TAP451/A2217-NKFN-PHNL)

## 4.6 General information messages

## 4.6.1 EMG (EMERGENCY)

## 4.6.1.1 Purpose

4.6.1.1.1 Used at the discretion of ATSU's when it is considered that the contents require immediate attention. Normally the information would be presented directly to the controller responsible for the flight or to the controller expecting to receive responsibility for the flight. When the message does not refer to a specific flight, a functional address shall be used and the information presented to the appropriate ATS position. Where such an address is used it is preceded by an oblique stroke (/) to differentiate it from aircraft identification. The following are some examples of circumstances which could justify the use of an EMG message.

- Reports of emergency calls or emergency locator transmission reports.
- Messages concerning hi-jack or bomb warnings.

Comment [ATO330]: APAC ICD, APPENDIX A, PARA 2.3.1.1 – NAT ICD, PART II, PARA 2.3, PG 16

Comment [ATO331]: APAC ICD, APPENDIX A, PARA 2.3.1.1 – NAT ICD, PART II, PARA 2.3, PG 16

Comment [r332]: APAC ICD, APPENDIX A, PARA 2.3.1.2 – NAT ICD, PART II, PARA 2.3, PG 16

Comment [r333]: APAC ICD, APPENDIX A, PARA 2.3.1.3 – NAT ICD, PART II, PARA 2.3, PG 16

Comment [ATO334]: APAC ICD, APPENDIX A, PARA 2.3.2 – NAT ICD, PART II, PARA 2.3, PG 17

Comment [ATO335]: APAC ICD, APPENDIX A, PARA 2.3.2.1 – NAT ICD, PART II, PARA 2.3, PG 17

Comment [ATO336]: APAC ICD, APPENDIX A, PARA 2.3.2.1 – NAT ICD, PART II, PARA 2.3, PG 17

Comment [r337]: APAC ICD, APPENDIX A, PARA 2.3.2.2 – NAT ICD, PART II, PARA 2.3, PG 17

Comment [r338]: APAC ICD, APPENDIX A, PARA 2.3.2.3

Comment [ATO339]: APAC ICD, APPENDIX A, PARA 2.4 – NAT ICD, PART II, PARA 2.4

Comment [ATO340]: APAC ICD, APPENDIX A, PARA 2.4.1 – NAT ICD, PART II, PARA 2.4, PG 17

Comment [ATO341]: APAC ICD, APPENDIX A, PARA 2.4.1.1 – NAT ICD, PART II, PARA 2.4, PG 17

Comment [ATO342]: APAC ICD, APPENDIX A, PARA 2.4.1.1 – NAT ICD, PART II, PARA 2.4, PG 17

Comment [ATO343]: APAC ICD, APPENDIX A, PARA 2.4.1.1 a) – NAT ICD, PART II, PARA 2.4, PG 17

Comment [ATO344]: APAC ICD, APPENDIX A, PARA 2.4.1.1 b) – NAT ICD, PART II, PARA 2.4, PG 17

- c) Messages concerning serious illness or disturbance among passengers.
- d) Sudden alteration in flight profile due to technical or navigational failure.
- e) Communications failure.

Comment [ATO345]: APAC ICD, APPENDIX A, PARA 2.4.1.1 c) – NAT ICD, PART II, PARA 2.4, PG 17

Comment [ATO346]: APAC ICD, APPENDIX A, PARA 2.4.1.1 d) – NAT ICD, PART II, PARA 2.4, PG 17

#### 4.6.1.2 Message format.

ATS Field	Description
3a	Message type
7a	Aircraft identification or functional address
18	Other information

Comment [r347]: APAC ICD, APPENDIX A, PARA 2.4.1.1 e)

Comment [r348]: APAC ICD, APPENDIX A, PARA 2.4.1.2 – NAT ICD, PART II, PARA 2.4, PG 17

#### Example

(EMG-UAL123-RMK/Free Text)  
(EMG-/ASUP-RMK/Free Text)

Comment [r349]: APAC ICD, APPENDIX A, PARA 2.4.1.3 – NAT ICD, PART II, PARA 2.4, PG 18

#### 4.6.2 MIS (MISCELLANEOUS)

##### 4.6.2.1 Purpose.

Comment [ATO350]: APAC ICD, APPENDIX A, PARA 2.4.2 – NAT ICD, PART II, PARA 2.4, PG 18

- 4.6.2.1.1 Used to transmit operational information which cannot be formatted to comply with any other message type and for plain language statements. Normally the information would be presented directly to the controller responsible for the flight or to the controller expecting to receive responsibility for the flight. When the message does not refer to a specific flight, a functional address shall be used and the information presented to the appropriate ATS position. Where such an address is used it is preceded by an oblique stroke (/) to differentiate it from an aircraft's identification.

Comment [ATO351]: APAC ICD, APPENDIX A, PARA 2.4.2.1 – NAT ICD, PART II, PARA 2.4, PG 18

Comment [ATO352]: APAC ICD, APPENDIX A, PARA 2.4.2.1 – NAT ICD, PART II, PARA 2.4, PG 18

##### 4.6.2.2 Message format.

ATS Field	Description
3a	Message type
7a	Aircraft identification
18	Other information

Comment [r353]: APAC ICD, APPENDIX A, PARA 2.4.1.2 – NAT ICD, PART II, PARA 2.4, PG 18

#### Examples

(MIS-NWA456-RMK/Free Text)  
(MIS-/ASUP-RMK/Free Text)

Comment [ATO354]: APAC ICD, APPENDIX A, PARA 2.4.1.3 – NAT ICD, PART II, PARA 2.4, PG 18

#### 4.6.3 TDM (TRACK DEFINITION MESSAGE)

##### 4.6.3.1 Purpose.

Comment [r355]: APAC ICD, APPENDIX A, PARA 2.4.3

- 4.6.3.1.1 Used to distribute track information to affected Area Control Centres (ACCs) and Airline Operational Control Centres (AOCs) for flight planning. The message contains track definition and activity time periods.

Comment [r356]: APAC ICD, APPENDIX A, PARA 2.4.3.1

Comment [r357]: APAC ICD, APPENDIX A, PARA 2.4.3.1

##### 4.6.3.2 Message Format.

1. Message Identifier. The message begins with a "(TDM" and ends with ")". Fields within the message are separated by a space (i.e. " ").

Comment [r358]: APAC ICD, APPENDIX A, PARA 2.4.3.2

Comment [ATO359]: APAC ICD, APPENDIX A, PARA 2.4.3.2.1.

2. **Track Name.** The track name consists of two fields. The first field is always TRK. The second field is the track identifier. The track identifier consists of 1 to 4 alphanumeric characters.

Comment [ATO360]: APAC ICD, APPENDIX A, PARA 2.4.3.2 2.

3. **General Information Contains:**

Comment [ATO361]: APAC ICD, APPENDIX A, PARA 2.4.3.2 3.

a. **Date** and time the track was generated and message number for that particular track in YYMMDDHHMMNN format where NN represents the message number. The initial TDM date/time message number group will look like: 941006134501. Message numbers 02 and to 99 indicate TDM amendments or e-revisions. Note that zero padding may be required to provide the correct number of digits.

Comment [ATO362]: APAC ICD, APPENDIX A, PARA 2.4.3.2 3.(A)

b. **Track status** – Blank field for initial message or “AMDT” for amendment.

Comment [ATO363]: APAC ICD, APPENDIX A, PARA 2.4.3.2 3.(b)

4. **Activity Time Interval.** This field consists of two date/time pairs, separated by a blank character, in the following format: YYMMDDHHMM YYMMDDHHMM.

Comment [ATO364]: APAC ICD, APPENDIX A, PARA 2.4.3.2 4.

The first date/time pair represents the track activation, while the second is the track termination date/time.

*Example:* 9410070300 9410071500.

This example represents an activation date/time of October 7, 1994, at 0300 UTC and a termination date/time of October 7, 1994 at 1500 UTC.

5. **Track Waypoint.** This field contains the set of waypoints defining the track from the ingress fix to the egress fix. Waypoints are represented as latitude/longitude or named en route points. Waypoints are separated from each other by a blank space. Note that zero padding may be required. For example:

Comment [ATO365]: APAC ICD, APPENDIX A, PARA 2.4.3.2 5.

60N150W 60N160W, or NORMUL NUMMI, or FINGS 5405N13430W, etc.

6. **Optional Fields**

Comment [ATO366]: APAC ICD, APPENDIX A, PARA 2.4.3.2 6.

a. **Level.** This optional field will not be used in the Pacific operations since levels are published in separate documents, *e.g.* Pacific Ocean Supplements. However, the field will be retained for possible future use. If used in the future, track levels lists may be specified for the east and westbound directions of flight and a track levels list would contain the complete list of levels available on the track for the specified direction of flight. The levels would apply to all waypoints in the track waypoint list.

Comment [ATO367]: APAC ICD, APPENDIX A, PARA 2.4.3.2 6.(A)

b. **Connecting routes (RTS):** The RTS field is an optional field not normally used by automated ATS systems. When used, it is located after the waypoint list (before the remarks field) and begins with the keyword “RTS/” at the beginning of a line. Each line of the RTS field contains a single connecting route (to the ingress fix or from the egress fix).

Comment [ATO368]: APAC ICD, APPENDIX A, PARA 2.4.3.2 6.(B)

7. **Remarks.** The Remarks subfield is a free text field *text field* that can contain additional comments. If there are no remarks a zero (0) is inserted as the only text. The remarks subfield begins with “RMK/”.

Comment [ATO369]: APAC ICD, APPENDIX A, PARA 2.4.3.2 7.

#### Examples

The following TDM describes a route connecting Honolulu and Japan and would look similar to:

Comment [r370]: APAC ICD, APPENDIX A, PARA 2.4.3.3

(TDM TRK A 940413124001  
9404131900 9404140800

Comment [r371]: APAC ICD, APPENDIX A, PARA 2.4.3.3.1

LILIA 27N170W 29N180E 31N170E 32N160E MASON  
 RTS/PHNL KEOLA2 LILIA  
 MASON OTR 15 MOLT OTR 16 SUNNS OTR20 LIBRA RJAA RMK/0)

The following TDM Revision describes a revision to the TDM shown above:

(TDM TRK A 940413131502 AMDT  
 9404131900 9404140800  
 LILIA 27N170W 29N180E 30N170E 32N160E MASON  
 RTS/PHNL KEOLA2 LILIA  
 MASON OTR15 SMOLT OTR16 SUNNS OTR20 LIBRA RJAA RMK/0)

In the example given above, the message number (as delineated by the last two digits of the message generation date/time group) indicates it as the second ("2") message for the track. This is followed by "AMDT" to signify the previous message has been amended.

#### 4.6.4 NAT (ORGANIZED TRACK STRUCTURE)

##### 4.6.4.1 Purpose

4.6.4.1.1 Used to publish the organized track structure and the levels available. The message may be divided into several parts to enable it to be transmitted.

##### 4.6.4.2 Message Format.

ATS Field	Description
3a	Message type
Text	Structured text

##### 4.6.4.3 Structured Text Format.

4.6.4.3.1 It is required to adhere strictly to the syntax described hereafter in order to facilitate automated processing of NAT messages.

4.6.4.3.2 In the examples below, text between angle brackets should be understood to represent characters by their ASCII name. E.g. <sp> stands for 'space character', <cr> for 'carriage return', <lf> for 'line feed', and any combination <cr> is the same as <cr><lf>. No control character shall be inserted in the message text unless specified as in the examples below. This restriction of course applies to <cr> and <lf> as well as any other control character.

4.6.4.3.3 It shall be noted that NAT Track messages shall otherwise follow current AFTN syntax requirements as expressed in ICAO Annex 10, Chapter 11, ~~1995~~ current version, e.g. that the alignment function with the message text, header and trailer is composed of a single <cr> followed by a single <lf>. However modern systems shall also be able to process the older alignment function composed of a double <cr> followed by a single <lf> as if it were a single <cr> followed by a single <lf> for backward compatibility reasons and to facilitate transition.

4.6.4.3.4 Characters in **bold underlined** in Message Text (syntax) column are to be replaced or dealt with as explained in the Description column.

4.6.4.3.5 The structured text is first composed of a NAT message header, as follows:

Id	Message Text (syntax)	Description (semantics)
----	-----------------------	-------------------------

Comment [r372]: APAC ICD, APPENDIX A, PARA 2.4.3.3.2

Comment [r373]: APAC ICD, APPENDIX A, PARA 2.4.3.3.3

Comment [ATO374]: NAT ICD, PART II, PARA 2.4.3, PG 18

Comment [ATO375]: NAT ICD, PART II, PARA 2.4.3, PG 18

Comment [ATO376]: NAT ICD, PART II, PARA 2.4.3, PG 18

Comment [ATO377]: NAT ICD, PART II, PARA 2.4.3, PG 18

Comment [ATO378]: NAT ICD, PART II, PARA 2.4.3, PG 18

Comment [ATO379]: NAT ICD, PART II, PARA 2.4.3, PG 18

Comment [ATO380]: NAT ICD, PART II, PARA 2.4.3, PG 18

Comment [ATO381]: NAT ICD, PART II, PARA 2.4.3, PG 19

Comment [ATO382]: NAT ICD, PART II, PARA 2.4.3, PG 19

Comment [ATO383]: NAT ICD, PART II, PARA 2.4.3, PG 19

- 1 (NAT-**a**/**b**<sp>  
TRACKS<sp>      **a** designates the part number in the **b** parts of the NAT message (**a** and **b** are one decimal digit)
- 2 FLS<sp>**nnn**/**mmm**  
<sp>INCLUSIVE      **nnn** and **mmm** designating the minimum and maximum concerned flight levels in hundreds of feet (three decimal digits)

3 <crLf>

- 4 **month**<sp>**d1/h1m1Z**      Validity time with:  
<sp>TO<sp>      **month**: for the month of validity full month name in letters

**month**<sp>**d2/h2m2Z**      **d1/h1m1**: beginning time of validity  
   **d2/h2m2**: ending time of validity(day/hour minute,  
   2 digits each, no space, leading zero required if number  
   is less than 10)

5 <crLf>

- 6 PART<sp>**a**      **a** and **b** textual numbers (ONE, TWO, THREE, FOUR) or one decimal  
<sp>OF<SP>      digit. Both numbers shall represent the same digits as referred to **b**<sp>  
**PARTS**-      in item Id 1 above.  
**b**<sp>PARTS-      Terminal character **S** may be omitted if **b** is ONE.

7 <crLf><crLf>

- 4.6.4.3.6 Following the NAT message header is a repeat of the following structure for each North Atlantic Track part of the message. If the resulting NAT message text is longer than 1800 characters, it must be separated into as many parts as necessary. Separation must happen between individual North Atlantic Track descriptions, not within an individual description.

#### Id Message Text (syntax) Description (semantics)

- 8 **L**      letter designating the name of the NAT track.

One of:

ABCDEFGHIJKLM for Westbound tracks. The most northerly Track of the day is designated as NAT Track Alpha, the adjacent Track to the south as NAT Track Bravo, etc.

NPQRSTUVWXYZ for Eastbound tracks The most southerly Track of the day is designated as NAT Track Zulu, the adjacent Track to the north as NAT Track Yankee, etc.

Tracks must be defined in sequence starting at any letter in the appropriate set, each following track using the immediately following letter in that set, e.g. UVWXYZ or ABCDE etc.

The first track in the message shall be the most northerly one and each subsequent track shall be the next one towards the south.

9 <sp>

Comment [ATO384]: NAT ICD, PART II, PARA 2.4.3, PG 19

Comment [ATO385]: NAT ICD, PART II, PARA 2.4.3, PG 19

Comment [ATO386]: NAT ICD, PART II, PARA 2.4.3, PG 19

- 10 **list of points** Each point, separated by a space, is either significant points (named points from the published ICAO list of fixes) or a LAT/LONG given in degrees or degrees and minutes. At present only whole degrees are used.

Acceptable LAT/LONG syntaxes are:

- xx/yy
- xxmm/yy
- xx/yymm
- xxmm/yymm

Where xx is the north latitude, yy the west longitude, and mm the minutes part of the latitude or longitude.

- 11 <crLf>

- 12 **EAST LVLS<sp>List of allowed levels** list the allowed flight levels for eastbound flights. This list can contain NIL if there is no allowed level or a list of numbers (3 decimal digits) for each allowed level separated by a space.

- 13 <crLf>

- 14 **West LVLS<sp>List of allowed levels** list the allowed flight levels for westbound flight. This list can contain NIL if there is no allowed level or a list of numbers (3 decimal digits) for each allowed level separated by a space.

- 15 <crLf>

- 16 **EUR<sp>RTS<sp>** (optional field)

**WEST<sp>XXX<sp>**  
**VIA<sp>RP** Note that the indentation does not indicate the presence of space characters, it is a presentation mechanism to highlight two variant syntaxes for this field.

OR

**EUR<sp>RTS<sp>**  
**WEST<sp>NIL** Description of European links to the tracks, this description will be given separately for Eastbound and/or Westbound flights.

**XXX** designating the Irish/UK route structure linked to the NAT track.

**RP** designating the point recommended to be over flown by westbound flights for joining the NAT track.

The text “VIA<sp>**RP**” is optional.

Or

There is no European link.

- 17 <crLf>

- 18 **NAR<sp>list** (optional)

OR  
**NAR<sp>NIL** Description of North American links to the tracks list  
list of North American airways recommended to be

Comment [ATO387]: NAT ICD, PART II, PARA 2.4.3, PG 20

Comment [ATO388]: NAT ICD, PART II, PARA 2.4.3, PG 21

overflowed by flights for joining or leaving the NAT track

Or

There ~~is~~are no recommended North American airways

19 -  
20 <crLf><crLf>

And to terminate the NAT message is composed of a trailer

Comment [ATO389]: NAT ICD, PART II, PARA 2.4.3, PG 21

Id	Message Text (syntax)	Description (semantics)
21	<crLf>	
22	REMARKS<crLf>text<crLf>	This field is optional and can only be present in the last part of a multipart NAT message, or in the unique part in case of a mono-part NAT message.
		The remark text must contain the Track Message Identifier (TMI).
		It is recommended to consistently place the TMI in the first remark.
		The syntax for the TMI is as follows:
		Any text may precede the keywords that identify the TMI.
		The TMI is recognised as the first occurrence of the string (without the quotes) "TMI<sp>IS<sp>xxx" is the TMI and "a" the optional track message revision letter.
		To facilitate automated processing, this string shall be followed by a space character before any subsequent remark text is inserted in the track message.
		The TMI shall be the Julian calendar day in the year – i.e. starting at one (001) on the first of January or each year, 002 for second of January etc.
23	END<sp>OF<sp>PART<sp>a<sp>OF<sp>b<sp>PARTS)	a and b textual numbers (ONE, TWO, THREE, FOUR) or one decimal digit.
		Both numbers must be the same as in field 6 above.
		Terminal character S may be omitted if b is ONE.

Comment [ATO390]: NAT ICD, PART II, PARA 2.4.3, PG 21

Comment [ATO391]: NAT ICD, PART II, PARA 2.4.3, PG 21

23 END<sp>OF<sp>PART<sp>a<sp>OF<sp>b<sp>PARTS)  
Both numbers must be the same as in field 6 above.  
Terminal character S may be omitted if b is ONE.

4.6.4.3.7 Example of westbound message set.

Comment [ATO392]: NAT ICD, PART II, PARA 2.4.3, PG 21

(NAT-1/3 TRACKS FLS 310/390 INCLUSIVE  
JULY 01/1130Z TO JULY 01/1800Z  
PART ON OF THREE PARTS-

A 57/10 59/20 61/30 62/40 62/50 61/60 RODEO  
EAST LVLS NIL  
WEST LVLS 320 340 360 380  
EUR RTS WEST NIL  
NAR N498C N4996C N484C-

Comment [ATO393]: NAT ICD, PART II, PARA 2.4.3, PG 21

B 56/10 58/20 60/30 61/40 60/50 59/60 LAKES  
EAST LVLS NIL  
WEST LVLS 310 330 350 370 390  
EUR RTS WEST 2

Comment [ATO394]: NAT ICD, PART II, PARA 2.4.3, PG 21



PAN ICD

NAR N434C N428C N424E N416C

C 55/10 57/20 59/30 60/40 59/50 PRAWN YDP  
EAST LVLS NIL  
WEST LVLS 310 32 330 340 350 360 370 380 390  
EUR RTS WEST NIL  
NAR N322B N326B N328C N336H N346A N348C N352C N356C N362B-

Comment [ATO395]: NAT ICD, PART II,  
PARA 2.4.3, PG 22

D MASIT 56/20 58/30 59/40 58/50 PORGY HO  
EAST LVL NIL  
WEST LVLS 310 320 330 340 350 360 370 380 390  
EUR RTS WEST DEVOL  
NAR N284B N292C N294C N298H N302C N304E N306C N308E N312A-

Comment [ATO396]: NAT ICD, PART II,  
PARA 2.4.3, PG 22

E 54/15 55/20 57/30 57/40 56/50 SCROD VALIE  
EAST LVLS NIL  
WEST LVLS 310 320 330 340 350 360 370 380 390  
EUR RTS WEST BURAK  
NAR N240C N248C N250E N252E N254A N256A N258A N260A-

Comment [ATO397]: NAT ICD, PART II,  
PARA 2.4.3, PG 22

END OF PART ONE OF THREE PARTS

(NAT-2/3 TRACKS FLS 310.390 INCLUSIVE  
JULY 01/1130Z TO JULY 01/1800Z  
PART TWO OF THREE PARTS

Comment [ATO398]: NAT ICD, PART II,  
PARA 2.4.3, PG 22

F 53/15 54/20 56/30 56/40 55/50 OYSTR STEAM  
EAST LVLS NIL  
WEST LVLS 310 320 330 340 350 360 370 380 390  
EUR RTS WEST GUNSO  
NAR NIL-

Comment [ATO399]: NAT ICD, PART II,  
PARA 2.4.3, PG 22

END OF PART TWO OF THREE PARTS

(NAT-3/3 TRACKS FLS 310/390 INCLUSIVE  
JULY 01/1130Z TO JULY 01/1800Z  
PART THREE OF THREE PARTS-

Comment [ATO400]: NAT ICD, PART II,  
PARA 2.4.3, PG 22

H BANAL 43/20 44/30 44/40 43/50 JEBBY CARAC  
EAST LVLS NIL  
WEST LVLS 310 350 370  
EUR RTS WEST DIRMA  
NAR N36E N44B-

Comment [ATO401]: NAT ICD, PART II,  
PARA 2.4.3, PG 22

REMARKS

1. TMI IS 182 AND OPERATORS ARE REMINDED TO INCLUDE THE TMI NUMBER AS PART OF THE OCEANIC CLEARANCE READ BACK.
2. OPERATORS ATTENTION IS DRAWN TO CZUL NOTAM A2152/01
3. OPERATORS ATTENTION IS DRAWN TO UK NOTAMS A1098/01 AND G0120/01
4. MNPS AIRSPACE EXTENDS FROM FL285 TO FL420. OPERATORS ARE REMINDED THAT SPECIFIC MNPS APPROVAL IS REQUIRED TO FLY IN THIS AIRSPACE. IN ADDITION, RVSM APPROVAL IS REQUIRED TO FLY BETWEEN FL310 AND FL390 INCLUSIVE.

Comment [ATO402]: NAT ICD, PART II,  
PARA 2.4.3, PG 22

5. EIGHTY PERCENT OR GROSS NAVIGATION ERRORS RESULT FROM POOR COCKPIT PROCEDURES. ALWAYS CARRY OUT PROPER WAY POINT CHECKS. -  
END OF PART THREE OR THREE PARTS)

#### 4.6.4.3.8 Example of eastbound message set.

(NAT-1/1 TRACKS FLS 310/390 INCLUSIVE  
JULY 01/0100Z TO JULY 01/0800Z  
PART ONE OF ONE PART-

V YAY 53/50 54/40 55/30 56/20 56/10 MAC  
EAST LVLS 310 320 330 340 350 360 370 380 390  
WEST LVLS NIL  
NAR N125A N129B-

W DOTTY 52/50 53/40 54/30 55/20 55/10 TADEx  
EAST LVLS 310 320 330 340 350 360 370 380 390  
WEST LVLS NIL  
EUR RTS WEST NIL  
NAR N109E N113B-

X CYMON 51/50 52/40 53/30 54/20 54/15 BABAN  
EAST LVLS 310 320 330 340 350 360 370 380 390  
WEST LVLS NIL  
EUR RTS WEST NIL  
NAR N93B N97B-

Y YQX 50/50 51/40 52/30 53/20 53/15 BURAK  
EAST LVLS 310 320 330 340 350 360 370 380 390  
WEST LVLS NIL  
EUR RTS WEST NIL  
NAR 77B N83B-

Z VIXUN 49/50 50/40 51/30 52/20 52/15 DOLIP  
EAST LVLS 310 320 330 340 350 360 370 380 390  
WEST LVLS NIL  
EUR RTS WEST NIL  
NAR 61B N67B-

#### REMARKS:

1. TMI IS 182 AND OPERATORS ARE REMINDED TO INCLUDE THE TMI NUMBER AS PART OF THE OCEANIC CLEARANCE READ BACK.
2. CLEARANCE DELIVERY FREQUENCY ASSIGNMENTS FOR AIRCRAFT OPERATING FROM MOATT OT BOBTU INCLUSIVE: MOATT - SCROD 128.7 OYSTR - DOTTY 135.45 CYMON - YQX 135.05 VIXUN - COLOR 128.45 BANCS AND SOUTH 119.42
3. PLEASE REFER TO INTERNATIONAL NOTAMS CZUL A2152/01
4. MNPS AIRSPACE EXTENDS FROM FL285 TO FL420. OPERATORS ARE REMINDED THAT SPECIFIC MNPS APPROVAL IS REQUIRED TO FLY IN THIS AIRSPACE. IN ADDITION, RVSM APPROVAL IS REQUIRED TO FLY WITHIN THE NAT REGIONS BETWEEN FL310 AND FL390 INCLUSIVE.
5. 80 PERCENT OF GROSS NAVIGATIONAL ERRORS RESULT FROM POOR COCKPIT PROCEDURES. ALWAYS CARRY OUT PROPER WAYPOINT CHECKS.
6. REPORT NEXT WAYPOINT DEVIATIONS OF 3 MINUTES OR MORE TO ATC.
7. EASTBOUND UK FLIGHT PLANNING RESTRICTIONS IN FORCE. SEE NOTAMS A1098/01.

Comment [ATO403]: NAT ICD, PART II, PARA 2.4.3, PG 23

Comment [ATO404]: NAT ICD, PART II, PARA 2.4.3, PG 23

Comment [ATO405]: NAT ICD, PART II, PARA 2.4.3, PG 23

Comment [ATO406]: NAT ICD, PART II, PARA 2.4.3, PG 23

Comment [ATO407]: NAT ICD, PART II, PARA 2.4.3, PG 23

Comment [ATO408]: NAT ICD, PART II, PARA 2.4.3, PG 23

Comment [ATO409]: NAT ICD, PART II, PARA 2.4.3, PG 23

Comment [ATO410]: NAT ICD, PART II, PARA 2.4.3, PG 23

END OF PART ONE OF ONE PART)

#### 4.7 Application management messages

##### 4.7.1 LAM (LOGICAL ACKNOWLEDGEMENT MESSAGE)

###### 4.7.1.1 Purpose

- 4.7.1.1.1 Sent for each message (except for another LAM or LRM) that has been received, processed, found free of errors and, where relevant, is available for presentation to a control position. Non-receipt of a LAM may require local action. Used to acknowledge successful receipt of a transmitted message. The message identifier and reference identifier are found in the message header which is defined in Part I – Part III Chapter 3, *Communications and Support Mechanisms*.

###### 4.7.1.2 Message Format.

ATS Field	Description
3a	Message type
18	Other information as contained in the original flight plan must be transmitted, with the sole exception of the EET sub-field

###### Example

(LAM)

##### 4.7.2 LRM (LOGICAL REJECTION MESSAGE)

###### 4.7.2.1 Purpose

- 4.7.2.1.1 Used to reject a message which contains invalid information. The message identifier and reference identifier are found in the message header, which is defined in Part II – Part III of this document Chapter 3, *Communications and Support Mechanism*. The LRM will identify the first field found that contains invalid information if this field information is available.

###### 4.7.2.2 Message Format.

ATS Field	Description
3a	Message type
18	Other information as contained in the original flight plan must be transmitted, with the sole exception of the EET sub-field. In the case of the LRM Field 18 is used to convey technical information between systems and will only include the RMK/ sub-field.

- 4.7.2.3 Field 18 will only use the RMK/ sub-field. It will comprise an error code, supporting text and the ICAO field number in which the error occurred (where applicable).

- 4.7.2.4 The following format is used in the RMK/ sub-field of the LRM to report errors:

&lt;error code&gt;/&lt;field number&gt;/&lt;invalid text&gt;

- 4.7.2.5 A catalogue of error codes and supporting text is contained in Appendix A Chapter 5, *Error Codes*.

###### Example

Comment [ATO411]: APAC ICD, APPENDIX A, PARA 2.5 – NAT ICD PART II, PARA 2.5

Comment [ATO412]: APAC ICD, APPENDIX A, PARA 2.5.1 – NAT ICD, PART II, PARA 2.5, PG 24

Comment [ATO413]: APAC ICD, APPENDIX A, PARA 2.5.1.1 – NAT ICD, PART II, PARA 2.5, PG 24

Comment [r414]: APAC ICD, APPENDIX A, PARA 2.5.1.1 – NAT ICD, PART II, PARA 2.5, PG 24

Comment [ATO415]: APAC ICD, APPENDIX A, PARA 2.5.1.2 – NAT ICD, PART II, PARA 2.5, PG 24

Comment [ATO416]: APAC ICD APPENDIX A, PARA 2.5.1.3 – NAT ICD, PART II, PARA 2.5, PG 24

Comment [ATO417]: APAC ICD, APPENDIX A, PARA 2.5.2 – NAT ICD, PART II, PARA 2.5, PG 24

Comment [ATO418]: APAC ICD, APPENDIX A, PARA 2.5.2.1 – NAT ICD, PART II, PARA 2.5, PG 24

Comment [ATO419]: APAC ICD, APPENDIX A, PARA 2.5.2.1 – NAT ICD, PART II, PARA 2.5, PG 24

Comment [r420]: APAC ICD, APPENDIX A, PARA 2.5.2.2 – NAT ICD, PART II, PARA 2.5, PG 24

Comment [ATO421]: NAT ICD new v1.2.9 - Changed description of field 18 to explain the intent of its use in the LRM message.

Comment [ATO422]: APAC ICD, APPENDIX A, PARA 2.5.2.3 – NAT ICD, PART II, PARA 2.5, PG 25

Comment [r423]: APAC ICD, APPENDIX A, PARA 2.5.2.4 – NAT ICD, PART II, PARA 2.5, PG 25

Comment [ATO424]: NAT ICD, PART II, PARA 2.5, PG 25

Comment [ATO425]: NAT ICD, PART II, PARA 2.5, Example, PG 25

(LRM-RMK/27/15/93N070W)

This message denotes an invalid lat/lon in Field 15.)

4.7.2.6 The <error code> shall contain the appropriate error code number from Appendix B, Table B-1 Chapter 5, *Error Code*, Table 5-1. The error code is described using up to three numeric characters without leading zeros. When multiple errors are detected in an AIDC message, only a single LRM should be generated in response. This LRM would usually contain the error code of the first error detected.

Comment [r426]: APAC ICD, APPENDIX A, PARA 2.5.2.5

4.7.2.7 The <field number> will contain the field number corresponding to the error code extracted from Table 5-1, *Error Codes*. Where multiple field numbers are assigned to an error code, only the first field number containing the error will be sent. Where no field number is referenced in Table B-1 Table 5-1, *Error Codes*, and the field number sub-field will be empty. The field number can be described using up to six alphanumeric characters.

Comment [r427]: APAC ICD, APPENDIX A, PARA 2.5.2.6

**Note:** Some ATSUs may not support non-numeric field numbers (e.g. "HEADER"). Whilst this is acceptable in order to preserve backwards compatibility with existing systems, the preferred implementation is for any non-numeric field numbers for Table B-1 Table 5-1 to be supported within the LRM.

Comment [ATO428]: APAC ICD, APPENDIX A, PARA 2.5.2.6 Note

4.7.2.8 The <invalid text> field will contain the error text corresponding to the error code extracted from Table 5-1 (not including any of 'explanatory text' that may have been included in Table 5-1). If the specific error can be identified, it may optionally be appended to the Table B-1 Table 5-1 error text. The invalid text field can contain up to 256 characters.

Comment [r429]: APAC ICD, APPENDIX A, PARA 2.5.2.7

**Note:** Some ATSUs may not include the error text from Table 5-1, *Error Codes*, in the <invalid text> field of transmitted LRMs. Whilst this is acceptable in order to preserve backwards compatibility with existing systems, the preferred option is the LRM <invalid text> field to at least contain the error text from Table B-1 Table 5-1, *Error Codes*.

Comment [ATO430]: APAC ICD, APPENDIX A, PARA 2.5.2.7 Note

4.7.2.9 The following shows a number of LRM examples. Where more than one LRM format is shown, the format of the first one is the preferred option.

Comment [r431]: APAC ICD, APPENDIX A, PARA 2.5.2.8

*Example*

(LRM-RMK/1/HEADER/INVALID SENDING UNIT)

**OR**

(LRM-RMK/1//INVALID SENDING UNIT)

(See Note following paragraph 2.5.2.7 4.7.2.7)

(LRM-RMK/17/16/INVALID AERODROME DESIGNATOR)

**OR**

(LRM-RMK/17/16/)

(See Note following paragraph 2.5.2.7 4.7.2.7)

(LRM-RMK/57//INVALID MESSAGE LENGTH)

(LRM-RMK/27/15/INVALID LAT/LON 130S165E)

(The actual error "130S165E" may be optionally appended to the error text from Table B-1, see paragraph 2.5.2.7 Table 5-1, *Error Codes* see para 4.7.2.7)

Comment [ATO432]: APAC ICD, APPENDIX A, PARA 2.5.2.9

Comment [ATO433]: APAC ICD, APPENDIX A, PARA para 2.5.2.9 (i)

Comment [ATO434]: APAC ICD, APPENDIX A, PARA 2.5.2.9 (ii)

Comment [ATO435]: APAC ICD, APPENDIX A, PARA 2.5.2.9 (iii)

Comment [ATO436]: APAC ICD, APPENDIX A, PARA 2.5.2.9 (iv)

Comment [ATO437]: APAC ICD, APPENDIX A, PARA 2.5.3 – NAT ICD, PART II, PARA 2.5, PG 24

Comment [ATO438]: APAC ICD, APPENDIX A, PARA 2.5.3.1 – NAT ICD, PART II, PARA 2.5, PG 24

4.7.3 ASM (APPLICATION STATUS MONITOR)

4.7.3.1 Purpose.

## PAN ICD

4.7.3.1.1 Sent to an adjacent centre to confirm that the adjacent centre's ATC application system is online. It is transmitted when no other application messages have been received within an adaptable time. The periodic interval between transmissions of this message should be determined based on the needs of the operation environment. Typical values may be between 5 and 30 minutes.

Comment [ATO439]: APAC ICD, APPENDIX A, PARA 2.5.3.1 – NAT ICD, PART II, PARA 2.5, PG 24

4.7.3.2 Message Format.

ATS Field	Description
-----------	-------------

3a	Message type
----	--------------

Example

(ASM)

Comment [ATO440]: APAC ICD, APPENDIX A, PARA 2.5.3.2 – NAT ICD, PART II, PARA 2.5, PG 24

4.7.4 FAN (FANS APPLICATION MESSAGE)

Comment [ATO441]: APAC ICD, APPENDIX A, PARA 2.5.3.3 – NAT ICD, PART II, PARA 2.5, PG 24

4.7.4.1 Purpose.

Comment [ATO442]: APAC ICD, APPENDIX A, PARA 2.5.4 – NAT ICD, PART II, PARA 2.5, PG 25

4.7.4.1.1 Transmitted by ~~an~~ one ATSAU (generally the controlling ATSU) to another ATSU (generally the receiving ATSU) to provide the required information necessary to establish CPDLC and/or ADS-C connections with FANS equipped aircraft and thus reduce the number of air-ground messages required to affect the transfer.

Comment [ATO443]: APAC ICD, APPENDIX A, PARA 2.5.4.1 – NAT ICD, PART II, PARA 2.5, PG 25

Comment [r444]: APAC ICD, APPENDIX A, PARA 2.5.4.1 – NAT ICD, PART II, PARA 2.5, PG 25

4.7.4.2 Message Format.

ATS Field	Description
3	Message type
7	Aircraft identification
13	Departure aerodrome
16	Destination aerodrome
Text	Application data as described below

Comment [ATO445]: APAC ICD, APPENDIX A, PARA 2.5.4.2 – NAT ICD, PART II, PARA 2.5, PG 25

4.7.4.3 Receipt or transmission of a FAN message does not change the coordination state of the flight.

Comment [r446]: APAC ICD, APPENDIX A, PARA 2.5.4.2.1

4.7.4.4 Application data field.

Comment [ATO447]: APAC ICD, APPENDIX A, PARA 2.5.4.3 – NAT ICD, PART II, PARA 2.5, PG 25

4.7.4.4.1 Application data field is a free text field used in the FAN message to permit the transfer of FANS logon information from one ATSU to another. This field contains a number of elements which are separated by a “/” character. The abbreviation used for the identifier corresponds to the associated ICAO abbreviation (where one exists)/ otherwise the three character MTI (Message Type Identifier) contained in the logon is used (refer to ARINC 622 for a listing of various MTIs)

Comment [ATO448]: APAC ICD, APPENDIX A, PARA 2.5.4.3 – NAT ICD, PART II, PARA 2.5, PG 25

4.7.4.4.2 The order of the elements within the FAN message is the order that they are listed below, with consecutive elements being separated by a single <space> character. Although some elements within the Application data field may be “optional”, they should be included if the corresponding data is available (i.e. if the ATSU transmitting the FAN message has received this information either from a logon or a FAN message). This is for the benefit of downstream ATSUs ~~what that~~ may use the information within these optional elements. If data is not available for an optional element, that element is not to be included in the FAN message.

Comment [ATO449]: APAC ICD, APPENDIX A, PARA 2.5.4.3.1 – NAT ICD, PART II, PARA 2.5, PG 25

4.7.4.4.3 Additional information concerning the elements described below is contained in [Appendix D](#) Chapter 7, *Implementation Guidance Material*.

Comment [ATO450]: APAC ICD, APPENDIX A, PARA 2.5.4.3.2 – NAT ICD, PART II, PARA 2.5, PG 26

#### 4.7.4.5 Standard message identifier (SMI)

Comment [ATO451]: APAC ICD, APPENDIX A, PARA 2.5.4.4 – NAT ICD, PART II, PARA 2.5, PG 26

4.7.4.5.1 This mandatory element is preceded by the identifier ‘SMI’ and contains information relating to the address ~~to which~~ uplink messages are routed to in the avionics. The value of the SMI sent in the FAN message is the downlink SMI as it was received in either the most recently received logon or FAN message.

Comment [ATO452]: APAC ICD, APPENDIX A, PARA 2.5.4.4 – NAT ICD, PART II, PARA 2.5, PG 26

4.7.4.5.2 Allowable values for the SMI are listed in ARINC 620. Examples ~~of~~ of SMIs include “FML”, “FMR”, “FMD”, “FM3” and “AFD”.

Comment [ATO453]: APAC ICD, APPENDIX A, PARA 2.5.4.4 – NAT ICD, PART II, PARA 2.5, PG 26

##### Example

Comment [ATO454]: APAC ICD, APPENDIX A, PARA 2.5.4.4 Example – NAT ICD, PART II, PARA 2.5, PG 26

SMI/FMD

#### 4.7.4.6 Aircraft identification

Comment [ATO455]: APAC ICD, APPENDIX A, PARA 2.5.4.5 – NAT ICD, PART II, PARA 2.5, PG 26

4.7.4.6.1 This mandatory element is preceded by the identifier ‘FMH’ and contains the aircraft identification as it was received in either the most recently received logon or FAN message.

Comment [ATO456]: APAC ICD, APPENDIX A, PARA 2.5.4.5 – NAT ICD, PART II, PARA 2.5, PG 26

##### Example

Comment [ATO457]: APAC ICD, APPENDIX A, PARA 2.5.4.5 Example – NAT ICD, PART II, PARA 2.5, PG 26

FMH/MAS123

#### 4.7.4.7 Aircraft registration

Comment [ATO458]: APAC ICD, APPENDIX A, PARA 2.5.4.6 – NAT ICD, PART II, PARA 2.5, PG 26

4.7.4.7.1 This mandatory element is preceded by the identifier ‘REG’ and contains the registration details of the aircraft – including the hyphen if applicable – as it was received in either the most recently received logon or FAN message.

Comment [ATO459]: APAC ICD, APPENDIX A, PARA 2.5.4.6 – NAT ICD, PART II, PARA 2.5, PG 26

##### Example

Comment [ATO460]: APAC ICD, APPENDIX A, PARA 2.5.4.6 Example – NAT ICD, PART II, PARA 2.5, PG 26

REG/N12345

REG/9V-ABC

#### 4.7.4.8 Aircraft Address (ICAO 24 bit code)

Comment [ATO461]: APAC ICD, APPENDIX A, PARA 2.5.4.7

4.7.4.8.1 This optional element is preceded by the identifier ‘CODE’ and contains the six character hexadecimal translation ~~of~~ of the 24 bit aircraft address as it was received in either the most recently received logon or FAN message.

Comment [ATO462]: APAC ICD, APPENDIX A, PARA 2.5.4.7

##### Example

Comment [ATO463]: APAC ICD, APPENDIX A, PARA 2.5.4.7 Example

CODE/ABC123

#### 4.7.4.9 Aircraft position information

Comment [ATO464]: APAC ICD, APPENDIX A, PARA 2.5.4.8 – NAT ICD, PART II, PARA 2.5, PG 26

4.7.4.9.1 This optional element is preceded by the identifier ‘FPO’ and contains the position of the aircraft as determined by the ATSU at the time of transmission of the FAN message, if this information is available. The position of the aircraft is expressed as a latitude/longitude in either dd[NS]ddd[EW] or dddmm[NS]dddmm[EW] format.

Comment [ATO465]: APAC ICD, APPENDIX A, PARA 2.5.4.8 – NAT ICD, PART II, PARA 2.5, PG 26

##### Example

Comment [r466]: APAC ICD, APPENDIX A, PARA 2.5.4.8, Example – NAT ICD, PART II, PARA 2.5, PG 26

FPO/23S150E

FPO/0823N11025E

#### 4.7.4.10ATS Application and Version Number

Comment [ATO467]: APAC ICD, APPENDIX A, PARA 2.5.4.9 – NAT ICD, PART II, PARA 2.5, PG 27

## PAN ICD

4.7.4.10.1 There will usually be multiple elements associated with the ATS Application and Version number (i.e. CPDLC and ADS-C). Occurrences of this element are preceded by the identifier 'FCO' which describes the ATS data link application(s) available in the avionics, as they were received in a logon or a previously received FAN message. The ~~Fan~~-FAN message must include at least one ATS data link application – a separate identifier is used for each available application. These elements may be transmitted in any order.

Comment [ATO468]: APAC ICD, APPENDIX A, PARA 2.5.4.9 – NAT ICD, PART II, PARA 2.5, PG 27

4.7.4.10.2 The value associated with FCO identifier consists of three letters to describe the application name immediately followed by (i.e. with no intervening spaces) two numeric characters to represent the associated version number. Possible values for the three letters are "ATC" (for CPDLC) or "ADS" (for ADS-C), and the possible range of version numbers is 01 to 99.

Comment [ATO469]: APAC ICD, APPENDIX A, PARA 2.5.4.9.1 – NAT ICD, PART II, PARA 2.5, PG 27

### Example

FCO/ATC01 FCO/ADS01  
FCO/ADS01

Comment [ATO470]: APAC ICD, APPENDIX A, PARA 2.5.4.9.1 Example – NAT ICD, PART II, PARA 2.5, PG 27

4.7.4.10.3 The second example illustrates a FAN message with ADS-C application only. This may be either because the aircraft is not CPDLC equipped, or because the FAN is being used with an adjacent ATSU to enable monitoring using ADS-C by that ATSU ~~with~~-when the aircraft is only entering the Area of Common Interest (ACI).

Comment [ATO471]: APAC ICD, APPENDIX A, PARA 2.5.4.9.2 – NAT ICD, PART II, PARA 2.5, PG 27

### Example

(FAN-ACA870-CYUL-LFPG-SMI/AFD FMH/ACA870 REG/C-GOJA FPO/53N035W  
FCO/ATC01 FCO/ADS01)

Comment [r472]: APAC ICD, APPENDIX A, PARA 2.5.4.10, Examples – NAT ICD, PART II, PARA 2.5, PG 27

(FAN-UAL951-EBBR-KIAD-SMI/FML FMH/UAL951 REG/N123UA CODE/A254B3  
FCO/ADS01)

(FAN-QFA43-YSSY-NZAA-SMI/AFD FMH/QFA43 REG/VH-OJA FPO/34S158E  
FCO/ATC01 FCO/ADS01)

FAN-ANZ123-NZAA-KLAX-SMI/FML FMH/ANZ123 REG/ZK-NJP FCO/ADS01

(FAN-SIA221-WSSS-YSSY-SMI/FMD FMH/SIA221 REG/9M-MRP CODE/A254B3  
FPO/1214S11223E FCO/ATC01 FCO/ADS01)

4.7.4.10.4 ATSUs should ensure that at least two of the ACID, REG, or CODE ~~fields~~-elements are used to ensure that the logon information contained in the FAN message is associated with the correct flight ~~date~~-data record.

Comment [ATO473]: APAC ICD, APPENDIX A, PARA 2.5.4.11 – NAT ICD, PART II, PARA 2.5, PG 27

**Note 1.** If the FAN message contains information for the purpose of the next unit establishing a CPDLC connection, is should not be sent until after an appropriate CPDLC Next Data Authority message (NDA) has been transmitted to the aircraft, ~~either~~ allowing a reasonable time for delivery of the NDA message or waiting for a MAS/S message to be received in response.

Comment [ATO474]: APAC ICD, APPENDIX A, PARA 2.5.4.11 Note 1 – NAT ICD, PART II, PARA 2.5, PG 27, Note 1

**Note 2.** Where an aircraft enters an adjacent ATSU's ACI but does not actually enter the ATSU's airspace and a FAN message is sent to the adjacent ATSU to enable monitoring using ADS-C then the FCO identifier for the CPDLC application should not be included.

Comment [ATO475]: APAC ICD, APPENDIX A, PARA 2.5.4.11 Note 2 – NAT ICD, PART II, PARA 2.5, PG 27, Note 2

4.7.5 FCN (FANS COMPLETION NOTIFICATION)

Comment [ATO476]: APAC ICD, APPENDIX A, PARA 2.5.5 – NAT ICD, PART II, PARA 2.5, PG 27

4.7.5.1 Purpose

Comment [ATO477]: APAC ICD, APPENDIX A, PARA 2.5.5.1 – NAT ICD, PART II, PARA 2.5, PG 27

4.7.5.1.1 The FCN may be transmitted by either the transferring or receiving ATSU to provide information concerning the CPDLC Connection status of the aircraft. It is transmitted by the transferring ATSU when their CPDLC Connection with the aircraft is terminated, providing notification to the receiving ATSU that they are the CPDLC Current Data Authority. It may also be transmitted by the receiving ATSU to provide notification of the establishment of a CPDLC Connection or a failure of a CPDLC Connection request.

**Comment [ATO478]:** APAC ICD, APPENDIX A, PARA 2.5.5.1 – NAT ICD, PART II, PARA 2.5, PG 27

4.7.5.2 Receipt or transmission of an FCN message does not change the coordination state of the flight.

**Comment [ATO479]:** APAC ICD, APPENDIX A, PARA 2.5.5.1.1 – NAT ICD, PART II, PARA 2.5, PG 27

4.7.5.3 An FCN transmitted by the receiving ATSU may also (optionally) include contact/monitor frequency information to be issued to the aircraft by the transferring ATSU.

**Comment [ATO480]:** APAC ICD, APPENDIX A, PARA 2.5.5.1.2 – NAT ICD, PART II, PARA 2.5, PG 27

4.7.5.4 Message Format.

**Comment [ATO481]:** APAC ICD, APPENDIX A, PARA 2.5.5.2 – NAT ICD, PART II, PARA 2.5, PG 28

ATS Field	Description
3	Message type
7	Aircraft identification
13	Departure aerodrome
16	Destination aerodrome
18	Field 18 in the FCN message is used for the purpose of transmitting two sub-fields; the CPDLC connection identifier and the frequency identifier, both of which are described below
Text	Communication Status as described below

4.7.5.5 Communication Status field

**Comment [r482]:** APAC ICD, APPENDIX A, PARA 2.5.5.3

4.7.5.5.1 Communication Status is a free text field used in the FCN message to permit the transfer of CPDLC connection status and (optionally) frequency information from one ATSU to another. This field may contain a number of elements which are described below. Each element consists of an “identifier” and a value which are separated by a “/” character. Separate elements are separated by a single < space> character.

**Comment [ATO483]:** APAC ICD, APPENDIX A, PARA 2.5.5.3

4.7.5.6 CPDLC Connection Status identifier (CPD)

**Comment [ATO484]:** APAC ICD, APPENDIX A, PARA 2.5.5.4 – NAT ICD, PART II, PARA 2.5, PG 28

4.7.5.6.1 This mandatory element is preceded by the identifier “CPD” and contains a single Integer value which is used to provide information concerning an aircraft’s CPDLC Connection status. The value to be included in the CPDLC Connection Status field is determined from the following table.

**Comment [ATO485]:** APAC ICD, APPENDIX A, PARA 2.5.5.4.1 – NAT ICD, PART II, PARA 2.5, PG 28

**Table 4-2. CPDCL Connection Status**

**Comment [ATO486]:** APAC ICD, APPENDIX A, PARA 2.5.5.4.1 Table – NAT ICD, PART II, PARA 2.5, PG 28, Table  
Procedures material from the Asia/Pacific Regional ICD for AIDC is highlighted in green.  
Procedures material from the North Atlantic Common Coordination ICD is highlighted in blue.  
Procedures material contained in both the NAT ICD and APAC ICD is not highlighted

CPDLC Connection Status		Meaning
FCN sent by transferring ATSU	FCN sent by receiving ATSU	
0		The CPDLC Connection with the aircraft has been terminated
	0	No CPDLC Connection could be established with the aircraft
	1	The CPDLC Connection Request failed due to the receiving ATSU not being the



		nominated CPDLC Next Data Authority
	2	A CPDLC Connection has been established with the aircraft

## 4.7.5.7 Frequency identifier (FREQ)

4.7.5.7.1 This optional element is preceded by the identifier “FREQ” and may be included in an FCN message transmitted by the receiving ATSU to advise of any changes to a previously notified (or a default) frequency. The FREQ/ identifier provides advice to the transferring ATSU of the voice frequency to be transmitted to the aircraft in the CPDLC Contact/Monitor instruction. If no frequency information is to be transmitted this element should not be included in the FCN message.

4.7.5.7.2 When transmitted in the FCN message, the frequency variable does not contain units, spaces or leading zeroes. It may be up to 7 characters in length, containing integers or a decimal point selected from the frequency range below.

Table 4-3. Frequency Identifier

	Range	Units
HF	2850 to 28000	kHz
VHF	117.975 to 137.000	MHz
UHF	225.000 to 399.975	MHz

## Example

FCN transmitted by receiving ATSU:

(FCN-SIA221-YSSY-WSSS-CPD/0)

The CPDLC Connection request for SIA221 failed

(FCN-ANZ15-KLAX-NZAA-CPD/2 FREQ/13261)

The CPDLC Connection request for ANZ15 was successful. Contact/Monitor voice frequency is 13261

FCN transmitted by transferring ATSU:

(FCN-ICE615-BIKF-KJFK-CPD/0)

The CPDLC Connection with ICE615 has been terminated

## 4.8 Surveillance data transfer service messages

## 4.8.1 ADS (SURVEILLANCE ADS-C)

## 4.8.1.1 Purpose

4.8.1.1.1 Used to transfer information contained in an ADS-C report from one ATSU to another

## 4.8.1.2 Message Format

ATS Field	Description
-----------	-------------

Comment [ATO487]: APAC ICD, APPENDIX A, PARA 2.5.5.6 – NAT ICD, PART II, PARA 2.5, PG 28

Comment [ATO488]: APAC ICD, APPENDIX A, PARA 2.5.5.6.1 – NAT ICD, PART II, PARA 2.5, PG 28

Comment [ATO489]: APAC ICD, APPENDIX A, PARA 2.5.5.6.3 – NAT ICD, PART II, PARA 2.5, PG 28

Comment [ATO490]: APAC ICD, APPENDIX A, PARA 2.5.5.6.3 Table – NAT ICD, PART II, PARA 2.5, PG 28, Table  
Procedures material from the Asia-Pacific Regional ICD for AIDC is highlighted in green.  
Procedures material from the North Atlantic Common Coordination ICD is highlighted in blue.  
Procedures material contained in both the NAT ICD and APAC ICD is not highlighted

Comment [ATO491]: APAC ICD, APPENDIX A, PARA 2.5.5.7 – NAT ICD, PART II, PARA 2.5, PG 29

Comment [ATO492]: APAC ICD, APPENDIX A, PARA 2.5.5.7.1 – NAT ICD, PART II, PARA 2.5, PG 29

Comment [ATO493]: APAC ICD, APPENDIX A, PARA 2.5.5.7.2 – NAT ICD, PART II, PARA 2.5, PG 29

Comment [ATO494]: APAC ICD, APPENDIX A, PARA 2.6

Comment [r495]: APAC ICD, APPENDIX A, PARA 2.6.1

Comment [r496]: APAC ICD, APPENDIX A, PARA 2.6.1.1

Comment [r497]: APAC ICD, APPENDIX A, PARA 2.6.1.1

Comment [r498]: APAC ICD, APPENDIX A, PARA 2.6.1.2

3	Message type
7	Aircraft identification
13	Departure aerodrome
16	Destination aerodrome
Text	ADS-C Data

#### 4.8.1.3 ADS-C data field.

4.8.1.3.1 ADS-C data is a free text field used in the ADS message to permit the transfer of information contained in an ADS-C report from one ATSU to another. The data field consists of an identifier (“ADS”) followed by a delimiter “/” character, followed by a text string containing specific text extracted from the encoded ACARS ADS-C report received from the aircraft.

4.8.1.3.2 The ADS-C data field may also be used to indicate that no further ADS messages will be sent to the receiving ATSU for the flight. To indicate this state the ADS identifier is followed by a delimiter “/” character, followed by a “0” (zero). The trigger would be ~~by the~~ bilateral agreement (e.g. an ADS-C report has been received that places the aircraft outside the ACI and the predicted route group indicates that the aircraft will not re-enter the ACI).

4.8.1.3.3 The specific text to be included in the AIDC ADS message is described in ~~Appendix D – Implementation Guidance Material~~ Chapter 7 – Implementation Guidance Material.

*Example*

```
(ADS-ANZ90-RJAA-NZAA-ADS/ZK-OKC030007FF946B6F6DC8FC044
B9D0DFC013B80DA88FC0A64F9E4438B4AC8FC000E34D0EFC0001014
0F3E86)(ADS-ANZ90-RJAA-NZAA-ADS/ZK-
KC030007FF946B6FC014B9D0DFC013B80DA88
FC0A64F9E4438B4AC8FC000E34D0EFC00010140F3E86)
(ADS-ANZ90-RJAA-NZAA-ADS/0)
```

Comment [r499]: APAC ICD, APPENDIX A, PARA 2.6.1.3

Comment [r500]: APAC ICD, APPENDIX A, PARA 2.6.1.3

Comment [r501]: APAC ICD, APPENDIX A, PARA 2.6.1.3.1

Comment [r502]: APAC ICD, APPENDIX A, PARA 2.6.1.3.2

Comment [r503]: APAC ICD, APPENDIX A, PARA 2.6.1.4

Table 4-4. PAN AIDC Messages and their Field Composition

CORE	OPT	MESSAGE	MESSAGE ACRONYM	ICAO FIELDS										NON-ICAO FIELDS
				3a	7a	8ab	9abc	10ab	13a	14abcde	15abc	16a	18	22
X		Advance Boundary Information	ABI	X	X				X	X		X		X 8,9,10,15,18,Text
X		Current Flight Plan	CPL	X	X	X	X	X	X	X	X	X	X	
X		Coordination Estimate	EST	X	X				X	X		X		
X		Coordination Cancellation	MAC	X	X				X			X		X 14,18
	X	PreActivation	PAC	X	X				X	X		X		X 8,9,10,15,18
X		Coordination Negotiation	CDN	X	X				X			X		X 10,14,15,18,Text
X		Acceptance	ACP	X	X				X			X		
X		Rejection	REJ	X	X				X			X		
	X	Track Update	TRU	X	X				X			X		X
X		Transfer of Control	TOC	X	X				X			X		
X		Assumption of Control	AOC	X	X				X			X		

Comment [ATO504]: APAC ICD, APPENDIX A, TABLE A-2, ASIA/PAC Core Messages – NAT ICD, PART II, TABLE 2, NAT Core Messages and Their Field Composition

Procedures material from the Asia/Pacific Regional ICD for AIDC is highlighted in green.

Procedures material from the North Atlantic Common Coordination ICD is highlighted in blue.

Procedures material contained in both the NAT ICD and APAC ICD is not highlighted.

Comment [ATO505]: APAC ICD, APPENDIX A, TABLE A-2, ASIA/PAC Core Messages

PAN ICD

CORE	OPT	MESSAGE	MESSAGE ACRONYM	ICAO FIELDS											NON-ICAO FIELDS
				3a	7a	8ab	9abc	10ab	13a	14abcde	15abc	16a	18	22	
X		Emergency	EMG	X	X				X				X		
X		Miscellaneous	MIS	X	X								X		
	X	Track Definition Message	TDM	X					X						X
X		Organized Tracks	NAT	X	X										X
X		Logical Acknowledge ment Message	LAM	X											
X		Logical Rejection Message	LRM	X									X		
X	X	Application Status Monitor	ASM	X											
X	X	FANS Application Message	FAN	X	X				X			X			X
X	X	FANS Completion Notification	FCN	X	X				X			X	X		X
		Organized Tracks	NAT	X											X

Comment [ATO506]: APAC ICD, APPENDIX A, TABLE A-2, ASIA/PAC Core Messages

Comment [r507]: NAT ICD, PART II, TABLE 2, NAT Core Messages

Comment [r508]: NAT ICD, PART II, TABLE 2, NAT Core Messages

PAN ICD

	X	Surveillance ADS-C	ADS	X	X				X			X			X
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Comment [ATO509]: APAC ICD, APPENDIX A, TABLE A-2, ASIA/PAC Core Messages

## Chapter 5. Error Codes

### 5.1 Introduction

- 5.11 A set of error codes has been developed for those messages contained in the NAT-Core ASIA/PAC AIDC message set. A list of the codes, associated field number and error text is contained in the table below. This information is for the inclusion in any Logical Rejection Message transmitted in response to the reception of an AIDC message containing an error.
- 5.12 Error codes for incorrect message sequences, such as attempting a change in coordination conditions (CDN) while a transfer of control is in progress (TOC) have not yet been developed

Table 5-1. Error Codes

Error Code	Field Number	Error Text
1	HEADER	INVALID SENDING UNIT (e.g. AFTN Address)
2	HEADER	INVALID RECEIVING UNIT (e.g. AFTN Address)
3	HEADER	INVALID TIME STAMP
4	HEADER	INVALID MESSAGE ID
5	HEADER	INVALID REFERENCE ID
6	7	INVALID ACID
7	7	DUPLICATE ACID
8	7	UNKNOWN FUNCTIONAL ADDRESS
9	7	INVALID SSR MODE
10	7	INVALID SSR CODE
11	8	INVALID FLIGHT RULES
12	8	INVALID FLIGHT TYPE
13	9	INVALID AIRCRAFT MODEL
14	9	INVALID WAKE TURBULENCE CATEGORY
15	10	INVALID CNA CNS EQUIPMENT DESIGNATOR
16	10	INVALID SSR EQUIPMENT DESIGNATOR
17	13,16,17	INVALID AERODROME DESIGNATOR
18	13	INVALID DEPARTURE AERODROME
19	16	INVALID DESTINATION AERODROME
20	17	INVALID ARRIVAL AERODROME
21	13,16,17	EXPECTED TIME DESIGNATOR NOT FOUND

Comment [ATO510]: APAC ICD, APPENDIX B – NAT ICD, APPENDIX A

Comment [r511]: APAC ICD, APPENDIX B, PARA 1 – NAT ICD, APPENDIX A, PARA 1

Comment [ATO512]: APAC ICD, APPENDIX B, PARA 1.1 – NAT ICD, APPENDIX A, PARA 1.1

Comment [ATO513]: NAT ICD, APPENDIX A, PARA 1.2

Comment [ATO514]: APAC ICD, APPENDIX B, TABLE B-1 – NAT ICD, APPENDIX A, TABLE A-1

Procedures material from the Asia/Pacific Regional ICD for AIDC is highlighted in green.  
Procedures material from the North Atlantic Common Coordination ICD is highlighted in blue.  
Procedures material contained in both the NAT ICD and APAC ICD is not highlighted.

PAN ICD

Error Code	Field Number	Error Text
22	13,16,17	TIME DESIGNATOR PRESENT WHEN NOT EXPECTED
23	13,14,16,17	INVALID TIME DESIGNATOR
24	13,14,16,17	MISSING TIME DESIGNATOR
25	14	INVALID BOUNDARY POINT DESIGNATOR
26	14,15	INVALID EN ROUTE POINT
27	14,15	INVALID LAT/LON DESIGNATOR
28	14,15	INVALID NAV AID FIX
29	14,15	INVALID LEVEL DESIGNATOR
30	14,15	MISSING LEVEL DESIGNATOR
31	14	INVALID SUPPLEMENTARY CROSSING DATA
32	14	INVALID SUPPLEMENTARY CROSSING LEVEL
33	14	MISSING SUPPLEMENTARY CROSSING LEVEL
34	14	INVALID CROSSING CONDITION
35	14	MISSING CROSSING CONDITION
36	15	INVALID SPEED/LEVEL DESIGNATOR
37	15	MISSING SPEED/LEVEL DESIGNATOR
38	15	INVALID SPEED DESIGNATOR
39	15	MISSING SPEED DESIGNATOR
40	15	INVALID ROUTE ELEMENT DESIGNATOR
41	15	INVALID ATS ROUTE/SIGNIFICANT POINT DESIGNATOR
42	15	INVALID ATS ROUTE DESIGNATOR
43	15	INVALID SIGNIFICANT POINT DESIGNATOR
44	15	FLIGHT RULES INDICATOR DOES NOT FOLLOW SIGNIFICANT POINT
45	15	ADDITIONAL DATA FOLLOWS TRUNCATION INDICATOR
46	15	INCORRECT CRUISE CLIMB FORMAT
47	15	CONFLICTING DIRECTION
48	18	INVALID OTHER INFORMATION ELEMENT
49	19	INVALID SUPPLEMENTARY INFORMATION ELEMENT

Error Code	Field Number	Error Text
50	22	INVALID AMENDMENT FIELD DATA
51		MISSING FIELD nn (See Note 2) INVALID AMENDMENT FIELD DATA
52		MORE THAN ONE FIELD MISSING
53		MESSAGE LOGICALLY TOO LONG
54		SYNTAX ERROR IN FIELD nn (See Note 2)
55		INVALID MESSAGE LENGTH
56		<del>NAT ERRORS/TDM ERROR</del> USE APPROPRIATE ERROR
57		INVALID MESSAGE
58		MISSING PARENTHESIS
59		MESSAGE NOT APPLICABLE TO zzzz OAC (See Note 2)
60	3	INVALID MESSAGE MNEMONIC (i.e., 3 LETTER IDENTIFIER)
61	Header	INVALID CRC
62-71		RESERVED FOR FUTURE USE
62		UNDEFINED ERROR
63		MSG SEQUENCE ERROR: ABI IGNORED
64		MSG SEQUENCE ERROR: INITIAL COORDINATION NOT PERFORMED
65		MESSAGE SEQUENCE ERROR: EXPECTING MSG xxx; RECEIVED MSGyyy (See Note 2)
66	14	INVALID BLOCK LEVEL
67	14	INVALID OFF-TRACK CLEARANCE TYPE
68	14	INVALID OFF-TRACK DIRECTION
69	14	INVALID OFF-TRACK DISTANCE
70	14	INVALID MACH NUMBER QUALIFIER
71	14	INVALID MACH NUMBER
72	ADF (See Note 4 3)	INVALID IDENTIFIER
73	ADF (See Note 4 3)	INVALID SMI
74	ADF (See Note 4 3)	INVALID ACID IN FMH/IDENTIFIER
75	ADF (See Note 4 3)	INVALID REGISTRATION IN REG/IDENTIFIER
76	ADF (See Note 4 3)	INVALID AIRCRAFT ADDRESS IN CODE/IDENTIFIER



PAN ICD

Error Code	Field Number	Error Text
77	ADF (See Note 4 3)	INVALID LOCATION IN FPO/IDENTIFIER
78	ADF (See Note 4 3)	INVALID DATA LINK APPLICATION FCO/IDENTIFIER
79	ADF (See Note 4 3)	INVALID OR UNSUPPORTED CPDLC VERSION NUMBER
80	ADF (See Note 4 3)	INVALID OR UNSUPPORTED ADS-C VERSION NUMBER
81	ADF (See Note 4 3)	INVALID IDENTIFIER IN FAN MESSAGE
82	CSF (See Note 4 18)	INVALID CPDLC CONNECTION STATUS
83	CSF (See Note 4 18)	INVALID FREQUENCY IN FREQ/IDENTIFIER
84-255		RESERVED FOR FUTURE USE
84	ADF (See Note 5)	INVALID IDENTIFIER IN ADS MESSAGE
85	ADF (See Note 5)	INVALID DATA IN ADS MESSAGE <b>Note.</b> This error message refers to the encoded ADS-C data (e.g. if it contains non-hexadecimal characters), rather than whether the contents of the decoded ADS-C report itself are valid
86	TDF (See Note 6)	INVALID IDENTIFIER IN TRU MESSAGE
87	TDF (See Note 6)	INVALID HEADING IN HDG/IDENTIFIER
88	TDF (See Note 6)	INVALID POSITION IN DCT/IDENTIFIER
89	TDF (See Note 6)	INVALID OFF TRACK DEVIATION IN OTD/IDENTIFIER
90	TDF (See Note 6)	INVALID FLIGHT LEVEL IN CFL/IDENTIFIER
91	TDF (See Note 6)	INVALID SPEED IN SPD/IDENTIFIER
92-256	14.14	RESERVED FOR FUTURE USE

**Note 1.** It is not intended that any amplifying text contained in parenthesis “(i.e., AFTN Address)” within the error text column be transmitted in any LRM.

**Note 2.** The intention is that in error codes 51, 54, 59, and 65 that lower case text (e.g. “nn”, or “xxx”) is replaced by the applicable value **when** this information is available.

**Note 3.** In the FAN message, the “ADF” field number refers to the Application data field.

**Note 4.** In the FCN message, the “CSF” field number refers to the Communication Status field.

**Note 5.** In the ADS message, the “ADF” field refers to the ADS-C data field.

Comment [AT0515]: APAC ICD, APPENDIX B, TABLE B-1 Note 1

Comment [AT0516]: APAC ICD, APPENDIX B, TABLE B-1 Note 2

Comment [AT0517]: APAC ICD, APPENDIX B, TABLE B-1 Note 3 – NAT ICD, APPENDIX A, TABLE A-1, Note 1

Comment [AT0518]: APAC ICD, APPENDIX B, TABLE B-1 Note 4

Comment [AT0519]: APAC ICD, APPENDIX B, TABLE B-1 Note 5

**Note 6.** In the TRU message, the “TDF” field refers to the Track data field.

**Comment [ATO520]:** APAC ICD, APPENDIX B, TABLE B-1 Note 6

## Chapter 6. ATM Application Naming Conventions

Comment [ATO521]: APAC ICD, APPENDIX C

### 6.1 Introduction

6.11 Eight character AFTN addresses will be used by the AIDC application to identify automated ATS end-systems. The first four characters identify the ATS unit location, while the last four characters identify an organization, end-system, or application process at the given location.

Comment [r522]: APAC ICD, APPENDIX C, PARA 1

6.12 The table below describes a proposed naming convention, developed by the ATN Panel for identifying ATM end-systems and applications. The last (eighth) character of the end-system's or application's AFTN address should be selected in accordance with the table Table 6-1.

Comment [r523]: APAC ICD, APPENDIX C, PARA 2

Table 6-1. CPDLC Connection Proposed ATM Application Naming Convention Status

Comment [ATO524]: APAC ICD, APPENDIX C, PARA 2, Table

8 <sup>th</sup> character	ATM ground system application process
A	Air space management
B	Unassigned
C	Unassigned
D	Dynamic track generation
E	Unassigned
F	Flight data processing (processor routes to appropriate control sector based on internal configuration information).
G	Reserved for State use
H	Reserved for State use
I	Reserved for State use
J	Reserved for State use
K	Reserved for State use
L	Reserved for State use
M	OPMET data bank
N	AIS data bank
O	Oceanic data processing
P	Unassigned
Q	Unassigned
R	Radar data processing (processor routes to appropriate control sector based on internal configuration information).
S	System management
T	Air traffic flow management

8 <sup>th</sup> character	ATM ground system application process
U	Unassigned
V	Unassigned
W	Unassigned
X	Default value
Y	Service function
Z	Unassigned

## Chapter 7. Implementation Guidance Material

### 7.1 Introduction

7.11 The AIDC Message set described in Appendix A of the ASIA/PAC Regional Interface Control Document (ICD) Chapter 4, *ATS Coordination Messages*, supports five six ATS-related functions.

1. Notification;
2. Coordination;
3. Transfer of Control;
4. General (Text) Information Interchange;
5. Surveillance Data Transfer; and
6. Application Management (Data and Communications Integrity Monitoring).

7.12 The NAT System Planning Group (SPG) Coordination Interface Control Document (ICD) PAN ICD provides detailed information on the structure of these messages. This chapter contains Implementation Guidance Material (IGM) of an explanatory nature. Information on how the message set as a whole is intended to be used is provided, with particular emphasis on the first three functions. The objective is to provide useful information and guidance to software engineers responsible for implementing the AIDC Message set within an automated ATS system.

7.13 Although outside the scope of the ICD, flight-Flight Planning messages play an important role within the region, and will continue to do so in the future.

### 7.2 Preliminaries

7.21 Assumptions.

7.21.1 The following assumptions have been made:

7.21.1.1 The IGM applies only to those portions of a flight operating within the APAC – NAT/PAC Regions. Only flights totally within the NAT NAT/PAC oceanic FIRS are considered;

7.21.1.2 The material described below applies only to data transfers between two automated ATS systems. Though most of it also applies to the general case of Notification and Coordination between more than two automated ATS systems, certain multi-ATSU Coordination problems have not yet been solved;

7.21.1.3 It must be possible to revert ~~at~~ to manual intervention of the Notification, Coordination, and Transfer of Control processes at any time;

7.21.1.4 Exceptional conditions, such as loss of communications between two ATSUs are not addressed and are subject to local procedures and,

7.21.1.5 An ATSU's Area of Common Interest (ACI) is defined as the airspace for which the ATSU is responsible, i.e., an FIR, and surrounding border regions just outside the FIR. These surrounding border regions are usually determined by the required separation minima.

7.22 AFTN message header.

7.22.1 Every message transmitted shall contain an AFTN header, as specified in Part II of the ASIA/PAC ICD Chapter 3, *Communications and Support Mechanisms*. This header shall contain

Comment [ATO525]: APAC ICD, APPENDIX D – NAT ICD, APPENDIX C

Comment [r526]: APAC ICD, APPENDIX D, PARA 1 – NAT ICD, APPENDIX C, PARA 1

Comment [r527]: APAC ICD, APPENDIX D, PARA 1.1 – NAT ICD, APPENDIX C, PARA 1.1

Comment [ATO528]: NAT ICD, APPENDIX C, PARA 1.2

Comment [r529]: APAC ICD, APPENDIX D, PARA 1.2 – NAT ICD, APPENDIX C, PARA 1.2

Comment [r530]: APAC ICD, APPENDIX D, PARA 1.3

Comment [r531]: APAC ICD, APPENDIX D, PARA 2

Comment [ATO532]: APAC ICD, APPENDIX D, PARA 2.1 – NAT ICD, APPENDIX C, PARA 2

Comment [ATO533]: APAC ICD, APPENDIX D, PARA 2.1.1 – NAT ICD, APPENDIX C, PARA 2.1

Comment [r534]: APAC ICD, APPENDIX D, PARA 2.1.1 a)

Comment [ATO535]: NAT ICD, APPENDIX C, PARA 2.1

Comment [ATO536]: APAC ICD, APPENDIX D, PARA 2.1.1 b) – NAT ICD, APPENDIX C, PARA 2.1

Comment [ATO537]: APAC ICD, APPENDIX D, PARA 2.1.1 c) – NAT ICD, APPENDIX C, PARA 2.1

Comment [ATO538]: APAC ICD, APPENDIX D, PARA 2.1.1 d) – NAT ICD, APPENDIX C, PARA 2.1

Comment [r539]: APAC ICD, APPENDIX D, PARA 2.1.1 e)

Comment [r540]: APAC ICD, APPENDIX D, PARA 2.2

Comment [r541]: APAC ICD, APPENDIX D, PARA 2.2.1

the optional AFTN data fields described in ~~Part II of the ASIA/PAC ICD~~ Chapter 3, *Communications and Support Mechanisms*.

7.22.2 Message identifier numbers (AFTN optional data field 2) shall be sequential. Receipt of an out of sequence message shall result in a warning being issued.

Comment [r542]: APAC ICD, APPENDIX D, PARA 2.2.2

7.22.3 A check for duplicate message identifier numbers shall be made. In general, since 1,000,000 numbers are available, no duplicates should be present.

Comment [r543]: APAC ICD, APPENDIX D, PARA 2.2.3

7.22.4 Message identifier numbers shall begin at 0, proceed through 999,999, and then rollover to 0. The same sequence shall be repeated when necessary.

Comment [r544]: APAC ICD, APPENDIX D, PARA 2.2.4

7.22.5 Each unique ATSU-to-ATSU interface shall select message identifier numbers from its own pool of numbers. Each pool shall encompass the entire possible range, i.e., include all numbers from 0 to 999,999.

Comment [r545]: APAC ICD, APPENDIX D, PARA 2.2.5

## 7.23 Response messages

Comment [r546]: APAC ICD, APPENDIX D, PARA 2.3

### 7.23.1 Application response

Comment [r547]: APAC ICD, APPENDIX D, PARA 2.3.1

7.23.1.1 Every AIDC message received by an ATSU, except a LAM or LRM, shall be responded to with a LAM or LRM. While no LAM is generated for a valid LRM, an ATSU may choose to respond to an invalid LRM with an LRM. Such a response is termed an Application Response, and is generated automatically by the automation system. A LAM shall be transmitted when the receiving automation system found the received message to be syntactically correct and the message data was accepted for further processing or presentation. Otherwise, an LRM message shall be transmitted. Every message possessing an associated message identification number (other than an LAM or LRM) must be responded to by the addressee with an (1) LAM if the message was processed and no errors were found by the receiving Air Traffic Control (ATC) application; otherwise an (2) LRM if the message was not accepted due to errors.

Comment [r548]: APAC ICD, APPENDIX D, PARA 2.3.1.1

Comment [ATO549]: – NAT ICD, APPENDIX C, PARA 5.1.2

7.23.1.2 The time out value  $T_{\text{alarm}}$  associated with an application response shall be 180 seconds, corresponding to the nominal value associated with the accountability timer described in ~~Part II, Section 2.2.2~~ Chapter 3, *Communications and Support Mechanisms*, para 3.22.2.

Comment [r550]: APAC ICD, APPENDIX D, PARA 2.3.1.2

7.23.1.3 Failure to receive an expected application response (i.e. a LAM or LRM) within  $T_r$  seconds ( $\leq T_{\text{alarm}}$ ) shall result in a re-transmission (up to a maximum number  $N_r$ ) of the original message, using the same information contained in optional data fields 2 and 3 found in the original message header. The timeout timer  $T_r$  shall be reset upon re-transmission. Failure to receive an application response within  $T_{\text{alarm}}$  seconds from the original transmission of the message shall result in a warning being issued.

Comment [r551]: APAC ICD, APPENDIX D, PARA 2.3.1.3

7.23.1.4 The transmission of a LAM or LRM shall be triggered by the ATC application process, not the communications process. This is because an application response LAM and LRM messages indicates that the received message was examined by the ATC application process(s), not just the communications functions. Note the distinction between an ATC application process, which implements a critical ATC function such as Coordination or Transfer of Control and a communications process which is responsible for the reliable delivery of data, but not data interpretation. This approach conforms to the OSI Reference Model.

Comment [r552]: APAC ICD, APPENDIX D, PARA 2.3.1.4 – NAT ICD, APPENDIX C, PARA 5.1.3

7.23.1.5 Receipt of an LRM shall cause the receiving ATSU to take a corrective action before re-transmitting the message. This action may be automatic, as in a CRC error being indicated, or manual as in an incorrect route element format. Once this action has been taken, the message shall be re-transmitted with a new message identifier number.

Comment [r553]: APAC ICD, APPENDIX D, PARA 2.3.1.5

## 7.23.2 Operational response.

7.23.2.1 Several AIDC messages require a response, in addition to the normal application response by another AIDC message. Such a response is termed an Operational Response. Table 7-1 below indicates the required response to a received message. AIDC messages not listed in Table 7-1 have no operational response.

Table 7-1. Required Operational Response

Received Message	Required Operational Response
CPL	ACP or CDN
EST	ACP
PAC	ACP
CDN	ACP, CDN, or REJ
TOC	AOC

7.23.2.2 A REJ is not available in an Initial Coordination Dialogue initiated by a CPL, EST or PAC. A REJ is only available in a CDN dialogue.

7.23.2.3 Failure to receive a response within an adapted operational response timeout period  $T_{op}$  shall result in a warning being issued.

7.23.2.4 The value of  $T_{op}$  is dependent on whether manual processing is required to generate the operational response. In general,  $T_{op}$  should be less than 600 seconds when a manual action is required to trigger the operational response.

7.23.2.5 An operational response shall employ the AFTN header optional data field 3 to reference the original message being responded to. A coordination dialogue which is initiated by one message and contains a sequence of message exchanges until terminated by an ACP or REJ shall always reference the original message which triggered the dialogue. For example, one ATSU may initiate a coordination dialogue by transmitting a CPL message to an adjacent ATSU. A sequence of CDN messages may ensue terminated by an ACP message. The CDN and ACP messages would all reference the original CPL message. After completion of the initial coordination dialogue in the preceding example one ATSU may initiate another coordination dialogue by transmitting a CDN message. A sequence of CDN messages may ensue terminated by an ACP message. Messages in this new coordination dialogue would reference the first CDN message in the dialogue.

## 7.24 Application management.

7.24.1 Application acceptance (LAM), application rejection due to errors (LRM), status monitoring (ASM), and FANS data link connection transfer (FAN and FCN) capabilities are supported.

7.24.2 The ASM message is used to confirm that the ATC application ~~of the receiving ATSU on the other end~~ is on-line alive. This message is sent by ATSU A to (adjacent) ATSU B if, after a mutually agreed time, no communication has been received from ATSU B. ATSU B responds, if the ATC application is active and functioning, by sending a LAM to ATSU A. If ATSU A does

Comment [r554]: APAC ICD, APPENDIX D, PARA 2.3.2

Comment [r555]: APAC ICD, APPENDIX D, PARA 2.3.2.1

Comment [r556]: APAC ICD, APPENDIX D, TABLE D-1

Comment [r557]: APAC ICD, APPENDIX D, TABLE D-1, NOTE

Comment [r558]: APAC ICD, APPENDIX D, PARA 2.3.2.2

Comment [r559]: APAC ICD, APPENDIX D, PARA 2.3.2.3

Comment [r560]: APAC ICD, APPENDIX D, PARA 2.3.2.4

Comment [r561]: APAC ICD, APPENDIX D, PARA 2.4 – NAT ICD, APPENDIX C, PARA 5.1

Comment [ATO562]: NAT ICD, APPENDIX C, PARA 5.1.1

Comment [r563]: APAC ICD, APPENDIX D, PARA 2.4.1 – NAT ICD, APPENDIX C, PARA 5.1.4

not receive a response LAM from ATSU B within a specified time, local contingency procedures should be executed. This message would normally be sent automatically, but may be sent manually for testing purposes. These procedures will include reverting to manual telephonic communications if it is determined a communications link is down. True loss of ATC capabilities at ATS Unit B will require a different response.

- 7.24.3 The FAN message may be used to transfer a data link aircraft's logon information from one ATSU to another. Implementation of this message obviates the need to utilize the five step "Address Forwarding" process (initiated by the FN\_CAD) that was developed for the initial implementation of FANS. The message contains all the information that is required to establish ADS-C and/or CPDLC connections with the aircraft. In the event that only an ADS-C connection will be required, the transferring ATSU should include ADS-C information only. If a FAN message is transmitted containing ADS-C information only, there should be no expectation of receiving an FCN (see below) response. If a FAN message is received containing ADS-C application information only, there should be no attempt to establish a CPDLC connection.

Comment [ATO564]: APAC ICD, APPENDIX D, PARA 2.4.2 – NAT ICD, APPENDIX C, PARA 5.1.5

- 7.24.4 Normally, one FAN message would be sent for each data link transfer per flight. However, when an FCN is received with a communication status field value of (1) indicating the receiving ATSU is not the Next Data Authority the transferring ATSU should send another NDA message to the aircraft and another FAN message to the receiving ATSU to indicate that the NDA has been sent (refer to Figure 7-4). While the second FAN may not ~~be~~ required for address forwarding purposes it does provide the receiving ATSU with a positive indication that another NDA has been sent to the aircraft.

Comment [ATO565]: APAC ICD, APPENDIX D, PARA 2.4.3 – NAT ICD, APPENDIX C, PARA 5.1.6

- 7.24.5 ATSU's implementing the FAN message should consider retaining existing Address Forwarding functionality to be used as a contingency for data link transfers in the event of failure ~~or of~~ the ground-ground link.

Comment [ATO566]: APAC ICD, APPENDIX D, PARA 2.4.4 – NAT ICD, APPENDIX C, PARA 5.1.7

- 7.24.6 Similarly to Address Forwarding, the FAN message should be sent at a time parameter prior to the boundary with the next ATSU. This parameter should be in accordance with guidance outlined in the FANS Operations Manual (FOM) ICAO Global Operational Data Link Document (GOLD). Functionality for the transmission of a FAN message manually by the ATS officer should also be implemented.

Comment [ATO567]: APAC ICD, APPENDIX D, PARA 2.4.5 – NAT ICD, APPENDIX C, PARA 5.1.8

- 7.24.7 Information concerning the identity of the aircraft (i.e. aircraft identification, aircraft address and registration) contained in the Application data field must not be extracted from the flight plan – it must be information that was contained in either the most recently received logon or FAN message.

Comment [ATO568]: APAC ICD, APPENDIX D, PARA 2.4.6 – NAT ICD, APPENDIX C, PARA 5.1.9

**7.24.7.1 Note.** This requirement only applies to the aircraft identification within the Application data field of the FAN message. The aircraft identification (i.e. ATS Field 7) at the beginning of the FAN message is the identification of the aircraft from the ATS flight plan.

Comment [ATO569]: APAC ICD, APPENDIX D, PARA 2.4.6 Note – NAT ICD, APPENDIX C, PARA 5.1.9 Note

**7.24.7.2 7.24.7.1** When extracting the identity of the aircraft from the logon, the information required is the aircraft identification within the CRC protected portion of the logon – not the flight identifier (FI) that is contained in Line 4 of the ACARS logon message. In the example below, the aircraft identification is **QFA924** rather ~~that~~ than the QFA924-QFO924 contained in Line 4 of the ACARS message.

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Comment [ATO570]: APAC ICD, APPENDIX D, PARA 2.4.6.1 – NAT ICD, APPENDIX C, PARA 5.1.10

QU BNECAYA  
.QXSXMXS 010019  
AFD  
FI QF0924/AN VH-EBA

Comment [r571]: APAC ICD, APPENDIX D, PARA 2.4.6.1 – NAT ICD, APPENDIX C, PARA 5.1.10



DT QXT POR1 010019 J59A  
 - AFN/FMHQFA924, -VH-EBA,,001902/FPOS33373E150484,0/FCOADS,  
 01/FCOATC,01292B

7.24.8 Under certain circumstances (e.g. FMC failure) it is possible for the SMI ~~or of~~ an aircraft to change in flight, which will require a new logon from the aircraft to permit data link services to continue. To ensure that the next ATSU has up to date information, the SMI transmitted in any FAN message should be the SMI from the most recently received logon or FAN message.

Comment [ATO572]: APAC ICD, APPENDIX D, PARA 2.4.7 – NAT ICD, APPENDIX C, PARA 5.1.11

7.24.9 A hyphen within the registration that was ~~a~~ contained in either the logon or any previously received FAN message must also be included in the REG element of any transmitted FAN message. Without this hyphen, data link message transmitted by the ATSU may not be delivered to the aircraft.

Comment [ATO573]: APAC ICD, APPENDIX D, PARA 2.4.8 – NAT ICD, APPENDIX C, PARA 5.1.12

~~7.24.9.1~~ **Note.** ATSUs implementing the FAN message must be aware of the possible existence of the hyphen within the registration and that it does not signify a “new field” as is the case with other AIDC messages.

Comment [ATO574]: APAC ICD, APPENDIX D, PARA 2.4.8 Note – NAT ICD, APPENDIX C, PARA 5.1.12 Note

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~~7.24.9.2~~ ~~7.24.9.1~~ Any “padding” in the registration contained in the logon (e.g. preceding periods <>s) must not be included in the FAN message. In the sample ACARS message above, the registration to be included in the FAN message would be “VH-EBA”, not “.VH-EBA”.

Comment [ATO575]: APAC ICD, APPENDIX D, PARA 2.4.8.1 – NAT ICD, APPENDIX C, PARA 5.1.13

7.24.10 Some ATSUs may utilise the aircraft position which is an optional field that may be contained in the logon. If the aircraft position information element is to be included in any transmitted FAN message, there is little purpose in simply relaying the aircraft position from the original logon – the calculated position of the aircraft should be used instead.

Comment [ATO576]: APAC ICD, APPENDIX D, PARA 2.4.9 – NAT ICD, APPENDIX C, PARA 5.1.14

7.24.11 The FCN message, where used, provides advice to the transferring ATSU that the receiving ATSU has established an (inactive) CPDLC connection with an aircraft. The transmission of an FCN message is triggered by an event such as the termination of a CPDLC Connection by the transferring ATSU, or the establishment of (or failure to establish) a CPDLC Connection by ~~their~~ the receiving ATSU. FCN messages should only be transmitted when a CPDLC transfer is being ~~affected-effected~~ – i.e. not for transfers involving aircraft that are only ADS-C equipped.

Comment [ATO577]: APAC ICD, APPENDIX D, PARA 2.4.10 – NAT ICD, APPENDIX C, PARA 5.1.15

7.24.12 Multiple FCN messages.

Comment [ATO578]: APAC ICD, APPENDIX D, PARA 2.4.11 – NAT ICD, APPENDIX C, PARA 5.1.16

7.24.12.1 The general philosophy for use of the FCN is that only a single FCN message is transmitted by each ATSU for each flight. Under normal conditions, changes in CPDLC status after transmission of an FCN should not result in the transmission of another FCN (an exception to this is when a Connection request fails due to the receiving unit not being the nominated next data authority – see Table 7-2 below).

Comment [ATO579]: APAC ICD, APPENDIX D, PARA 2.4.11.1 – NAT ICD, APPENDIX C, PARA 5.1.16.1

Table 7-2. FCN Transmission

ATSU transmitting FCN	When an FCN should <del>not</del> be sent
Transferring ATSU	On receipt of a Disconnect Request terminating the CPDLC Connection
Receiving ATSU	On receipt of a Connection Confirm, establishing a CPDLC Connection
Receiving ATSU	On receipt of CPDLC downlink #DM64 [ <del>icao</del> ICAO facility designation],

Comment [ATO580]: APAC ICD, APPENDIX D, TABLE D-2 – NAT ICD, APPENDIX C, TABLE 5

Procedures material from the Asia/Pacific Regional ICD for AIDC is highlighted in green.  
 Procedures material from the North Atlantic Common Coordination ICD is highlighted in blue.  
 Procedures material contained in both the NAT ICD and APAC ICD are not highlighted.

	<p><b>Note.</b> This provides advice to the transferring ATSU to uplink an appropriate Next Data Authority message to the aircraft. And subsequently:</p> <p>On establishment of a CPDLC Connection</p>
Receiving ATSU	Following initial failure of a CPDLC Connection request or a time parameter prior to the FIR boundary, if no CPDL-C Connection has yet been established, whichever occurs later

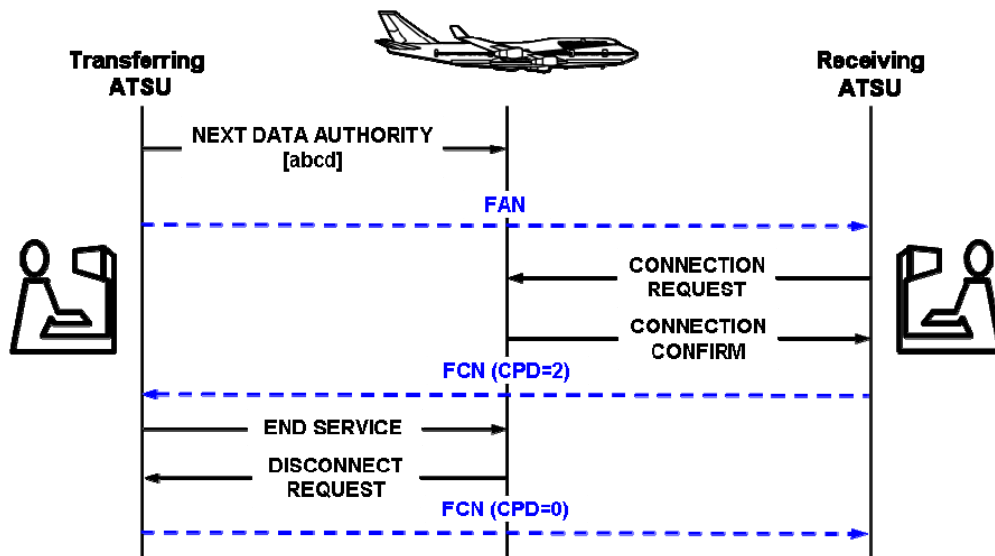
7.24.12.2 Procedures following a change to CPDLC Connectivity following the transmission of an FCN message should be described in local procedures (e.g. voice coordination), rather than by transmission of another FCN message.

7.24.13 Procedures for the notification of changes to the voice frequency after the transmission of an FCN message should be described in local procedures rather than via the transmission of another FCN message.

7.24.14 Sample flight threads involving FAN and FCN messages

7.24.14.1 The following diagrams show typical flight threads involving the FAN and FCN messages. Relevant uplink and downlink messages between the aircraft and the ATSU are also shown.

Figure 7-1. Routine Data Link Transfer Using FAN and FCN Messaging



Comment [ATO581]: APAC ICD, APPENDIX D, PARA 2.4.11.2 – NAT ICD, APPENDIX C, PARA 5.1.16.2

Comment [ATO582]: APAC ICD, APPENDIX D, PARA 2.4.12 – NAT ICD, APPENDIX C, PARA 5.1.16.3

Comment [ATO583]: APAC ICD, APPENDIX D, PARA 2.4.13 – NAT ICD, APPENDIX C, PARA 5.1.17

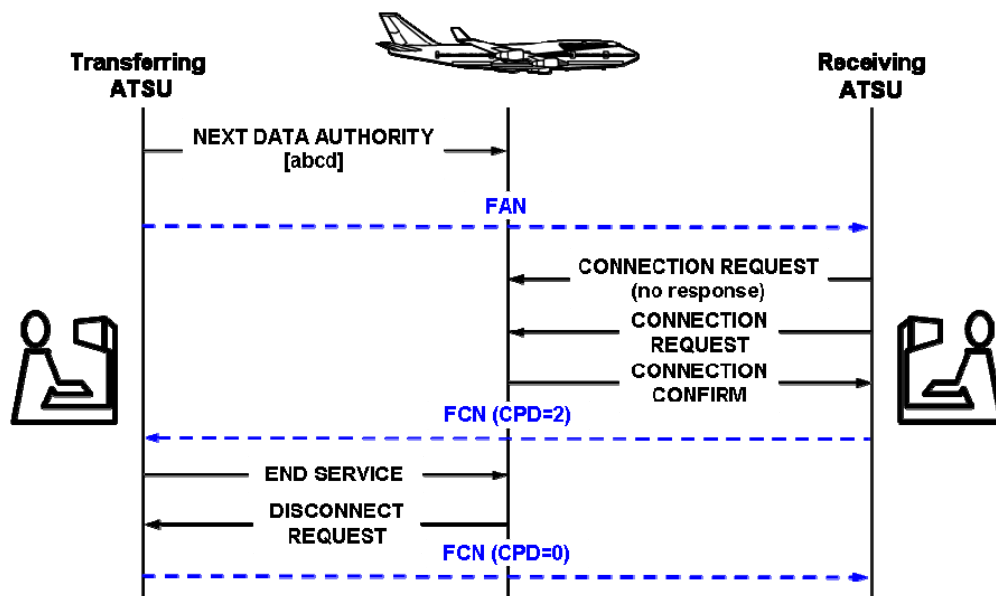
Comment [ATO584]: APAC ICD, APPENDIX D, PARA 2.4.13.1 – NAT ICD, APPENDIX C, PARA 5.1.17.1

Comment [ATO585]: APAC ICD, APPENDIX D, FIGURE D-1 – NAT ICD, APPENDIX C, FIGURE 2

7.24.14.2 Figure 7-1 shows a routine data-link CPDLC transfer from one ATSU to the next. The first step in the transfer process is the up-linking of a CPDLC Next Data Authority message to the aircraft advising the avionics of the next centre that will be communicating with the aircraft via CPDLC. A FAN message is then sent to the next ATSU to provide them with the aircraft's logon information. The receiving ATSU then successfully establishes a CPDLC connection with the aircraft and transmits a 'successful' FCN (CPD = 2) back to the transferring ATSU. On termination of the CPDLC connection, the transferring ATSU transmits an FCN (CPD = 0) to the receiving ATSU.

Comment [r586]: APAC ICD, APPENDIX D, PARA 2.4.13.2 – NAT ICD, APPENDIX C, PARA 5.1.17.2

Figure 7-2. CPDLC Transfer Using FAN and FCN Messaging – Initial Connection Request Failed

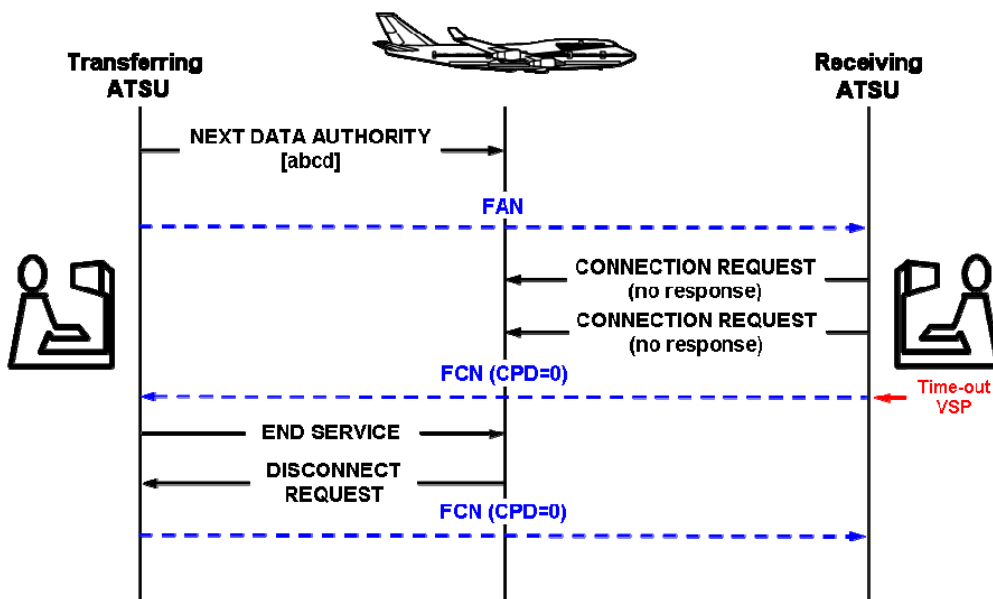


Comment [ATO587]: APAC ICD, APPENDIX D, FIGURE D-2 – NAT ICD, APPENDIX C, FIGURE 3

7.24.14.3 Figure 7-2 shows a data-link CPDLC transfer where there is no response by the avionics to the initial Connection Request uplinked by the receiving ATSU. A subsequent Connection Request is uplinked to the aircraft which is successful. Because the CPDLC connection is finally established prior to the 'time out' VSP before the FIR boundary, a successful FCN (CPD=2) is transmitted to the transferring ATSU. On termination of the CPDLC connection, the transferring ATSU transmits an FCN (CPD=0) to the receiving ATSU.

Comment [r588]: APAC ICD, APPENDIX D, PARA 2.4.13.3 NAT ICD, APPENDIX C, PARA 5.1.17.3

Figure 7-3. CPDLC Transfer Using FAN and FCN Messaging – Unable to Establish CPDLC Connection



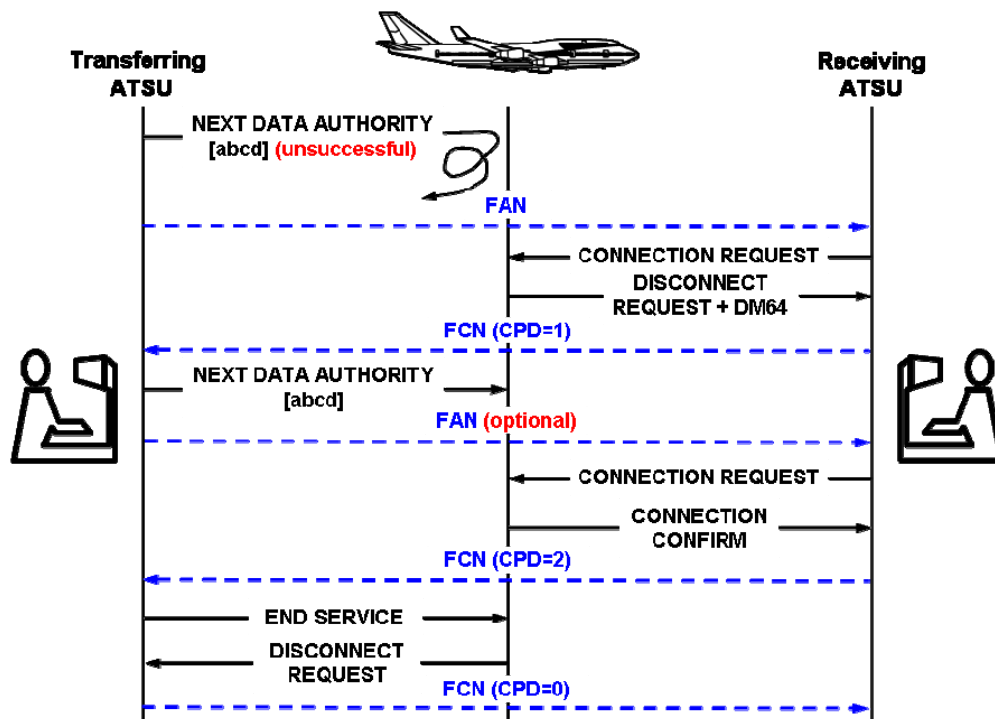
Comment [ATO589]: APAC ICD, APPENDIX D, FIGURE D-3 NAT ICD, APPENDIX C, FIGURE 4

7.24.14.4 Figure 7-3 shows an attempted data-link CPDLC transfer where there is no response by the avionics to multiple CPDLC connection requests uplinked by the receiving ATSU before the 'time out' VSP prior to the FIR boundary. An unsuccessful FCN (CPD=0) is transmitted to the transferring ATSU. Letters of Agreement should describe the procedures to be followed in the event that the receiving ATSU establishes a CPDLC connection after this FCN has been transmitted. Even though the receiving ATSU has advised of their inability to establish a CPDLC connection, the transferring ATSU still transmits an FCN (CPD=0) when their CPDLC connection with the aircraft is terminated.

Comment [r590]: APAC ICD, APPENDIX D, PARA 2.4.13.4 NAT ICD, APPENDIX C, PARA 5.1.17.4

Figure 7-4. CPDLC Transfer Using FAN and FCN Messaging – Initial NDA not Delivered

Comment [ATO591]: APAC ICD, APPENDIX D, FIGURE D-4 NAT ICD, APPENDIX C, FIGURE 5



7.24.14.5 Figure 7-4 shows a data-link CPDLC transfer in which the original Next Data Authority message uplinked by the transferring ATSU is not delivered to the aircraft. An FCN (CPD=1) is transmitted by the receiving ATSU advising of the failure of their CPDLC Connection request. Another Next Data Authority message is uplinked to the aircraft. The transferring ATSU may send another FAN message after which the receiving ATSU successfully establishes a CPDLC connection. Because this occurs before the time out VSP prior to the FIR boundary, a successful FCN (CPD=2) is transmitted back to the transferring ATSU. On

Comment [r592]: APAC ICD, APPENDIX D, PARA 2.4.13.5 NAT ICD, APPENDIX C, PARA 5.1.17.5

termination of the CPDLC connection, the transferring ATSU transmits an FCN (CPD=0) to the receiving ATSU.

### 7.3 Phases of flight

7.31 From an ATSU's perspective, a flight is considered to progress through several phases. The IGM is principally concerned with three phases: Notification, Coordination, and Transfer of Control.

#### 7.32 Notification phase

7.32.1 An ATSU receives information during the Notification phase on a flight which will at some future time enter its ACI.

#### 7.32.2 Notification dialogue

7.32.2.1 ABI messages shall be used to transfer notification information. The sending ATSU transmits an ABI to the downstream ATSU(s) (including the next Receiving ATSU – the R-ATSU) with which it must coordinate the flight. The ATSU is responsible for determining which D-ATSUs must be notified.

#### 7.32.3 Re-Route Notification

7.32.3.1 All D-ATSUs to the destination aerodrome shall be notified when a re-route has been made. Re-route dissemination shall be performed as a minimum capability on a stepwise (i.e. from one D-ATSU to the next D-ATSU) basis. In stepwise dissemination, an ATSU receiving an ABI is responsible for passing it on to any other affected D-ATSUs at the appropriate time.

#### 7.32.4 Route to Destination

7.32.4.1 The above procedure requires the C-ATSU to acquire the complete route to destination. Initially, this information is found in the route field of the Filed Flight Plan (FPL). As re-routes occur, the filed route must be updated by the C-ATSU, and transmitted to D-ATSUs. In cases where this is not possible, the route field shall be terminated after the last known significant point with the ICAO truncation indicator, which is the letter "T".

7.32.4.2 In accordance with PANS-ATM Doc 4444, the truncation indicator shall only follow a significant point or significant point/Cruising Speed and Cruising Level in Field 15 and shall not follow an ATS route designator.

#### 7.32.5 Re-route to new destination

7.32.5.1 The procedures described below apply when the notification and coordination of amended destinations has been included in bilateral agreements.

7.32.5.2 If an amendment to the destination aerodrome occurs **prior to** the transmission of the first ABI to an adjacent ATSU:

Field 16 shall contain the original destination of the aircraft; and

The Amended destination field shall contain the new destination of the aircraft.

7.32.5.3 Subsequent AIDC messages shall contain the new destination in Field 16, without reference to an amended destination.

7.32.5.4 If an amendment to the destination aerodrome occurs **after** the transmission of the first ABI to an adjacent ATSU, but before coordination has occurred, a new ABI shall be transmitted.

Field 16 shall contain the original destination of the aircraft; and

Comment [ATO593]: APAC ICD, APPENDIX D, PARA 3

Comment [ATO594]: APAC ICD, APPENDIX D, PARA 3.0.1

Comment [r595]: APAC ICD, APPENDIX D, PARA 3.1

Comment [r596]: APAC ICD, APPENDIX D, PARA 3.1.1

Comment [r597]: APAC ICD, APPENDIX D, PARA 3.1.2

Comment [ATO598]: APAC ICD, APPENDIX D, PARA 3.1.2

Comment [r599]: APAC ICD, APPENDIX D, PARA 3.1.3

Comment [ATO600]: APAC ICD, APPENDIX D, PARA 3.1.3

Comment [r601]: APAC ICD, APPENDIX D, PARA 3.1.4

Comment [ATO602]: APAC ICD, APPENDIX D, PARA 3.1.4

Comment [r603]: APAC ICD, APPENDIX D, PARA 3.1.4, NOTE

Comment [r604]: APAC ICD, APPENDIX D, PARA 3.1.5

Comment [ATO605]: APAC ICD, APPENDIX D, PARA 3.1.5

Comment [r606]: APAC ICD, APPENDIX D, PARA 3.1.5.1

Comment [r607]: APAC ICD, APPENDIX D, PARA 3.1.5.2

Comment [r608]: APAC ICD, APPENDIX D, PARA 3.1.5.3

Amended destination field shall contain the new destination of the aircraft.

7.32.5.5 Subsequent AIDC messages shall contain the new destination in Field 16, without reference to an amended destination.

Comment [r609]: APAC ICD, APPENDIX D, PARA 3.1.5.4

7.32.5.6 The format of the Amended destination field shall be one of the options described below:

Comment [r610]: APAC ICD, APPENDIX D, PARA 3.1.5.5

ICAO four-letter location indicator; or

Name of the destination aerodrome, for aerodromes listed in Aeronautical Information Publications; or

Latitude/Longitude in the format dd[NS]ddd[EW] or ddmm-[NS]ddmm[EW]; or

Bearing and distance from a significant point, using the following format:

The identification of the significant point, followed by

The bearing from the significant point in the form of 3 figures giving degrees magnetic, followed by

The distance from the significant point in the form of 3 figures expressing nautical miles.

7.32.6 Notification Cancellation.

Comment [r611]: APAC ICD, APPENDIX D, PARA 3.1.6

7.32.6.1 A notification can be cancelled using a MAC message. Receipt of a MAC by an ATSU means that any notification data previously received for the flight is no longer relevant. Filed flight plan information (and any modifications) shall continue to be held, in accordance with local ATSU procedures.

Comment [ATO612]: APAC ICD, APPENDIX D, PARA 3.1.6

7.33 Coordination phase.

Comment [r613]: APAC ICD, APPENDIX D, PARA 3.2

7.33.1 Coordination between adjacent ATSUs occurs when the flight approaches a shared FIR boundary. An initial coordination dialogue can be automatically initiated a parameter time or distance from the boundary, as documented within a bi-lateral agreement, or it can also be manually initiated. There are several types of coordination dialogues which occur, depending on where the aircraft is and what previous dialogues have occurred.

Comment [r614]: APAC ICD, APPENDIX D, PARA 3.2.1

7.33.2 Initial Coordination Dialogue.

Comment [r615]: APAC ICD, APPENDIX D, PARA 3.2.2

7.33.2.1 This coordination dialogue (or Abbreviated Initial Coordination dialogue) is always required to be successfully completed before later coordination dialogues are initiated. The C-ATSU transmits a CPL to the R-ATSU. The R-ATSU then responds with either an ACP, which signifies acceptance of the coordination conditions contained within the CPL, or a CDN which proposes a modification to the conditions contained in the CPL. If a CDN is the R-ATSU's response to the CPL, a sequence of CDNs may be exchanged between the two ATSUs. This dialogue is eventually terminated by the ATSU which last received a CDN transmitting an ACP to the other ATSU. Transmission of an ACP indicates that coordination conditions are mutually acceptable and an initial coordination has been achieved.

Comment [ATO616]: APAC ICD, APPENDIX D, PARA 3.2.2

7.33.3 Abbreviated Initial Coordination Dialogue.

Comment [r617]: APAC ICD, APPENDIX D, PARA 3.2.3

7.33.3.1 An Abbreviated Initial Coordination dialogue may be used in place of an Initial Coordination Dialogue when it is known *a priori* (e.g., by letters or agreement) that a flight's coordination data is mutually acceptable to both the C-ATSU and R-ATSU, accurate route information is available at the R-ATSU (e.g., ~~from from~~ either an ABI or FPL message), and both ATSUs have agreed to permit the use of this dialogue. The C-ATSU transmits an EST or PAC to the R-ATSU. The R-

Comment [ATO618]: APAC ICD, APPENDIX D, PARA 3.2.3

ATSU then responds with an ACP, which signifies acceptance of the coordination conditions (i.e., boundary crossing data) contained within the EST or PAC. Either this dialogue or a full (i.e., CPL-based) Initial Coordination dialogue shall be successfully completed before any later coordination dialogues are initiated. Note that negotiation via CDNs is not permitted within this dialogue.

7.33.3.2 PAC is only used when coordination is required before departure. This normally only occurs when the FIR boundary is close to the departure airport. ~~Pac~~-PAC signals to the R-ATSU that the departure is imminent as well as initiating coordination.

Comment [r619]: APAC ICD, APPENDIX D, PARA 3.2.3.1

7.33.4 Re-~~Negotiating~~ Negotiation Dialogue.

Comment [r620]: APAC ICD, APPENDIX D, PARA 3.2.4

7.33.4.1 This is an optional dialogue used to propose new coordination conditions after the initial dialogue has been completed. Either ATSU may initiate this dialogue by transmitting a CDN (in contrast to a CPL in the Initial Coordination Dialogue) to the other ATSU. The dialogue then proceeds with an exchange of additional CDNs as necessary. Either ATSU may terminate the dialogue in one of two ways: (1) with an ACP ~~indication-indicating~~ that the coordination proposal contained in the latest CDN is acceptable; or (2) with an REJ indicating that the previously agreed upon coordination conditions remain in effect.

Comment [ATO621]: APAC ICD, APPENDIX D, PARA 3.2.4

7.33.5 Active CDN.

Comment [r622]: APAC ICD, APPENDIX D, PARA 3.2.5

7.33.5.1 For a given flight, only one ~~DCN-CDN~~ may be active between any pair of ATSUs. Note, however, that coordination between more than two ATSUs (for the same flight) may have a total number of active CDNs greater than one, though each pair of ATSUs is still restricted to a maximum of one active CDN per flight. In the exceptional (rare) case where a C-ATSU and D-ATSU both simultaneously transmit CDNs, the C-ATSU shall transmit a REJ to the D-ATSU cancelling the ~~SD~~-ATSU's CDN.

Comment [ATO623]: APAC ICD, APPENDIX D, PARA 3.2.5

7.33.6 CDNs Are Proposals.

Comment [r624]: APAC ICD, APPENDIX D, PARA 3.2.6

7.33.6.1 Note that CDNs are only proposals; no changes are made in a flight's profile until an ACP is sent and acknowledged.

Comment [ATO625]: APAC ICD, APPENDIX D, PARA 3.2.6

7.33.6.2 To ensure interoperability between ATSUs when using a CDN to propose a diversion to an alternative destination, the following procedures shall be used:

Comment [r626]: APAC ICD, APPENDIX D, PARA 3.2.6.1

7.33.6.3 The mandatory Field 16 shall contain the original (i.e., the "current") destination aerodrome. The Amended Destination text field shall contain the amended destination.

Comment [r627]: APAC ICD, APPENDIX D, PARA 3.2.6.2

7.33.6.4 The format of the Amended destination field shall be one of the options described below:

Comment [r628]: APAC ICD, APPENDIX D, PARA 3.2.6.3

ICAO four-letter location indicator; or

Name of the destination aerodrome, for aerodromes listed in Aeronautical Information Publications; or

Latitude/longitude in the format dd[NS]ddd[EW] or ddmm[NS]dd[mm][EW]; or

Bearing and distance from a significant point using the following format:

The identification of the significant point followed by

The bearing from the significant point in the form of 3 figures giving degrees magnetic followed by

The distance from the significant point in the form of 3 figures expressing nautical miles.



7.33.6.5 The mandatory Field 16 contained in the operational response (ACP, REJ, CDN) to a CDN that proposes an amended destination shall contain the original (i.e. the “current”) destination aerodrome.

Comment [r629]: APAC ICD, APPENDIX D, PARA 3.2.6.4

7.33.6.5.1 Due to the complexities involved with maintaining multiple profiles for “current destination” vs. “amended destination” ~~ATSUs~~ ATSUs should consider prohibiting (via bilateral agreement) an operational response of CDN in any coordination renegotiation dialogues that contain an amended destination.

Comment [r630]: APAC ICD, APPENDIX D, PARA 3.2.6.4, NOTE

7.33.6.6 Provided that the proposed amendment is agreed to, all subsequent AIDC messages concerning this aircraft shall contain the new destination in the mandatory Field 16.

Comment [r631]: APAC ICD, APPENDIX D, PARA 3.2.6.5

7.33.7 Cleared Flight Profile Update.

Comment [r632]: APAC ICD, APPENDIX D, PARA 3.2.7

7.33.7.1 The cleared flight profile (which is used for control purposes) shall only be updated after successful completion of a coordination dialogue, i.e., an ACP has been sent and acknowledged. This will require temporarily storing a proposed flight profile undergoing coordination separate from the cleared flight profile. The cleared profile shall then be updated using the newly coordinated profile upon successful completion of the coordination dialogue.

Comment [ATO633]: APAC ICD, APPENDIX D, PARA 3.2.7

7.33.8 Automatic update of coordination conditions.

Comment [r634]: APAC ICD, APPENDIX D, PARA 3.2.8

7.33.8.1 When included in bilateral agreements between ATSUs, changes to previously agreed coordination conditions may be coordinated by way of a TRU message. The intent of this message is to allow amendments to certain elements of an aircraft’s clearance to be coordinated to an adjacent ATSU. In contrast to the CDN, there is ~~not~~ no operational response to a TRU message – this message is used when there is agreement to what amendments can be made to an aircraft’s clearance by the controlling ATSU after initial coordination has occurred without prior coordination.

Comment [ATO635]: APAC ICD, APPENDIX D, PARA para 3.2.8

7.33.8.2 Whilst a number of the elements that may be coordinated by TRU message may be more suited to an environment associated with an ATS Surveillance system (e.g. Heading, Direct to, etc), other elements may be applicable in *any* ATS environment (e.g. Cleared Flight Level, Off track deviation, Speed, etc).

Comment [r636]: APAC ICD, APPENDIX D, PARA 3.2.8.1

7.33.8.3 The TRU message makes use of the Track data field to provide updated clearance information to an adjacent ATSU. Track data may be used to update assigned heading, assigned level, off track clearance, assigned speed, or ‘direct to’ information.

Comment [r637]: APAC ICD, APPENDIX D, PARA 3.2.8.2

7.33.8.4 When using the ~~DECDCT~~ [position] element in the TRU message, [position] would normally be located on the flight planned route of the aircraft. Local procedures should specify the actions to be taken in the event that [position] is not on the flight planned route.

Comment [r638]: APAC ICD, APPENDIX D, PARA 3.2.8.3

7.33.8.5 For the purpose of the TRU message, the format of [position] is one of the following:

Comment [r639]: APAC ICD, APPENDIX D, PARA 3.2.8.4

From 2 to 5 characters being coded designator assigned to an en-route point or aerodrome; or

ddmm[NS]dddmm[EW]; or

dd[NS]ddd[EW]; or

2 or 3 characters being the coded identification of a navigation aid followed by 3 decimal numerics giving the bearing from the point in degrees magnetic followed by ~~3~~ 3 decimal numerics giving the distance from the point in nautical mile.

7.33.9 Coordination Cancellation.

Comment [r640]: APAC ICD, APPENDIX D, PARA 3.2.9

7.33.9.1 Coordination can be cancelled using a MAC message. Receipt of a MAC by an ATSU means that any coordination (or notification) data previously received for that flight is no longer relevant. Filed flight plan information (and any modification) shall continue to be held in accordance with local ATSU procedures.

Comment [ATO641]: APAC ICD, APPENDIX D, PARA 3.2.9

7.33.10 Coordination and the ACI.

Comment [r642]: APAC ICD, APPENDIX D, PARA 3.2.10

7.33.10.1 ATSU A may need to coordinate with or provide information to ATSU B on all aircraft that enter ACI B, even if they do not enter FIR B. Consider the case of aircraft A in FIR A and aircraft B in FIR B, both flying near the FIR A – FIR B boundary, but never penetrating the other's FIR's airspace. The maintenance of adequate separation between these two aircraft may require coordination between or the provision of information to adjoining ATSUs.

Comment [ATO643]: APAC ICD, APPENDIX D, PARA 3.2.10

7.34 Transfer of control phase.

Comment [r644]: APAC ICD, APPENDIX D, PARA 3.3

7.34.1 Transfer Dialogue.

Comment [r645]: APAC ICD, APPENDIX D, PARA 3.3.1

7.34.1.1 This phase occurs when the C-ATSU is ready to relinquish control of the flight to the R-ATSU normally just before the FIR boundary crossing. The C-ATSU transfers-transmits a TOC message to the R-ATSU which responds with an AOC message. The R-ATSU then becomes the C-ATSU once an application response for the AOC has been received.

Comment [ATO646]: APAC ICD, APPENDIX D, PARA 3.3.1

7.34.2 Transfer of Control and the ACI.

Comment [r647]: APAC ICD, APPENDIX D, PARA 3.3.2

7.34.2.1 Note that the Transfer of Control process will not occur for all flights. Some flights fly near an FIR boundary, and may require coordination or the provision of other information, but do not actually enter the FIR.

Comment [ATO648]: APAC ICD, APPENDIX D, PARA 3.3.2

## 7.4 Flight state transitions

7.41 Notifying states.

Comment [r649]: APAC ICD, APPENDIX D, PARA 4 – NAT ICD, APPENDIX C, PARA 3

7.41.1 Consider an aircraft that is currently within an ASIA/PAC – NAT/PAC FIR – FIR A – controlled by ATSU A (i.e. the C-ATSU) progressing towards the next FIR, FIR B (i.e. the R-ATSU). The aircraft is several hours from the boundary between the two FIRs. The flight is initially in a Pre-Notifying state from ATSU B's perspective. ATSU B usually will have previously received a Filed Flight Plan (an FPL message) possibly with later amendments (as contained in CHG messages). ATSU A will employ a Notification dialogue to transfer information to ATSU B. (This transfer occurs at either a system parameter time (e.g. 60 minutes), or distance prior to the flight crossing the FIR A – FIR B boundary.) This places the flight in a Notifying state from ATSU B's perspective. Additional Notification dialogues may be invoked by ATSU A as needed to inform ATSU B of flight changes. If the aircraft for some reason, such as a change in route, is no longer expected to penetrate ACI B, ATSU A sends a MAC message to ATSU B causing the flight to be placed back in Pre-Notifying state from ATSU B's perspective.

Comment [r650]: APAC ICD, APPENDIX D, PARA 4.1

Comment [r651]: APAC ICD, APPENDIX D, PARA 4.1 – NAT ICD, APPENDIX C, PARA 3.1

7.42 Initial coordination states.

Comment [r652]: APAC ICD, APPENDIX D, PARA 4.2

7.42.1 An Initial Coordination Dialogue is employed to effect the initial coordination. ATSU A transmits a CPL to ATSU B when the aircraft is at a mutually agreed upon predetermined time (e.g. thirty minutes) or distance (e.g., 60nm) from the FIR A – FIR B FIR B's boundary. The flight is now in Negotiating state from both ATSU A's and ATSU B's perspectives. ATSU B can accept the conditions specified in the CPL "as is" by transmitting an ACP message to ATSU A, or it can propose modifications using the CDN message. Negotiations between the two ATSUs are carried out using the CDN until a mutually acceptable flight profile is achieved. This

Comment [r653]: APAC ICD, APPENDIX D, PARA 4.2 – NAT ICD, APPENDIX C, PARA 3.2

acceptance is signaled by one ATSU sending an ACP, as before, to the other ATSU. This establishes the initial coordination conditions. From the perspective of both ATSUs the flight is now in a Coordinated state.

7.42.2 For an Abbreviated Initial Coordination, ATSU A transmits an EST to ATSU B when the aircraft is at a mutually agreed upon predetermined time (e.g. thirty minutes) or distance from FIR A – FIR B boundary. The flight is now in a Coordinating state. ATSU B responds with an ACP which places the flight in a coordinated state. This sequence of messages corresponds to an Abbreviated Initial Coordination Dialogue.

Comment [r654]: APAC ICD, APPENDIX D, PARA 4.2.1

#### 7.43 Re-negotiation states.

Comment [ATO655]: APAC ICD, APPENDIX D, PARA 4.3

7.43.1 The initial coordination is typically the final coordination. However, in certain situations it may be desirable, or necessary to re-open the coordination dialogue after initial coordination has been completed. A Re-Negotiation dialogue is employed to effect profile changes. The dialogue is re-opened when one ATSU (either A or B) transmits a CDN to the other ATSU causing the flight to be in a Re-Negotiating state. The dialogue proceeds as above using CDN messages until either an ACP or REJ is sent. Either ATSU can close the dialogue by ~~issuing-transmitting~~ an ACP or REJ. An ACP closes the dialogue with a new mutually agreed upon flight profile. A REJ however, immediately terminates the dialogue with the previously accepted coordination conditions remaining in effect. Any proposed changes are null and void. Transmission of an ACP or REJ places the flight back into the coordinated state.

Comment [ATO656]: APAC ICD, APPENDIX D, PARA 4.3 – NAT ICD, APPENDIX C, PARA 3.3

~~7.43.2 For a given flight, only one CDN may be active between any pair of centres. Note, however, that coordination between more than two centres (for the same flight) may have a total number of active CDNs greater than one, though each pair of centres is still restricted to a maximum of one active CDN.~~

Comment [ATO657]: NAT ICD, APPENDIX C, PARA 3.4

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~~7.43.3 A flight that was coordinated, but will no longer enter a downstream ATS Unit's ACI, can be cancelled. The controlling ATS Unit (i.e. ATS Unit A) transmits a MAC to the affected downstream ATS Unit (e.g. ATS Unit B).~~

Comment [ATO658]: NAT ICD, APPENDIX C, PARA 3.5

~~7.43.4 Note that ATS Unit A must coordinate with ATS Unit B all aircraft that enter ACI B, even if they do not enter FIR B. Consider the case of aircraft A in FIR A and aircraft B in FIR B, both flying near the FIR A – FIR B boundary but never penetrating the other FIR's airspace. The maintenance of adequate separation between these two aircraft requires coordination between the two ATS units.~~

Comment [ATO659]: NAT ICD, APPENDIX C, PARA 3.6

#### 7.44 Transfer states

Comment [r660]: APAC ICD, APPENDIX D, PARA 4.4

7.44.1 Transfer of control is supported by the Transfer dialogue. Transfer of control conditions are supported by two messages: the TOC and AOC. ATSU A sends a TOC to ATSU B when the aircraft is about to cross the boundary. Alternatively, ATSU A can send a TOC when it is ready to relinquish control even if the aircraft will remain in FIR A airspace several minutes before entering FIR B. The flight is now in a Transferring state from both ATSU A's and ATSU B's perspectives. ATSU B responds by transmitting an AOC to ATSU A ~~signalling~~signaling acceptance of control responsibility. The flight is now in a Transferred state from ATSU A's perspective.

Comment [r661]: APAC ICD, APPENDIX D, PARA 4.4 - NAT ICD, APPENDIX C, PARA 3.7

~~7.44.2 Note that Transfer of Control process will not occur for all flights. Some flights fly near an FIR boundary, requiring coordination, but do not actually enter the FIR.~~

Comment [ATO662]: NAT ICD, APPENDIX C, PARA 3.8

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7.44.37.44.2 The aircraft has now entered FIR B, and is under the control of ATS Unit B, progressing towards the next FIR, FIR C. The same process described above is repeated between ATS Units B and C.

Comment [ATO663]: NAT ICD, APPENDIX C, PARA 3.9

7.44.47.44.3 No changes to the flight profile may be made while in the border region without mutual agreement between ATS Units A and B. If a flight has entered FIR B, and either ATS Unit A or B desires a change in the coordination conditions, negotiation must occur using CDNs. This negotiation is terminated with either an ACP or REJ.

Comment [ATO664]: NAT ICD, APPENDIX C, PARA 3.10

7.45 Backward re-negotiating state.

Comment [r665]: APAC ICD, APPENDIX D, PARA 4.5

7.45.1 A flight's profile may occasionally require changes after Transfer of Control have been completed, but the aircraft is still within ATSU A's ACI. A Re-Negotiating dialogue is employed to effect profile changes after transfer has been completed. This places the flight in a Backward Re-Negotiating State from both ATSU's perspectives. Completion of this dialogue returns the aircraft to the Transferred state.

Comment [r666]: APAC ICD, APPENDIX D, PARA 4.5

7.45.2 Several flight states are identified in the above discussion description. These states are listed in Table D-3-7-3.

Comment [ATO667]: APAC ICD, APPENDIX D, PARA 4.6, NAT ICD, APPENDIX C, PARA 3.11

7.45.3 A flight state transition diagram is shown in Figure D-5-7-5. This diagram depicts graphically how the flight transitions from one state to the next. It can be seen that the AIDC messages act as triggers forcing the necessary state transitions. A description of the allowable flight state transitions along with the message event that triggers the transitions is given in Table D-4-7-4.

Comment [ATO668]: APAC ICD, APPENDIX D, PARA 4.7 – NAT ICD, APPENDIX C, PARA 3.12

Table 7-3. Flight States

Flight State	Description
Pre-Notifying	Flight plan information may have been received. Any previously received notification and coordination information for the given flight cancelled by a MAC is no longer relevant. A flight which was originally going to enter a downstream ATS Units area of responsibility will no longer do so.
Notifying	The aircraft's progress is being monitored by one or more non-controlling ATSUs in addition to the controlling ATSU.
Negotiating	The aircraft is near the ACI and Coordination data is being exchanged between the controlling ATSU and the receiving ATSU as part of the initial coordination dialogue.
Coordinating	Abbreviated coordination data has been sent to the receiving ATSU.
Coordinated	Coordination of the boundary ACI crossing conditions is completed
Re-Negotiating	The aircraft is near the ACI and Coordination data is being exchanged between the controlling ATSU and the receiving ATSU as part of a later coordination dialogue.
Transferring	Air traffic control responsibility for the aircraft is in the process of being transferred to the receiving ATSU.
Transferred	Air traffic control responsibility for the aircraft has been transferred to the receiving ATSU.
Backward Re-	The aircraft is now under the control of the receiving ATSU, but still near the

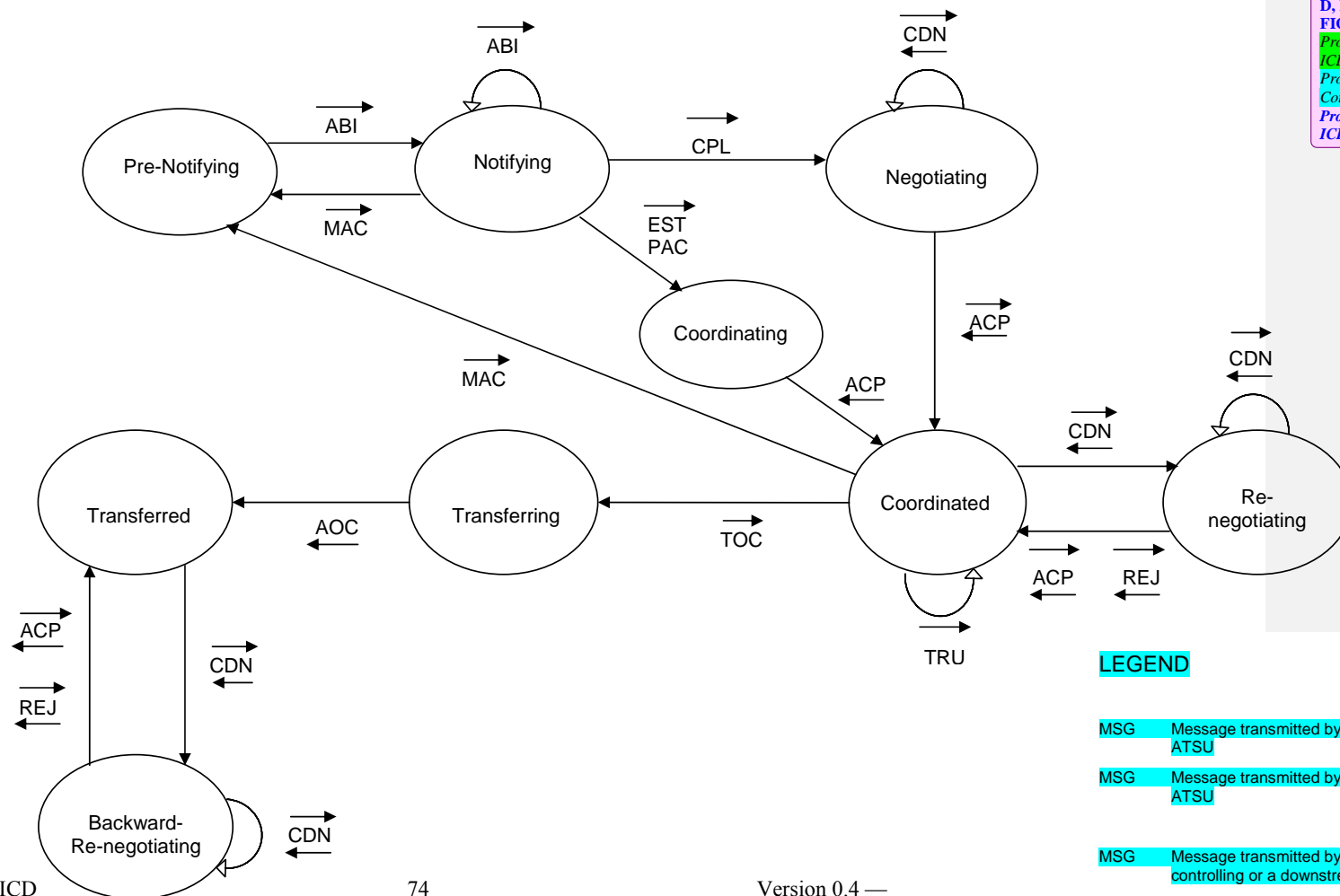
Comment [ATO669]: APAC ICD, APPENDIX D, TABLE D-3 – NAT ICD, APPENDIX C, TABLE 1

Procedures material from the Asia/Pacific Regional ICD for AIDC is highlighted in green.  
Procedures material from the North Atlantic Common Coordination ICD is highlighted in blue.  
Procedures material contained in both the NAT ICD and APAC ICD is not highlighted.

PAN ICD

<div>Negotiating</div> <div>Backward-</div> <div>Coordinating</div>	boundary. Changes are being proposed to the coordination conditions while the aircraft is still in the vicinity of the boundary ACI.
---	--

Figure 7-5. Flight State Transition Diagram



**Comment [ATO670]:** APAC ICD, APPENDIX D, FIGURE D-5 – NAT ICD, APPENDIX C, FIGURE 1  
 Procedures material from the Asia/Pacific Regional ICD for AIDC is highlighted in green.  
 Procedures material from the North Atlantic Common Coordination ICD is highlighted in blue.  
 Procedures material contained in both the NAT ICD and APAC ICD is not highlighted.

# LEGEND

MSG Message transmitted by the controlling ATSU

MSG Message transmitted by a downstream ATSU

MSG Message transmitted by either a controlling or a downstream ATSU

Table 7-4. Flight State Transitions

State Transition	Message Trigger	Description
Pre-Notifying/ Notifying	ABI	An initial ABI begins the Notification phase. An ABI updates the information a downstream ATS Unit maintains on a flight that is expected to enter its ACI at some future time. This data can be sent hours in advance of the actual entry.
Notifying/ Notifying	ABI	An ABI updates the information a downstream ATSU maintains on a flight that is expected to enter its ACI at some future time. This data can be sent hours in advance of the actual entry.
Notifying/ Pre-Notifying	MAC	A flight that was expected to enter a downstream ATSU's ACI will no longer do so.
Notifying/ Negotiating	CPL	A CPL is used to initiate the coordination process for an aircraft that will enter the downstream ATSU's ACI. A CPL contains the current clearance to destination landfall.
Notifying/ Coordinating	EST	An EST is used to initiate an Abbreviated Coordination process for an aircraft that will enter the downstream ATSU's ACI.
Notifying/ Coordinating	PAC	A PAC is used to initiate an Abbreviated Coordination process for an aircraft not yet airborne that will enter the downstream ATSU's ACI.
NotifyingNegotiating/ Negotiating	CDN	If the downstream ATSU does not likecannot accept the current clearance (and boundary crossing conditions), a Negotiation process is carried out using CDNs.
Negotiating/ Coordinated	ACP	The negotiation process is terminated when one ATSU signals its acceptance of the coordination conditions using an ACP.
NegotiatingCoordinating/ Coordinated	ACP	The Abbreviated Coordination dialogue is terminated by the receiving ATSU transmitting an ACP.
Coordinated/ Re-Negotiating	CDN	The coordination dialogue can be re-opened at any time after the initial coordination and before the initiation of the transfer of control procedure.
Re-Negotiating/ Re-Negotiating	CDN	Either ATSU may attempt to change the previously agreed upon coordination conditions any time after the initial coordination dialogue has been completed.
Re-Negotiating/ Coordinated	ACP REJ	An ACP terminates a re-negotiation dialogue with a new mutually agreed upon profile in effect. An REJ immediately terminates the dialogue with the coordination conditions remaining as previously agreed (which is usually, but not

Comment [ATO671]: APAC ICD, APPENDIX D, TABLE D-4 – NAT ICD, APPENDIX C, TABLE 2

Procedures material from the Asia/Pacific Regional ICD for AIDC is highlighted in green.  
Procedures material from the North Atlantic Common Coordination ICD is highlighted in blue.  
Procedures material contained in both the NAT ICD and APAC ICD is not highlighted.

		necessarily the initial coordination conditions).
State Transition	Message Trigger	Description
Coordinated/ Coordinated	TRU	A TRU may be sent by the controlling ATSU after the initial coordination dialogue has been completed to update previously agreed coordination conditions.
Coordinated/ Transferring	TOC	A TOC is sent after coordination occurs <del>but</del> but (usually just) before the boundary is crossed to the accepting ATSU. The TOC informs the accepting ATSU that it now has control authority for the aircraft.
Coordinated/ Pre-Notifying	MAC	A flight that was expected to enter a downstream ATSU's ACI will no longer do so.
Transferring/ Transferred	AOC	The formerly downstream ATSU is now the controlling ATSU.
Transferred/ Backward- Re-Negotiating Transferred/Backward- Coordinating	CDN	An attempt is made (by either the previous or new controlling ATSU) to change the coordination conditions while the aircraft is near the common boundary.
Backward- Re-Negotiating/ Backward- Re-Negotiating Backward- Coordinating/Backward- Coordinating	CDN	Either ATSU may <u>propose changes to</u> attempt to change the previously agreed upon coordination conditions any time after transfer of control has been completed, but while the aircraft remains in the common boundary region.
Backward- Re-Negotiating/ Transferred Backward- Coordinating/Transferred	ACP REJ	Similar to a Re-Negotiation/Coordinated state <del>transmission</del> transition. An ACP terminates a backward coordination dialogue with a new mutually agreed upon profile in effect. An REJ immediately terminates the dialogue with the coordination conditions remaining as previously agreed (which is usually, but not necessarily the initial coordination conditions).

### 7.5 Message sequencing

- 7.51 The preceding section identified the flight states and showed how the aircraft transitions ~~from~~ from on state to the next based on the receipt of AIDC messages by ATSU B. In this section, a table of two-message sequences is constructed as shown in Table D-5-7-5. The sequences identify the allowable messages (the next message column) that may correctly follow a given, just received message (the first column). Application Management Messages LAM and LRM are not shown but must be sent in response to any received Notification, Coordination or Transfer of Control.

Comment [ATO672]: APAC ICD, APPENDIX D, PARA 5 – NAT ICD, APPENDIX C, PARA 4

Comment [ATO673]: APAC ICD, APPENDIX D, PARA 5.1 – NAT ICD, APPENDIX C, PARA 4.1



Table 7-5. Message Sequences

Received Message	Next Valid Message	Comments
<b>Notification Sequences</b>		
ABI	ABI	Update the flight information.
	MAC	Indicates that the flight is no longer expected to enter the downstream ATSUs' ACI. The ABI may be Cancelled, indicating that the flight is no longer expected to enter the downstream air space.
	CPL	Receipt of the ABI signals the beginning of the Notification phase for a particular flight. Coordination will take place when the aircraft is within a parameter distance/time of the boundary.
	EST	Receipt of the ABI signals the beginning of the notification phase for a particular flight. Coordination will take place when the aircraft is within a parameter distance/time of the boundary.
<b>Coordination Sequences</b>		
CPL	ACP	The aircraft's current clearance is acceptable.
	CDN	The aircraft's current clearance is not acceptable to the receiving airspace and must be modified.
EST	ACP	The boundary crossing conditions are in accordance with the agreement that exists between the two ATSUs.
PAC	ACP	The boundary crossing conditions are in accordance with the agreement that exists between the two ATSUs.
CDN	ACP	The negotiated clearance is acceptable to both ATSUs.
	CDN	The proposed clearance modification is not acceptable to one of the airspaces and a new proposal is submitted.
	REJ	The last clearance agreed to by both airspaces must be honoured.
TRU	CDN	The proposed clearance modification is not acceptable to one of the airspaces and a new proposal is submitted.
	TOC	The aircraft is at or near the boundary.
	TRU	Notification of an amendment to the previously accepted clearance.
	MAC	Indicates that the flight is no longer expected to enter the downstream ATSUs' ACI.

Comment [ATO674]: APAC ICD, APPENDIX D, TABLE D-5 – NAT ICD, APPENDIX C, TABLE 3

Procedures material from the Asia/Pacific Regional ICD for AIDC is highlighted in green.

Procedures material from the North Atlantic

Common Coordination ICD is highlighted in blue.

Procedures material contained in both the NAT ICD and APAC ICD is not highlighted.

ACP	CDN	A request for modification or a previously accepted clearance is submitted.
	TRU	Notification of an amendment to the previously accepted clearance.
	TOC	The aircraft is at or near the boundary.
	MAC	The coordinated flight may be cancelled, indicating Indicates that the flight is no longer expected to enter the downstream ATSU's ACL.
Received Message	Next Valid Message	Comments
REJ	CDN	
	TOC	
	MAC	
Transfer of Control Sequence		
TOC	AOC	The aircraft is at or near the boundary.
AOC	CDN	A request for modification of a previously accepted clearance is submitted.

7.52 Table D-6 7-6 lists the AIDC messages which are valid for each state. The ATSU which can transmit the message is also identified.

Table 7-6. Valid Messages by ATSU

Flight State	Message	Sent by
Notifying	ABI	Controlling ATSU
Notifying	MAC	Controlling ATSU
Notifying	CPL	Controlling ATSU
Notifying	EST	Controlling ATSU
Notifying	PAC	Controlling ATSU
Negotiating	CDN	Either ATSU
Negotiating	ACP	Either ATSU
Coordinating	ACP	Receiving ATSU
Coordinated	CDN	Either ATSU
Coordinated	TRU	Controlling ATSU
Coordinated	TOC	Controlling ATSU
Coordinated	MAC	Controlling ATSU
Re-Negotiating	CDN	Either ATSU

Comment [AT0675]: APAC ICD, APPENDIX D, PARA 5.2 – NAT ICD, APPENDIX C, PARA 4.2

Comment [AT0676]: APAC ICD, APPENDIX D, TABLE D-6 – NAT ICD, APPENDIX C, TABLE 4

Procedures material from the Asia/Pacific Regional ICD for AIDC is highlighted in green.  
Procedures material from the North Atlantic Common Coordination ICD is highlighted in blue.  
Procedures material contained in both the NAT ICD and APAC ICD is not highlighted.

Re-Negotiating	ACP	Either ATSU
Re-Negotiating	REJ	Either ATSU
Transferring	AOC	Receiving ATSU
Flight State	Message	Sent by
Transferred	CDN	Either ATSU
Backward-Re-Negotiating Backward-Coordinating	CDN	Either ATSU
Backward-Re-Negotiating Backward-Coordinating	ACP	Either ATSU
Backward-Re-Negotiating Backward-Coordinating	REJ	Either ATSU

## 7.6 Other messages

7.61 The previous sections have discussed the use of Notification, Coordination, Transfer of Control, and Application Management messages. There are two remaining message subgroups in the **NAT Core Message set ASIA/PAC** AIDC messages: (1) General Information messages; and (2) Surveillance Data Transfer **Application Management** messages. All messages within these two subgroups require an application response; no operational response is defined.

7.62 General information messages.

7.62.1 EMG and MIS Messages.

7.62.1.1 These messages support the exchange of text information between ATSUs. A communicator (usually a person, but a computer or application process is also permitted) in one ATSU can send a free text message to a functional address at another ATSU. Typical functional addresses could be an area supervisor or an ATC sector. If further EMG or MIS messages are transmitted in response to a previously received EMG or MIS, the later messages shall include the original message identifier within field 3 of the AFTN header. The EMG shall have an AFTN emergency priority (SS).

### 7.62.2 Track Definition Message

7.62.2.1 The TD is generated and disseminated to all affected ATSUs. It is also sent to Airline Operational Control (AOC) Centres where it is used for flight planning purposes. This message contains in a structure text format, the track definition and the time when it is active.

7.63 Surveillance data transfer messages.

7.63.1 The ADS message is used to transfer data contained within an ADS-C report including optional ADS-C groups to an adjacent ATSU.

Comment [ATO677]: APAC ICD, APPENDIX D, PARA 6 – NAT ICD, APPENDIX C, PARA 5

Comment [ATO678]: APAC ICD, APPENDIX D, PARA 6.0 – NAT ICD, APPENDIX C, PARA 5

Comment [ATO679]: APAC ICD, APPENDIX D, PARA 6.1 – NAT ICD, APPENDIX C, PARA 5.2

Comment [ATO680]: APAC ICD, APPENDIX D, PARA 6.1.1 – NAT ICD, APPENDIX C, PARA 5.2.1

Comment [ATO681]: APAC ICD, APPENDIX D, PARA 6.1.1

Comment [r682]: APAC ICD, APPENDIX D, PARA 6.1.2

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Comment [ATO683]: APAC ICD, APPENDIX D, PARA 6.1.2

Comment [r684]: APAC ICD, APPENDIX D, PARA 6.2

Comment [r685]: APAC ICD, APPENDIX D, PARA 6.2

7.63.2 The ADS message contains a text field – the ADS-C data field – which contains information from the ADS-C report in its original hexadecimal format. The ADS-C data field consists of the text that immediately follows the “ADS” IMI (but excluding the 4 character CRC) within the application data portion of the ADS-C report.

Comment [r686]: APAC ICD, APPENDIX D, PARA 6.2.1

7.63.3 The following example shows an encoded ACARS ADS-C report – as it would be received by an ATSU – as well as an example of what information from this report would be transferred into the corresponding ADS-C data field. The ATSU receiving the AIDC ADS message simply decodes the ADS-C data field and extracts the data that is required by the ATSU.

Comment [r687]: APAC ICD, APPENDIX D, PARA 6.2.2

ACARS ADS-C report	QU BNECAYA QXSXMXS 011505 PAR FI NZ0090/AN ZK-OKC DT QXT POR1 011505 F59A - ADS.ZK- OKC03000FF946B6F6DC8FC044B9D0DFC013B80DA88FC0A64F9E4438B4AC8FC000E34D0EDC00010140F3E8660F3
ADS-C data field	ADS/ ZK- OKC03000FF946B6F6DC8FC044B9D0DFC013B80DA88FC0A64F9E4438B4AC8FC000E34D0EDC00010140F3E8660F3

Comment [ATO688]: APAC ICD, APPENDIX D, PARA 6.2.2 Example

**Note.** Because it is part of the 7 character registration field the leading “.” must be retained in front of the registration (“ZK-OKC”). The 4 character CRC (“60F3”) at the end of the ACARS message is not included in the ADS-C data field.

Comment [ATO689]: APAC ICD, APPENDIX D, PARA 6.2.2 Note

7.63.4 The types of ADS-C reports (i.e. periodic or event) transmitted by the AIDC ADS message shall be in accordance with bilateral agreements. When implementing the AIDC ADS message, ATSUs should consider the effect of relaying numerous ADS-C periodic reports via ground-ground links (e.g. AFTN) when a high periodic reporting rate is in effect.

Comment [r690]: APAC ICD, APPENDIX D, PARA 6.2.3

7.63.4.1 The AIDC ADS message is used to transfer ADS-C information only. Other messaging protocols exist for the transfer of ADS-B information.

Comment [r691]: APAC ICD, APPENDIX D, PARA 6.2.3, NOTE

7.63.4.2 While the AIDC ADS message may be used to transfer ADS-C information, this data may also be transferred using the ACARS ground-ground network by re-addressing the received ADS-C message to the other ATSU. States should agree on the method to be used on a bilateral basis.

Comment [r692]: APAC ICD, APPENDIX D, PARA 6.2.3, NOTE

**Example:** Brisbane ATSU (BNECAYA) receives an ADS-C downlink via the ACARS network from its Data link Service Provider SITA (QXSXMXS)

Comment [ATO693]: APAC ICD, APPENDIX D, PARA 6.2.3 Example

```

QU BNECAYA
.QXSXMXS 011505
PAR
FI NZ0090/AN ZK-OKC
DT QXT POR1 011505 F59A
- ADS.ZK-
OKC0300FF946B6F6DC8FC044B9D0DFC013B80DA88FC0A64F9E4438B4AC8FC00E34D0EDC00010140F3EE8660F3

```

Brisbane re-addresses the downlink and forwards to Auckland via the ACARS ground-ground network:

QU AKLCBYA

.BNECAYA 011505

PAR

FI NZ0090/AN ZK-OKC

DT QXT POR1 011505 F59A

- ADS ZK-

OKC0300FF946B6F6DC8FC044B9D0DFC013B80DA88FC0A64F9E4438B4AC8FC00

0E34D0EDC00010140F3EE8660F3

### 7.7 Examples

7.71 Several examples illustrating the use of the **NAT Core** AIDC Message set are presented. No Application Management messages (principally the LAM, but also the LRM and ASM) are shown for clarity, though these messages are almost always sent as an application acknowledgement response to the receipt of a Notification, Coordination or Transfer of Control message.

7.72 Standard coordination.

7.72.1 Brisbane transmits a notification message (ABI) to Auckland forty five minutes prior to the time that QFA108 is expected to cross the FIR boundary (1209). The destination of the flight is Christchurch.

7.72.2 The abbreviated coordination message (EST) is transmitted by Brisbane thirty minutes prior to the boundary estimate (which is now 1213). Auckland accepts the proposed coordination conditions by responding with an ACP. **Auckland accepts ATC responsibility by responding with an AOC**

7.72.3 Brisbane transfers ATC responsibility approaching the FIR boundary by transmitting a TOC.

7.72.4 The timing of the transmission of these messages is defined in bilateral agreements between the two **ATS** units.

*Example* Standard coordination

Brisbane	Auckland
(ABI-QFA108-YBBN-33S163E/1209F350 -NZCH-8/IS-9/B744/H-10/SDHIWRJ -15/M084F350 35S164E 36S165E...)	
(EST-QFA108-YBBN-33S163E/1213F350-NZCH)	
	(ACP-QFA108-YBBN-NZCH)
(TOC-QFA108-YBBN-NZCH)	
	(AOC-QFA108-YBBN-NZCH)

Comment [r694]: APAC ICD, APPENDIX D, PARA 7 – NAT ICD, APPENDIX C, PARA 6

Comment [r695]: APAC ICD, APPENDIX D, PARA 7.1 – NAT ICD, APPENDIX C, PARA 6.1

Comment [r696]: APAC ICD, APPENDIX D, PARA 7.1.1

Comment [r697]: APAC ICD, APPENDIX D, PARA 7.1.2

Comment [r698]: APAC ICD, APPENDIX D, PARA 7.1.3

Comment [ATO699]:

Comment [r700]: APAC ICD, APPENDIX D, PARA 7.1.3, NOTE

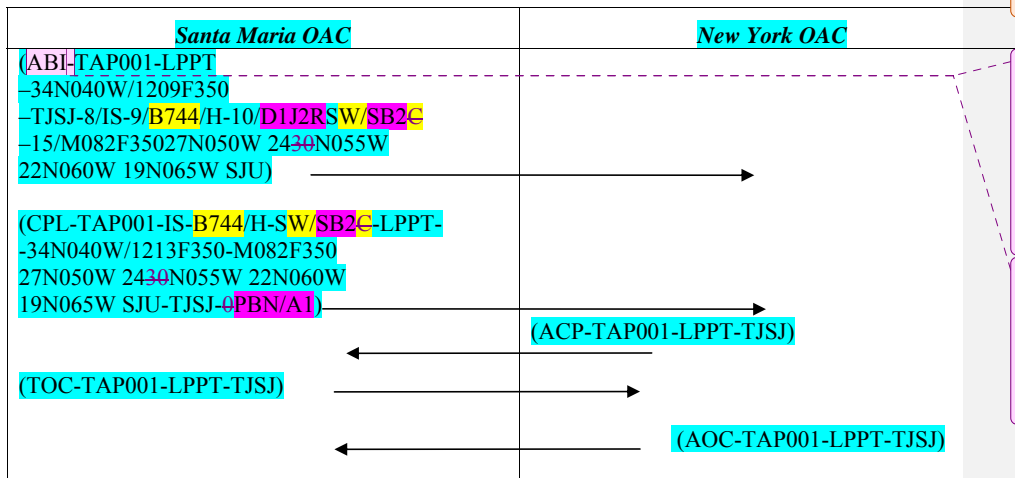
Comment [r701]: APAC ICD, APPENDIX D, PARA 7.1.3, Example 1

7.72.5 Santa Maria Oceanic Area Control (OAC) informs New York OAC several hours in advance that flight TAP001 is expected to cross the Santa Maria FIR boundary into the New York FIR at approximately 1209 PM (ABI). The flight will continue on to San Juan, Puerto Rico.

7.72.6 Coordination between Santa Maria OAC and New York OAC occurs approximately twenty minutes before the expected boundary crossing time, which has been revised to 1213 PM (CPL). New York OAC accepts the coordination conditions without modification (ACP).

7.72.7 Santa Maria OAC transfers ATC responsibility near the boundary (TOC). New York OAC accepts ATC responsibility by responding with an AOC.

Example Standard coordination



Comment [r702]: NAT ICD, APPENDIX C, PARA 6.1.3, Example 1

Comment [ATO703]: NAT ICD new v1.2.9 - ABI example: B747 is no longer a valid type designator; changed to B744; added RVSM qualifier in 10a, transponder qualifier in 10b; corrected lat/long and added a space before 27N removed space before 34N. In CPL example: B747 is no longer a valid type designator; changed to B744; added RVSM qualifier in 10a, transponder qualifier in 10b; removed space before 34N; corrected lat/long in field 15.

Comment [ATO704]: NAT ICD new v1.3.0 - ABI and CPL: realistic equipage for an aircraft on a transatlantic flight should include "R" in field 10a, indicating PBN capability. CPL example shows PBN/ indicator in field 18, making the example more relevant to 2012 changes. Updating 10b to reflect advanced surveillance equipment is useful in showing the new letter/number codes.

7.73 Negotiation of coordination conditions.

7.73.1 Brisbane transmits a notification message (ABI) to Auckland forty five minutes prior to the time that TAP001 is expected to cross the FIR boundary (1209). The destination of the flight is Christchurch.

7.73.2 The coordination message (CPL) is transmitted by Brisbane thirty minutes prior to the boundary estimate (which is now 1213).

7.73.3 Auckland responds with a negotiation message (CDN) requesting a change in the boundary crossing altitude to F390. Brisbane responds with an ACP indicating that the revised altitude is acceptable.

7.73.4 Brisbane transfers ATC responsibility approaching the FIR boundary by transmitting a TOC. Auckland accepts ATC responsibility by responding with an AOC.

7.73.5 The timing of the transmission of these messages is defined in bilateral agreements between the two ATS units.

Example Negotiation of Coordination Conditions



Comment [ATO705]: APAC ICD, APPENDIX D, PARA 7.2 - NAT ICD, APPENDIX C, PARA 6.2

Comment [ATO706]: APAC ICD, APPENDIX D, PARA 7.2.1

Comment [ATO707]: APAC ICD, APPENDIX D, PARA 7.2.2

Comment [ATO708]: APAC ICD, APPENDIX D, PARA 7.2.3

Comment [ATO709]: APAC ICD, APPENDIX D, PARA 7.2.4

Comment [ATO710]: APAC ICD, APPENDIX D, PARA 7.2.4 Note

Comment [ATO711]: APAC ICD, APPENDIX D, PARA 7.2.4 Example 2

(ABI-QFA56-YBBN-33S163E/1209F350-NZCH-8/IS-9/B744/H-10/SDHIWRJ-15/M084F350-35S164E 36S165E ...)	
(CPL-QFA56-IS-B744/H-SDHIWRJ-YBBN-33S163E/1213F350-M084F350-35S164E 36S165E NZCH -0.)	
	(CDN-QFA56-YBBN-NZCH-14/33S163E/1213F390)
(ACP-QFA56-YBBN-NZCH)	
(TOC-QFA56-YBBN-NZCH)	
	(AOC-QFA56-YBBN-NZCH)

7.73.6 Santa Maria OAC informs New York OAC several hours in advance that flight TAP001 is expected to cross the Santa Maria FIR boundary into the New York FIR at approximately 1209 PM (ABI). The flight will continue on to San Juan, Puerto Rico.

Comment [ATO712]: NAT ICD, APPENDIX C, PARA 6.2.1

7.73.7 Coordination between Santa Maria OAC and New York OAC occurs approximately twenty minutes before the expected boundary crossing time, which has been revised to 1213 PM (CPL). New York OAC requests a change in the boundary crossing altitude to F390 (CDN), which Santa Maria OAC signals as acceptable (ACP).

Comment [ATO713]: NAT ICD, APPENDIX C, PARA 6.2.2

7.73.8 Santa Maria OAC transfers ATC responsibility near the boundary (TOC). New York OAC accepts ATC responsibility by responding with an AOC.

Comment [ATO714]: NAT ICD, APPENDIX C, PARA 6.2.3

Example Negotiation of Coordination Conditions

Comment [r715]: NAT ICD, APPENDIX C, PARA 6.2.3, Example 2

Santa Maria OAC	New York OAC
(ABI-TAP001-LPPT-34N040W/1209F350-TJSJ-8/IS-9/B744/H-10/DI2RSW/SB2C-15/M082F35027N050W 2439N055W 22N060W 19N065W SJU)	
(CPL-TAP001-IS-B744/H-DI2RSW/SB2C-LPPT-34N040W/1213F350-M082F350 27N050W 2439N055W 22N060W 19N065W SJU-TJSJ-PBN/A19)	
	(CDN-TAP001-LPPT-TJSJ-14 / 34N040W/1213F390)
(ACP-TAP001-LPPT-TJSJ)	
(TOC-TAP001-LPPT-TJSJ)	
	(AOC-TAP001-LPPT-TJSJ)

Comment [ATO716]: NAT ICD new v1.2.9 - ABI example: B747 is no longer a valid type designator; changed to B744; added RVSM qualifier in 10a, transponder qualifier in 10b; corrected lat/long and added a space before 27N removed space before 34N. In CPL example: B747 is no longer a valid type designator; changed to B744; added RVSM qualifier in 10a, transponder qualifier in 10b; removed space before 34N; corrected lat/long in field 15.

Comment [ATO717]: NAT ICD new v1.3.0 - ABI and CPL: realistic equipage for an aircraft on a transatlantic flight should include "R" in field 10a, indicating PBN capability. CPL example shows PBN/ indicator in field 18, making the example more relevant to 2012 changes. Updating 10b to reflect advanced surveillance equipment is useful in showing the new letter/number codes.

## 7.74 Re-negotiation rejected.

Comment [ATO718]: APAC ICD, APPENDIX D, PARA 7.3

7.74.1 Brisbane transmits a notification message (ABI) to Auckland forty five minutes prior to the time that QFA108 is expected to cross the FIR boundary (1209). The destination of the flight is Christchurch.

Comment [r719]: APAC ICD, APPENDIX D, PARA 7.3.1

7.74.2 The coordination message (CPL) is transmitted ~~to~~ by Brisbane thirty minutes prior to the boundary estimate (which is now 1213). Auckland accepts the proposed coordination conditions without modification by responding with an ACP.

Comment [r720]: APAC ICD, APPENDIX D, PARA 7.3.2

7.74.3 Some time after the initial coordination process has been completed, but before the start of the Transfer of Control process, Auckland requests an amendment to the boundary crossing altitude by transmitting a negotiation message (CDN). Brisbane cannot accept the proposed change due to conflicting traffic in its FIR and therefore rejects the request (REJ).

Comment [ATO721]: APAC ICD, APPENDIX D, PARA 7.7.3

7.74.4 Brisbane transfers ATC responsibility approaching the FIR boundary by transmitting a TOC. Auckland accepts ATC responsibility by responding with an AOC.

Comment [r722]: APAC ICD, APPENDIX D, PARA 7.3.4

7.74.5 The timing of the transmission of these messages is defined in bilateral agreements between the two ATS units.

Comment [ATO723]: APAC ICD, APPENDIX D, PARA 7.3.4 Note

## Example Rejection of Renegotiated Coordination

Comment [r724]: APAC ICD, APPENDIX D, PARA 7.3.4, Example 3

Brisbane	Auckland
(ABI-QFA108-YBBN-33S163E/1209F350-NZCH-8/IS-9/B744/H-10/SDHIWRJ-15/M084F350 35S164E 36S165E....)	
(CPL-QFA108-IS-B744/H-SDHIWRJ-YBBN-33S163E/1213F350-M084F350 35S164E 36S165E NZCH -0.)	
	(ACP-QFA108-YBBN-NZCH)
	(CDN-QFA108-YBBN-NZCH-14/33S163E/1213F390)
(REJ-QFA108-YBBN-NZCH)	
(TOC-QFA108-YBBN-NZCH)	
	(AOC-QFA108-YBBN-NZCH)
<del>(REJ-QFA108-YBBN-NZCH)</del>	
<del>(TOC-QFA108-YBBN-NZCH)</del>	
	(AOC-QFA108-YBBN-NZCH)

7.74.6 Santa Maria OAC informs New York OAC several hours in advance that flight TAP001 is expected to cross the Santa Maria FIR boundary into the New York FIR at approximately 1209 PM (ABI). The flight will continue on to San Juan, Puerto Rico.

Comment [ATO725]: NAT ICD, APPENDIX C, PARA 6.3.1

7.74.7 Coordination between Santa Maria OAC and New York OAC occurs approximately twenty minutes before the expected boundary crossing time, which has been revised to 1213 PM (CPL). New York OAC accepts the coordination conditions without modification (ACP).

Comment [ATO726]: NAT ICD, APPENDIX C, PARA 6.3.2



7.74.8 Some time after the initial Coordination process has been completed, but before the start of the Transfer of Control process, New York OAC attempts to modify the boundary crossing altitude (CDN), due to unexpected traffic in the area. Santa Maria OAC can not accept the proposed change due to conflicting traffic in its FIR, and therefore rejects the proposal (REJ).

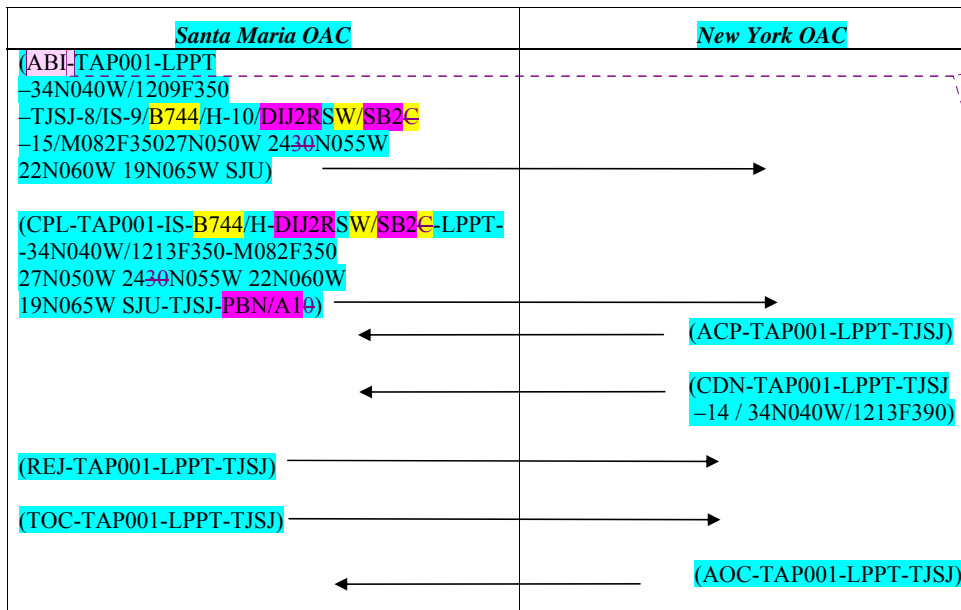
Comment [ATO727]: NAT ICD, APPENDIX C, PARA 6.3.3

7.74.9 Santa Maria OAC transfers ATC responsibility near the boundary (TOC). New York OAC accepts ATC responsibility by responding with an AOC.

Comment [ATO728]: NAT ICD, APPENDIX C, PARA 6.3.4

Example Rejection of Renegotiated Coordination

Comment [r729]: NAT ICD, APPENDIX C, PARA 6.2.4, Example 3



Comment [ATO730]: NAT ICD new v1.2.9 - ABI example: B747 is no longer a valid type designator; changed to B744; added RVSM qualifier in 10a, transponder qualifier in 10b; corrected lat/long and added a space before 27N removed space before 34N. In CPL example: B747 is no longer a valid type designator; changed to B744; added RVSM qualifier in 10a, transponder qualifier in 10b; removed space before 34N; corrected lat/long in field 15.

Comment [ATO731]: NAT ICD new v1.3.0 - ABI and CPL: realistic equipage for an aircraft on a transatlantic flight should include "R" in field 10a, indicating PBN capability. CPL example shows PBN/ indicator in field 18, making the example more relevant to 2012 changes. Updating 10b to reflect advanced surveillance equipment is useful in showing the new letter/number codes.

7.75 Abbreviated coordination.

Comment [r732]: APAC ICD, APPENDIX D, PARA 7.4

7.75.1 Several minutes before AAA842's departure time (e.g. at taxi time), coordination between Bali and Brisbane is effected by Bali transmitting a coordination message (PAC). This message alerts Brisbane that the flight is pending and indicates a boundary estimate of 1213 at f290. Brisbane accepts the coordination conditions without modification by responding with an ACP.

Comment [r733]: APAC ICD, APPENDIX D, PARA 7.4.1

7.75.2 On departure, the aircraft's actual estimate differs from that coordinated by more than the value specified in bilateral agreements. The new estimate is coordinated to Brisbane by Bali transmitting a CDN message to Brisbane. Brisbane accepts this revised estimate by responding with an ACP message.

Comment [r734]: APAC ICD, APPENDIX D, PARA 7.4.2

7.75.3 Bali transfers ATC responsibility approaching the FIR boundary by transmitting a TOC. Brisbane accepts ATC responsibility by responding with an AOC.

Comment [r735]: APAC ICD, APPENDIX D, PARA 7.4.3

7.75.4 The timing of the transmission of these messages is defined in bilateral agreements between the two ATS units.

Comment [r736]: APAC ICD, APPENDIX D, PARA 7.4.3, NOTE

Example Abbreviated coordination

Comment [r737]: APAC ICD, APPENDIX D, PARA 7.4.3, Example 4

<b>Bali</b>	<b>Brisbane</b>
(PAC-AAA842/A4534-IS-B737/M-WRRR-OGAMI/1213F290-YPPH...)	
	(ACP-AAA842/A4534-WRRR-YPPH)
(CDN-AAA842/4534-WRRR-YPPH-14/OGAMI/1219F290)	
	(ACP-AAA842/A4534-WRRR-YPPH)
(TOC-AAA842/A4534-WRRR-YPPH-14/OGAMI/1219F290)	
	(AOC-AAA842/A4534-WRRR-YPPH)

#### 7.76 Multiple modifications + AIDC cancellation

7.76.1 Brisbane transmits a notification message (ABI) to Auckland forty five minutes prior to the time that QFA11 is expected to cross the FIR boundary (1105). The destination of the flight is Los Angeles.

Comment [r738]: APAC ICD, APPENDIX D, PARA 7.5

Comment [r739]: APAC ICD, APPENDIX D, PARA 7.5.1

7.76.2 Prior to transmitting the coordination message, a modification to the cleared flight level is made resulting in the transmission of another notification message. This ABI contains the latest boundary information of the aircraft showing that the current boundary estimate is now 1107.

Comment [r740]: APAC ICD, APPENDIX D, PARA 7.5.2

7.76.3 The abbreviated coordination message (EST) is transmitted by Brisbane thirty minutes prior to the boundary estimate (which is now 1108). Auckland accepts the proposed coordination conditions by responding with an ACP.

Comment [r741]: APAC ICD, APPENDIX D, PARA 7.5.3

7.76.4 Due to weather QFA11 requests and is issued an amended route clearance that will now no longer affect Auckland. To advise of the cancellation of any previously transmitted AIDC messages, a MAC message is transmitted to Auckland.

Comment [r742]: APAC ICD, APPENDIX D, PARA 7.5.4

7.76.5 The timing of the transmission of these messages is defined in bilateral agreements between the two ATS units.

Comment [ATO743]: APAC ICD, APPENDIX D, PARA 7.5.4 Note

Example Multiple notifications + AIDC cancellation

Comment [r744]: APAC ICD, APPENDIX D, PARA 7.5.5, Example 5

<b>Brisbane</b>	<b>Auckland</b>
(ABI-QFA11-YSSY-31S163E/1105F290-KLAX-8/IS-9/B744/H-10/SDHIWRJ-15/M085F29033S158E 30S168E...)	
(ABI-QFA11-YSSY-31S163E/1107F310-KLAX-8/IS-9/B744/H-10/SDHIWRJ-15-M084F29033S158E 30S168...)	
(EST-QFA11-YSSY-31S163E/1108F310-KLC)	
	(ACP-QFA11-YSSY-KLAX)
(MAC-QFA11-YSSY-KLAX)	

## PAN ICD

### 7.77 Multiple negotiations

7.77.1 Brisbane transmits a notification message (ABI) to Auckland forty five minutes prior to the time that QFA108 is expected to cross the FIR boundary (1209). The destination of the flight is Christchurch.

7.77.2 The abbreviated coordination message (EST) is transmitted by Brisbane thirty minutes prior to the boundary estimate (which is now 1213). Auckland accepts the proposed coordination conditions by responding with an ACP.

7.77.3 QFA108 requests F370. The bilateral Letter of Agreement between Brisbane and Auckland requires that prior coordination is ~~required-completed~~ before issuing a change of level after initial coordination. Brisbane transmits a negotiation message (CDN) proposing the change of level to F370. This level is not available in Auckland's airspace, but an alternative level is available. Auckland therefore responds with a negotiation message proposing F360. Brisbane responds with an ACP indicating that this level is acceptable to Brisbane (and QFA108).

7.77.4 Brisbane transfers ATC responsibility approaching the FIR boundary by transmitting a TOC. Auckland accepts ATC responsibility by responding with an AOC.

7.77.5 The timing of the transmission of these messages is defined in bilateral agreements between the two units.

7.77.5.1 Complex re-negotiations may be more easily solved by voice communication.

Example Multiple negotiations

Brisbane	Auckland
(ABI-QFA108-YBBN-33S163E/1209F350 -NZCH-8/IS-9/B744/H-10/SDHIWRJ -15/M084F350 35S164E 36S165E....)	
(EST-QFA108-YBBN-33S163E/1213F350- NZCH)	
	(ACP-QFA108-YBBN-NZCH)
(CDN-QFA108-YBBN-NZCH -14/33S163E/1213F370)	
	(CDN-QFA108-YBBN-NZCH -14/33S163E/1213F360)
(ACP-QFA108-YBBN-NZCH)	
(TOC-QFA108-YBBN-NZCH)	
	(AOC-AOC-QFA108-YBBN-NZCH)

### 7.78 Standard coordination with proposed amended destination

7.78.1 Brisbane transmits a notification message (ABI) to Auckland forty five minutes prior to the time that ANZ136 is expected to cross the FIR boundary (1400). The destination of the flight is Christchurch.

Comment [r745]: APAC ICD, APPENDIX D, PARA 7.6

Comment [r746]: APAC ICD, APPENDIX D, PARA 7.6.1

Comment [r747]: APAC ICD, APPENDIX D, PARA 7.6.2

Comment [r748]: APAC ICD, APPENDIX D, PARA 7.6.3

Comment [r749]: APAC ICD, APPENDIX D, PARA 7.6.4

Comment [r750]: APAC ICD, APPENDIX D, PARA 7.6.4, NOTE 1

Comment [r751]: APAC ICD, APPENDIX D, PARA 7.6.4, NOTE 2

Comment [r752]: APAC ICD, APPENDIX D, PARA 7.6.4, Example 6

Comment [r753]: APAC ICD, APPENDIX D, PARA 7.7

Comment [r754]: APAC ICD, APPENDIX D, PARA 7.7.1

7.78.2 The abbreviated coordination message (EST) is transmitted by Brisbane thirty minutes prior to the boundary estimate (which is now 1401). Auckland accepts the proposed coordination conditions by responding with an ACP.

Comment [r755]: APAC ICD, APPENDIX D, PARA 7.7.2

7.78.3 ANZ136 requests a deviation to Auckland (NZAA). Brisbane transmits a Coordination message (CDN) to Auckland proposing changes to the previously agreed coordination conditions (route and boundary estimate) as well as the new destination. Auckland accepts the proposed revision(s) by the transmission of an ACP. All subsequent AIDC messages for ANZ136 contain "NZAA" as the destination aerodrome.

Comment [r756]: APAC ICD, APPENDIX D, PARA 7.7.3

7.78.4 Brisbane transfers ATC responsibility approaching the FIR boundary by transmitting a TOC. Auckland accepts ATC responsibility by responding with an AOC.

Comment [r757]: APAC ICD, APPENDIX D, PARA 7.7.4

7.78.5 The timing of the transmission of these messages is defined in bilateral agreements between the two ATS units.

Comment [r758]: APAC ICD, APPENDIX D, PARA 7.7.4, NOTE

Example Coordination of amended destination

Comment [r759]: APAC ICD, APPENDIX D, PARA 7.7.4, Example 7

Brisbane	Auckland
(ABI-ANZ136-YBBN-RUNOD/1400F350 -NZCH-8/IS-9/A320/M-10/SDHIWR -15/M078F350 SCOTT Y32 LOKET L503 LALAP DCT ... 0FA108 YBBN-RUNOD/1400F350 -NZCH-8/IS-9/A320/M-10/SDHIWR -15/M078F350 SCOTT Y32 LOKET L503 LALAP DCT ...)	
(EST-ANZ136-YBBN- RUNOD33S163E/1401F350-NZCH-EST- ANZ136-YBBN-33S163E/1401F350-NZCH)	
	(ACP-ANZ136-YBBN-NZAA/NZCH)
(CDN-ANZ136-YBBN-NZCH -14/ESKEL/1357F350-15/ SCOTT Y32 LOKET WOOLY ESKEL L521 AA DEST/NZAA)	
	(ACP-ANZ136-YBBN-NZAA)
(TOC-ANZ136-YBBN-NZAA)	
	(AOC-ANZ136-YBBN-NZAA)

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7.79 Standard coordination including FAN/FCN exchange.

7.79.1 Brisbane transmits a notification message (ABI) to Auckland forty five minutes prior to the time that UAL815 is expected to cross the FIR boundary (0330).

Comment [r760]: APAC ICD, APPENDIX D, PARA 7.8 – NAT ICD, APPENDIX C, PARA 6.4

7.79.2 The abbreviated coordination message (EST) is transmitted by Brisbane thirty minutes prior to the boundary estimate. Auckland accepts the proposed coordination conditions by responding with an ACP.

Comment [ATO761]: APAC ICD, APPENDIX D, PARA 7.8.1 – NAT ICD, APPENDIX C, PARA 6.4.1

Comment [r762]: APAC ICD, APPENDIX D, PARA 7.8.2

## PAN ICD

- 7.79.3 Brisbane transmits a FAN message to Auckland providing the logon information that Auckland requires to establish a CPDLC connection as well as ADS contracts.
- 7.79.4 When a CPDLC connection is established, Auckland transmits a FCN to Brisbane containing the appropriate frequency for the aircraft to monitor.
- 7.79.5 The current flight plan message (CPL) is transmitted by Brisbane thirty minutes prior to the boundary estimate. Auckland accepts the proposed coordination conditions by responding with an ACP.
- 7.79.6 Brisbane transfers ATC responsibility approaching the FIR boundary by transmitting a TOC. Auckland accepts ATC responsibility by responding with an AOC.
- 7.79.7 Brisbane terminates the CPDLC connection with UAL815 and transmits an FCN to Auckland to advise them that the CPDLC connection has been terminated.
- 7.79.8 The timing of the transmission of these messages is defined in bilateral agreements between the two ATS units.

*Example.* Standard coordination including FAN and FCN exchanges

Brisbane	Auckland
<del>(ABI-UAL815-YSSY-3050S16300E3200S16300E/0330F290-KLAX-8/IS-9/B744/H-10/SDHIRZYWJ1P/SB2G1CD-15/N0499F310 NOBAR A579 JORDY DCT 3200S16000E 3050S16300E 2800S16500E-DAT/SHV PBN/AILI)(ABI-UAL815/ YSSY-3200S16300E/0330F290-KLAX-8/IS-9/B744/H-NOBAR A579 JORDY DCT 3200S16000E 3050S16300E 2800S16500E...)</del>	
<del>(EST-UAL815-YSSY-3050S16300E33S163E/0330F290-KLAX)(EST-UAL815 YSSY 33S163E/0330F290 KLAX</del>	
	(ACP-UAL815-YSSY-KLAX)
(FAN-UAL815-YSSY-KLAX-SMI/FML FMH/UAL815 REG/N123UA FPO/3330S15910E FCO/ATC01 FCO/ADS01)	
	(FCN-UAL815-YSSY-KLAX-CPD/2-FREQ/13261)
(TOC-UAL815-YSSY-KLAXz)	
	(AOC-UAL815-YSSY-KLAX)
(FCN-UAL815-YSSY-KLAX-CPD/0)	

Comment [r763]: APAC ICD, APPENDIX D, PARA 7.8.3 – NAT ICD, APPENDIX C, PARA 6.4.2

Comment [ATO764]: APAC ICD, APPENDIX D, PARA 7.8.4 – NAT ICD, APPENDIX C, PARA 6.4.3

Comment [ATO765]: NAT ICD, APPENDIX C, PARA 6.4.4

Comment [ATO766]: APAC ICD, APPENDIX D, PARA 7.8.5 – NAT ICD, APPENDIX C, PARA 6.4.5

Comment [ATO767]: APAC ICD, APPENDIX D, PARA 7.8.6 – NAT ICD, APPENDIX C, PARA 6.4.6

Comment [ATO768]: APAC ICD, APPENDIX D, PARA 7.8.6 Note – NAT ICD, APPENDIX C, PARA 6.4.6 Note

Comment [ATO769]: APAC ICD, APPENDIX D, PARA 7.86, Example 8 – NAT ICD, APPENDIX C, PARA 6.4.6, Example 4

Comment [ATO770]: NAT ICD new v1.2.9 - Added hyphen before field 10. Improper '/' after UAL815 in ABI corrected. Added 'DAT/' in field 18 to link with filed 'J', ABI and CPL.

Comment [ATO771]: NAT ICD new v1.3.0 - Updated examples to include new equipment and capabilities in field 10, changed J to J1 in ABI---removed D from 10b, which will not be valid after 2012---changed DAT/SHV to PBN/AILI.

7.80 Standard coordination with TRU update.

Comment [r772]: APAC ICD, APPENDIX D, PARA 7.9

7.80.1 An abbreviated coordination message (EST) is transmitted by Melbourne as soon as UAE412 departs Sydney. Brisbane accepts the proposed coordination conditions by responding with an ACP.

Comment [r773]: APAC ICD, APPENDIX D, PARA 7.9.1

7.80.2 The Sydney Departure controller assigns the aircraft a heading of 100 degrees magnetic and issues instructions to maintain FL200. A TRU is transmitted to update the Brisbane controller's flight details.

Comment [r774]: APAC ICD, APPENDIX D, PARA 7.9.2

7.80.3 Melbourne transfers ATC responsibility approaching the FIR boundary by transmitting a TOC. Brisbane accepts ATC responsibility by responding with an ACP/AOC.

Comment [r775]: APAC ICD, APPENDIX D, PARA 7.9.3

Example Coordination of amended clearances via TRU

Comment [r776]: APAC ICD, APPENDIX D, PARA 7.9.3, Example 9

Brisbane	Auckland
(EST-UAE412-YSSY-EVONN/0130F280-NZAA)	
	(ACP-UAE412-YSSY-NZAA)
(TRU-UAE412-YSSY-NZAA-HDG/100 CFL/F200)	
(TOC-UAE412-YSSY-NZAA)	(AOC-UAE412-YSSY-NZAA)

## 7.8 Notes

Comment [r777]: APAC ICD, APPENDIX D, PARA 8 – NAT ICD APPENDIX C, PARA 7

7.81 The IGM concerns communications between two ATSUs within the NAT/APAC Regions. Inter-centre communications within one country, and communications with ATSUs outside the NAT/APAC regions, though important to an ATC system's design and implementation are not part of the scope of this material.

Comment [r778]: APAC ICD, APPENDIX D, PARA 8.1

7.82 Initialization and termination conditions.

Comment [ATO779]: NAT ICD APPENDIX C, PARA 7.1

7.82.1 Only material pertaining to flights within NAT/APAC oceanic FIRs is included. Most flights depart from aerodromes outside the region, then transition into the NAT/APAC. Similarly, most flights transition from a NAT/APAC FIR into a non-NAT/APAC FIR. These transitions are not discussed. The required Notification, Coordination and Transfer of Control processes are dependent on the particular transition. For example, the transition from New York oceanic FIR to New York domestic is different than the transition from Shanwick oceanic to UK domestic. These transitions must be accounted for when designing and implementing an ATC system; however, they are outside the scope of the NAT Common Coordination ICD.

Comment [ATO780]: NAT ICD APPENDIX C, PARA 7.1

7.82.2 Air/ground events.

Comment [ATO781]: NAT ICD APPENDIX C, PARA 7.2

7.82.2.1 Certain air/ground events may be associated with the particular flight states. These include ADS contract establishment and Data Link Transfer. Assume that an aircraft is ADS equipped, and that the current controlling centre is receiving ADS reports. The flight then undergoes a coordination process, leaving it in Coordinated state with one or more downstream ATS Units. These ATS Units may now establish separate ADS contracts with the aircraft to monitor its position just

Comment [ATO782]: NAT ICD APPENDIX C, PARA 7.2

before and after entry into a new FIR. The Coordinated state has been linked with a specific A/G event – establish an ADS contract.

7.82.2.2 Similarly, Transfer of a Data Link connection may be linked with the Transferred state. Only one ATS Unit has control authority over an aircraft at any given time. This unit would transfer its Data Link connection during the Transfer of Control process.

Comment [ATO783]: NAT ICD APPENDIX C, PARA 7.3

## Chapter 8. Common Boundary Agreements

### 8.1 Introduction

8.11 Due to the individual nature of operations in the vicinity of OCA boundaries, some divergence from the common ICD is required. These differences and other procedures are defined in the following sections. The long term aim should be to adopt the contents of **Parts 1, 2 and 3 of the ICD**—Chapter 2, *Purpose, Policy & Units of Measurement*, and Chapter 3, *Communications & Support Mechanisms*, with only variable system parameters.

### 8.2 Interfaces

#### 8.21 Reykjavik/Shanwick Interface

##### 8.21.1 General

8.21.1.1 On-line message transfer will be effected by discrete links, but may eventually be superseded by the AFTN subject to the latter satisfying the required standards as to integrity and response.

8.21.1.2 All messages listed in **Part 2 — Paragraph 2**—Chapter 3, para 3.2, *Message Headers, Timers and ATSU Indicators*, except RPT and TAM, will contain Data Transfer Numbers consisting of a two letter directional indicator followed by a three digit serial number. The direction indicators will be 'RO' for Reykjavik to Shanwick and 'OR' for Shanwick to Reykjavik.

8.21.1.3 A TAM will be sent by each unit for every message received with ATS Field 3 syntactically correct. If a TAM is not received within 3 minutes of a message being transmitted, the message will be repeated. If, after a further 1 ½ minutes a TAM still has not been received, the message will be repeated for a second time. If, 1 ½ minutes later a TAM still has not been received, notification will be output locally for manual intervention.

8.21.1.4 The systems must be capable of altering the time intervals mentioned if required. The adaptable parameters from the time of the initial transmission being:

1 <sup>st</sup> repeat	-	1 to 4 minutes
2 <sup>nd</sup> repeat	-	1 ½ to 6 minutes
Local notification	-	2 to 8 minutes

8.21.1.5 The automatic acknowledgement and repeat of messages should be able to be suppressed.

##### 8.21.2 Notification of Organized Track Structure and elapsed times

8.21.2.1 The NAT messages will be transmitted by Shanwick for the day track structure, with tracks designated 'A' to 'M' inclusive (except 'I').

8.21.2.2 Tables of elapsed times (ETAFs) for tracks infringing the Reykjavik OCA will be transmitted on the discrete line as a MIS message. See **Part 1, Appendix B**—Chapter 4, *ATS Coordination Messages*, para 4.6.4, for the layout of this message. For each requested track, the output will contain the estimate elapsed times for each segment of the track in both directions at speeds of Mach 0.80, 0.82 and 0.84 for each flight level declared available for the track.

##### 8.21.3 Clearance messages

8.21.3.1 Automatic Data Transfer (ADT) will be ~~affected~~ **effected** for all flights in both directions which cross, fly along or touch 61N between 10W and 30W inclusive. Initially ADT may be restricted

Comment [r784]: NAT ICD, ATTACHMENT 1

Comment [r785]: NAT ICD, ATTACHMENT 1, PARA 1

Comment [r786]: NAT ICD, ATTACHMENT 1, PARA 1.1

Comment [r787]: NAT ICD, ATTACHMENT 1, PARA 2

Comment [r788]: NAT ICD, ATTACHMENT 1, PARA 2.1

Comment [r789]: NAT ICD, ATTACHMENT 1, PARA 2.1.1.0

Comment [r790]: NAT ICD, ATTACHMENT 1, PARA 2.1.1.1

Comment [r791]: NAT ICD, ATTACHMENT 1, PARA 2.1.1.2

Comment [r792]: NAT ICD, ATTACHMENT 1, PARA 2.1.1.3

Comment [r793]: NAT ICD, ATTACHMENT 1, PARA 2.1.1.4

Comment [r794]: NAT ICD, ATTACHMENT 1, PARA 2.1.1.5

Comment [r795]: NAT ICD, ATTACHMENT 1, PARA 2.1.2.0

Comment [r796]: NAT ICD, ATTACHMENT 1, PARA 2.1.2.1

Comment [r797]: NAT ICD, ATTACHMENT 1, PARA 2.1.2.2

Comment [r798]: NAT ICD, ATTACHMENT 1, PARA 2.1.3.0

Comment [r799]: NAT ICD, ATTACHMENT 1, PARA 2.1.3.1



to eastbound flights from Reykjavik to Shanwick, and westbound flights from Shanwick to Reykjavik with full implementation at a later date. Data transfer for these flights will be in the form of CLR messages.

8.21.3.2 Transmission of the CLR message in either direction will take place 60 minutes (adaptable) before 61N ~~whether the flight has a route point coincident with 61N~~ or not.

Comment [r800]: NAT ICD, ATTACHMENT 1, PARA 2.1.3.2

8.21.3.3 The first route point stated in a CLR will be the route point prior to 61N and may be a lat/long or a fix identifier in UK domestic airspace or Icelandic airspace. For flights operating wholly on an organised track, the remainder of the route will be specified by the appropriate track designator (e.g. NATA). For random flights, details of the cleared route to landfall will be transmitted, but OAC FDPS currently does not hold route details beyond 70N and/or 80W.

Comment [r801]: NAT ICD, ATTACHMENT 1, PARA 2.1.3.3

8.21.3.4 Once CLR has been transmitted, no further CLRs will be issued for the same flight while the original flight plan remains valid.

Comment [r802]: NAT ICD, ATTACHMENT 1, PARA 2.1.3.4

8.21.3.5 The flight level stated in the CLR will be the final level known to the originating system at the time of ADT.

Comment [r803]: NAT ICD, ATTACHMENT 1, PARA 2.1.3.5

8.21.4 Repeat messages.

Comment [r804]: NAT ICD, ATTACHMENT 1, PARA 2.1.4.0

8.21.4.1 RPT messages will be sent manually by the receiving centre when missing serial numbers are detected, or when a message received containing a serial number is found to contain text errors. OAC FDPS is capable of actioning an RPT request for messages up to 6 hours ~~proceeding~~ ~~preceding~~ the time of input of the RPT message.

Comment [r805]: NAT ICD, ATTACHMENT 1, PARA 2.1.4.1

8.21.5 Cancellation messages.

Comment [r806]: NAT ICD, ATTACHMENT 1, PARA 2.1.5.0

8.21.5.1 A CNL message will be generated only when a flight plan is cancelled subsequent to a CLR being sent.

Comment [r807]: NAT ICD, ATTACHMENT 1, PARA 2.1.5.1

8.21.6 Miscellaneous messages.

Comment [r808]: NAT ICD, ATTACHMENT 1, PARA 2.1.6.0

8.21.6.1 The MIS message will be used to transmit plain language statements or queries between the two centres, and also the transmission of organised track elapsed times.

Comment [r809]: NAT ICD, ATTACHMENT 1, PARA 2.1.6.1

8.21.7 System ~~of or~~ line failures.

Comment [r810]: NAT ICD, ATTACHMENT 1, PARA 2.1.7.0

8.21.7.1 Basic communication facilities between the two centres will be available in the even of system failures. The actions to be taken will be defined in the current version of the Letter of Agreement between Shanwick and Reykjavik ACC.

Comment [r811]: NAT ICD, ATTACHMENT 1, PARA 2.1.7.1

8.22 Gander/Shanwick interface.

Comment [r812]: NAT ICD, ATTACHMENT 1, PARA 2.2

8.22.1 General

Comment [r813]: NAT ICD, ATTACHMENT 1, PARA 2.2.1

8.22.1.1 On-line message transfer is currently ~~affected~~ ~~effected~~ by discrete links which may eventually be superseded by the AFTN/CIDIN subject to the ~~later~~ ~~latter~~ satisfying the required standards as to integrity and response.

Comment [r814]: NAT ICD, ATTACHMENT 1, PARA 2.2.1.1

8.22.1.2 All messages listed in ~~Part 2 – Paragraph 2~~ Chapter 4, *ATS Coordination Messages* – except RPT and TAM contain Data Transfer Numbers consisting of a two letter directional indicator followed by a three digit serial number. The direction indicators are ‘GO’ for Gander to Shanwick and ‘OG’ for Shanwick to Gander.

Comment [r815]: NAT ICD, ATTACHMENT 1, PARA 2.2.1.2

8.22.1.3 A TAM is sent by each unit for every message received with ATS Field 3 syntactically correct. If a TAM is not received within three minutes of a message being transmitted, the message will be repeated. If, after a further 1 ½ minutes a TAM still has not been received, the message will be

Comment [r816]: NAT ICD, ATTACHMENT 1, PARA 2.2.1.3

repeated for a second time. If, 1 ½ minutes later a TAM still has not been received, notification will be output locally for manual intervention.

8.22.1.4 The system must be capable of altering the time intervals mentioned if required – the variable system parameters (from the time of the initial transmission) being:

First repeat	-	1 to 4 minutes
Second repeat	-	1 ½ to 6 minutes
Local notification	-	2 to 8 minutes

8.22.1.5 The automatic repetition of messages may be terminated by agreement.

8.22.2 Notification of Organized Track Structure and elapsed times.

8.22.2.1 The NAT message is transmitted by Shanwick for the day structure and by Gander for the night structure.

8.22.2.2 The tracks stored by either centre shall be activated, altered or deleted – depending on operational requirements – by appropriate local action.

8.22.2.3 Day tracks are designated ‘A’ to ‘M’ inclusive (except ‘I’) and Night tracks ‘N’ to ‘Z’ (except ‘O’).

8.22.2.4 When requested, tables of elapsed times (ETAFs) will be transmitted on the discrete lines as a MIS message by the centre responsible for the establishment of the track structure.

8.22.2.5 ETAFs can be output for Organised and Contingency Tracks and will consist of the established elapsed times for each segment of the track for flights in both directions at speeds of Mach 0.80, 0.82 and 0.84 for each Flight Level declared available on the track.

8.22.2.6 Contingency tracks will be designated by two numerics commencing at ‘01’.

8.22.3 Clearance messages.

8.22.3.1 Automatic Data Transfer (ADT) will be ~~affected~~ effected for flights in both directions which cross 30W between 45 and 61N inclusive at FL060 (adaptable) or above. Data transfer for these flights will be in the form of CLR messages.

8.22.3.2 Transmission of the CLR message in either direction will take place 60 minutes (adaptable) before 30W.

8.22.3.3 Each system will action the content of any CLR message received, either by processing in accordance with local procedures, or by intimation of text failure to a local position.

8.22.3.4 For flights operating wholly on Organised Tracks, the first position stated in the CLR will be 20W or 40W as dictated by the direction of flight with the route being specified by the appropriate track designator (e.g. NATB). In the case of Random flights, full route details from or after 20W or 40W will be transmitted. Both systems will be capable of transmitting the entire Oceanic route if this becomes an operational requirement.

8.22.3.5 Once a CLR has been transmitted, no further CLRs will be issued for the same flight while the original flight plan remains valid.

8.22.3.6 In order to work towards compatibility of the application of “deemed” separation standards, each unit should be aware of the special separations incorporated in each others conflict algorithm.

8.22.3.7 The flight level stated in the CLR will be the final cleared level known to the originating system at the time of ADT.

Comment [r817]: NAT ICD, ATTACHMENT 1, PARA 2.2.1.4

Comment [r818]: NAT ICD, ATTACHMENT 1, PARA 2.2.1.5

Comment [r819]: NAT ICD, ATTACHMENT 1, PARA 2.2.2

Comment [r820]: NAT ICD, ATTACHMENT 1, PARA 2.2.2.1

Comment [r821]: NAT ICD, ATTACHMENT 1, PARA 2.2.2.2

Comment [r822]: NAT ICD, ATTACHMENT 1, PARA 2.2.2.3

Comment [r823]: NAT ICD, ATTACHMENT 1, PARA 2.2.2.4

Comment [r824]: NAT ICD, ATTACHMENT 1, PARA 2.2.2.5

Comment [r825]: NAT ICD, ATTACHMENT 1, PARA 2.2.2.6

Comment [r826]: NAT ICD, ATTACHMENT 1, PARA 2.2.3.0

Comment [r827]: NAT ICD, ATTACHMENT 1, PARA 2.2.3.1

Comment [r828]: NAT ICD, ATTACHMENT 1, PARA 2.2.3.2

Comment [r829]: NAT ICD, ATTACHMENT 1, PARA 2.2.3.3

Comment [r830]: NAT ICD, ATTACHMENT 1, PARA 2.2.3.4

Comment [r831]: NAT ICD, ATTACHMENT 1, PARA 2.2.3.5

Comment [r832]: NAT ICD, ATTACHMENT 1, PARA 2.2.3.6

Comment [r833]: NAT ICD, ATTACHMENT 1, PARA 2.2.3.7

## 8.22.4 Repeat message.

8.22.4.1 RPT messages will be sent manually by the receiving centre when missing serial numbers are detected, or when a message received containing a serial number is found to contain text errors. The RPT message will be input manually and actioned by the computer at the centre to which it was sent.

8.22.4.2 Each computer is capable of actioning a RPT request for any or all of the 64 messages immediately preceding the latest message issued. The message repeated will be an exact copy of the message originally issued under the Data Transfer Number quoted in the RPT.

## 8.22.5 Cancellation messages.

8.22.5.1 A CNL message will be generated when re-routing necessitates the cancellation of a previously sent CLR message. This will occur when the flight's route will now no longer traverse airspace as defined in paragraph 3.3.1.

## 8.22.6 Miscellaneous messages.

8.22.6.1 The "MIS" message will be used to transmit plain language statements or queries between the two centres. However, the MIS message will also be used for the transmission of NAT elapsed times incorporating the information in paragraph 3.2.5.

## 8.23 Gander/Reykjavik interface.

8.23.1 Gander is responsible for the boundary. The interface is currently manual.

## 8.24 Gander/New York interface.

8.24.1 The interface is currently manual, however, development and testing is ongoing of an automated AIDC interface.

## 8.25 New York/Santa Maria interface.

8.25.1 The interface is affected through AFTN and comprises only Initial Coordination Messages (CPL and ACP) and the appropriate Application Management Messages (LAM, LRM and ASM). Notification and Negotiation Phases will be implemented at a later date.

8.25.2 The concept of operation, message content and communication mechanisms of the above messages was adopted in accordance with Parts I, and II Chapters 2 and 4 of the PAN ICD, except:

a) No restrictions are in use.

b) CPL sent from New York contains full route until destination.

8.25.3 The ACP message is triggered manually by the controller and closes the dialogue automatically. Verbal coordination is still required for counter-proposals (Negotiation) and upon the following:

a) Crossing conditions and/or restrictions at the boundary including blocking levels.

b) Any profile change from a previously coordinated and accepted profile.

c) At the LAM time out warning after sending a CPL or an ACP.

d) When receiving an LRM in response to a CPL or an ACP.

## 8.26 Gander/Santa Maria interface.

8.26.1 The interface is currently manual.

Comment [r834]: NAT ICD, ATTACHMENT 1, PARA 2.2.4.

Comment [r835]: NAT ICD, ATTACHMENT 1, PARA 2.2.4.1

Comment [r836]: NAT ICD, ATTACHMENT 1, PARA 2.2.4.2

Comment [r837]: NAT ICD, ATTACHMENT 1, PARA 2.2.5

Comment [r838]: NAT ICD, ATTACHMENT 1, PARA 2.2.5.1

Comment [ATO839]: NAT ICD, ATTACHMENT 1, PARA 2.2.6

Comment [ATO840]: NAT ICD, ATTACHMENT 1, PARA 2.2.6.1

Comment [ATO841]: NAT ICD, ATTACHMENT 1, PARA 2.3

Comment [ATO842]: NAT ICD, ATTACHMENT 1, PARA 2.3

Comment [ATO843]: NAT ICD, ATTACHMENT 1, PARA 2.4

Comment [ATO844]: NAT ICD, ATTACHMENT 1, PARA 2.4

Comment [r845]: NAT ICD, ATTACHMENT 1, PARA 2.5

Comment [r846]: NAT ICD, ATTACHMENT 1, PARA 2.5.1

Comment [r847]: NAT ICD, ATTACHMENT 1, PARA 2.5.2

Comment [ATO848]: NAT ICD, ATTACHMENT 1, PARA 2.5.2 a)

Comment [ATO849]: NAT ICD, ATTACHMENT 1, PARA 2.5.2 b)

Comment [r850]: NAT ICD, ATTACHMENT 1, PARA 2.5.3

Comment [ATO851]: NAT ICD, ATTACHMENT 1, PARA 2.5.3 a)

Comment [ATO852]: NAT ICD, ATTACHMENT 1, PARA 2.5.3 b)

Comment [ATO853]: NAT ICD, ATTACHMENT 1, PARA 2.5.3 c)

Comment [ATO854]: NAT ICD, ATTACHMENT 1, PARA 2.5.3 d)

Comment [r855]: NAT ICD, ATTACHMENT 1, PARA 2.6

Comment [r856]: NAT ICD, ATTACHMENT 1, PARA 2.6.1

- 8.27 Shanwick/Santa Maria interface.
- 8.27.1 The interface is currently manual.
- 8.28 Bodø/Reykjavik interface.
- 8.28.1 The interface is currently manual.

- Comment [r857]: NAT ICD, ATTACHMENT 1, PARA 2.7
- Comment [r858]: NAT ICD, ATTACHMENT 1, PARA 2.7.1
- Comment [r859]: NAT ICD, ATTACHMENT 1, PARA 2.8
- Comment [r860]: NAT ICD, ATTACHMENT 1, PARA 2.8.1

## Chapter 9. Relationship to ICAO AIDC Messages

Comment [ATO861]: APAC ICD, APPENDIX E – NAT ICD ATTACHMENT 2

### 9.1 Introduction

- 9.11 The AIDC message set can be tailored to satisfy regional requirements. The ADS Panel OPLINKP documentation defining the AIDC data link application provides three means for achieving regional adaptation of the AIDC messages:
- 9.11.1 Regions select an AIDC subset that will support their regional operational procedures.
- 9.11.2 The selected messages are tailored by mandating the usage of optional components into one of three classes:
- The optional component that must always be used;
  - The optional component that must never be used; and,
  - The optional component is truly optional.
- 9.11.3 For interim, pre-ATN implementations, encoding rules may be specified by a region. The most frequently used encoding rules today employ ICAO ATS fields and messages. The default encoding rules are the ISO Packed Encoding rules.
- 9.11.4 Using the regional tailoring procedure stated above, the NAT/APAC Core messages are related to a subset of the AIDC messages and are shown in Table E-1-9-1.
- 9.11.5 The encoding rules employed within the NAT/APAC will remain for the foreseeable future as the ICAO ATS field and message-based, character-oriented rules currently defined in the NAT/APAC AIDC Interface Control Document (ICD) (and ICAO PANS-ATM Doc 4444).

Comment [r862]: APAC ICD, APPENDIX E, PARA 1 – NAT ICD, ATTACHMENT 2,

Comment [ATO863]: APAC ICD, APPENDIX E, PARA 1 a) – NAT ICD, ATTACHMENT 2, a)

Comment [ATO864]: APAC ICD, APPENDIX E, PARA 1 b) – NAT ICD, ATTACHMENT 2, b)

Comment [ATO865]: APAC ICD, APPENDIX E, PARA 1 b) (1) – NAT ICD, ATTACHMENT 2, b) i)

Comment [ATO866]: APAC ICD, APPENDIX E, PARA 1 b) (2) – NAT ICD, ATTACHMENT 2, b) ii)

Comment [ATO867]: APAC ICD, APPENDIX E, PARA 1 b) (3) – NAT ICD, ATTACHMENT 2, b) iii)

Comment [ATO868]: APAC ICD, APPENDIX E, PARA 1 c) – NAT ICD, ATTACHMENT 2, c)

Comment [ATO869]: APAC ICD, APPENDIX E, PARA 2 – NAT ICD, ATTACHMENT 2

Comment [ATO870]: APAC ICD, APPENDIX E, PARA 3 – NAT ICD, ATTACHMENT 2

Table 9-1. PAN ICD AIDC/ICAO AIDC Relationship

ICAO AIDC message	PAN ICD AIDC message	ICAO AIDC message	PAN ICD AIDC message	ICAO AIDC message	PAN ICD AIDC message	
		Mandatory <b>data</b> fields		Optional <b>data</b> fields		
Notify	ABI	Aircraft identification Departure Aerodrome Destination Aerodrome Boundary estimate data	Aircraft identification SSR Mode and Code (where applicable) Departure Aerodrome Destination Aerodrome Boundary estimate data Number of aircraft Aircraft type Wake turbulence category Route	Flight rules Type of flight Number of aircraft (if more than one in the flight) Aircraft type Wake turbulence category CNS equipment Route Amended destination Code (SSR) Other information	Flight rules Equipment Route Other information Amended destination	Always used Always used Always used Always usedOptional
Coordinate Initial	CPL	Aircraft identification Departure Aerodrome Destination Aerodrome Boundary estimate data	Aircraft identification SSR Mode and Code (where applicable) Departure Aerodrome Destination Aerodrome Boundary estimate data Flight Rules Number of aircraft Aircraft type Wake turbulence category Equipment Route Other information	Flight rules Type of flight Number of aircraft (if more than one in the flight) Aircraft type Wake turbulence category CNS equipment Route Amended destination Code (SSR) Other information	Flight rules Equipment Route Other information	Always used Always used Always used Always usedOptional

Procedures material from the Asia/Pacific ICD for AIDC is highlighted in green.  
Procedures material from the North Atlantic Common Coordination ICD is highlighted in blue.  
Procedures material contained in both ICDs is highlighted in green and blue.  
Procedures material contained in both ICDs and APAC ICD is not highlighted.

Comment [ATO871]: APAC ICD, APPENDIX E, TABLE E-1 – NAT ICD, ATTACHMENT 2, TABLE 1

Procedures material from the Asia/Pacific Regional

ICD for AIDC is highlighted in green.

Procedures material from the North Atlantic

Common Coordination ICD is highlighted in blue.

Procedures material contained in both the NAT ICD and APAC ICD is not highlighted.

ICAO AIDC message	PAN ICD AIDC message	ICAO AIDC message	PAN ICD AIDC message	ICAO AIDC message	PAN ICD AIDC message	PAN ICD AIDC message
		Mandatory data fields		Optional data fields		Optional data fields usage
Coordinate Initial Estimate	EST	Aircraft identification Departure Aerodrome Destination Aerodrome Boundary estimate data	Aircraft identification SSR Mode and Code (where applicable) Departure Aerodrome Destination Aerodrome Boundary estimate data	Flight rules Type of flight Number of aircraft (if more than one in the flight) Aircraft type Wake turbulence category CNS equipment Route Amended destination Code (SSR) Other information		
Coordinate Initial	PAC	Aircraft identification Departure Aerodrome Destination Aerodrome Boundary estimate data	Aircraft identification SSR Mode and Code (where applicable) Departure Aerodrome Destination Aerodrome Boundary estimate data	Flight rules Type of flight Number of aircraft (if more than one in the flight) Aircraft type Wake turbulence category CNS equipment Route Amended destination Code (SSR) Other information	Flight rules Number of aircraft Aircraft type Wake turbulence category Equipment Route Other information	

# PAN ICD

ICAO AIDC message	PAN ICD AIDC message	ICAO AIDC message	PAN ICD AIDC message	ICAO AIDC message	PAN ICD AIDC message	PAN ICD AIDC message
		Mandatory data fields		Optional data fields		Optional data fields usage
Coordinate Negotiate	CDN	Aircraft identification Departure Aerodrome Destination Aerodrome Boundary estimate data	Aircraft identification SSR Mode and Code (where applicable) Departure Aerodrome Destination Aerodrome Boundary estimate data	Flight rules Type of flight Number of aircraft (if more than one in the flight) Aircraft type Wake turbulence category CNS equipment Route Amended destination Code (SSR) Other information	Equipment Boundary estimate data Route Other information Amended destination	Optional
Coordinate Accept	ACP		Aircraft identification SSR Mode and Code (where applicable) Departure Aerodrome Destination Aerodrome	Aircraft identification Departure aerodrome Destination aerodrome		
Coordinate Reject	REJ		Aircraft identification SSR Mode and Code (where applicable) Departure Aerodrome Destination Aerodrome	Aircraft identification Departure aerodrome Destination aerodrome		
Coordinate Standby	N/A			Aircraft identification Departure aerodrome Destination aerodrome		
Coordinate Cancel	MAC	Aircraft identification Departure aerodrome Destination aerodrome	Aircraft identification SSR Mode and Code (where applicable) Departure Aerodrome Destination Aerodrome	Fix Reason for cancellation	Boundary Estimate Data Other Information	Never used Never used



PAN ICD

ICAO AIDC message	PAN ICD AIDC message	ICAO AIDC message	PAN ICD AIDC message	ICAO AIDC message	PAN ICD AIDC message	PAN ICD AIDC message
		Mandatory data fields		Optional data fields		Optional data fields usage
Coordinate Update	TRU	Aircraft identification Departure aerodrome Destination aerodrome Boundary estimate data	Aircraft identification SSR Mode and Code (where applicable) Departure Aerodrome Destination Aerodrome Track data	Flight rules Type of flight Number of aircraft (if more than one in the flight) Aircraft type Wake turbulence category CNS equipment Route Amended destination Code (SSR) Other information		
Transfer Initiate	N/A	Aircraft identification Executive Data (if available)		Track Data		
Transfer Conditions Proposal	N/A	Aircraft identification Executive data (if available)		Track Data		
Transfer Conditions Accept	N/A	Aircraft identification		Frequency		
Transfer Communication Request	N/A	Aircraft identification		Frequency		
Transfer Communication	N/A	Aircraft identification Executive data and/or Release indication (if available)		Frequency Track data		
Transfer Communication Assume	N/A	Aircraft identification				
Transfer Control Transfer Proposal	TOC	Aircraft identification	Aircraft identification SSR Mode and Code (where applicable) Departure Aerodrome Destination Aerodrome	Departure Aerodrome Destination Aerodrome Executive data	Departure Aerodrome Destination Aerodrome Executive data	Always used Always used Never used

PAN ICD

ICAO AIDC message	PAN ICD AIDC message	ICAO AIDC message	PAN ICD AIDC message	ICAO AIDC message	PAN ICD AIDC message	PAN ICD AIDC message
		Mandatory data fields		Optional data fields		Optional data fields
Transfer Control Assume Transfer Assume	AOC	Aircraft identification	Aircraft identification SSR Mode and Code (where applicable) Departure Aerodrome Destination Aerodrome	Departure Aerodrome Destination Aerodrome	Departure Aerodrome Destination Aerodrome	Always used Always used
General Point	N/A	Aircraft identification Departure aerodrome Destination aerodrome		Sector designator (sending) Sector designator (receiving) Flight rules Type of flight Number of aircraft (if more than one in flight) Aircraft type Wake turbulence category CNS equipment Route Track data Code (SSR) Other information		
General Executive Data	N/A	Aircraft identification		Executive data Frequency		
Track System	NAT		NAT track system name NAT tracks		Generation time Start time Stop time Other information	Optional Always used Always used Optional
Free Text Emergency	EMG	Facility designation or Aircraft identification Free text	Functional address or Aircraft identification SSR Mode and Code (where applicable) Other information			

ICAO AIDC message	PAN ICD AIDC message	ICAO AIDC message	PAN ICD AIDC message	ICAO AIDC message	PAN ICD AIDC message	PAN ICD AIDC message
		Mandatory data fields		Optional data fields		Optional data fields
Free Text General	MIS	Facility designation or Aircraft identification Free text	Functional address or Aircraft identification SSR Mode and Code (where applicable) Other information			
Application Accept	LAM					
Application Reject Application Error	LRM	Error code	Other information Message type Component type Error code	Error data	Error data	Optional
Application Status	ASM	N/A	N/A			
N/A	FAN		Aircraft identification SSR Mode and Code (where applicable) Departure aerodrome Destination aerodrome Application data			
N/A	FCN		Aircraft identification SSR Mode and Code (where applicable) Departure aerodrome Destination aerodrome Communication status			
N/A	ADS		Aircraft identification SSR Mode and Code (where applicable) Departure aerodrome Destination aerodrome ADS-C data			

**Chapter 10. Interim Operational Support****10.1 Introduction**

10.11 This ICD describes the end-state messages to be used within the ASIA/PAC NAT/APAC regions to ensure interoperability between automated ATS systems. However, during the transition to this end state architecture, current operations must be documented and supported. This chapter is the repository of messages not found in other ICD sections which will be used to support current operations during the interim transition period.

10.12 Each interim message will be described in a separate paragraph. Those ATS Providers employing an interim message contained in this chapter shall document this usage in the appropriated bilateral agreements.

**10.2 Interim messages**

10.21 Estimate (EST) message

10.21.1 The Estimate message is contained within the Core Message set. However, its use has been constrained to those situations in which a flight will cross an FIR boundary in accordance with existing letters of agreement.

10.21.2 An EST message may be used in any situation in which a CPL is permitted. The EST is in actuality an abbreviated CPL contingent upon prior receipt of route and ancillary information. This information could be provided by an FPL or ABI message.

10.21.3 Those ATS Provider States employing an EST in the more general manner during the interim transition period shall document this usage in the appropriate bi-lateral agreements.

10.21.4 The EST message format shall be as described in the Core Message set.

Comment [ATO872]: APAC ICD, APPENDIX F

Comment [r873]: APAC ICD, APPENDIX F, PARA 1

Comment [r874]: APAC ICD, APPENDIX F, PARA 1.1

Comment [r875]: APAC ICD, APPENDIX F, PARA 1.2

Comment [ATO876]: APAC ICD, APPENDIX F, PARA 2

Comment [r877]: APAC ICD, APPENDIX F, PARA 2.1

Comment [r878]: APAC ICD, APPENDIX F, PARA 2.1.1

Comment [r879]: APAC ICD, APPENDIX F, PARA 2.1.2

Comment [r880]: APAC ICD, APPENDIX F, PARA 2.1.3

Comment [r881]: APAC ICD, APPENDIX F, PARA 2.1.4

## Chapter 11. NAT/EUR ATS Interface Messages

### 11.1 Introduction

11.11 The following section describes those messages used by NAT ATS systems for On-Line Data Interchange between NAT provider States adjacent to the European Region.

### 11.2 Regional interface message group

11.21 This group describes several messages used by ATS Providers ~~in~~to interface with European domestic systems.

REGIONAL INTERFACE MESSAGES	
Flight Planning	DLA (Delay)
Co-ordination	ACT (Activation)
	DEP (Departure)
	ACT (ACTIVATE) – Prestwick/Shannon
	OCM (Oceanic Clearance)

11.22 Flight planning messages.

11.22.1 DLA (Delay).

11.22.1.1 Purpose.

11.22.1.1.1 Used to indicate a delay in a flight's departure time.

11.22.1.2 Message format.

ATS FormatField	Description
3	Message type, DTSN
7	Aircraft identification
13	Departure aerodrome and time
16	Destination aerodrome

Example

(DLAS/0456-EIN105-EINN1400-KJFK)

11.23 Coordination messages.

11.23.1 ACT (Activation).

11.23.1.1 Purpose.

11.23.1.1.1 Used to activate a flight in the receiving system. The ACT provides the latest information on a flight and is normally sent subsequent to an ABI.

Comment [ATO882]: NAT ICD, ATTACHMENT 3

Comment [ATO883]: NAT ICD, ATTACHMENT 3, PARA 1

Comment [ATO884]: NAT ICD, ATTACHMENT 3, PARA 1

Comment [ATO885]: NAT ICD, ATTACHMENT 3, PARA 2

Comment [ATO886]: NAT ICD, ATTACHMENT 3, PARA 2

Comment [ATO887]: NAT ICD, ATTACHMENT 3, PARA 2 TABLE

Comment [ATO888]: NAT ICD, ATTACHMENT 3, PARA 2.1

Comment [ATO889]: NAT ICD, ATTACHMENT 3, PARA 2.1

Comment [ATO890]: NAT ICD, ATTACHMENT 3, PARA 2.1

Comment [ATO891]: NAT ICD, ATTACHMENT 3, PARA 2.1

Comment [ATO892]: NAT ICD, ATTACHMENT 3, PARA 2.1

Comment [ATO893]: NAT ICD, ATTACHMENT 3, PARA 2.1, Example

Comment [ATO894]: NAT ICD, ATTACHMENT 3, PARA 2.2

Comment [ATO895]: NAT ICD, ATTACHMENT 3, PARA 2.2.1

Comment [ATO896]: NAT ICD, ATTACHMENT 3, PARA 2.2.1

Comment [ATO897]: NAT ICD, ATTACHMENT 3, PARA 2.2.1

## 11.23.1.2 Message format.

ATS FormatField	Description
3	Message type, DTSN
7	Aircraft identification
13	Departure aerodrome
14	Boundary estimate data
16	Destination aerodrome
22	Amendment

Field 22 will contain Field 9 to specify aircraft type and field 15 to permit transmission of the next reporting point after the boundary crossing.

*Example*

(ACTO/P487-BAW179-KJFK-ETIKI/0703F370  
-EGLL-9/B743-B743-15/QPR)

Comment [ATO898]: NAT ICD, ATTACHMENT 3, PARA 2.2.1

Comment [ATO899]: NAT ICD, ATTACHMENT 3, PARA 2.2.1, Example

## 11.23.2 DEP (Departure)

## 11.23.2.1 Purpose.

11.23.2.1.1 Used to indicate a flight's actual departure time.

## 11.23.2.2 Message format.

ATS FormatField	Description
3	Message type, DTSN
7	Aircraft identification
13	Departure aerodrome and time
16	Destination aerodrome

*Example*

(DEPS/0476-EIN105-EINN1300-KJFK)

Comment [ATO900]: NAT ICD, ATTACHMENT 3, PARA 2.2.2

Comment [ATO901]: NAT ICD, ATTACHMENT 3, PARA 2.2.2

Comment [ATO902]: NAT ICD, ATTACHMENT 3, PARA 2.2.2

Comment [ATO903]: NAT ICD, ATTACHMENT 3, PARA 2.2.2

Comment [ATO904]: NAT ICD, ATTACHMENT 3, PARA 2.2.2, Example

## 11.23.3 ACT (Activate Message [Shanwick to Shannon]).

## 11.23.3.1 Purpose.

11.23.3.1.1 Used to inform the receiving centre of boundary estimates for flights transiting or infringing the Shanwick/Shannon common boundary including flights transiting NOTA.

## 11.23.3.2 Message format.

ATS fields: 3, 7, 9, 13, 14, 15, 16

Comment [ATO905]: NAT ICD, ATTACHMENT 3, PARA 2.2.3

Comment [ATO906]: NAT ICD, ATTACHMENT 3, PARA 2.2.3

Comment [ATO907]: NAT ICD, ATTACHMENT 3, PARA 2.2.3

Message Content:

Comment [ATO908]: NAT ICD.  
ATTACHMENT 3, PARA 2.2.3 Message Content

Field Type	Contents of Field	Example	
Start of ATS DATA (open bracket)			
3	Message Type and DTSN	Message type “ACT” followed by “O/S” followed by three numerics in the range 000 to 999	(ACT/S010
Start of Field (single hyphen)			
7	Flight Callsign	Between three and seven alphanumeric characters	-BAW250
Oblique stroke			
	SSR Mode and Code	“A” followed by four “1” numeric characters	/A1111
Start of Field (single hyphen)			
13	Departure Airfield	Four alphanumeric characters being the ICAO location indicator	-KJFK
Start of Field (single hyphen)			
14	Boundary Point	Up to five alphanumeric characters or Geographical coordinates	-MALOT 5330N01500W
Oblique stroke			
	Boundary Estimate and Flight Level	Two numerics in the range 00 to 23 followed by two numerics in the range 00 to 59 then F followed by three numerics	/0700F330
Start of Field (single hyphen)			
16	Destination Airfield	Four alphanumeric characters being the ICAO location indicator	-EGLL
Start of Field (single hyphen)			
9	Aircraft Type	The field ident “9/” followed directly by either: a) Between two and four characters defining the aircraft type as per ICAO Doc 8643 [Reference 5] or b) As a) above preceded by one or two numerics giving the number of aircraft in the flight	-9/GLF2, -9/C12 or 9/B762 -9/02F16
Oblique stroke			
Wake Turbulence Category	H – Heavy  M – Medium  L – Light  Note: If the WTC is unknown, Shanwick will default to sending /H	/H  /M  /L	

Field Type	Contents of Field	Example
<b>Start of Field (single hyphen)[only if field 15 present]</b>		
15	The field ident "15/" followed directly by one of the following: a) Two <b>numerics</b> followed by "N" followed by three <b>numerics</b> followed by "W" b) Four <b>numerics</b> followed by "N" followed by five <b>numerics</b> followed by "W" c) Up to five <b>alphanumeric</b> characters	-15/15N012W 15/5240N01406W -15/DOLIP
<b>End of ATS Data (close bracket)</b>		

Example:

(ACTO/S575-BAW250/A1111-KJFK-MALOT/0700F330-EGLL-9/B762/H-15/DOLIP)

#### 11.23.4 OCM (OCEANIC CLEARANCE MESSAGE)

##### 11.23.4.1 Purpose

11.23.4.1.1 Used to inform Shannon ACC of Oceanic Clearances issued by Shanwick to any flight entering Shanwick OCA from Shannon FIR/UIR or SOTA including flights transiting the NOTA

##### 11.23.4.2 Message format

ATS fields 3, 7, 9, 13, 14, 15, 16, 22 (optional)

Message Content:

Field Type	Contents of Field	Example
<b>Start of ATS Data (open bracket)</b>		
3	Message Type and DTSN	(OCMO/S539)
<b>Start of Field (single hyphen)</b>		
7	Flight Callsign	-IBE416A
<b>Start of Field (single hyphen)</b>		
9	Aircraft Type	a) Between two and four characters defining the aircraft type as per ICAO Doc 8643 [Reference 5] or b) As a) above preceded by one or two numerics giving the number of aircraft in the flight
		-GLF2, -C12 or -B762 -02F16
<b>Start of Field (single hyphen)</b>		
13	Departure Airfield	Four <b>alphanumeric</b> characters being the ICAO indicator
		-EGLL

Comment [ATO909]: NAT ICD, ATTACHMENT 3, PARA 2.2.3, Examples

Comment [ATO910]: NAT ICD, ATTACHMENT 3, PARA 2.2.4

Comment [ATO911]: NAT ICD, ATTACHMENT 3, PARA 2.2.4

Comment [ATO912]: NAT ICD, ATTACHMENT 3, PARA 2.2.4

Comment [ATO913]: NAT ICD, ATTACHMENT 3, PARA 2.2.4

Comment [ATO914]: NAT ICD, ATTACHMENT 3, PARA 2.2.4, Message Content



<b>Field Type</b>		<b>Contents of Field</b>	<b>Example</b>
<b>Start of Field (single hyphen)</b>			
15	Aircraft Speed	a) "M" followed by three numerics giving the Mach Number or b) Four numerics giving the True Airspeed in knots (not to stated standard)	-M079 -0410
	Flight Level	"F" followed by three numerics	F310
	<b>Space</b>		
	Boundary Coordinate	Up to five alphabetic characters or Geographical coordinates	LIMRI 5310N01500W
	<b>Oblique Stroke</b>		
	Boundary Estimate	Two numerics in the range of 00 to 23 followed by two numerics in the range of 00 to 59	/1357
<b>Field Type</b>		<b>Contents of Field</b>	<b>Example</b>
	Subsequent Oceanic Route	The text "NAT" followed by one or two alphabetic characters or A random route defined as geographical coordinates and/or named points separated by <sp> in the format:  a) Two numerics followed by "N" followed by three numerics followed by "W"  b) four numerics followed by "N" followed by five numerics followed by "W"  c) Between two and five alphabetic characters	NATG  49N020W 4832N02814W BANCS
	<b>Start of Field (single hyphen)</b>		
	Destination Airfield	Four alphabetic characters being the ICAO indicator	-KJFK

Field Type	Contents of Field	Example
<b>Start of Field (single hyphen) [only if Field 22 present]</b>		
<b>22</b> Other information (operational field)	<p>The text “ATC/&lt;sp&gt;” and one or more of the following fields in any order each separated by a &lt;sp&gt;</p> <p>NBT (i.e. not before time)&lt;sp&gt;time&lt;sp&gt;ATC restriction point*</p> <p>NLT (i.e. not later than)&lt;sp&gt;time&lt;sp&gt; ATC restriction point*</p> <p>EPC (i.e. entry point change)</p> <p>INT (i.e. interval)&lt;sp&gt;callsign&lt;sp&gt;+&lt;sp&gt; interval in minutes</p> <p>LCHG (i.e. level change)</p> <p>RTD (i.e. return to domestic) and/or</p> <p>RECLEARANCE &lt;sp&gt; one numeric in the range of 1 to 7</p> <p>*ATC restriction point takes one of the following formats:</p> <p>a) Up to five alphabetic characters</p> <p>or</p> <p>b) Two numeric followed by “N” and underscore followed by two numeric followed by “W”</p>	<p>ATC/</p> <p>NBT 1357 49N_10W</p> <p>NLT 1357 49N_10W</p> <p>EPC</p> <p>INT BBB213 + 10</p> <p>LCHG</p> <p>RTD</p> <p>RECLEARANCE 2</p>
<b>End of ATS Data (close bracket)</b>		)

**Example**

(OCMO/S400-ELY027-B743-EGLL-M084/F330 LIMRI/1348 NATG-KJFK)

(OCMO/S475-DAL85-B762-LFMN-M082F330 LIMRI/1335 53N020W 54N030W 54N040W 53N050W YAY-KJFK-ATC/INT VIR015 + 08 RECLEARANCE 1)

(OCMO/S478-UAL919-B744-EGLL-M085F350 MASIT/1356 NATG-KIAD-ATC/NBT 1356 MASIT INT DAL49 + 16)

(OCMO/S919-DLH408-A343-EDDL-M083F370 DOGAL/1441 NATE-KJFK-ATC/ EPC INT WIN111 +10)

(OCMO/S928-OAL881-B762-LGAV-M080F350 SOMAX/1451 51N020W 52N030W 52N040W 50N050W YQK-KJFK-ATC/ LCHG NBT 1451 SOMAX)

Comment [ATO915]: NAT ICD,  
ATTACHMENT 3, PARA 2.2.4, Example

**Appendix A** Templates for Bilateral Letter of Agreement on AIDC

Comment [ATO916]: APAC ICD APPENDIX G

At an organizational level, the implementation of AIDC to enable data transfers between automated ATS systems is accomplished under the authority and strict operational terms of a bilateral letter of agreement or memorandum of understanding on AIDC arrangements that must be established between the two ATSUs involved. Depending on the particular circumstances, the legally less sophisticated Memorandum of Understanding (MOU) format could be used for the initial implementation of AIDC until the more formalized Letter of Agreement (LOA) is put in place. The choice of legal instrument will be a decision made by the two ATSUs as they prepare the formal agreement to enable AIDC data transfer between States.

In order to provide guidance in the structure and content of bilateral arrangements, templates have been included in this appendix to assist States in preparing suitable memorandums of understandings/letters of agreement on AIDC arrangements. The templates are based upon documentation developed by Airways New Zealand in implementation evolving AIDC arrangements between Auckland Oceanic and all neighbouring States over a period of approximately 10 years commencing from the mid 1990's. Three templates are included:

Template 1 provides a generic example of a basic Letter of Agreement

Template 2 is an example of an actual Letter of Agreement between Auckland Oceanic (New Zealand) and Brisbane ATS Centre (Australia); and

Template 3 is an example of an actual Memorandum of Understanding between Auckland Oceanic (New Zealand) and Nadi ATM Operations Centre (Fiji).

The templates are intended as guidance material only. It is important to note that although changes in the AIDC arrangements applicable to Auckland Oceanic will occur over time, Templates 2 and 3 will NOT be routinely updated. Accordingly, as the circumstances for each bilateral implementation will differ, appropriate adjustments should be made to the content of the templates to ensure that the resulting ~~MOU~~ MOU or LOA is fit for the purpose intended.

### Template 1

#### Generic Letter of Agreement

##### AIDC Procedures

1. The format of AIDC messages (*List messages used e.g. ABI, PAC, CDN, CPL, ACP, REJ, MAC, LAM and LRM*) are as defined by the Asia/Pacific/North Atlantic Regional AIDC Interface Control Document (ICD) as amended from time to time, unless described otherwise in this LOA.
2. List messages not supported (*e.g. "EST, TOC, AOC messages are not supported"*).
3. Acceptance of CPL or CDN message is approval of the flight's profile and requires no further voice communication (i.e. Non-Standard Altitudes, Block Altitudes, and Deviations).
4. (*Describe other procedures applicable to the use of AIDC for this LOA. Some examples are listed below*)
  - a. *Example only. If there is any doubt with regard to the final coordination data, voice coordination shall be used for confirmation.*
  - b. *Example only. Receipt of a MAC message ~~must~~ not be interpreted as meaning that the flight plan has been cancelled. Voice coordination must be conducted by the transferring controller to confirm the status of the flight.*
  - c. *Example only. Each facility shall advise the other facility of any known equipment outage that affects AIDC. In the event of AIDC outage, voice communication procedures will apply.*
  - d. *Example only. Truncation. Where route amendment outside the FIR is unavoidable.*
    - i. *Terminate the route details at the farthest possible flight plan significant point of the flight and enter "T" immediately following this.*
    - ii. *Without amending the originally received details, every effort is to be made to truncate the route at a minimum of one significant point beyond the adjacent FIR to provide an entry track in that FIR.*

##### AIDC Messages

(For each message used describe when it will be sent by each ATSU under the parameter column and use the Notes column to describe other applicable information for the message use by each ATSU. The data below provides an example of the type of information that could be incorporated.)

Messages	Parameter	Notes
ABI	<p><b>ATSU1:</b> Sends ABI approx. 80 minutes prior to boundary (73 min prior to the 50 nm expanded sector boundary).</p> <p><b>ATSU2:</b> Sends ABI approx. 87 minutes prior to boundary (80 min prior to the 50 nm expanded sector boundary).</p> <p>(Note: An updated ABI will not be sent once a CPL has been sent.)</p>	<p><b>ATSU1 : ATSU2</b></p> <p>Updated <del>ABI's</del> ABI's will be sent automatically if there is any change to profile. ABI is sent automatically and is transparent to the controller. ABI automatically updates the receiving unit's flight data record.</p>
CPL	<p><b>ATSU1 : ATSU2</b></p> <p>Send CPL messages approx 37 minutes prior to the boundary (30 minutes prior to the 50 nm expanded sector boundary).</p>	<p><b>ATSU1 : ATSU2</b></p> <p>CPL messages should be sent by the transferring controller in sufficient time to allow the completion of coordination at least 30 minutes prior to the boundary or 30 minutes prior to the aircraft passing within 50nm of the FIR boundary for information transfers.</p>
CDN	<p><b>ATSU1 : ATSU2</b></p> <p>CDN messages are sent by either the transferring or receiving facility to propose a change once the coordination process has been completed, i.e., CPL sent and ACP received. CDN's must contain all applicable profile restrictions (e.g. weather deviations, speed assignment, block altitude). If the use of a CDN does not support this requirement, then verbal coordination is required.</p>	<p><b>ATSU1 : ATSU2</b></p> <p>The APS will display a flashing "DIA" until receipt of ACP. If ACPJ not received within ten (10) minutes, controller is alerted with a message to the queue.</p> <p>CDN messages are not normally used for coordination of reroutes; however, with the receiving facilities approval a CDN may be used to coordinate a reroute on a critical status aircraft such as in an emergency.</p>
PAC	<p><b>ATSU1 : ATSU2</b></p> <p>PAC messages will normally be sent when the time criteria from the departure point to the boundary is less than that stipulated in the CPL.</p>	<p><b>ATSU1 : ATSU2</b></p> <p>Will respond to a PAC message with an ACP. PAC messages shall be verbally verified with receiving facility.</p>
ACP	<p><b>ATSU1 : ATSU2</b></p>	<p><b>ATSU1 : ATSU2</b></p> <p>The APS will display a flashing "DIA" until receipt of ACP. If ACP not received within ten (10) minutes, controller is alerted with a message to the queue.</p>

Messages	Parameter	Notes
TOC	ATSU1 : ATSU2 <i>Not supported. Implicit hand in/off.</i>	ATSU1 : ATSU2
AOC	ATSU1 : ATSU2 <i>Not supported. Implicit hand in/off.</i>	
MAC	ATSU1 : ATSU2 MAC messages are sent when a change to the route makes the other facility no longer the “next” responsible unit.	ATSU1 : ATSU2 Receipt of a MAC message must not be interpreted as meaning that the flight plan has been cancelled. Voice coordination must be conducted by the transferring controller to confirm the status of the flight.
REJ	ATSU1 : ATSU2 REJ messages are sent in reply to a CDN message when the request change is unacceptable	ATSU1 : ATSU2 REJ messages are sent only as a response to a CDN message.

**Template 2****Example: Auckland Oceanic – Brisbane ATS Centre****Letter of Agreement****Coordination – General**

**Transfer of Control Point** The Transfer of Control Point (TCP) shall be either on receipt of an Acceptance of Control (AOC) to a Transfer of Control (TOC) or the common FIR boundary, whichever occurs first. The TCP shall also be the point of acceptance of primary guard.

All ATS units shall coordinate an estimate for the FIR boundary at least thirty (30) minutes prior to the boundary. Such coordination constitutes an offer of transfer of responsibility.

After the estimate for the FIR boundary has been sent, units shall coordinate any revised estimate that varies by 3 minutes or more.

**Communication Systems** Use of communications systems coordination between adjacent units shall be in the following order of priority:

- a. ATS Interfacility Data Communication (AIDC)
- b. AIDC messages and procedures are specified in the following sections:
- c. ATS direct speech circuits;
- d. International telephone system;
- e. Any other means of communication available

**AIDC Messages** AIDC message format will be in accordance with the Asia/Pacific/North Atlantic Regional Interface Control Document (ICD), as amended from time to time, unless described otherwise in the LOA.

Successful coordination via AIDC occurs on receipt of an ACP message in response to an EST message.

Each centre shall advise the other of any known equipment outage that affects AIDC.

**AIDC Message Parameters** The following table details the AIDC parameters and message to be used.

Message	Parameter	Notes
ABI	EUROCAT: 5-60 minutes prior to COP (Note: An updated ABI will not be sent once an EST has been sent)  OCS: 40 minutes prior 50nm expanded boundary	ABI is sent automatically and is transparent to controller. ABI automatically updates flight plan.
EST	EUROCAT: 40 minutes prior to COP  OCS: 40 minutes prior 50nm expanded boundary	Any changes to EST level or estimate conditions as detailed in LOA to be notified by voice after initial coordination completed. See notes below on voice procedures. EST is required to track generation in EUROCAT.
ACP	EUROCAT: Sends automatic ACP on receipt of EST  OCE: Sends automatic ACP on receipt of EST	EUROCAT: If ACP not received within 4 minutes the sending controller is alerted. Sending controller will initiate voice coordination if ACP is not received within 4 minutes of sending EST. Receiving controller will initiate voice coordination if proposed EST conditions are not acceptable.  OCS: If ACP is not received within 5 minutes the sending controller is alerted. Sending controller will not initiate voice coordination if ACP is not received within 5 minutes of sending EST. Receiving controller will initiate voice coordination if proposed EST conditions are not acceptable.
TOC	EUROCAT: Sent automatically 5 minutes prior to boundary  OCS: Sent automatically 2 minutes prior to boundary	
AOC	EUROCAT: Sent automatically on controller acceptance of a TOC  OCS: Sent automatically on receipt of a TOC	



**Coordination – General, Continued****AIDC Message (continued)****Parameters**

Message	Parameter	Notes
CDN	EUROCAT: Manually by the controller when required	<ul style="list-style-type: none"> <li>Responses to the CDN shall be ACP or REJ only – there will be no CDN negotiations.</li> <li>CDN messages will be sent by Brisbane only to revise coordination on eastbound flights.</li> <li>CDN messages may be used to coordinate changes to estimate or assigned altitude only.</li> <li>Only on CDN dialogue may be open per aircraft at any time.</li> <li>Not to be used if the aircraft will not be maintaining the assigned altitude 10 minutes prior to the TCP.</li> </ul>
MAC	As per ICD	
LRM	As per ICD. Controller alerted on receipt	
LAM	As per ICD. Controller alerted on non-receipt	

**Amendment to Flight Data Record** Route amendment – routes/waypoints may be added/deleted as long as they do not change the original intent or integrity of the flight plan information.

Truncation – where route amendment outside the FIR unavoidable:

- Terminate the route details at the farthest possible 'flight planned' point of the flight outside the FIR and enter "T" immediately following this.
- If insufficient 'flight planned' point exist outside the FIR for truncation, insert the first 'defined' point in the adjoining FIR and enter "T" immediately following this.
- The minimum acceptable truncation point must be at least the first point in the adjoining FIR.
- Every effort is to be made to truncate the route at a minimum of one point beyond the adjacent international FIR to provide an entry track in to that FIR.

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**Coordination – General, Continued**

**Address Forwarding And Next Data Authority** Brisbane ATSC and Auckland OAC shall send automatic Next Data Authority (NDA) and Address Forwarding (CAD) for data link aircraft as per the following table:

Brisbane ATSC	Auto NDA sent 22 minutes prior to the FIR boundary Auto CAD sent 20 minutes prior to the FIR boundary
Auckland OAC	Auto NDA sent 40 minutes prior to the FIR boundary Auto CAD sent 35 minutes prior to the FIR boundary

**Voice Coordination** Voice coordination is not required when AIDC messaging has been successful to offer and accepts transfer of control.

However, the receiving controller will initiate voice coordination if the proposed AIDC EST conditions are not acceptable.

If AIDC messaging is not to be sent following voice coordination, it shall be stated as part of the voice coordination by use of the phrase “AIDC messaging will not be sent”. A read back is required.

Voice Coordination is required for aircraft operating under any of the following conditions:

- block level clearance;
- weather deviations;
- offset track; or
- Mach Number technique

Read backs shall comprise all elements of the voice coordination passed by the transferring controller. Read back by the receiving unit confirms acceptance of the offer of transfer of control subject to any other conditions negotiated.

**Hemstitch Flights** A hemstitch flight is any flight that will remain within the New Zealand FIR for less time than the NDA VSP (40 minutes) prior to the flight entering the Brisbane FIR.

Auckland AOC shall voice coordinate any hemstitch flight.

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**Coordination – General, Continued**

**Near Boundary**     ATS units shall relay significant details of any flight which is, or intends **Operations** operating within fifty nautical miles (50NM0 of the common FIR boundary.

**HF Frequencies**     Brisbane ATC and Auckland ATC shall update each other as to the current voice backup frequency for use by ATC data link equipped aircraft.

**Template 3****Example: Auckland Oceanic – Nadi ATM Operations Centre**

Memorandum of Understanding

Between

Airways New Zealand Limited

And

Nadi ATM Operations Centre

**Subject** Air Traffic Services Inter-facility Data Communications (AIDC) Coordination Procedures**Validity Period** This Memorandum of Understanding shall be effective from 0506300300 UTC and may be cancelled by either party with written notice.**Signatories** The following signatories have ratified this Agreement:

Authority	Signature	Date
(Name of Officer) Oceanic Business Unit Manager Airways New Zealand		
(Name of Officer) Manager, Operations Strategic Air Services Limited Fiji		
(Name of Officer) Chairman, ATM Projects Committee, Airports Fiji Limited Fiji		

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**Memorandum of Understanding, Continued**

**Purpose** To establish procedures to permit AIDC messages for coordination purposes to be transmitted by Auckland Oceanic and received by Nadi Air Traffic Management Operations Centre (ATMOC).

**Scope** This MOU between Auckland and Nadi is supplementary to the procedures contained in the Airways Corporation of New Zealand Limited and Airport Fiji Limited LOA, dated 25 November 2004. Revision to this MOU shall be made only with the concurrence of all parties.

**Procedures** The format of AIDC messages (ABI, EST, PAC, CDN, CPL, ACP, REJ, TOC, AOC, MAC, LAM and LRM) are defined by the Asia/Pacific/North Atlantic Regional AIDC Interface Control Document (ICD) version 2.0. The optional formats for the coordination of block levels, weather deviations and Mach Number Technique have not been implemented.

Each facility shall advise the other facility of any known equipment outage that will affect AIDC. In the event of AIDC outage, voice coordination procedures will apply.

The following table details the messaging parameters and additional information for each message.

Message	Parameter	Notes
ABI Non Hem-stitching flights	<b>Auckland:</b> Sends ABI 48 minutes prior to boundary  (Note: An updated ABI will not be sent once an EST has been sent)	Updated ABIs will be sent automatically if there is any change to profile. ABI is sent automatically and is transparent to the controller. ABI automatically updates the receiving units flight data record
EST (general) Non Hem-stitching flights	<b>Auckland:</b> Sends EST 38 minutes prior to boundary	EST is sent automatically and automatically coordinates the receiving unit's flight data record. Any change to the EST (level or estimate) conditions as detailed in LOA are to be notified by voice after the initial coordination completed. See section below on voice procedures
ABI & EST Hem-stitch flights	<b>Auckland:</b> Sends ABI & EST messages for flights that re-enter the Nadi FIR as soon as the aircraft enters NZZO FIR	In these cases the ABI and EST are sent automatically
PAC	<b>Auckland:</b> Voice coordination will take place in those situations when a PAC is sent	

Continued on next page

**Memorandum of Understanding, Continued**

Message	Parameter	Notes
ACP	<b>Auckland:</b> Sent automatically on receipt of EST <b>Nadi:</b> Sent automatically on receipt of EST or PAC	<b>Auckland:</b> The APS will display a flashing “DIA” until receipt of ACP. If ACP not received within ten (10) minutes, controller is alerted with a message to the queue
TOC	<b>Auckland:</b> Sent automatically 2 minutes prior to boundary	This proposes a hand-off to the receiving unit
AOC	<b>Auckland:</b> Sent automatically on receipt of TOC <b>Nadi:</b> Sent <del>automatically</del> <b>only by the controller on acceptance of TOC</b>	This completes the hand-off proposal
MAC	<b>Auckland:</b> Sent manually when a change to the route makes Nadi no longer the “next” responsible unit	Receipt of a MAC message should not be interpreted as meaning that the flight plan has been cancelled. Voice coordination should be conducted by the receiving controller to confirm the status of the flight

**Procedures, Continued** Block levels, offsets, and weather deviations, or Mach Number Techniques are not included in the current version of AIDC messaging. Voice coordination shall be conducted for aircraft operating under these circumstances.

If there is any doubt with regard to the final coordination conditions, voice coordination shall be used for confirmation.

Truncation – Where route amendment outside the FIR is unavoidable:

- Terminate the route details at the farthest possible ‘flight planned’ point of the flight and enter “T” immediately following this.
- Without amending the originally received details, every effort is to be made to truncate the route a minimum of one point beyond the adjacent FIR to provide an entry track in to that FIR

For any reason where changes to this MOU are advisable the requesting unit shall propose the pertinent revision. The revision should be emailed or faxed to the appropriate Manager for action. The Manager or the designated deputies shall agree by email or telephone, followed by a confirming fax message signed by all parties. Formal exchange of signed copies of the amended MOW shall take place as soon as practicable thereafter.

**Hemstitch Flights** A Hemstitch flight is any flight that vacates FIR 1 and transits FIR 2 before re-entering FIR 1.

When a hemstitching flight vacates FIR 1 and then re-enter FIR 2 30 minutes or less later, the re-entry coordination is considered to have been completed when

coordination for the initial entry is completed and further coordination is only required if the aircraft requests:

Continued on next page

#### Memorandum of Understanding, Continued

- A weather deviation, or
- A level change, or
- Any change to the EST time is received or
- If there is any doubt that the receiving FIR has the correct boundary information

AIDC messages (ABI and EST) will still be sent by Auckland, but only when the aircraft flight state becomes active control. For hem stitching flights this will usually be when the aircraft enters the NZZO FIR, therefore these messages will normally be sent at less than 30 minutes prior to the TCP.

**Voice Coordination** The following is provided as a summary of occasions when voice coordination is required:

- In the event of an AIDC outage;
- Aircraft operating under any of the following conditions:
  - Block level clearance;
  - Unfulfilled time constraints;
  - Weather deviations;
  - Offset track; or
  - Mach Number technique
- Any change to the EST (level or time) conditions;
- On receipt of a warning that an ACP has not been received;
- On receipt of a MAC message;
- If there is any doubt with regard to the final coordination conditions;
- If the receiving controller can not accept the aircraft at the coordinated level

Notwithstanding the above, voice coordination shall take place for any flight that departs an airfield within the NZZO FIR and enters the NFFF FIR within 30 mins after departure.

For aircraft on fixed routes this specifically applies to:

- Aircraft departing Norfolk and entering the Nadi FIR via UBDK or OSVAR;
- Aircraft departing Fua'amotu and entering the Nadi FIR via APASI;
- Aircraft departing Faleolo and entering the Nadi FIR via OVLAD or KETOT

Continued on next page

**Memorandum of Understanding, Continued**

Auckland OCA will obtain the appropriate level approval for these flights and will pass Nadi an "Estimate" based on the aircrafts probed profile at the same time as obtaining the level approval.

A PAC message will also be sent containing the time at the TCP and the climbing condition.

Time revisions will only be passed when the "Estimated" time changes by more than 2 minutes from that previously passed.

Level changes to that previously coordinated and/or off track request shall be verbally coordinated in the usual manner.

<b>Notification of Descent Restrictions by Nadi</b>	Auckland OCS controllers may issue descent to aircraft entering the NZZO FIR from the NFFF FIR and landing at Norfolk, Tonga or Samoa without requesting descent restrictions from Nadi provided descent is commenced after the aircraft has passed the following positions. Should Nadi have any restrictions for descent, they will advise Auckland at least 10 mins prior to these positions:
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For aircraft entering NZZO FIR via:

- UPDAK descent to commence after NOGOL
- OSVAR descent to commence after OSVAR minus 10 mins
- APASI descent to commence after ASAPI
- All other occasions, descent to commence after the aircraft has crossed the FIR boundary.



*NAT ICD new v1.3.0 - Realistic equipage for an aircraft on a transatlantic flight should include "R" in field 10a, indicating PBN capability. This will also require a PBN/ indicator in field 18, making the example more relevant to 2012 changes. Updating 10b to reflect advanced surveillance equipment is useful in showing the new letter/number codes.*

*NAT ICD new v1.3.0 - Updated example to include new equipment and capabilities in field 10ab, new order of field 18 elements and show PBN/ field element .DOF/ corrected to reflect post-2012 date & format (YYMMDD)*