EUROCONTROL Specification for On-Line Data Interchange (OLDI)

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EUROCONTROL
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Abstract

This specification describes the requirements and message formats for the execution of notification, co-ordination and transfer of communication to flights between air traffic control units by the use of electronic data transfer between flight data processing systems.

Keywords

OLDI	Messages	Co-ordination	Bi-lateral Agreement
SYSCO	Communication	Letter of Agreement	Air Traffic Services
ADEXP	Transfer	Flight Data Processing Systems	Specification

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DOCUMENT APPROVAL

AUTHORITY	NAME AND SIGNATURE	DATE
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DOCUMENT CHANGE RECORD

The following table records the complete history of the successive editions of the present document.

EDITION NUMBER	EDITION DATE	REASON FOR CHANGE	PAGES AFFECTED
1.0	12/92	First released OLDI Standard	
2.2	9/98	Released issue incorporating all comments received during the approval and endorsement stages.	Whole Document
2.3 Proposed Issue	12/01	Incorporation of Amendment 1 to Edition 2.2 – inclusion of aircraft capability data	ABI, ACT, REV, Annex A
3.00	31/10/2003	Comments from IDTF/6 Meeting	Multiple
Released Issue 4.0	20/10/2007	Update of the EUROCONTROL On-Line Data Interchange (OLDI) Specification for the formal consultation comments	Multiple
Released Issue 4.1	16/01/2008	Editorial correction of the EUROCONTROL On-Line Data Interchange (OLDI) Specification Edition 4.0	Multiple
Released Issue 4.2	16/12/2010	Editorial correction of the EUROCONTROL On-Line Data Interchange (OLDI) Specification Edition 4.14	Multiple
Released Issue 4.3	18/12/2017	Update of the EUROCONTROL On-Line Data Interchange (OLDI) Specification with the corrigendum of OLDI 4.2, comments provided by OLDI Specification review group and outcome of the public formal consultation	Multiple
Released Issue 5.0	14/07/2020	Update of the EUROCONTROL On-Line Data Interchange (OLDI) Specification taking into account comments provided by OLDI group and outcome of the public formal consultation	Multiple (see foreword)
Released Issue 5.1	24/05/2023	Update of the EUROCONTROL On-Line Data Interchange (OLDI) Specification taking into account comments provided by OLDI group	Multiple (see foreword)

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FOREWORD

1 Responsible Body

The EUROCONTROL Specification for On-Line Data Interchange (OLDI), Edition 5.1, has been prepared by the EUROCONTROL Network Manager Directorate (NMD) in cooperation with the operational stakeholders within the OLDI group of the NETOPS working arrangement.

The need for additional OLDI guidance material was identified by the OLDI group and acknowledged by NETOPS. Such OLDI guidance material is published as a separate EUROCONTROL Guidelines document [GUID].

2 Maintenance of this Document

This EUROCONTROL Specification has been developed under the EUROCONTROL Regulatory and Advisory Framework (ERAF) and is maintained by EUROCONTROL in accordance with this Framework as further detailed in Annex E.

3 Relationship with Regulatory Framework

Former editions of the OLDI Specification have been recognised as Community specification for the single European sky (SES) regulatory framework, in particular for Regulation (EC) No. 1032/2006 and Regulation (EC) No. 30/2009. As the SES regulatory framework will be repealed or transposed as detailed in Article 139 point 2 and Article 140 point 2 of the EASA basic regulation (Regulation (EU) 2018/1139) no later than 12 September 2023, this edition no longer refers to the SES regulatory framework.

4 Editorial Practices

The following editorial practice has been followed in the writing of the requirements:

- Requirements using the operative verb "**shall**" are mandatory to claim compliance with the Specification;
- For the Recommended Requirements the operative verb "**should**" is used;
- For the Optional Requirements the operative verb "**may**" is used.

Cross-references to documents list in section 2 are identified by a label such as [GUID].

Every requirement within this document follows a pre-defined format, namely:
OLDI-[procedure / message]-[nnn]-[M | R | O]   [Text of requirement]
where:

- [procedure / message]:   3-5 characters, which identifies the procedure or message to which the requirements apply, e.g. ACT;
- [nnn]:   numeric, which identifies the sequence number of the requirement;
- [M | R | O]:   M (mandatory), R (recommended), O (optional), which identifies the type of requirements

Requirements may be followed by a free text note to give additional explanation.

5 Relationship to Edition 5.0 of the EUROCONTROL Specification for On Line Data Interchange

This Specification when approved will supersede Edition 5.0.

6 Significant Changes from Edition 5.0

It is to be noted that the EUROCONTROL Guidelines for OLDI [GUID] Edition 1.1 included proposed content for a future release of the OLDI Specification, these have been further reviewed by the OLDI

group for integration into this Edition of the OLDI Specification. The following are the most significant changes and additions from Edition 5.0 to Edition 5.1:

1. New TFD message (section 7.4)
2. New explicit requirement on re-routings (OLDI-GEN-85-M);
3. New options for formation flights (OLDI-ABI-25-O, OLDI-ACT-25-O, OLDI-REV-45-O, OLDI-PAC-45-O, OLDI-BFD-30-O, OLDI-CFD-30-O);
4. New options for approach type (OLDI-ACT-25-O, OLDI-REV-45-O, OLDI-BFD-30-O, OLDI-CFD-30-O);
5. New mandatory rules for REV messages (OLDI-REV-120-M, OLDI-REV-130-M), updated REV examples and updated references for some REV requirement (OLDI-REV-140-M, OLDI-REV-145-O);
6. New optional requirement send direct clearances in RAP and RRV messages (OLDI-RAP-25-M, OLDI-RRV-25-M);
7. Updated of LOF message's purpose (removing FIS application) and requirement notes (removing note of OLDI-LOF-60-M and adding note to OLDI-LOF-140-M);
8. Adding note to NAN mandatory requirement (OLDI-NAN-80-M);
9. Reviewed requirements for the dialogue procedure rules (OLDI-DIA-60-O, OLDI-DIA-70-O, and OLDI-DIA-180-O);
10. Updates to the SDM message (OLDI-SDM-60-M, OLDI-SDM-110-O, OLDI-SDM-115-O);
11. Clarification of the ADEXP reason field (18.26);
12. Complete update of section 17 concerning special route processing requirement (adding/updating and removing mandatory requirements), adding new examples and removing the outdates ones;
13. Adding 4 additional paragraphs in section 18 (18.56-18.59) referring to ADEXP field used by certain OLDI messages;
14. Updated diagram contained in Annex B;
15. Removal of informational Annex with traceability matrix to SES regulatory provisions.

7 Relationship to Other Documents

This document makes reference to the use of two types of field format in the compilation of messages; these are ICAO and ADEXP.

- ICAO field formats are described [PANS-ATM]. In the event that [PANS-ATM] is superseded by another document, the definition of ICAO field types shall be as described in that document.

- ADEXP field formats are described in [ADEXP].

Referenced documents are listed at Section 2.

1. Introduction

1.1 Purpose

This Edition of the EUROCONTROL Specification for OLDI has been thoroughly reviewed and updated by the OLDI Group, established under the NETOPS working arrangement.

Flights which are being provided with an ATC service are transferred from one ATC unit to the next in a manner designed to ensure complete safety. In order to accomplish this objective, it is a standard procedure that the passage of each flight across the boundary of the areas of responsibility of the two units is co-ordinated between them beforehand and that the control of the flight is transferred when it is at, or adjacent to, the said boundary.

Where it is carried out by telephone, the passing of data on individual flights as part of the co-ordination process is a major support task at ATC units. The operational use of connections between Flight Data Processing Systems (FDPSs) for the purpose of replacing such verbal "estimates", referred to as On-Line Data Interchange (OLDI), began within Europe in the early nineteen eighties.

In order to facilitate implementation, common rules and message formats were elaborated and agreed by the agencies concerned and incorporated in Edition 1 of the EUROCONTROL Standard for On-Line Data Interchange first published in 1992. The EUROCONTROL Specification for OLDI has evolved following regular implementation feedback. Edition 5.1, of the Specification has been produced to meet the latest requirements and comments submitted by operational stakeholders.

1.2 Scope

This document specifies the facilities and messages to be provided between FDPSs serving ATC units for the purpose of achieving:

- the notification of flights;
- the co-ordination required prior to the transfer of flights from one unit to the next;
- the civil / military co-ordination;
- situational awareness;
- the transfer of communication of such flights;
- support to air-ground data link;
- co-ordination between Area Control Centres and Oceanic Control Centres.

This document:

- defines the message formats and rules for the content;
- describes the facilities required at such units which are prerequisite to the use of data interchange for this purpose.

It is recommended that the data flows specified in this document be used for the internal system interfaces between units served by the same system to facilitate interoperability between internal and external units.

OLDI-GEN-10-R This Specification **should** be applied by ANSPs to OLDI facilities between units providing an ATC service.

OLDI-GEN-20-O The operational data within the messages defined within this Specification **may** be applied within systems which provide service to more than one ATSU.

OLDI-GEN-30-O The operational data within the messages defined within this Specification **may** be applied between systems used by other types of units than ATSUs (i.e. Military units, Airports, etc.).

2. References

ICAO Document 4444 - Procedures for Air Navigation Services Air Traffic Management (PANS-ATM)

The following document contains provisions which, through reference in this text, constitute provisions of this EUROCONTROL Specification:

[PANS-ATM]   Procedures for Air Navigation Services - Air Traffic Management, ICAO Document 4444, 16th Edition dated 10 November 2016.

At the time of publication of this EUROCONTROL Specification, the editions indicated for the referenced documents were valid.

OLDI-REF-10-M	Any revision of the referenced ICAO documents **shall** be immediately taken into account to revise this EUROCONTROL Specification.
	Note: *The revision of this document will be done in accordance with the agreed update mechanism for the OLDI Specification.*
OLDI-REF-20-M	Revisions of the other referenced documents **shall** form part of the provisions of this EUROCONTROL Specification after they are formally reviewed and incorporated into this EUROCONTROL Specification.
OLDI-REF-30-M	In the case of conflict between the requirements of this EUROCONTROL Specification and the contents of other EUROCONTROL documents, this EUROCONTROL Specification **shall** take precedence.

ICAO Annex 10

The following document contains references to ICAO Annex 10 for ATN B1 and B2 related messages.

EUROCONTROL Documents

The following EUROCONTROL document is referenced in this Specification:

[ADEXP]   EUROCONTROL Specification for ATS Data Exchange Presentation, SPEC-107, Edition 3.4, dated 24/05/2023 *(Note: under consultation with OLDI Ed. 5.1)*.

[GUID]   EUROCONTROL Guidelines for On-Line Data Interchange, GUID-176, Edition 1.1, dated 14/07/2020 *(Note: current Ed. 1.1 will be superseded by Ed. 1.2 prepared by the OLDI Group to be aligned with OLDI Ed. 5.1)*.

3. Definitions and Abbreviations

3.1 Message Field Definitions

The data fields which are given in each of the messages in this document are described in section 18 Data Insertion Rules. This section makes reference either to [PANS-ATM] or [ADEXP] and describes the derivation of the content in general. Any unique requirements applicable to a particular message or circumstance are specified in the description of the message concerned.

OLDI-GEN-40-M   The requirements for the format and content of data fields described under the 'Data Content' section for each message **shall** be as described in section 18 unless described specifically for the message concerned.

3.2 Definitions - General

OLDI-GEN-50-M   For the purposes of this EUROCONTROL Specification, the following definitions **shall** apply.

Accepting Unit:	The Air Traffic Control unit next to take control of an aircraft.
Acknowledgement:	Notification that a message has been received and found to be correctly processable.
Activation:	The process in a receiving ATC unit whereby the flight plan for the referent flight is upgraded to include the data provided by the transferring unit as part of the co-ordination process between the two units and which results in the provision of the data to controllers.
ADEXP Format:	One of the formats utilised for the ground - ground transmission of ATS messages and which uses the field types and separators described in [ADEXP].
Altitude:	The vertical distance of a level, a point or an object considered as a point, measured from mean sea level.
Application:	That part of an ATS sub-system that conforms to this specification and interfaces with such entities in other ATS systems.
Area of Responsibility:	An airspace of defined dimensions within which an ATC unit provides air traffic services.
Area of Interest	The airspace volume for which the ATC unit requires information such as entering flights, airspace status, etc. This area includes the area of responsibility and its vicinity.
Association:	A procedure in which a system connects a received OLDI message with a flight plan entry in the database.
ATC Unit:	ATC Unit means variously area control centre, approach control unit or aerodrome control tower.
Automated acceptance:	Acceptance of the co-ordination/transfer conditions as a result of an automated system processing.
Availability:	The degree to which the system or component is operational and accessible when required for use.
Boundary:	The planes (lateral and vertical) delineating the area of responsibility of an ATC unit.
Cleared Flight Level:	The flight level to or at which a flight has currently been cleared by ATC.
Community Specification:	Means of defining the technical and operational conditions necessary to meet the essential requirements and relevant implementing rules for interoperability; compliance with published Community Specifications, which remains voluntary, crates a presumption of conformity with the essential requirements and relevant implementing rules for interoperability.
Co-ordination, ATC:	Co-ordination between Air Traffic Control Units of the planned passage of flights across the common boundary, in order to ensure flight safety.
Co-ordination Message:	A generic term referring to a message used for accomplishing ATC co-ordination. These include the CDN which is a specific message described in section 14.6.
Co-ordination Phase:	In respect of a given flight, the phase during which the transferring and receiving ATC units agree the conditions under which a flight will pass from the control of one to the other.

Co-ordination Point:	A point on or adjacent to the boundary known by the ATC units in a co-ordination sequence and referred to in co-ordination messages.
Correlation:	The process of linking flight plan data and the radar track of the same flight.
Departure Flight Level:	The flight level to which the flight is initially to climb issued as part of a departure clearance.
Executive Control:	Executive control is performed by the controller having executive responsibility of separation of flight.
Flight Plan:	Specified information provided to air traffic service units, relative to an intended flight or portion of flight of an aircraft.
Flight Level Block:	A flight level block defining an airspace vertically, inclusive of the flight levels given.
Generate:	A process in an ATC system where relevant data are extracted from the data base(s) and a message is created for transmission to a receiving ATC unit.
ICAO Format:	One of the formats utilised for the ground - ground transmission of ATS messages and which uses the field types and separators described in [PANS-ATM].
Letter of Agreement:	Document that specifies the exchange of flight data and the associated procedures between ATC Units for the purpose of notification, co-ordination and transfer of flights or for information exchange for flights for which the responsibility of the control does not change.
Level:	A generic term relating to vertical position of an aircraft in flight; within this Specification the term level or flight level includes altitude in those cases where it is used.
Manual acceptance:	Acceptance of the co-ordination/transfer conditions as a result of a controller action.
Notification:	Transmission by the transferring unit of data to update the system at the receiving unit in preparation for the co-ordination phase.
Non standard conditions:	Conditions that are not in accordance with the ones specified in Letters of Agreement.
Operational data:	Data of interest to operational staff in connection to the provision of ATC service as distinct from message control data such as the message type and number.
Receiving Unit:	The ATC unit who receives data.
Reliability:	The probability that the ground installation operates within the specified tolerances.
Requested Flight Level:	A flight level requested by the flight in the flight plan.
Revision:	An amendment to data sent previously by the transferring ATC unit to the receiving ATC unit.
Sending Unit:	The ATS Unit who sends the data.
Standard conditions:	Conditions that are in accordance with the ones specified in Letters of Agreement.
Supplementary Flight Level:	A level, at or above which, or at or below which a flight has been co-ordinated to cross the transfer of control point. The supplementary level, if present, is an element of the exit level.
System Flight Plan:	Information derived from the flight plan of a specific flight held within an FDPS.
Time-out:	A mechanism applied at the sending and at the receiving units to facilitate the timely provision of operational reply to messages that are referred to the controller.
Transaction Time:	A time interval following the initiation of a message during which transmission, initial processing in the receiving system, generation and transmission of an acknowledgement message, and its identification in the transferring system are performed.
Transfer Flight Level:	The flight level agreed during the co-ordination if in level flight, or the cleared flight level to which the flight is proceeding if climbing or descending at the co-ordination point.
Transfer of Control Point:	A point, on the flight path of an aircraft, at which the responsibility for providing ATS to the aircraft is transferred from one ATC unit to the next. *Note: The transfer of control point is not necessarily coincident with the co-ordination point.*

Transfer Phase:	A phase of flight following the co-ordination phase, during which the transfer of communication is executed.
Transferring Unit:	ATC unit in the process of the transferring the responsibility for providing an air traffic control service to an aircraft to the next ATC unit along the route of flight.
Transmit:	Communicate a message from one system to another.
Transmission error:	Any error associated to a message that prevents the processing of that message in the receiving unit.
Warning:	A message displayed at a working position when the automated co-ordination process has failed.

3.3   Abbreviations

OLDI-GEN-60-M   The following abbreviations **shall** apply for the purposes of this document.

ABI	Advance Boundary Information message
ACC	Area Control Centre
ACM	ATC Communication Management
ACP	Accept message
ACT	Activate message
ADEXP	ATS Data Exchange Presentation
AFN	ATS Facilities Notification
AMA	Arrival Management message
APP	Approach Control Unit
ATC	Air Traffic Control
ATM	Air Traffic Management
ATS	Air Traffic Services
ATSU	Air Traffic Services Unit
BFD	Basic Flight Data message
CDA	Current Data Authority
CDN	Co-ordination message
CFD	Change To Flight Data message
CFL	Cleared Flight Level
CM	Context Management
CNL	Flight Plan Cancellation
COD	SSR Code Assignment message
COF	Change Of Frequency message
COP	Co-ordination Point
CPDLC	Controller- Pilot Data Link Communications
CRP	Clearance Response message
CRQ	Clearance Request message
CWP	Controller Working Position
EOBT	Estimated Off-Block Time
ETA	Estimated Time of Arrival
ETO	Estimated Time Over

ETOT	Estimated Take-Off Time
FDPS	Flight Data Processing System
FRA	Free Route Airspace
FRF	Further Route of Flight
GAT	General Air Traffic
HMI	Human Machine Interface
HOP	Hand Over Proposal message
ICAO	International Civil Aviation Organisation
ICD	Interface Control Document
IFR	Instrument Flight Rules
INF	Information message
LACK	Logical acknowledgement (air-ground data link)
LAM	Logical Acknowledgement message
LOF	Log-On Forwarding message
MAC	Message for Abrogation of Co-ordination
MAS	Manual Assumption of Communication message
MIL	Military
NAN	Next Authority Notified message
NDA	Next Data Authority
NM	Nautical Mile
OCM	Oceanic Clearance message
OLDI	On-Line Data Interchange
ORCAM	Originating Region Code Assignment Method
PAC	Preliminary Activation message
PANS	Procedures for Air Navigation Services
PNT	Point message
RAP	Referred Activate message
REV	Revision message
RJC	Reject message
RLS	Release message
ROF	Request on Frequency message
RRQ	Release Request message
RRV	Referred Revision message
RTF	Radio Telephony Facilities
RTI	Request Tactical Instructions message
RVSM	Reduced Vertical Separation Minimum
SBY	Stand-By message
SCO	Skip Communication message
SDM	Supplementary Data message
SFL	Supplementary Flight Level

SID	Standard Instrumental Departure
SKC	Skip Cancellation message
SSR	Secondary Surveillance Radar
SYSCO	System Supported Co-ordination
TFD	Terminated Flight Data message
TI	Transfer Initiation
TIM	Transfer Initiation message
TIP	Tactical Instructions Proposal message
TWR	Aerodrome Control Tower
UTC	Universal Time Coordinated
VCI	Voice Contact Information
VFR	Visual Flight Rules
VOR	VHF Omni-directional Range
XAP	Crossing Alternate Proposal message
XCM	Crossing Cancellation message
XIN	Crossing Intention Notification message
XRQ	Crossing Clearance Request message

4. General Requirements

4.1 Introduction

This section describes the general operational requirements necessary for the implementation of an OLDI facility between ATC units and the classification and performance requirements of the different types of message used.

4.2 Flight Data Processing System Requirements

4.2.1 Flight Data Base

OLDI-GEN-70-M   Units which utilise a facility described in this document **shall** be provided with data from an FDPS which contains all the information required for the display, processing and compilation of the messages as specified.

Note: *The primary source of data for each flight is the flight plan as filed by, or on behalf of, the pilot in command.*

Further items of data are obtained by the processing of flight plans with reference to the environment of the unit concerned.

4.2.2 Operation in Real Time

The OLDI procedure includes events in the transferring ATC unit to initiate functions necessary for the timely presentation of data to the transferring controller and the transmission of co-ordination data to the accepting unit.

OLDI-GEN-80-M   The FDPS **shall** be able to initiate functions by the comparison of Co-ordinated Universal Time and applicable time parameters with times at specified positions on the route of flight as determined from the flight database.

4.2.3 Re-Routing

In case of re-routing and change of downstream ATS unit, the coordination with the previous downstream unit is cancelled using MAC message.

OLDI-GEN-85-M   The coordination and data link connectivity with a new downstream ATS unit **shall** be established by triggering the transmission of ACT or RAP, LOF and NAN messages towards the new downstream unit.

4.2.4 Data Communications Capability

OLDI-GEN-90-M   The FDPS **shall** be able to receive and transmit flight data in the format applicable to the message as specified in this document via a data communication medium which supports the OLDI function.

OLDI-GEN-100-R   The FDPS **should** have the development potential to allow the addition of new messages that may be included in future editions of this specification.

OLDI-GEN-110-M   Within the performance requirements specified in this document, the data communication medium **shall** provide a rapid and reliable application-to-application data exchange by:

- assuring the integrity of OLDI message transmission;

- monitoring either point-to-point connections or the status of the communications network, as applicable.

OLDI-GEN-120-M   The FDPS **shall** warn the working positions when anomalies are detected by the data communications system.

4.2.5 Application Functions

OLDI-GEN-130-M   The systems used for the provision of OLDI facilities **shall** be able to automatically receive, store, process, extract and deliver for display, and transmit OLDI related data in real-time.

OLDI-GEN-140-M   The FDPS **shall** reflect current operational data relevant to the OLDI function as required by this Specification, updated either automatically, through manual input, or by a combination of both.

OLDI-GEN-150-M   The FDPS **shall** be able to extract such elements from the flight plan database.

OLDI-GEN-160-M   The FDPS **shall** identify the next ATC unit on the aircraft trajectory derived from the route of flight and the expected transfer flight level.

OLDI-GEN-170-M   The following **shall** be agreed bilaterally:
- Co-ordination Points (COPs);
- Reference points used for bearing and distance notations in identifying the COP on direct, off-ATS route segments, where used.

Note: *The COPs may not always be identical to the transfer of control points. It is recognised that transfer of control points are subject to bilateral agreement. However, the OLDI messages include only the COPs, and as consequence the agreement of the transfer of control points has not been included in the above OLDI requirement.*

OLDI-GEN-180-M   The system **shall** be able to provide co-ordination and transfer message warnings to the operational positions responsible for the co-ordination of the flights concerned.

4.2.6 Human-Machine Interface (HMI)

OLDI-GEN-190-M   The HMI **shall** be able to display the operational contents of OLDI messages and relevant warnings related to received messages for immediate attention.

Note: *The operational content is not meant to be displayed in text form.*

OLDI-GEN-200-M   The HMI **shall** provide ATC staff with a means to modify the data from which the operational contents of the messages are derived as required in this document.

OLDI-GEN-210-M   The HMI **shall** indicate that the transmission of the message is in progress or has been successfully transmitted as appropriate.

OLDI-GEN-220-M   A warning or notification to the appropriate ATC or technical position(s) **shall** be generated automatically if no acknowledgement has been received within the parameter time following a transmission of a co-ordination or transfer message.

OLDI-GEN-230-M   Such a warning or notification **shall** be in a form that immediately attracts the attention of the appropriate working position.

OLDI-GEN-240-R   The HMI at ATC positions using OLDI **should** provide a warning if the OLDI facility is not available.

4.2.7 Initiation of Messages

OLDI-GEN-250-M   Each system **shall** contain a set of system parameters in order to ensure timely, automatic initiation of OLDI messages.

OLDI-GEN-260-R   The capability to manually initiate the transmission of a co-ordination message prior to the calculated transmission time **should** be provided.

OLDI-GEN-270-M   The automatic event **shall** always be assured, if manual initiation is not executed.

OLDI-GEN-280-M   The system **shall** utilise time parameters to define the following:
- lead time, prior to transmission, when the operational contents of the messages within the transferring unit are displayed;
- lead time, global or per COP, to transmit the message, where applicable;

- time after transmission of a message within which an application level acknowledgement is to be received (time-out).

OLDI-GEN-290-M The system **shall** permit the transmission of messages, triggered by events.

OLDI-GEN-300-O The system **may** permit message initiation, triggered by advanced functions.

OLDI-GEN-310-M A message **shall** be transmitted without delay when the required information becomes available at a time later than that at which it would otherwise have been transmitted.
Note: *A flight commences a GAT IFR segment at a point close to the boundary which it is then to cross; the ETO at the point is communicated eight minutes before the COP at which time transmission of the ACT message is already late based on the applicable time parameter(s); the message is sent without delay.*

4.2.8 Reception of Messages

OLDI-GEN-320-M The ATC system **shall** be able to receive OLDI messages;

OLDI-GEN-330-M The ATC system **shall** be able to process them automatically in accordance with this Specification;

OLDI-GEN-340-M The ATC system **shall** be able to output flight data in accordance with the message received, and display required warnings in case of inconsistency in the data received;

OLDI-GEN-350-M The ATC system **shall** be able to generate and transmit acknowledgement messages automatically at the application level.

OLDI-GEN-360-M An acknowledgement message (Logical Acknowledgement (LAM), Accept (ACP) or Stand-by (SBY) Message) **shall** be generated and transmitted when the corresponding message has been processed and the presentation of the results of the processing to the appropriate position(s), as necessary, is assured.
Note: *The detailed conditions for the generation of an acknowledgement are specified in this document individually for each message.*

4.3 Time Estimate Derivation

OLDI-GEN-370-R In order to ensure the accuracy of time estimate data, information derived from the most accurate data source **should** be used.

4.4 Route Data

OLDI-GEN-380-R Whenever inserted in OLDI messages the item Route **shall** contain the current operational data and as such is based on the most up to date information available.

4.5 Recording of OLDI Data

4.5.1 Content

OLDI-GEN-390-M The contents of all OLDI messages and the time of reception **shall** be recorded.

4.5.2 Facilities

OLDI-GEN-400-M Facilities **shall** be available for the retrieval and display of the recorded data.

4.6 Availability, Reliability, Data Security and Data Integrity

4.6.1 Availability

OLDI-GEN-410-M The OLDI facility **shall** be available during the hours of normal and peak traffic flows between the two units concerned.

OLDI-GEN-420-R   The OLDI facility **should** be available 24 hours every day.

OLDI-GEN-430-M   Any scheduled down-time periods (and thus the planned availability time) **shall** be bilaterally agreed between the two units concerned.

4.6.2 Reliability

OLDI-GEN-440-M   Reliability on every OLDI link **shall** be at least 99.86 % (equivalent to a down-time of not more than 12 hours per year based on 24-hour availability).

OLDI-GEN-450-R   Where operationally justified, a reliability of at least 99.99% (equivalent to a down-time of not more than 52 minutes per year, based on 24 Hour availability) **should** be provided.

4.6.3 Data Security

OLDI-GEN-460-R   Data security methods (e.g. access rights, source verification) and, where applicable, network management **should** be applied to OLDI facilities.

4.6.4 Data Integrity

OLDI-GEN-470-M   The failure rate at application level **shall** be less than or equal to one transmission error per 2000 messages.

4.7 Operational Evaluation

4.7.1 Evaluation Period

OLDI-GEN-480-M   Each new OLDI facility, including a new facility on an existing link, **shall** be subject to an evaluation period to verify the data integrity, accuracy, performance, compatibility with ATC procedures and overall safety prior to its operational implementation.

4.7.2 Operational Introduction Date

OLDI-GEN-490-M   The date of the operational introduction, implying completion of the evaluation period, **shall** be formally agreed between the two units.

4.7.3 Management of Bilaterally Agreed and Optional requirements

OLDI-GEN-500-R   Each individual item of data marked as bilaterally agreed and/or optional **should** be defined in the LOA with each adjacent ATC unit and be separately configured for each OLDI connection.

5. Message Categories

5.1 General

This section of the document indicates the OLDI message transaction times

5.2 Transaction Times

The transaction times specified include transmission, initial processing at the receiving / accepting unit, creation of the acknowledgement message, its transmission and reception at the transferring unit.

OLDI-MSG-10-M   The maximum transaction times for the OLDI messages **shall** be as specified in Table 5.1.

Table 5.1 – Maximum OLDI Message Transaction Times

90 % of transmitted/received messages	99.8 % of transmitted/received messages
4 sec	10 sec

OLDI-MSG-20-M   If no acknowledgement has been received within the specified time after transmission, a message **shall** be considered to have been unsuccessfully transmitted or processed and a warning output as specified in the pertinent section in this document.

PART A – BASIC MESSAGES

6. Basic Procedure

6.1 General

6.1.1 Description of Requirement

This section describes the minimum requirement at the application level for the implementation of OLDI facilities.

6.1.2 Implementation

OLDI-BAS-10-M When ABI, ACT, REV, PAC, MAC and LAM messages are implemented for the notification and co-ordination of flights, the ATS units involved **shall** implement them as described in section 6, except where it has been bilaterally agreed to use the co-ordination dialogue procedure as described in section 14 of this document, in which case the conditions for the use of ACT and REV messages are as defined in that section.

6.2 Advance Boundary Information Message (ABI)

6.2.1 Purpose of the ABI Message

The ABI satisfies the following operational requirements:

- provide for acquisition of missing flight plan data;
- provide advance boundary information and revisions thereto for the next ATC unit;
- update the basic flight plan data;
- facilitate early correlation of radar tracks;
- facilitate accurate short-term sector load assessment;
- request the assignment of an SSR code from the unit to which the above notification is sent, if required.

 The ABI is a notification message.

6.2.2 Message Contents

OLDI-ABI-10-M   The ABI message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification;
- SSR Mode and Code (if available);
- Departure Aerodrome;
- Estimate Data;
- Destination Aerodrome;
- Number and Type of Aircraft;
- Type of Flight;
- Equipment Capability and Status.

Note: *If the SSR code is not assigned or not available, it may be omitted. Depending on the aircraft identification method applied, the SSR code and Mode element (data item A.7) may contain the current SSR code or the SSR code at the transfer of control point.*

OLDI-ABI-20-M   If bilaterally agreed, the ABI message **shall** contain any of the following items of data:

- Route;
- Other Flight Plan Data

OLDI-ABI-25-O   The ABI message **may** contain the following item of data:

- Formation Flight Information.

6.2.3 Rules of Application

6.2.3.1 General

OLDI-ABI-30-M   Except as provided for in OLDI-ABI-60-M and OLDI-ABI-70-R below, one or more ABI messages **shall** be sent for each flight planned to cross the boundary of areas of responsibility subject to OLDI procedures.

OLDI-ABI-40-M   The use of the code request facility **shall** be agreed bilaterally.

OLDI-ABI-50-M   When sent, the ABI message **shall** precede the Activate (ACT) or Referred Activate Proposal (RAP) message.

OLDI-ABI-60-M   ABI message generation **shall** be inhibited if a Preliminary Activation (PAC) message is to be sent.

OLDI-ABI-70-R   ABI transmission **should** be inhibited if the ACT or RAP message is due for transmission immediately or within a bilaterally agreed time interval.
Note: The purpose of this recommendation is to avoid the attempted simultaneous resolution of anomalies at different positions at the receiving unit in respect of ABI and ACT messages for the same flight.

OLDI-ABI-80-M   A revised ABI message **shall** be sent if the subsequent ACT message has not been generated and any of the following change or are modified:

- COP;

- expected SSR code at the transfer of control point;

- aerodrome of destination;

- type of aircraft;

- equipment capability and status.

Note: The revised ABI messages in ICAO format with a different aerodrome of destination are difficult to process automatically. Consequently the ADEXP format is recommended.

OLDI-ABI-85-O   A revised ABI message **may** contain both the Estimate Data and the Route Field if there is a change of COP.

OLDI-ABI-90-R   A revised ABI message **should** be sent if the subsequent ACT message has not been generated and one of the following items is subject to change:

- the expected boundary crossing level;

- the estimated time over (ETO) at the COP differs from that in the previous ABI message by more than the time specified in the Letter of Agreement (LoA);

- any other data as bilaterally agreed.

6.2.3.2 Processing in the Receiving Unit

OLDI-ABI-100-M   The ATC system receiving an ABI message **shall** attempt association with the corresponding flight plan data.

OLDI-ABI-110-M   If the flight plan association is unsuccessful, a flight plan **shall** be created automatically or manually in the receiving system.
Note: If no syntax and/or semantic discrepancies are found in the received ABI message, a flight plan could be automatically created by the receiving system. If syntax and/or semantic discrepancies are found in the received ABI message, the ABI message could be referred to the operator for correction and manual creation of a system flight plan by the receiving system.

OLDI-ABI-120-M   If the flight plan association is successful but a discrepancy is identified between the data in the message and corresponding data in the receiving system that would result in the need for corrective action on receipt of the following ACT message, the discrepancy **shall** be referred to an appropriate position for resolution.

OLDI-ABI-130-M   If the ABI message includes a request for the assignment of an SSR code and is correctly processed, a COD message **shall** be returned in addition to the LAM.
Note: As the code assignment process requires detailed flight plan route information, no requirement is made in this document for the return of a COD message by the receiving unit where such data may not be available. This does not prevent a message being returned under such circumstances if a specific local capability exists and the procedure has been agreed bilaterally.

6.2.3.3 Criteria for Message Transmission

OLDI-ABI-140-M   The message **shall** be transmitted a parameter number of minutes before the estimated time at the COP.

OLDI-ABI-145-R   Upon a change in the sequence of concerned ATS units, a delay **should** be applied between the MAC transmission to the unit to which notification had previously been effected for the flight and the initiation of ABI to the new unit.

OLDI-ABI-150-M   The ABI generation parameter(s) **shall** be included in the LoA between the ATC units concerned.

OLDI-ABI-160-R   The ABI generation parameter(s) **should** be variable, based on the provisions of the LoA.

OLDI-ABI-170-R   The ABI generation parameter(s) **should** be defined separately for each of the COPs.

OLDI-ABI-175-O   An ABI message **may** be sent to the downstream ATC unit upon reception of an ABI message.

6.2.4 Acknowledgement of ABI

6.2.4.1 Acknowledgement

OLDI-ABI-180-M   The ABI message **shall** be acknowledged by generating and transmitting a LAM message.
Note: *A LAM message is generated regardless of the results of the flight plan association attempt.*

6.2.4.2 No Acknowledgement

OLDI-ABI-190-R   If no LAM message is received as an acknowledgement for an ABI message, a warning **should** be displayed at the appropriate position.

6.2.4.3 No COD Message

OLDI-ABI-200-M   If a COD message is not received in response to a code request included in the ABI message, a warning **shall** be displayed at the appropriate position.

OLDI-ABI-210-M   Where the code request function is to be used, the time-out value to be applied **shall** be agreed bilaterally.

6.2.5 Examples

"Air 2000" 253, a Boeing 757 from Malta to Birmingham estimating ALESO at 1221 UTC, flying at FL350 at a true airspeed of 480 knots, planned to route via UT10 ALESO UT420 BUZAD UL10 HON, transponding on A7012 and requesting FL390. The following are equivalent examples of the ABI message sent from Reims to London ACC.

6.2.5.1 Normal Situation

6.2.5.1.1 ICAO
Example 1
(ABIE/L001-AMM253/A7012-LMML-ALESO/1221F350-EGBB-8/I-9/2B757/M-15/N0480F390
UT10 ALESO UT420 BUZAD UL10 HON-80/N-81/W/EQ Y/NO-18/DEP/LUQA AIRPORT
DEST/BIRMINGHAM OPR/AIR 2000 LTD ALTN/EGLL RALT/EGKK RMK/ONE ENG INOP)

Example 2 (including PBN capability and Mode S capability and status)
(ABIE/L001-AMM253/A7012-LMML-ALESO/1221F350-EGBB-9/B757/M-15/N0480F390 UT10
ALESO UT420 BUZAD UL10 HON-80/N-81/W/EQ Y/NO R/EQ/B1D1 S/EQ/E)

6.2.5.1.2 ADEXP
Example 1
-TITLE **ABI**
-REFDATA
    -SENDER -FAC **E**
    -RECVR -FAC **L**
    -SEQNUM **001**
-ARCID **AMM253**
-SSRCODE **A7012**
-ADEP **LMML**
-COORDATA

```
        -PTID ALESO
        -TO 1221
        -TFL F350
    -ADES EGBB
    -ARCTYP B757
    -NBARC 2
    -WKTRC M
    -FLTTYP N
    -BEGIN EQCST
        -EQPT W/EQ
        -EQPT Y/NO
    -END EQCST
    -ROUTE N0480F390 UT10 ALESO UT420 BUZAD UL10 HON
    -FLTRUL I
    -OPR AIR 2000 LTD
    -ALTRNT1 EGLL
    -ALTRNT2 EGKK
    -RMK ONE ENG INOP
```

Example 2 (including Mode S capability and status)
```
    -TITLE ABI
    -REFDATA
        -SENDER -FAC E
        -RECVR -FAC L
        -SEQNUM 001
    -ARCID AMM253
    -SSRCODE A7012
    -ADEP LMML
    -COORDATA
        -PTID ALESO
        -TO 1221
        -TFL F350
    -ADES EGBB
    -ARCTYP B757
    -FLTTYP N
    -BEGIN EQCST
        -EQPT W/EQ
        -EQPT Y/NO
        -EQPT R/EQ
        -SUREQPT S/EQ/E
    -END EQCST
    -PBN B1D1
    -ROUTE N0480F390 UT10 ALESO UT420 BUZAD UL10 HON
    -ADESOLD EGCC
```

6.2.5.2 SSR Code Request

6.2.5.2.1 ICAO

(ABIE/L001-AMM253/A9999-LMML-ALESO/1221F350-EGBB-9/B757/M-15/N0480F390 UT10
ALESO UT420 BUZAD UL10 HON-80/N-81/W/EQ Y/NO)

6.2.5.2.2 ADEXP

```
    -TITLE ABI
    -REFDATA
        -SENDER -FAC E
        -RECVR -FAC L
        -SEQNUM 001
    -ARCID AMM253
    -SSRCODE REQ
    -ADEP LMML
    -COORDATA
```

```
            -PTID ALESO
            -TO 1221
            -TFL F350
    -ADES EGBB
    -ARCTYP B757
    -FLTTYP N
    -BEGIN EQCST
            -EQPT W/EQ
            -EQPT Y/NO
    -END EQCST
    -ROUTE N0480F390 UT10 ALESO UT420 BUZAD UL10 HON
```

6.3 Activate Message (ACT)

6.3.1 Purpose of the ACT Message

The ACT message satisfies the following operational requirements:

- Replace the verbal boundary estimate by transmitting automatically details of a flight from one ATC unit to the next prior to the transfer of control;
- Update the basic flight plan data in the receiving ATC unit with the most recent information;
- Facilitate distribution and display of flight plan data within the receiving ATC unit to the working positions involved;
- Enable display of correlation in the receiving ATC unit;
- Provide transfer conditions to the receiving ATC unit.

6.3.2 Message Contents

OLDI-ACT-10-M   The ACT message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification;
- SSR Mode and Code
- Departure Aerodrome;
- Estimate Data;
- Destination Aerodrome;
- Number and Type of Aircraft;
- Type of Flight;
- Equipment Capability and Status.

Note: *If the SSR code is not assigned or not available, it may be omitted, but only in exceptional cases (e.g. transponder failure) or in cases where it is bilaterally agreed (e.g. Military or VFR flights exempted from SSR code assignment). Depending on the aircraft identification method applied, the SSR code and Mode element (data item A.7) may contain the current SSR code or the SSR code at the transfer of control point.*

OLDI-ACT-20-M   If bilaterally agreed, the ACT message **shall** contain any of the following items of data:

- Route;
- Other flight plan data
- Actual Take-Off Time.

Note: *The Actual Take-Off Time is normally used in the cases where the ACT follows a PAC or CRQ message that included the Estimated Take-Off Time.*

OLDI-ACT-25-O   The ACT message **may** contain the following items of data:

- Approach Type;
- Formation Flight Information.

6.3.3 Rules of Application

6.3.3.1 General

OLDI-ACT-30-M   One ACT message **shall** be sent for eligible flights crossing the boundary except as provided for in requirement OLDI-ACT-130-M.

OLDI-ACT-40-M   The ACT message **shall** be generated and transmitted automatically at the calculated time as specified in the LoA, unless manually initiated at an earlier time.

OLDI-ACT-50-R   ATC staff **should** be provided with a means to trigger the transmission of ACT messages prior to the calculated time of transmission.

OLDI-ACT-60-M   An ACT message **shall** be generated on the departure of a flight if a PAC or CRQ message, relating to the flight, containing boundary estimate data has previously been transmitted.
Note: *ACT message can also be sent if PAC or CRQ contain ETOT.*

OLDI-ACT-70-M   The operational contents of the ACT message due to be transmitted **shall** be made available at the working position responsible for the co-ordination of the flight prior to the actual transmission.

OLDI-ACT-80-R   In relation to requirement OLDI-ACT-70-M, the time at which it is calculated that the ACT is to be transmitted automatically **should** be displayed together with its contents.

OLDI-ACT-90-M   The ACT message **shall** contain the most recent information on the flight, reflecting the expected exit conditions.

OLDI-ACT-100-M   The relevant working position **shall** be notified of the transmission of the ACT message.

OLDI-ACT-110-M   Acceptance by the receiving unit of the transfer conditions implied in the ACT message **shall** be assumed, unless the receiving unit initiates co-ordination to amend them.

OLDI-ACT-120-M   The co-ordinated transfer conditions and the fact that the LAM has been received **shall** be presented to the ATC staff at the transferring unit.
Note: *As soon as a LAM has been received, the ACT message data becomes operationally binding to both of the ATC units unless the receiving unit initiates co-ordination in accordance with OLDI-ACT-110-M.*

OLDI-ACT-130-M   A further ACT message **shall** only be sent to the same co-ordination partner if the previous one has been abrogated by the use of a MAC.

6.3.3.2 Processing in the Receiving Unit

OLDI-ACT-140-M   The ATC system receiving an ACT message **shall** attempt association with the corresponding flight plan.

OLDI-ACT-150-M   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, the operational content **shall** be included with the flight plan.

OLDI-ACT-160-M   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, the required data **shall** be output at operational ATC and other positions as appropriate.

OLDI-ACT-170-M   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, an acknowledgement **shall** be returned.

OLDI-ACT-180-M   If the corresponding flight plan is found and a discrepancy is found that inhibits correct processing of the message and the sector responsible for accepting control of the flight can be identified, the operational content of the message **shall** be displayed at the appropriate working position.

OLDI-ACT-190-M   If the corresponding flight plan is found and a discrepancy is found that inhibits correct processing of the message and the sector responsible for accepting control of the flight can be identified, an acknowledgement **shall** be returned.

Note: *Bi-lateral agreements can determine specific cases where a sector/position cannot be identified for acceptance of control of the flight (and the LAM cannot be returned, in line with section 6.7.1 "Purpose of the LAM").*

OLDI-ACT-200-M   If a corresponding flight plan cannot be found and the sector responsible for accepting control of the flight can be identified, the operational content of the message **shall** be displayed at the appropriate working position.

OLDI-ACT-210-M   If a corresponding flight plan cannot be found and the sector responsible for accepting control of the flight can be identified, an acknowledgement **shall** be returned.

OLDI-ACT-220-M   If a corresponding flight plan cannot be found and the sector responsible for accepting control of the flight can be identified, a system flight plan **shall** be created.

OLDI-ACT-230-M   In all other cases, the acknowledgement **shall** be inhibited.

6.3.3.3 Criteria for Message Transmission

OLDI-ACT-240-M   The message **shall** be transmitted at or as soon as possible after the earlier of the times determined from the following:

- a parameter number of minutes before the estimated time at the COP;
- the time at which the flight is at a bilaterally agreed distance from the COP.

Note: *When a flight is transferred on a direct routing the requirement above will refer to the point determined in accordance with OLDI-DCT-90-M, OLDI-DCT-110-M and OLDI-DCT-120-M.*

OLDI-ACT-245-R   Upon a change in the sequence of concerned ATS units, a delay **should** be applied between the MAC transmission to the unit to which co-ordination had previously been effected for the flight and the initiation of ACT to the new unit.

OLDI-ACT-250-M   The ACT generation parameter(s) **shall** be included in the LoA between the ATC units concerned.

OLDI-ACT-260-M   The ACT generation parameter(s) **shall** be variable based on the provisions of the LoA.

OLDI-ACT-270-R   ACT generation parameters **should** be defined separately for each of the COPs.

OLDI-ACT-280-M   The specified parameters **shall** allow sufficient time for:

- the transmitting unit to update the transfer flight level to reflect the expected conditions at the COP; and
- the receiving unit to process the ACT and generate and transmit a LAM but still allow for verbal co-ordination to be carried out by the transferring unit and resultant action initiated by the accepting unit if the exchange of data fails.

6.3.4 Acknowledgement of ACT

6.3.4.1 Acknowledgement

OLDI-ACT-290-M   The ACT message **shall** be acknowledged by the generation and transmission of a LAM message.

6.3.4.2 No Acknowledgement Cases

OLDI-ACT-300-M   If no LAM message is received as an acknowledgement for an ACT message, a warning **shall** be displayed at the ATC position responsible for the co-ordination of the flight.

6.3.4.3 Change of State to Co-ordinated

OLDI-ACT-310-M   For the purposes of this document, following the transmission of an ACT message, a flight **shall** be considered to be co-ordinated either after the message has been acknowledged by a LAM or when the completion of co-ordination has been indicated manually at the transferring unit.

6.3.5 Examples

The following examples are an extension of those provided for the ABI message in section 6.2 - Advance Boundary Information Message (ABI); all details are the same except the ETO at the COP, which is 1226 in the ACT message shown.

6.3.5.1 ICAO

(ACTE/L005-AMM253/A7012-LMML-ALESO/1226F350-EGBB-8/I-9/2B757/M-15/N0480F390 UT10 ALESO UT420 BUZAD UL10 HON-80/N-81/W/EQ Y/NO R/EQ/O1D1 S/UN-18/DEP/LUQA AIRPORT DEST/BIRMINGHAM OPR/AIR 2000 LTD ALTN/EGLL RALT/EGKK RMK/ONE ENG INOP)

6.3.5.2 ADEXP

```
-TITLE ACT
-REFDATA
    -SENDER -FAC E
    -RECVR -FAC L
    -SEQNUM 005
-ARCID AMM253
-SSRCODE A7012
-ADEP LMML
-COORDATA
    -PTID ALESO
    -TO 1226
    -TFL F350
-ADES EGBB
-ARCTYP B757
-NBARC 2
-WKTRC M
-FLTTYP N
-BEGIN EQCST
    -EQPT W/EQ
    -EQPT Y/NO
    -EQPT R/EQ
    -SUREQPT S/UN
-END EQCST
-PBN O1D1
-ROUTE UT10 ALESO UT420 BUZAD UL10 HON
-FLTRUL I
-OPR AIR 2000 LTD
-ALTRNT1 EGLL
-ALTRNT2 EGKK
-RMK ONE ENG INOP
-ATOT 1309
```

6.4   Revision Message (REV)

6.4.1   Purpose of the REV Message

The REV message is used to transmit revisions to co-ordination data previously sent in an ACT message provided that the accepting unit does not change as a result of the modification.

6.4.2   Message Contents

OLDI-REV-10-M   The REV message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification;
- Departure Aerodrome;
- Estimate Data and/or Co-ordination point;
- Destination Aerodrome;

Note: *The Estimate Data contained in the REV has to include complete data in the Estimate Data field in order to eliminate any ambiguity regarding the transfer elements. If the ACT message included the supplementary flight level, the following REV message will include the supplementary flight level if still applicable.*

OLDI-REV-20-M   The REV message **shall** contain the following items of data if they have changed:

- SSR Mode and Code;
- Equipment Capability and Status.

OLDI-REV-30-M   If bilaterally agreed, the REV message **shall** contain any of the following items of data, if they have changed:

- Route.

OLDI-REV-40-M   If bilaterally agreed, the REV message **shall** contain any of the following items of data:

- Message Reference.

OLDI-REV-45-O   The REV message **may** contain the following items of data:

- Approach Type;
- Formation Flight Information;

6.4.3   Rules of Application

6.4.3.1 General

OLDI-REV-50-O   One or more REV messages **may** be sent to the unit to which a flight has been currently co-ordinated by the use of an Activate message.

OLDI-REV-60-M   The following elements **shall** be subject to revisions:

- ETO at the COP;
- Transfer Flight Level(s);
- SSR Mode and Code;
- Equipment capability and status.

Note: *If the SSR code is not assigned or not available, it may be omitted, but only in exceptional cases (e.g. transponder failure) or in cases where it is bilaterally agreed (e.g. Military or VFR flights exempted from SSR code assignment). Depending on the aircraft identification method applied, the SSR code and Mode element (data item A.7) may contain the current SSR code or the SSR code at the transfer of control point.*

OLDI-REV-70-M   A REV message **shall** be sent when:

- the ETO at the COP differs from that in the previous message by more than a value bilaterally agreed, rounded to the nearest integer value;

- there is any change to the transfer flight level(s), SSR code or equipment capability and status.

OLDI-REV-80-M   Where bilaterally agreed, a REV message **shall** be sent when there is any change in the following:

- COP;

- Route.

Note: *Operational rules may require that modifications effected after ACT be subject to prior co-ordination between the units concerned.*

OLDI-REV-85-O   A REV message **may** contain both the Estimate Data and the Route Field if there is a change of COP.

OLDI-REV-86-O   If bilaterally agreed, a REV message **may** contain a change in the destination aerodrome.

OLDI-REV-90-M   The message reference, when included, **shall** contain the message number of the preceding ACT message.

OLDI-REV-100-M   Acceptance by the receiving ATC unit of the transfer conditions implied by the REV message **shall** be assumed, unless the receiving ATC unit initiates co-ordination to amend them.

OLDI-REV-110-M   A message changing a capability that results in the need to include data concerning an additional capability as specified in section 18.32 'Equipment Capability and Status' **shall** include the additional capability.

6.4.3.2 Formatting of Revision Messages

6.4.3.2.1 ICAO Format

OLDI-REV-120-M   All revision messages **shall** include field types 3, 7, 13, 14 and 16, applying the following rules:

- A change to the ETO at the COP or transfer flight level(s) is to be incorporated by the inclusion of the revised data in field 14 (elements a, b and c and elements d and e if required).

- In case of COP change, field 14 includes only element a) containing the old COP for reference purposes, while the new COP and relevant crossing conditions are provided as field 14 in field 22 format.

- A change to the SSR Code is to be included as elements b) and c) of field 7.

OLDI-REV-130-M   All other modifications **shall** be included in field 22 format after the initial five fields, applying the following rules:

- Fields included in field 22 format can be in any order relative to each other.

- Estimates for new boundary crossing conditions as field 14 data in field 22 format.

- Route changes are to be incorporated as field 15 data in field 22 format. Rules for the co-ordination of such changes, including direct routings, are specified in section 17 'Special Route Processing Requirements'.

- Equipment Capability and Status; only the capability or capabilities being changed is to be included.

OLDI-REV-135-O   If bilaterally agreed, changes to the destination aerodrome **may** be included as field 16 data in field 22 format.

6.4.3.2.2 ADEXP Format

OLDI-REV-140-M   All revision messages in ADEXP format **shall** include the following primary fields: TITLE REFDATA ARCID ADEP ADES, applying the following rules:

- a change to the ETO at the COP or transfer flight level(s) is to be incorporated by the inclusion of the revised data in primary field COORDATA;

- The primary field COP is to be included unless a change to the ETA or transfer flight level(s) requires the use of primary field COORDATA. It will contain the COP through which the flight is currently co-ordinated or, if the COP is being amended, the COP through which the flight had previously been co-ordinated.

- Changes to the COP are to be incorporated using primary field COORDATA (see section 17 'Special Route Processing Requirements'). Such messages shall also include primary field COP as stated above.

- Changes to the route are to be incorporated using primary field ROUTE. Rules for the co-ordination of such changes, including direct routings, are specified in– section 17 'Special Route Processing Requirements'.

- a change to the SSR Code is to be indicated by the inclusion of primary field SSRCODE;

- A change to Equipment Capability and Status is to utilise primary field EQCST; only the capability or capabilities being changed are to be included.

OLDI-REV-145-O   If bilaterally agreed, changes to the destination aerodrome **may** be specified by including ADESOLD primary field in addition to ADES primary field (see section 18.11 'Destination Aerodrome').

6.4.3.2.3 SSR Code

OLDI-REV-150-M   SSR Mode and Code **shall** be included in a REV message only when it is required to co-ordinate a change of SSR code.

6.4.3.3 Processing in the Receiving Unit

OLDI-REV-160-M   If an ACT has been received for the subject flight from the same ATC unit, the ATC system receiving a REV message **shall** attempt association with the corresponding flight plan.

OLDI-REV-170-M   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, the operational content **shall** be included with the flight plan.

OLDI-REV-180-M   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, the required data **shall** be output at operational ATC and other positions as appropriate.

6.4.3.4 Criteria for Message Transmission

OLDI-REV-190-M   The REV message is event driven and **shall** be transmitted immediately following the relevant input or update.

OLDI-REV-200-M   By the fact that no changes may be effected by the use of the REV message after the flight is a specified time/distance from the transfer of control point, the time and distance parameters **shall** be bilaterally agreed.

Note: If specified in the Letter of Agreement between adjacent ATS units, additional data items (e.g. route info) that do not affect the agreed transfer conditions can be exchanged within REV messages until transfer of the flight, regardless of time or distance parameters.

OLDI-REV-210-R   The REV parameters **should** be defined separately for each of the COPs.

6.4.3.5 Change of Receiving ATC Unit

OLDI-REV-220-M   The use of a REV message **shall** be inhibited if a revision of flight plan data leads to a change of the receiving ATC unit (see Message for the Abrogation of Co-ordination).

6.4.4 Acknowledgement of REV

6.4.4.1 Acknowledgement

OLDI-REV-230-M   If the REV message can be associated with a flight plan within the receiving system, a LAM message **shall** be transmitted in acknowledgement.

OLDI-REV-240-M   If the REV message cannot be associated with a flight plan within the receiving system, the transmission of a LAM message **shall** be inhibited.

6.4.4.2 No Acknowledgement

OLDI-REV-250-M   If no LAM message is received as an acknowledgement for a REV message, a warning **shall** be displayed at the ATC position responsible for the co-ordination of the flights.

OLDI-REV-260-M   In no-LAM cases, a verbal revision **shall** be initiated by the transferring ATC unit.

6.4.5 Examples

6.4.5.1 ICAO

1. (REVE/L002-AMM253-LMML-ALESO/1226F310-EGBB)
2. (REVE/L010E/L007-AMM253-/A2317-LMML-ALESO/1226F310-EGBB)
3. (REVE/L019-AMM253-LMML-ALESO/1237F350-EGBB-81/W/NO)
4. (REVE/L873-AMM253-LMML-ALESO—EGBB-14/KUNAV/1239F390-15/ALKLO DCT KUNAV DCT MIKROM)

6.4.5.2 ADEXP

Example 1.
-TITLE **REV**
-REFDATA
   -SENDER -FAC **E**
   -RECVR -FAC **L**
   -SEQNUM **002**
-ARCID **AMM253**
-ADEP **LMML**
-COORDATA
   -PTID **ALESO**
   -TO **1226**
   -TFL **F310**
-ADES **EGBB**

Example 2.
-TITLE **REV**
-REFDATA
   -SENDER -FAC **E**
   -RECVR -FAC **L**
   -SEQNUM **010**
-ARCID **AMM253**
-ADEP **LMML**
-COP **ALESO**
-ADES **EGBB**
-SSRCODE **A2317**
-ROUTE **N0480F390 UT10 ALESO UT420 BUZAD UL10 HON**
-MSGREF
   -SENDER -FAC **E**
   -RECVR -FAC **L**
   -SEQNUM **007**

Example 3.
-TITLE **REV**
-REFDATA
    -SENDER -FAC **E**
    -RECVR -FAC **L**
    -SEQNUM **019**
-ARCID **AMM253**
-ADEP **LMML**
-COP **ALESO**
-ADES **EGBB**
-BEGIN EQCST
    -EQPT **W/NO**
-END EQCST

Example 4.
-TITLE **REV**
-REFDATA
    -SENDER -FAC **E**
    -RECVR -FAC **L**
    -SEQNUM **010**
-ARCID **AMM253**
-ADEP **LMML**
-COP **ALESO**
-COORDATA
    -PTID **KUNAV**
    -TO **1239**
    -TFL **F350**
-ADES **EGBB**
-ROUTE **UT10 KUNAV UT421**

6.5 Message for the Abrogation of Co-ordination (MAC)

6.5.1 Purpose

A MAC message is used to indicate to the receiving unit that the co-ordination or notification previously effected for a flight is being abrogated.

The MAC is not a replacement for a Cancellation (CNL) message, as defined by ICAO, and therefore, shall not be used to erase the basic flight plan data.

6.5.2 Message Contents

OLDI-MAC-10-M   The MAC message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification;
- Departure Aerodrome;
- Co-ordination Point;
- Destination Aerodrome.

OLDI-MAC-20-M   If bilaterally agreed, the MAC message **shall** contain any of the following items of data:

- Message Reference;
- Co-ordination Status and Reason.

6.5.3 Rules of Application

6.5.3.1 General

OLDI-MAC-30-M   A MAC message **shall** be sent to a unit to which co-ordination had previously been effected for a flight, by the use of an ACT or RAP message, when one of the following occurs:

- the expected level at the transfer of control point is different from the level contained in the previous message resulting in a change of the next unit in the co-ordination sequence;
- the route of flight has been altered which results in change of the next unit in the co-ordination sequence;
- the system flight plan is cancelled in the sending unit and the co-ordination is no longer relevant;
- a MAC is received from the previous unit in respect of the flight that requires an effective abrogation towards the downstream unit based on bi-lateral agreements.

Note: The operational requirement to send a MAC on reception of a MAC from the previous unit is to be assessed. If operational procedures make that a new ACT is received shortly after the reception of the MAC (e.g. because traffic climbs faster/slower than expected and is re-coordinated by another unit), there might be no need to immediately send a MAC to the downstream unit if this has no impact. Sending a MAC in this case might even create nuisance to the ATCO at the receiving unit.

OLDI-MAC-40-M   When the MAC message is sent due to a flight level or route change, notification and/or co-ordination, as appropriate, **shall** be effected with the new unit in the co-ordination sequence.

OLDI-MAC-45-R   A delay **should** be applied between the MAC transmission to the unit to which co-ordination or notification had previously been effected for the flight and the initiation of co-ordination or notification to the new unit, if bilaterally agreed.

Note: This is to avoid that the ABI/ACT/PAC/RAP to the new unit be received before the MAC abrogating the previous coordination or notification.

OLDI-MAC-50-M   A MAC message **shall** be sent when the co-ordination for a departing flight, effected by the use of a PAC or CRQ message, is abrogated.

OLDI-MAC-60-R   A MAC message **should** be sent when the notification (ABI message) previously effected for a flight is cancelled due to any of the reasons specified in requirement OLDI-MAC-30-M or the flight is delayed en-route and a revised estimate cannot be determined automatically.

OLDI-MAC-80-M   If included, the message reference **shall** contain the message number of the last ABI, PAC, ACT, REV or RRV message transmitted for the flight and acknowledged.

OLDI-MAC-90-M   The co-ordination point **shall** be the COP through which the flight had been previously notified or co-ordinated.

OLDI-MAC-100-R   The MAC message **should** identify the status to which the co-ordination or notification is to revert and the reason for the abrogation.

OLDI-MAC-110-M   If included, the status and reason **shall** be one of the following three options:

1. when the receiving unit is no longer the next co-ordination partner:
    a. the status is INI (initial);
    b. the reason is one of the following:
        i.   TFL if the reason is a change of transfer flight level;
        ii.   RTE if the reason is a change of route (including diversion);
        iii.   CAN if the reason is a cancellation;
        iv.   OTH for any other reason or if the reason is unknown.

2. the co-ordination effected by the use of the previous PAC, CRQ or ACT message (as modified by any subsequent REV message) is abrogated but the flight is expected to be the subject of a new co-ordination sequence with the same unit;
    a. the status is NTF (notification);
    b. the reason is one of the following:
        i.   DLY if the reason is a delay prior to departure;
        ii.   HLD if the reason is a hold;
        iii.   OTH for any other reason, or if the reason is unknown.

3. the transmission of an ABI, RAP (if applicable) or ACT message, the flight is holding for an indefinite period and is expected to be subject to a revised ABI, RAP or ACT, as appropriate:
    a. the status is NTF (notification);
    b. the reason is one of the following:
        i.   DLY if the reason is a delay prior to departure;
        ii.   HLD if the reason is a hold;
        iii.   OTH for any other reason, or if the reason is unknown.

OLDI-MAC-120-M   If the flight is to be re-notified or re-co-ordinated, a new notification and/or co-ordination message, as appropriate, **shall** be sent.

OLDI-MAC-130-M   If the flight is to be re-notified or re-co-ordinated, the system **shall** retain the capability to correctly process a new notification and/or co-ordination message from either the previous transferring unit or a different unit in a new co-ordination sequence.

6.5.3.2 Processing in the Receiving Unit

OLDI-MAC-140-M   The working position(s) in the receiving ATC unit which are provided with flight details **shall** be notified of the abrogation.
Note: the basic flight plan data stored in the receiving ATC unit remains unchanged upon reception of a MAC message.

OLDI-MAC-145-O   The received MAC message **may** be referred to the appropriate position for manual intervention.

Note: This can be necessary to allow further actions e.g. decorrelation of the flight.

OLDI-MAC-150-R   On the reception of a MAC message, a previously received LOF and/or NAN message **should** be abrogated.

6.5.4 Acknowledgement of MAC

6.5.4.1 Acknowledgement

OLDI-MAC-160-M   If the MAC message can be associated with a flight plan within the receiving system and can be processed, a LAM message **shall** be transmitted in acknowledgement.

OLDI-MAC-170-M   If the MAC message cannot be associated with a flight plan within the receiving system, or cannot be processed, the transmission of a LAM message **shall** be inhibited.

6.5.4.2 No Acknowledgement

OLDI-MAC-180-M   If ATC co-ordination is being abrogated and no LAM message is received, a warning **shall** be displayed at the ATC position responsible for the co-ordination.

Note: In such cases a verbal abrogation of co-ordination should be effected by the transferring ATC unit, as bi-laterally agreed.

6.5.5 Examples

An ABI message was sent by Amsterdam ACC to Brussels ACC for flight HOZ3188, planned at FL190; the flight subsequently requests to climb to FL270 and is so cleared, thus entering Maastricht airspace instead of Brussels. Examples 6.5.5.1 – 1. and 6.5.5.2 – 1. show how the MAC sent to Brussels by Amsterdam would appear both in ICAO and ADEXP formats.

An ABI and, later, an ACT message are sent to Maastricht, but, before reaching the COP, the aircraft returns to Amsterdam Airport and the route and destination are amended in the sending unit's system; a MAC is sent to Maastricht as shown in examples 6.5.5.1 – 2. and 6.5.5.2 - 2.

6.5.5.1 ICAO

1.   (MACAM/BC112 AM/BC105-HOZ3188-EHAM-NIK-LFPG-18/STA/INITFL)
2.   (MACAM/MC096-HOZ3188-EHAM-NIK-LFPG-18/STA/INIRTE)

6.5.5.2 ADEXP

Example 1.
-TITLE **MAC**
-REFDATA
       -SENDER -FAC **AM**
       -RECVR -FAC **BC**
       -SEQNUM **112**
-ADEP **EHAM**
-COP **NIK**
-ADES **LFPG**
-ARCID **HOZ3188**
-CSTAT
       -STATID **INI**
       -STATREASON **TFL**
-MSGREF
       -SENDER -FAC **AM**
       -RECVR -FAC **BC**
       -SEQNUM **105**

Example 2.
-TITLE **MAC**
-REFDATA
        -SENDER -FAC **AM**
        -RECVR -FAC **MC**
        -SEQNUM **096**
-ADEP **EHAM**
-COP **NIK**
-ADES **LFPG**
-ARCID **HOZ3188**
-CSTAT
        -STATID **INI**
        -STATREASON **RTE**

6.6   Preliminary Activation Message (PAC)

6.6.1   Purpose of the PAC Message

The PAC message satisfies the following operational requirements:

- notification and pre-departure co-ordination of a flight where the time of flight from departure to the COP is less than that which would be required to comply with the agreed time parameters for ACT message transmission;

- notification and pre-departure co-ordination of a flight by a local (aerodrome /approach control) unit to the next unit that will take control of the flight;

- provide for acquisition of missing flight plan data in case of discrepancies in the initial distribution of flight plan data;

- request the assignment of an SSR code from the unit to which the above notification/co-ordination is sent, if required.

6.6.2   Message Contents

OLDI-PAC-10-M   The PAC message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification;
- SSR Mode and Code;
- Departure Aerodrome;
- Estimated Take-Off Time or Estimate Data;
- Destination Aerodrome;
- Number and Type of Aircraft.

Note: If the SSR code is not assigned or not available, it may be omitted, but only in exceptional cases (e.g. transponder failure) or in cases where it is bilaterally agreed (e.g. Military or VFR flights exempted from SSR code assignment). Depending on the aircraft identification method applied, the SSR code and Mode element (data item A.7) may contain the current SSR code or the SSR code at the transfer of control point.

OLDI-PAC-20-M   A PAC message sent from a TMA control unit or an ACC **shall** contain the following items of data:

- Type of Flight;
- Equipment Capability and Status.

OLDI-PAC-30-M   If bilaterally agreed, the PAC message **shall** contain any of the following items of data:

- Route;
- Other flight plan data;
- Message Reference.

OLDI-PAC-40-M   If bilaterally agreed and the data is required to be included for the flight, the PAC message **shall** contain one or more of the following items of data:

- Departure Runway;
- SID Identifier;
- Cleared Flight Level.

OLDI-PAC-45-O   The PAC message **may** contain the following data item of data:

- Formation Flight Information.

6.6.3 Rules of Application

6.6.3.1 General

OLDI-PAC-50-M   One or more PAC messages **shall** be sent for each flight planned to cross the boundary of areas of responsibility where the time from departure to the COP would not permit the ACT message to be sent at the required time.

OLDI-PAC-60-M   One or more PAC messages **shall** be sent by the Aerodrome/Approach unit to the next unit for each departing flight for which either notification or co-ordination is required.

OLDI-PAC-70-R   For the implementation of the PAC / LAM message exchange between units, the relevant TWR/APP systems **should** be provided with a means to input and forward "start-up", "push-back", "taxi" or similar information from which the ETOT may be derived in order to calculate the ETO at the COP and initiate the transmission of the PAC.

OLDI-PAC-80-M   As bilaterally agreed, the message **shall** contain either:

- Estimated Take-Off Time, or
- Estimate Data.

OLDI-PAC-90-M   When the message reference is included by bilateral agreement, it **shall** contain the message number of the first PAC message sent for the flight.

OLDI-PAC-100-M   When the message reference is included, by bilateral agreement, it **shall** be included on second and subsequent PAC messages.

OLDI-PAC-110-M   The use of the code request facility, if required, **shall** be agreed bilaterally.

OLDI-PAC-120-M   A revised PAC message **shall** be sent if, before departure, there is a change to any item of data included in the previous PAC message.

OLDI-PAC-130-M   The route **shall** be included where bilaterally agreed between the sending and receiving units.

OLDI-PAC-135-O   If CRQ and/or CRP messages are not implemented, a PAC message **may** be sent from a TWR unit to the downstream ATS unit (TMA or ACC).

6.6.3.2 Processing in the Receiving Unit

OLDI-PAC-140-M   The ATC system receiving a PAC message **shall** attempt association with the corresponding flight plan.

OLDI-PAC-150-M   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, the operational content **shall** be included with the flight plan.

OLDI-PAC-160-M   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, the required data **shall** be output at operational ATC and other positions as appropriate.

OLDI-PAC-170-M   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, an acknowledgement **shall** be returned.

OLDI-PAC-180-M   If a corresponding flight plan cannot be found, or a discrepancy is found that inhibits correct processing of the message and the sector responsible for accepting control of the flight can be identified, the operational content of the message **shall** be displayed at the appropriate working position.

OLDI-PAC-190-M   If a corresponding flight plan cannot be found, or a discrepancy is found that inhibits correct processing of the message and the sector responsible for accepting control of the flight can be identified, an acknowledgement **shall** be returned.

OLDI-PAC-200-M   If a corresponding flight plan cannot be found, or a discrepancy is found that inhibits correct processing of the message and the sector responsible for accepting control of the flight can be identified, a flight plan **shall** be created.

OLDI-PAC-210-M   If a corresponding flight plan cannot be found, or a discrepancy is found that inhibits correct processing of the message and the sector responsible for accepting control of the flight cannot be identified, the acknowledgement **shall** be inhibited.

OLDI-PAC-220-M   The data in a second or subsequent PAC message **shall** supersede the data in the previous message.

OLDI-PAC-230-M   If the PAC message includes a request for the assignment of an SSR code and is correctly processable as described in requirements OLDI-PAC-150-M, OLDI-PAC-160-M and OLDI-PAC-170-M, a COD message **shall** be returned in addition to the LAM.

Note: *As the code assignment process requires detailed flight plan route information, no requirement is made in this document for the return of a COD message by the receiving unit where such data may not be available. This does not prevent a message being returned under such circumstances if a specific local capability exists and the procedure has been agreed bilaterally.*

6.6.3.3 Criteria for Message Transmission

OLDI-PAC-240-M   PAC message transmission **shall** be initiated by a start-up, push-back, taxi or ETOT confirmed event.

OLDI-PAC-245-R   Upon a change in the sequence of concerned ATS units, a delay **should** be applied between the MAC transmission to the unit to which notification/coordination had previously been effected for the flight and the initiation of PAC to the new unit.

6.6.4   Acknowledgement of PAC

6.6.4.1 Acknowledgement

The messages to be sent in response to a PAC message are described in section 6.6.3.2.

6.6.4.2 No Acknowledgement

OLDI-PAC-250-M   If no LAM message is received as an acknowledgement for a PAC message, a warning **shall** be displayed at the position in the ATC unit responsible for co-ordination with the next unit.

6.6.4.3 No-LAM cases

OLDI-PAC-260-M   In no-LAM cases, verbal co-ordination **shall** be initiated.

6.6.4.4 No COD Message

OLDI-PAC-270-M   If a COD message is not received in response to a code request included in the PAC message, a warning **shall** be displayed at an appropriate position.

OLDI-PAC-280-M   Where the code request function is to be used, the time-out value to be applied **shall** be agreed bilaterally.

6.6.5   Action on Departure

6.6.5.1 Boundary Estimate Data Format

Requirement OLDI-ACT-60-M identifies that an ACT message is sent following the departure of a flight previously co-ordinated by the use of a PAC message using boundary estimate data.

6.6.5.2 Estimated Take-off Time Format

See section 12.1.7.

6.6.6 Examples

6.6.6.1 Estimated Take-Off Time and Code Request

6.6.6.1.1 ICAO

(PACBA/SZ002-CRX922/A9999-LFSB1638-LSZA-8/I-9/2B737/M-15/N0480F390 UB4 BNE
UB4 BPK UB3 HON-80/N-81/W/EQ Y/NO R/NO S/UN-18/DEP/BALE MULHOUSE
DEST/LUGANO OPR/CROSS AVIATION LTD ALTN/EGLL RALT/EGKK RMK/ONE ENG
INOP)

6.6.6.1.2 ADEXP

```
-TITLE PAC
-REFDATA
        -SENDER -FAC BA
        -RECVR -FAC SZ
        -SEQNUM 002
-ARCID CRX922
-SSRCODE REQ
-ADEP LFSB
-ETOT 1638
-ARCTYP B737
-NBARC 2
-WKTRC M
-FLTTYP N
-ADES LSZA
-BEGIN EQCST
        -EQPT W/EQ
        -EQPT Y/NO
        -EQPT R/NO
        -SUREQPT S/UN
-END EQCST
-ROUTE N0480F390 UB4 BNE UB4 BPK UB3 HON
-MSGREF
        -SENDER -FAC BA
        -RECVR -FAC SZ
        -SEQNUM 0012
-FLTRUL I
-OPR CROSS AVIATION LTD
-ALTRNT1 LSZH
-ALTRNT2 LSGG
-RMK ONE ENG INOP
-RWYDEP 16
-SID 5
-CFL
        -FL F210
```

6.6.6.2 Time at COP

6.6.6.2.1 ICAO

(PACD/L025-EIN636/A5102-EIDW-LIFFY/1638F290F110A-EBBR-9/B737/M)

6.6.6.2.2 ADEXP

```
-TITLE PAC
-REFDATA
        -SENDER -FAC D
        -RECVR -FAC L
        -SEQNUM 025
-ARCID EIN636
-SSRCODE A5102
```

```
-ADEP EIDW
-COORDATA
        -PTID LIFFY
        -TO 1638
        -TFL F290
        -SFL F110A
-ARCTYP B737
-ADES EBBR
```

6.7 Logical Acknowledgement Message (LAM)

6.7.1 Purpose of the LAM Message

The LAM is the means by which the receipt and safeguarding of a transmitted message is indicated to the sending unit by the receiving unit.

The LAM processing provides the ATC staff at the transferring unit with the following:

- a warning when no acknowledgement has been received;
- an indication that the message being acknowledged has been received, processed successfully, found free of errors, stored and, where relevant, is available for presentation to the appropriate working position(s).

6.7.2 Message Contents

OLDI-LAM-10-M   The LAM message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Message Reference.

6.7.3 Rules of Application

6.7.3.1 General

The rules for the return of a LAM are specified in the sections of this document defining the processing of each message.

OLDI-LAM-20-M   The LAM message **shall** be generated and transmitted without human intervention.

OLDI-LAM-30-M   The use of the LAM message to avoid the need for technical messages to ensure the integrity of data transmissions **shall** be forbidden.

OLDI-LAM-40-M   The LAM message **shall** be generated and transmitted immediately so that the transaction time requirement of the message being acknowledged can be achieved.

OLDI-LAM-50-M   With exception of ABI messages, the transmitting ATC system **shall** display a warning to the appropriate position if a LAM message has not been received within the parameter set for such warnings.

6.7.4 Acknowledgement of LAM

OLDI-LAM-60-M   The acknowledgement of a LAM message **shall** be inhibited.

6.7.5 Examples

6.7.5.1 ICAO

    (LAML/E012E/L001)

6.7.5.2 ADEXP

```
-TITLE LAM
-REFDATA
     -SENDER -FAC L
     -RECVR -FAC E
     -SEQNUM 012
-MSGREF
     -SENDER -FAC E
     -RECVR -FAC L
     -SEQNUM 001
```

7. Ground – Ground Situational Awareness

7.1 General

7.1.1 Description of Requirement

This section describes the data transfer applicable for the notification and co-ordination of flights between ATSUs and between ATSUs and air defence units where the information is being provided to make the receiving unit aware of the flights concerned but not for an intended later transfer of control. The messages are defined, in particular, for the following purposes:

- Notification of flights to military agencies including military ATSUs and air defence units providing service within the same airspace as the ATSU providing the data;
- Notification of flights which are to operate adjacent to the boundary of the airspace under the jurisdiction of the ATSU to the ATSU having jurisdiction of the airspace on the other side of the boundary.

7.1.1.1 Flight Data Exchange

The flight data exchange consists of the exchange of a basic set of information when a flight is about to enter the area of interest of the concerned unit. The Basic Flight Data (BFD) message provides more detailed data, supplemented with updates and additions to that information (Change of Flight Data (CFD) message) as the flight progresses through the concerned airspace. The additions may include, when agreed nationally, the controller's intention. The availability of this information will reduce the need for controller-to-controller verbal co-ordination. Although in principle the data exchange should be automatic, in certain cases it may be desirable to initiate the exchange by a specific controller input.

7.1.1.2 Acknowledgement

All flight data exchange and airspace crossing functions are acknowledged automatically if they can be correctly received and processed in the addressed unit.

7.1.2 Implementation

OLDI-SITAW-10-M   When implementing ground-ground situational awareness messages (BFD or BFD and CFD), the requirements described in this section **shall** be applied.

7.2   Basic Flight Data Message (BFD)

7.2.1 Purpose

The purpose of the BFD is to:

- forward basic flight data from civil units to military units and, if bilaterally agreed, from military units to civil units and between civil units;
- forward basic flight data to an ATSU which requires information on the flight but whose airspace is not planned to be penetrated by the flight, e.g. where the route takes the flight close to the boundary and a LoA exists requiring such flights to be notified of co-ordinated;
- identify the controller/console having the flight under control, particularly where it may not be apparent from the current position of the flight as is the case at a number of military units;
- activate the system flight plan in the receiving unit, if necessary;
- allow correlation of radar data with flight plan data.

7.2.2 Message Contents

OLDI-BFD-10-M   The BFD message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification;
- SSR Mode and Code.

OLDI-BFD-20-M   If bilaterally agreed, the BFD message **shall** contain any of the following items of data:

- Departure Aerodrome;
- Destination Aerodrome;
- Number and Type of Aircraft;
- Route Points;
- Equipment Capability and Status;
- Other flight data;
- Requested Flight Level; (see OLDI-BFD-60-O);
- Speed. (see OLDI-BFD-60-O);
- Route;
- Cleared Flight Level;
- Estimated Off-Block Time;
- Flight Type.

Note: *The Other Flight Data item may contain any Item of the ICAO FPL or any other bilaterally agreed data item.*

OLDI-BFD-30-O   The BFD message **may** contain the following items of data:

- Sector Identifier;
- Previous SSR Mode and Code;
- Next SSR Mode and Code;
- Approach Type;
- Formation Flight Information.

Note: *In some cases the Sector Identifier item will contain the identifier of the appropriate working position (e.g. in the case of military units that don't have defined sectors).*

7.2.3 Processing

7.2.3.1 General

OLDI-BFD-40-M   If included, the Route Points element **shall** contain a list of route points with at least the point identification, flight level and estimated time over:

- the point at which the flight is entering the area of responsibility of the sending unit or the point before entering the area of responsibility of the receiving unit and

- the point at which the flight is leaving the area of responsibility of the sending unit or the point beyond the area of responsibility of the receiving unit.

OLDI-BFD-50-O   The remainder of the route **may** be described in the list of route points.

OLDI-BFD-60-O   Requested flight level and speed **should** be added outside the list of route points if not provided in the list of route points.

OLDI-BFD-70-M   When inserted the sector identifier **shall** contain the identifier of the position having control of the flight.

7.2.3.2 In the Sending Unit

OLDI-BFD-80-M   The BFD **shall** be transmitted automatically for each flight meeting the bilaterally agreed conditions for notification of the interested units.

7.2.3.3 In the Receiving Unit

OLDI-BFD-90-M   If no discrepancy that would inhibit correct processing is found, the receiving unit **shall** attempt association with a flight plan.

OLDI-BFD-100-M   If a corresponding flight plan can be found, an acknowledgement **shall** be sent, the data shall be included in the flight plan and be available for correlation.

OLDI-BFD-110-M   If no corresponding flight plan can be found, an acknowledgement **shall** be sent, a flight plan shall be created based on the received data and be made available for correlation.

OLDI-BFD-120-M   If the message cannot be correctly processed, no acknowledgement **shall** be returned.

7.2.4 Acknowledgement of BFD

OLDI-BFD-130-M   The BFD **shall** be acknowledged by a LAM message.

OLDI-BFD-140-M   If no acknowledgement has been received within a specified time, a warning **shall** be displayed at the appropriate position.

7.2.5 Operational Reply

OLDI-BFD-150-M   There **shall** be no operational reply to a BFD message.

7.2.6 Message Example

```
-TITLE BFD
-REFDATA
     -SENDER -FAC EBBUZXZQ
     -RECVR -FAC EBSZZXZQ
     -SEQNUM 006
-ARCID DLH151
-SSRCODE A2157
-ADEP EDDW
-ADES GMME
-BEGIN RTEPTS
     -PT
```

```
                              -PTID WOODY
                              -TO 1235
                              -FL F210
                    -PT
                              -PTID CIV
                              -TO 1239
                              -FL F330
                    -PT
                              -PTID NEBUL
                              -TO 1240
                              -FL F330
          -END RTEPTS
          -ARCTYP B737
          -NBARC 2
          -WKTRC M
          -BEGIN EQCST
                    -EQPT W/EQ
                    -EQPT Y/NO
          -END EQCST
          -ROUTE N0480F390 UB4 BNE UB4 BPK UB3 HON
          -FLTRUL I
          -OPR DEUTSCHE LUFTHANSA, A.G.
          -ALTRNT1 EDDF
          -ALTRNT2 EDDH
          -RMK ONE ENG INOP
          -RFL F210
          -SPEED K0650
          -CFL
                    -FL F230
          -EOBT 1205
          -FLTTYP N
          -SECTOR ZURICH
          -PREVSSRCODE A2153
          -NEXTSSRCODE A2257
```

7.3 Change to Flight Data Message (CFD)

7.3.1 Purpose

The purpose of the CFD is for the unit controlling the flight to notify the interested unit of

- all significant changes to flight data previously sent to this unit with a BFD/CFD;
- all flight data required to be notified by bilateral agreement and not included in the BFD or previous CFDs.

Note: *The exact meaning of "significant" is to be bilaterally agreed for each data element.*

7.3.2 Message Contents

OLDI-CFD-10-M   The CFD message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Message Reference;
- Aircraft Identification.

OLDI-CFD-20-M   If bilaterally agreed, the CFD message **shall** contain any of the following items of data:

- SSR Mode and Code;
- Departure Aerodrome;
- Destination Aerodrome;
- Number and Type of Aircraft;
- Route Points;
- Assigned Heading/Track or Direct Clearance;
- Assigned Speed;
- Assigned Rate of Climb/Descent;
- Release Indication;
- Other flight data;
- Route;
- Cleared Flight Level.

Note: *The Other Flight Data item may contain any Item of the ICAO FPL or any other bilaterally agreed data item.*

OLDI-CFD-30-O   The CFD message **may** contain the following items of data:

- Sector Identifier;
- Previous SSR Mode and Code;
- Next SSR Mode and Code.
- Estimated Off-Block Time;
- Equipment Capability and Status;
- Approach Type;
- Formation Flight Information.

Note: *In some cases the Sector Identifier item will contain the identifier of the appropriate working position (e.g. in the case of military units that don't have defined sectors).*

7.3.3 Processing

7.3.3.1 General

OLDI-CFD-40-M   A CFD **shall** only be sent for a flight, which has previously been notified by a BFD.

OLDI-CFD-50-M   The Message Reference in a CFD **shall** contain the Message Number of the BFD exchanged between the two units for the subject flight.

OLDI-CFD-60-M   If included, the route element **shall** contain at least the route points ahead of the present position of the flight, with flight level and estimated times.
Note: the supplementary flight level consists of a level calculated at the point or the received/transmitted coordinated level at the point.

OLDI-CFD-70-O   A supplementary flight level **may** be added if necessary.

OLDI-CFD-80-M   When inserted the sector identifier **shall** contain the identifier of the position having control of the flight.

7.3.3.2 In the Sending Unit

OLDI-CFD-90-M   A CFD **shall** be transmitted automatically whenever a significant change occurs to flight data which was sent previously or when data that requires notification by bilateral agreement, is added.

7.3.3.3 In the Receiving Unit

OLDI-CFD-100-M   The system receiving the CFD **shall** attempt association with a corresponding flight plan.

OLDI-CFD-110-M   If a corresponding flight plan is found and no discrepancy that would inhibit correct processing is found, an acknowledgement **shall** be returned.

OLDI-CFD-120-M   If a corresponding flight plan is found and no discrepancy that would inhibit correct processing is found, the data **shall** be included in the flight plan and made available to the controller immediately.

OLDI-CFD-130-M   If the message cannot be associated with a corresponding flight plan or it cannot be correctly processed, the acknowledgement **shall** be inhibited.

7.3.4   Acknowledgement of CFD

OLDI-CFD-140-M   The CFD **shall** be acknowledged by a LAM message.

OLDI-CFD-150-M   If no acknowledgement has been received within the specified time, a warning **shall** be displayed at the appropriate position.

7.3.5   Operational Reply

OLDI-CFD-160-M   There **shall** be no operational reply to a CFD message.

7.3.6   Message Example

```
-TITLE CFD
-REFDATA
     -SENDER -FAC EBBUZXZQ
     -RECVR -FAC EBSZZXZQ
     -SEQNUM 007
-MSGREF
     -SENDER -FAC EBBUZXZQ
     -RECVR -FAC EBSZZXZQ
     -SEQNUM 006
-ARCID DLH151
-SECTOR BRUW
-CFL
     -FL F290
-BEGIN RTEPTS
     -PT
          -PTID WOODY
          -TO 1235
          -FL F210
```

```
                        -SFL F190A
                -PT

                        -PTID CIV
                        -TO 1239
                        -FL F290
                        -SFL F250A
                -PT

                        -PTID NEBUL
                        -TO 1240
                        -FL F330
        -END RTEPTS
        -ARCTYP B737
        -NBARC 2
        -WKTRC M
        -BEGIN EQCST
                -EQPT W/EQ
                -EQPT Y/NO
        -END EQCST
        -ROUTE N0480F390 UB4 BNE UB4 BPK UB3 HON
        -FLTRUL I
        -OPR DEUTSCHE LUFTHANSA, A.G.
        -ALTRNT1 EDDF
        -ALTRNT2 EDDH
        -RMK ONE ENG INOP
        -RFL F210
        -SPEED K0650
        -CFL
                -FL F230
        -EOBT 1205
        -FLTTYP N
        -SECTOR ZURICH
        -SSRCODE A2234
        -PREVSSRCODE A2153
        -NEXTSSRCODE A2257
        -ADEP EDDW
        -ADES GMME
        -AHEAD 310
        -ASPEED K0650
        -RATE C20
        -RELEASE F
```

7.4 Terminate Flight Data Message (TFD)

7.4.1 Purpose

The purpose of the TFD is to:
- inform the receiving unit about the termination of the flight plan or route segment within the airspace of the sending unit;
- inform the receiving unit about the landing of the flight;
- remove the flight plan in the system of the receiving unit, if necessary.

7.4.2 Message Contents

OLDI-TFD-10-M   The TFD message **shall** contain the following items of data:
- Message Type;
- Message Number;
- Message Reference;
- Aircraft Identification.

OLDI-TFD-20-M   If bilaterally agreed, the TFD message **shall** contain any of the following items of data:
- Departure Aerodrome;
- Destination Aerodrome;
- Estimated Off Block Time;
- Estimated Off Block Date.

OLDI-TFD-30-O   The TFD message **may** contain the following items of data:
- Actual Time of Arrival;
- Original Destination Aerodrome in case of diversion.

7.4.3 Processing

7.4.3.1 General

OLDI-TFD-40-M   A TFD **shall** only be sent for a flight, which has previously been notified by a BFD.

OLDI-TFD-50-R   The Message Reference in a TFD **should** contain the Message Number of the BFD exchanged between the two units for the subject flight.

7.4.3.2 In the Sending Unit

OLDI-TFD-60-M   The TFD **shall** be transmitted automatically for each flight meeting the bilaterally agreed conditions for termination of flight data of the interested units.
Note: TFD message can also be sent upon processing of the MAC message.

7.4.3.3 In the Receiving Unit

OLDI-TFD-70-M   The system receiving the TFD **shall** attempt association with a corresponding flight plan.

OLDI-TFD-80-M   If a corresponding flight plan is found and no discrepancy that would inhibit correct processing is found, an acknowledgement **shall** be returned.

OLDI-TFD-90-M   If a corresponding flight plan is found and no discrepancy that would inhibit correct processing is found, the corresponding flight plan or flight plan segment **shall** be terminated.

OLDI-TFD-100-M   If the message cannot be associated with a corresponding flight plan or it cannot be correctly processed, the acknowledgement **shall** be inhibited.

7.4.4 Acknowledgement of TFD

OLDI-TFD-110-M   The TFD **shall** be acknowledged by a LAM message.

OLDI-TFD-120-M   If no acknowledgement has been received within the specified time, a warning **shall** be displayed at the appropriate position.

7.4.5 Operational Reply

OLDI-TFD-130-M   There **shall** be no operational reply to a TFD message.

7.4.6 Message Example

```
-TITLE TFD
-REFDATA
        -SENDER -FAC EBBUZXZQ
        -RECVR -FAC EBSZZXZQ
        -SEQNUM 008
-MSGREF
        -SENDER -FAC EBBUZXZQ
        -RECVR -FAC EBSZZXZQ
        -SEQNUM 006
-ARCID DLH151
-ADEP GMME
-ADES EDDW
-ADESOLD EDDH
-EOBT 1205
-EOBD 200615
```

```
-TITLE TFD
-REFDATA
        -SENDER -FAC EBBUZXZQ
        -RECVR -FAC EBSZZXZQ
        -SEQNUM 010
-MSGREF
        -SENDER -FAC EBBUZXZQ
        -RECVR -FAC EBSZZXZQ
        -SEQNUM 009
-ARCID DLH151
-ADEP GMME
-ADES EDDW
-EOBT 1105
-EOBD 200615
-ATA 1535
```

8. Civil - Military Co-ordination – Airspace Crossing

8.1 General

8.1.1 Description of Requirement

This section describes facilities applicable for the co-ordination of airspace crossing between civil and military agencies that are additional to those described in section 6 'Basic Procedure'.

Flight data exchange between civil and military units other than for airspace crossing purposes utilises the Basic Flight Data (BFD) and Change to Flight Data (CFD) messages as described in sections 7.2 and 7.3 of this document.

8.1.1.1 Airspace Crossing

The airspace crossing function consists of a message exchange triggered by the controller who has the option either to notify the other unit that a flight under his control is intending to cross the airspace controlled by that unit, or to request the permission to cross that airspace. In the second case the controller in the second unit will be expected to make an input to trigger an operational reply to the crossing request.

This reply can either be an acceptance of the request, or a counter proposal, or a rejection. A counter proposal requires an approval or a rejection from the controller who was the originator of the original request. A previously sent notification can be amended by the controller in charge of the flight.
Agreed crossing details can be amended by the controller in charge of the flight and by the controller in charge of the airspace to be crossed.

8.1.1.2 Acknowledgement

All flight data exchange and airspace crossing functions are acknowledged automatically if they can be correctly received and processed in the addressed unit.

8.1.2 Implementation

OLDI-MIL-10-M   If airspace crossing facilities are implemented based on bilateral agreement the rules described in this section **shall** be applied.

8.2 Crossing Intention Notification Message (XIN)

8.2.1 Purpose

The purpose of the XIN message is to forward the intention to cross an airspace controlled by a civil unit with a flight controlled by military unit or vice versa.
The XIN message may be used to update an XIN message sent earlier on the same flight.

8.2.2 Message Contents

OLDI-XIN-10-M   The XIN message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Message Reference (if the message is updating an earlier XIN message);
- Aircraft Identification;
- SSR Mode and Code;
- Number and Type of Aircraft;
- Sector Identifier;
- Route Points.

Note: *The Sector Identifier item contains the identifier of the sector responsible for the flight.*

OLDI-XIN-20-M   If bilaterally agreed, the XIN message **shall** contain any of the following items of data:

- Departure Aerodrome;
- Destination Aerodrome;
- Other Flight Plan Data.

8.2.3 Processing

8.2.3.1 General

OLDI-XIN-30-M   The Route Points element **shall** contain a description of the crossing route including at least two points.

OLDI-XIN-40-M   Times and flight levels **shall** be included for each point.

OLDI-XIN-50-O   In the case of climb or descend, a supplementary flight level **may** be included in addition to flight level information.

OLDI-XIN-60-M   In the case of formation flights, a flight level block **shall** be used instead of a single flight level.

OLDI-XIN-70-M   In all other cases, only a flight level **shall** be provided.

OLDI-XIN-80-M   When used to update an earlier XIN message, the Message Reference **shall** contain the Message Number of the first message.

OLDI-XIN-90-M   The unit sending the XIN **shall** make sure the flight stays on the shortest route between the consecutive points.

8.2.3.2 In the Sending Unit

OLDI-XIN-100-M   The message **shall** be initiated at the controller's discretion or automatically, as described in the LoA.

OLDI-XIN-110-O   Multiple XIN messages **may** be sent for the same flight.
Note: *The points included in the route element of a XIN do not need to be outside of the airspace to be crossed.*

8.2.3.3 In the Receiving Unit

OLDI-XIN-120-M   If the message can be correctly processed, the system receiving the XIN **shall** return an acknowledgement.

OLDI-XIN-130-M   If the message can be correctly processed, the system receiving the XIN, the data **shall** be made available to the controller immediately.

OLDI-XIN-140-M   If the message cannot be correctly processed, no acknowledgement **shall** be returned.

8.2.4 Acknowledgement

OLDI-XIN-150-M   The message **shall** be acknowledged by a LAM message.

OLDI-XIN-160-M   If no LAM has been received within a specified time, a warning **shall** be displayed at the appropriate position.

8.2.5 Operational Reply

There is no operational reply required to the XIN message.

8.2.6 Message Example

```
-TITLE XIN
-REFDATA
        -SENDER -FAC EBSZZXZQ
        -RECVR -FAC EBBUZXZQ
        -SEQNUM 009
-ARCID AL25
-SSRCODE A2151
-ARCTYP F16
-NBARC 1
-SECTOR WEST
-ADEP EBBE
-ADES EGUN
-BEGIN RTEPTS
        -PT
                -PTID GEO01
                -TO 150500
                -FL F230
        -PT
                -PTID GEO02
                -TO 150600
                -FL F230
-END RTEPTS
-GEO
        -GEOID GEO01
        -LATTD 512500N
        -LONGTD 0030000E
-GEO
        -GEOID GEO02
        -LATTD 513400N
        -LONGTD 0030300E
-MSGREF
        -SENDER -FAC EBSZZXZQ
        -RECVR -FAC EBBUZXZQ
        -SEQNUM 007
-FLTRUL I
```

8.3 Crossing Clearance Request Message (XRQ)

8.3.1 Purpose

The purpose of the XRQ message is to forward a request to cross an airspace controlled by a civil unit with a flight controlled by military unit or vice versa.
The XRQ message may be used by the unit that has obtained an agreed crossing to modify that agreement.

8.3.2 Message content

OLDI-XRQ-10-M   The XRQ message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Message Reference (if modifying an earlier agreed crossing);
- Aircraft Identification;
- SSR Mode and Code;
- Number and Type of Aircraft;
- Route Points;
- Sector Identifier.

Note: *The Sector Identifier item contains the identifier of the sector responsible for the flight.*

OLDI-XRQ-20-M   If bilaterally agreed, the XRQ message **shall** contain the following items of data:

- Departure Aerodrome;
- Destination Aerodrome;
- Equipment Capability and Status;
- Other Flight Plan Data.

8.3.3 Processing

8.3.3.1 General

OLDI-XRQ-30-M   The Route Points element **shall** contain a description of the crossing route including at least two points.

OLDI-XRQ-40-M   Times and flight levels **shall** be included for each point.

OLDI-XRQ-50-O   In the case of climb or descent, an SFL **may** be included in addition to FL information.

OLDI-XRQ-60-M   In the case of formation flights, a flight level block **shall** be used instead of a single FL.

OLDI-XRQ-70-M   If not a case of climb, or descent, or formation flights, only a FL **shall** be provided.

OLDI-XRQ-80-M   A second XRQ for the same flight and for the same crossing **shall not** be sent until the initiated dialogue has been concluded.

OLDI-XRQ-90-M   The use of an XRQ to modify an earlier agreed crossing **shall** be subject to bilateral agreement.
Note: *If the modification of an earlier agreed crossing is allowed, the modification dialogue can be started either by a XRQ message sent by the controller in charge of the flight or by an XAP message (see Section 8.4) sent by the controller in charge of the airspace to be crossed by this flight. Both controllers may try to initiate the modification dialogue simultaneously. In that case, only the dialogue initiated by the controller in charge of the flight shall be considered.*

OLDI-XRQ-100-M   A bilateral agreement to include Equipment Capability and Status or Other Flight Plan Data **shall** also include those elements that are to be included.

> *Note:* *In respect of the XRQ message, the above statement replaces that in section 18.32 'Equipment Capability and Status' regarding the content of the field.*

OLDI-XRQ-110-M   Such data fields **shall** include only those items bilaterally agreed.

> *Note:* *In respect of the XRQ message, the above statement replaces that in section 18.32 'Equipment Capability and Status' regarding the content of the field.*

8.3.3.2 In the Sending Unit

OLDI-XRQ-120-M   The message **shall** be initiated at the controller's discretion, in accordance with the conditions specified in the LoA.

8.3.3.3 In the Receiving Unit

OLDI-XRQ-130-M   If the message can be correctly processed, the system receiving the XRQ **shall** return an acknowledgement.

OLDI-XRQ-140-M   If the message can be correctly processed, the data **shall** be made available to the controller immediately.

OLDI-XRQ-150-M   If the message cannot be correctly processed, no acknowledgement **shall** be returned.

8.3.4 Acknowledgement

OLDI-XRQ-160-M   XRQ messages **shall** be acknowledged by a SBY message.

OLDI-XRQ-170-M   If no SBY message has been received within a specified time, a warning **shall** be displayed at the appropriate position.

8.3.5 Operational Reply

OLDI-XRQ-180-M   An XRQ **shall** be replied to by

- an ACP accepting the proposed route/area crossing details;

- an XAP counter-proposing different route/area crossing details; or

- an RJC rejecting the proposed route/area crossing details.

OLDI-XRQ-190-O   When no operational reply is received, a verbal co-ordination **may** be initiated.

OLDI-XRQ-200-O   When no operational reply is received and a verbal co-ordination is initiated, if necessary, an XCM **may** be sent by the unit in charge of the flight to indicate that the current system dialogue is terminated.

8.3.6 Message Example

```
-TITLE XRQ
-REFDATA
        -SENDER -FAC EBSZZXZQ
        -RECVR -FAC EBBUZXZQ
        -SEQNUM 012
-ARCID DEUCE22
-SSRCODE A1240
-ARCTYP F111
-NBARC 3
-SECTOR SOUTH
-BEGIN RTEPTS
     -PT
            -PTID GEO01
            -TO 163000
            -FLBLOCK -FL F245 -FL F255
     -PT
            -PTID GEO02
```

```
                      -TO 163100
                      -FLBLOCK -FL F255 -FL F265
        -END RTEPTS
        -GEO
                -GEOID GEO01
                -LATTD 500000N
                -LONGTD 0051000E
        -GEO
                -GEOID GEO02
                -LATTD 500000N
                -LONGTD 0051500E
        -ADEP EBBE
        -ADES EGUN
        -MSGREF
                -SENDER -FAC EBSZZXZQ
                -RECVR -FAC EBBUZXZQ
                -SEQNUM 007
        -FLTRUL I
        -BEGIN EQCST
                -EQPT W/EQ
                -EQPT Y/NO
        -END EQCST
```

8.4 Crossing Alternate Proposal Message (XAP)

8.4.1 Purpose

The purpose of the XAP message is to transmit a counter-proposal by a controller to the route/area crossing details proposed by another controller.
If bilaterally agreed, the XAP message may be used by the controller in charge of the airspace to be crossed to propose a modification to agreed route/area crossing details.

8.4.2 Message content

OLDI-XAP-10-M　　　　The XAP message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Message Reference;
- Aircraft Identification;
- Route Points.

OLDI-XAP-20-M　　　　If bilaterally agreed, the XAP message **shall** contain the following item of data:

- Other Flight Plan Data.

8.4.3 Processing

8.4.3.1 General

OLDI-XAP-30-M　　　　The counter-proposal **shall** include a proposed new flight level for at least one point mentioned either in the XRQ message to which it is replying for, or in the agreed route/area crossing details it aims to modify.

OLDI-XAP-40-O　　　　Only flight levels (FL, SFL, Flight Level Block) **may** be changed.

OLDI-XAP-50-O　　　　If, as for XRQ, the initiation of a new dialogue to modify an earlier agreed crossing is bilaterally agreed, the controller in charge of the airspace to be crossed **may** initiate a new dialogue by sending an XAP.

　　　　　　　　　　　　Note: *The modification dialogue can also be initiated by a XRQ message sent by the controller in charge of the flight (see Section 8.3). Both controllers may try to initiate the modification dialogue simultaneously. In that case, only the dialogue initiated by the controller in charge of the flight shall be considered.*

8.4.3.2 In the sending unit

OLDI-XAP-60-M　　　　The XAP message **shall** be triggered by the manual input of a proposed new flight level by the controller.

8.4.3.3 In the receiving unit

OLDI-XAP-70-M　　　　The system receiving the XAP **shall** attempt association with the corresponding message.

OLDI-XAP-80-M　　　　If that message is found and there is no discrepancy that would inhibit correct processing, an acknowledgement **shall** be returned.

OLDI-XAP-90-M　　　　If that message is found and there is no discrepancy that would inhibit correct processing, the content of the XAP **shall** made available to the controller immediately.

OLDI-XAP-100-M　　　　If the message cannot be correctly processed or it cannot be associated with the corresponding message, no acknowledgement **shall** be returned.

8.4.4 Acknowledgement

OLDI-XAP-110-M　　　　The XAP **shall** be acknowledged by a SBY message.

OLDI-XAP-120-M   If no acknowledgement has been received within a specified time, a warning **shall** be displayed at the appropriate position.

8.4.5 Operational Reply

OLDI-XAP-130-M   An XAP message **shall** be replied to by

- an ACP message when the proposed route/area crossing details are accepted.
- a RJC message when the proposed route/area crossing details are rejected.

Note: Both replies terminate the dialogue.

OLDI-XAP-140-O   When no operational reply is received, a verbal co-ordination **may** be initiated.

OLDI-XAP-150-O   When no operational reply is received and if necessary, an XCM **may** be sent by the unit in charge of the airspace to indicate that the current system dialogue is terminated.

8.4.6 Message Example

```
-TITLE XAP
-REFDATA
        -SENDER -FAC EBBUZXZQ
        -RECVR -FAC EBSZZXZQ
        -SEQNUM 014
-MSGREF
        -SENDER -FAC EBSZZXZQ
        -RECVR -FAC EBBUZXZQ
        -SEQNUM 012
-ARCID DEUCE22
-BEGIN RTEPTS
        -PT
                -PTID GEO01
                -TO 163000
                -FL F230
        -PT
                -PTID GEO02
                -TO 163100
                -FL F230
-END RTEPTS
-FLTRUL I
```

8.5 Crossing Cancellation Message (XCM)

8.5.1 Purpose

An XCM message is used to indicate to the addressed unit that the notification or co-ordination previously effected for a flight is being abrogated.

The XCM is not a replacement for a Cancellation (CNL) message defined by ICAO and therefore shall not be used to erase the basic flight plan data.

8.5.2 Message contents

OLDI-XCM-10-M   The XCM message **shall** contain the following items of data:
- Message Type;
- Message Number;
- Message Reference;
- Aircraft Identification.

OLDI-XCM-20-M   If bilaterally agreed, the XCM message **shall** contain any of the following items of data:
- Departure Aerodrome;
- Destination Aerodrome.

8.5.3 Processing

8.5.3.1 General

OLDI-XCM-30-M   An XCM **shall** be sent by the unit responsible for the flight when one of the following occurs:
- the flight will not enter the addressed unit's airspace after a BFD/CFD;
- the crossing will not be executed on the route expressed in the XIN;
- the crossing will not be executed according to the conditions under negotiation or according to the conditions agreed after an airspace crossing dialogue.

OLDI-XCM-40-O   An XCM **may** be sent by the unit responsible for the flight when no operational reply has been received to an acknowledged XRQ to indicate that the current system dialogue is terminated.

OLDI-XCM-50-O   An XCM **may** be sent by the unit responsible for the airspace when no operational reply has been received to an acknowledged XAP to indicate that the current system dialogue is terminated.

OLDI-XCM-60-M   The message reference **shall** contain the message number of the BFD, XIN, XRQ or XAP message transmitted and acknowledged for the flight, it intends to abrogate.

8.5.3.2 In the sending unit

OLDI-XCM-70-M   The XCM **shall** be triggered automatically or manually by a controller input.

OLDI-XCM-80-M   An XCM **shall** be triggered manually when it is sent to terminate the dialogue after the failure to receive an operational reply.

8.5.3.3 In the receiving unit

OLDI-XCM-90-M   If the message can be associated with the corresponding message or flight plan and can be processed, an acknowledgement **shall** be returned.

OLDI-XCM-100-M   If the message can be associated with the corresponding message or flight plan and can be processed, the content of the message **shall** be made available to the controller immediately.

OLDI-XCM-110-M   If the message can be associated with the corresponding message or flight plan and can be processed, the relevant data **shall** be deleted.

OLDI-XCM-120-M   If the message cannot be associated with a corresponding flight plan or message, or it cannot be correctly processed, the acknowledgement **shall** be inhibited.

8.5.4 Acknowledgement

OLDI-XCM-130-M   The message **shall** be acknowledged by a LAM message.

OLDI-XCM-140-M   If no LAM is received in response to an XCM within a specified time, a warning **shall** be displayed at the appropriate position.

OLDI-XCM-150-M   In such cases a verbal abrogation of co-ordination **shall** be effected by the unit that has initiated the XCM message.

8.5.5 Operational Reply

There is no operational reply required for the XCM.

8.5.6 Message Example

```
-TITLE XCM
-REFDATA
        -SENDER -FAC EBSZZXZQ
        -RECVR -FAC EBBUZXZQ
        -SEQNUM 015
-MSGREF
        -SENDER -FAC EBSZZXZQ
        -RECVR -FAC EBBUZXZQ
        -SEQNUM 012
-ARCID DEUCE22
-ADEP EBBE
-ADES EGUN
```

8.6 Stand-by Message (SBY)

8.6.1 Purpose of the SBY Message

The SBY message acknowledges the receipt of a message proposing transfer conditions and indicates that the proposal is being referred to the controller for a decision.

8.6.2 Message Contents

OLDI-SBY-10-M   The SBY message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Message Reference.

8.6.3 Rules of Application

8.6.3.1 General

OLDI-SBY-20-M   The SBY message **shall** be generated and transmitted automatically immediately in response to:

- a RAP, RRV, RTI, TIP, CRQ, RRQ or CDN message;
- a XAP or XRQ message;
- an ACT or REV message which fails the filter.

8.6.4 Acknowledgement of SBY

OLDI-SBY-30-M   The acknowledgement of the SBY message **shall** be inhibited.

8.6.5 Examples

8.6.5.1 ICAO

(SBYL/E027E/L002)

8.6.5.2 ADEXP

```
-TITLE SBY
-REFDATA
    -SENDER -FAC L
    -RECVR -FAC E
    -SEQNUM 027
-MSGREF
    -SENDER -FAC E
    -RECVR -FAC L
    -SEQNUM 002
```

8.7 Acceptance Message (ACP)

8.7.1 Purpose of the ACP Message

The ACP message satisfies the following operational requirements:

- indicate the manual acceptance by a controller in one unit of the transfer conditions proposed by the controller in the other unit in one of the following messages:
  - RAP;
  - RRV;
  - CDN;
  - RTI;
  - TIP;
  - ACT and REV, if either is found to be non-standard;
- indicate the issue of crossing clearance following the receipt of an XRQ message;
- indicate agreement to a counter proposal to a crossing request following the receipt of an XAP message;
- when bilaterally agreed, provide the automatic acceptance of an ACT or REV message that has passed the filter in the accepting unit (in place of the LAM);
- when bilaterally agreed, indicate the manual acceptance of a HOP message (in place of the ROF message).

8.7.2 Message Contents

OLDI-ACP-10-M	The ACP message **shall** contain the following items of data: • Message Type; • Message Number; • Message Reference.
OLDI-ACP-20-M	If bilaterally agreed, the ACP message **shall** contain any of the following items of data: • Frequency; • Sector identifier.
OLDI-ACP-30-M	When the ICAO format is used, if bilaterally agreed, the ACP message **shall** contain any of the following items of data: • Aircraft Identification; • Departure Aerodrome; • Destination Aerodrome.

8.7.3 Rules of Application

8.7.3.1 General

OLDI-ACP-40-M	The Message Reference of the ACP **shall** include the Message Number of the message to which it is in response.
OLDI-ACP-50-M	The Frequency field, when included, **shall** contain the frequency on which the flight is to contact the accepting unit when the hand-over takes place.
OLDI-ACP-60-M	The ACP message **shall** be sent following manual acceptance by the controller of proposed transfer conditions, forwarded by an ACT, RAP, REV, RRV, RTI, TIP or CDN message.
OLDI-ACP-70-M	The ACP message **shall** be sent following manual acceptance by the controller of proposed crossing conditions or a counter proposal to such a request forwarded by an XRQ or XAP message.

OLDI-ACP-80-O   The ACP message **may** be sent as an alternative to a ROF message in response to a HOP message.

OLDI-ACP-90-M   When bilaterally agreed, the ACP message **shall** be generated and transmitted automatically by the system as a reply to an ACT or REV message that has passed the filter.

OLDI-ACP-100-O   The sector identifier **may** be included in ACP messages sent in response to an XRQ message if bilaterally agreed.

OLDI-ACP-110-M   When an ACP message has been received, the agreed transfer conditions **shall** be binding for both units.

8.7.3.2 Processing in the Receiving Unit

OLDI-ACP-120-M   The ATC system receiving an ACP message **shall** attempt association with the corresponding flight plan.

OLDI-ACP-130-M   if the ACP can be associated with a flight plan the acceptance **shall** be indicated to the controller together with any conditional data as described in section 8.7.2.

OLDI-ACP-140-M   If the ACP message cannot be associated with a flight plan, a warning **shall** be output at the appropriate position.

OLDI-ACP-150-M   If the ACP message cannot be associated with a flight plan, the acknowledgement **shall** be inhibited.

8.7.4   Acknowledgement of ACP

8.7.4.1 Acknowledgement

OLDI-ACP-160-M   An ACP message sent as a result of a manual acceptance **shall** be acknowledged by generating and transmitting a LAM message.

OLDI-ACP-170-M   The transmission of a LAM message **shall** be inhibited where the ACP is used as an automatic reply for an ACT or REV message that has passed the filter.
Note: *In such cases a SBY message would not have preceded the ACP message.*

8.7.4.2 No Acknowledgement Cases

OLDI-ACP-180-M   If no LAM message is received as an acknowledgement for an ACP message sent as a result of a manual acceptance, a warning **shall** be displayed at the ATC position responsible for the co-ordination of the flight.

8.7.5   Examples

8.7.5.1 ICAO

1.   Single field message using common acknowledgement format (as LAM and SBY)
      (ACPM/O455O/M476)

2.   Message fully compliant with [PANS-ATM] (including ICAO fields 7, 13 and 16)
      (ACPM/O455O/M476-AFR5661-LFPG-LPPT)

3.   Common acknowledgement format plus optional frequency field
      (ACPL/E027E/L002-18/FRQ/242150)

8.7.5.2 ADEXP

Examples 1 to 3 are equivalent to the respective ICAO format examples.

1.   -TITLE **ACP**
    -REFDATA
        -SENDER -FAC **M**
        -RECVR -FAC **O**
        -SEQNUM **455**
    -MSGREF
        -SENDER -FAC **O**
        -RECVR -FAC **M**
        -SEQNUM **476**

2.   -TITLE **ACP**
    -REFDATA
        -SENDER -FAC **M**
        -RECVR -FAC **O**
        -SEQNUM **455**
    -MSGREF
        -SENDER -FAC **O**
        -RECVR -FAC **M**
        -SEQNUM **476**
    -ARCID **AFR5661**
    -ADEP **LFPG**
    -ADES **LPPT**

3.   -TITLE **ACP**
    -REFDATA
        -SENDER -FAC **L**
        -RECVR -FAC **E**
        -SEQNUM **027**
    -MSGREF
        -SENDER -FAC **E**
        -RECVR -FAC **L**
        -SEQNUM **002**
    -FREQ **242150**

4.   Acceptance of a request made by an XRQ message notifying the requesting unit that the authority issuing the clearance is sector 34 (in ADEXP format only as the sector field is not available in ICAO format):

    -TITLE **ACP**
    -REFDATA
        -SENDER -FAC **MM**
        -RECVR -FAC **RT**
        -SEQNUM **256**
    -MSGREF
        -SENDER -FAC **RT**
        -RECVR -FAC **MM**
        -SEQNUM **476**
    -SECTOR **34**

8.8 Reject Co-ordination Message (RJC)

8.8.1 Purpose of the RJC Message

The RJC message satisfies the following operational requirements:

- indicate the rejection by the controller of crossing clearance or a counter proposal in response to such a request for crossing clearance following the receipt of one of the following messages:
  - XRQ;
  - XAP.

- indicate the rejection by a controller at one unit of the transfer conditions proposed by the controller at the other unit in one of the following messages:
  - RAP;
  - RRV;
  - CDN;
  - RTI;
  - TIP;
  - RRQ;
  - ACT and REV, if either is found to be non-standard.

The RJC message can only be used in response to one of the above messages.

8.8.2 Message Contents

OLDI-RJC-10-M   The RJC message **shall** contain the following items of data:
- Message Type;
- Message Number;
- Message Reference.

OLDI-RJC-20-M   If bilaterally agreed, the RJC message **shall** contain the following item of data:
- Sector identifier.

8.8.3 Rules of Application

8.8.3.1 General

OLDI-RJC-30-M   The RJC message **shall** be sent as required in response to:
- a XAP, XRQ, RAP, RRV, CDN, RTI, TIP, RRQ message;
- an ACT or REV message found to be non-standard at the accepting unit.

OLDI-RJC-40-M   The RJC message **shall** terminate the system dialogue and any previously agreed co-ordination remains valid.

OLDI-RJC-50-O   The sector identifier **may** be included in a RJC message sent in response to a crossing request made using an XRQ message.

OLDI-RJC-60-R   Following the reception of an RJC message in response to a RAP, ACT, RRV, REV or CDN message, a new co-ordination sequence **should** be initiated, reflecting the telephone co-ordination where applicable.

8.8.3.2 Processing in the Receiving Unit

OLDI-RJC-70-M   If a corresponding message to which the RJC message refers is found, the rejection **shall** be indicated at the ATC position responsible for the co-ordination of the relevant flight.

OLDI-RJC-80-M   If a corresponding message to which the RJC message refers is found, an acknowledgement **shall** be returned.

OLDI-RJC-90-M   If no such message is found to be awaiting reply, or a discrepancy is present in the message which prevents processing, no acknowledgement **shall** be returned.

8.8.4   Acknowledgement of RJC

8.8.4.1 Acknowledgement

OLDI-RJC-100-M   The RJC message **shall** be acknowledged by the generation and transmission of a LAM message.

8.8.4.2 No Acknowledgement Cases

OLDI-RJC-110-M   If no LAM message is received as an acknowledgement for an RJC message, a warning **shall** be displayed at the ATC position responsible for the co-ordination of the flights.

8.8.5   Examples

8.8.5.1 ICAO

(RJCMC/E746E/MC324)

8.8.5.2 ADEXP

-TITLE **RJC**
-REFDATA
    -SENDER -FAC **MC**
    -RECVR -FAC **E**
    -SEQNUM **746**
-MSGREF
    -SENDER -FAC **E**
    -RECVR -FAC **MC**
    -SEQNUM **324**
-SECTOR **34**

9. Dialogue Procedure – Transfer of Communication

9.1 General

9.1.1 Introduction

This section of the Specification describes the facilities and messages that support the radar hand-over aspect of the transfer of control procedure. They shall be implemented where bilaterally agreed.

OLDI-TOC-10-M   Transfer of Communication facilities **shall not** be implemented unless the unit is utilising either the co-ordination facilities described for the basic procedure - mandatory messages and for the dialogue procedure - co-ordination.

9.1.2 Message Sequence

OLDI-TOC-20-M   Transfer of Communication message exchange, other than the Supplementary Data Message (SDM), **shall not** take place unless co-ordination is complete, i.e. an ACT or RAP dialogue has been completed by a LAM or ACP.
Note: *However, for the SDM message, the ACT or RAP dialogue has to be initiated.*

OLDI-TOC-30-M   An acknowledgement **shall** be inhibited whilst co-ordination is outstanding.

9.1.3 Transfer of Communications

OLDI-TOC-40-M   The method of signifying the actual change of communication of flights **shall** be bilaterally agreed between the two units concerned.

OLDI-TOC-50-M   The conditions **shall** be one of the following:
- the transferring unit sends a Change Of Frequency message (COF);
- the accepting unit sends a Manual Assumption of Communication message (MAS);
- both of the above.

OLDI-TOC-60-R   Both COF and MAS messages **should** be used between two adjacent air/ground data-link equipped ATC units.

OLDI-TOC-70-M   The method **shall** be agreed between the two units for each traffic flow.
Note: *Alternative methods may be used for different flows, e.g. one unit may generate COF messages for flights leaving its airspace and MAS messages for flights entering its airspace. In such a case it would not be necessary for the other unit to enter any messages to signify transfer of communication.*

9.2 Change of Frequency Message (COF)

9.2.1 Purpose of the COF Message

9.2.1.1 General

The COF is sent by the transferring unit to the accepting unit, to indicate that the flight has been instructed to contact the accepting controller.

The message may include the facility for the transferring controller to release the flight from the agreed transfer conditions when it has established radio communication with the accepting controller.

9.2.2 Message Contents

OLDI-COF-10-M The COF message **shall** contain the following items of data:
- Message Type;
- Message Number;
- Aircraft Identification.

OLDI-COF-20-M The COF message **shall** contain any of the following items of data,:
- Release Indication;
- Cleared Flight Level;
- Assigned Heading/Track or Direct Clearance;
- Assigned Speed;
- Assigned Rate of Climb/Descent.

OLDI-COF-30-M If bilaterally agreed, the COF message **shall** contain the following items of data:
- Position of the flight;
- Frequency.

OLDI-COF-35-O The COF message **may** contain any of the following items of data:
- Departure Aerodrome;
- Destination Aerodrome;

9.2.3 Rules of Application

9.2.3.1 General

OLDI-COF-40-M The COF message **shall** be manually initiated by the transferring controller.
Note: The earliest time or distance before the boundary at which a COF is sent can be bilaterally agreed.

OLDI-COF-50-M The COF message **shall** be used if, by bilateral agreement, the MAS message is not used.
Note: This requirement does not preclude the use of both COF and MAS messages upon bi-lateral agreement.

OLDI-COF-60-M If a COF message is sent before Transfer Initiation, the Transfer phase **shall** be initiated.
Note: A Transfer Initiation Message (TIM) is not required in addition to the COF.

OLDI-COF-70-M For a data-link equipped aircraft the COF message **shall** be automatically initiated by the transferring system, immediately at the same time as the VCI instruction "Contact" or "Monitor Frequency".

OLDI-COF-80-M In case the VCI instruction is not initiated for data-link equipped aircraft, the COF **shall** be manually initiated by the transferring controller.

OLDI-COF-90-M In case of not data link equipped aircraft, the COF **shall** be manually initiated by the transferring controller.

9.2.3.2 Processing in the Receiving Unit

OLDI-COF-100-M   The ATC system receiving a COF message **shall** attempt association with the corresponding flight plan.

OLDI-COF-110-M   The reception of the COF **shall** be indicated to the accepting controller without delay.

9.2.4   Acknowledgement of COF

9.2.4.1 Acknowledgement

OLDI-COF-120-M   If the COF message can be unambiguously associated with a flight plan, it **shall** be acknowledged by the generation and transmission of a LAM message.

OLDI-COF-130-M   If the COF message cannot be unambiguously associated with a flight plan, the acknowledgement **shall** be inhibited.

9.2.4.2 No Acknowledgement Cases

OLDI-COF-140-M   If no LAM message is received as an acknowledgement for a COF message, a warning **shall** be displayed at the appropriate ATC position.

9.2.5   Examples

```
-TITLE COF
-REFDATA
        -SENDER -FAC L
        -RECVR -FAC E
        -SEQNUM 030
-ARCID AMM253
-CFL
        -FL F230
-AHEAD 310
-ASPEED K0450
-RATE C20
-RATELIMIT MAX
-RELEASE F
-POSITION REF01
-REF
        -REFID REF01
        -PTID ALESO
        -BRNG 345
        -DISTNC 15
-FREQ 127000
```

9.3 Manual Assumption of Communications Message (MAS)

9.3.1 Purpose of the MAS Message

The MAS is sent by the accepting unit to the transferring unit indicating that two-way radio contact has been established with the flight.

9.3.2 Message Contents

OLDI-MAS-10-M   The MAS message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification.

OLDI-MAS-15-O   The MAS message **may** contain any of the following items of data:

- Departure Aerodrome;
- Destination Aerodrome.

9.3.3 Rules of Application

9.3.3.1 General

OLDI-MAS-20-M   The MAS message **shall** be manually initiated by the accepting controller.

OLDI-MAS-30-O   The MAS message **may** be automatically transmitted upon reception of an air / ground "Monitoring Frequency" message.

OLDI-MAS-40-M   The MAS message **shall** be used if, by bilateral agreement, the COF message is not used.
> *Note:*   *This requirement does not preclude the use of both COF and MAS messages upon bi-lateral agreement.*

9.3.3.2 Processing in the Receiving Unit

OLDI-MAS-50-M   The ATC system receiving a MAS message **shall** attempt association with the corresponding flight plan.

OLDI-MAS-60-M   The fact that the MAS has been received **shall** be presented immediately to the controller.

9.3.4 Acknowledgement of MAS

9.3.4.1 Acknowledgement

OLDI-MAS-70-M   If the MAS message can be unambiguously associated with a flight plan, it **shall** be acknowledged by the generation and transmission of a LAM message.

OLDI-MAS-80-M   If the MAS message cannot be unambiguously associated with a flight plan, the acknowledgement **shall** be inhibited.

9.3.4.2 No Acknowledgement Cases

OLDI-MAS-90-M   If no LAM message is received as an acknowledgement for an MAS message, a warning **shall** be displayed at the appropriate ATC position, as required.

9.3.5 Example

```
-TITLE MAS
-REFDATA
      -SENDER -FAC L
      -RECVR -FAC E
```

-SEQNUM **030**
-ARCID **DLH123**

10. Support to Air / Ground Data-Link

The ICAO manual (Document 9880) describing the AGDL applications, defines a service (CM forward) to provide the application addresses. This section defines an alternative to the CM-forward service for units which are implementing ATN data link application services.

10.1 Logon Forward Message (LOF)

10.1.1 Purpose

The LOF message is transmitted to provide the ATN logon parameters to the receiving data-link equipped unit, to allow the unit to use the data link applications (CM, CPDLC, ADS-C).

10.1.2 Message Contents

OLDI-LOF-10-M   The LOF message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification;
- Departure Aerodrome;
- Destination Aerodrome;
- Logon Type;
- ATN Logon Parameters.

10.1.3 Rules of Application

10.1.3.1 Transferring Unit

OLDI-LOF-20-M   One LOF message **shall** be sent for each data-link logged-on flight planned to cross the boundary.

OLDI-LOF-25-O   The LOF message **may** contain the following item of data:
- ATNB2 Logon Parameters.

10.1.3.2 Receiving Unit

OLDI-LOF-30-M   The ATC system receiving a LOF message **shall** attempt association with the corresponding flight plan.

OLDI-LOF-40-M   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, the content **shall** be included with the flight plan.

> ***Note:*** *A check of the 24 bit address obtained from an independent source is normally required for safety purposes. This source is anticipated to be in most cases the FPL. As a consequence, proper care should be taken for implementations that use the above check in order not to replace the 24 bit address received in the FPL with the one received in the LOF.*

OLDI-LOF-50-R   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing of the message and the sector responsible for accepting control of the flight can be identified, the logged-on status of the flight **should** be displayed at the appropriate working position.

OLDI-LOF-60-M   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, an acknowledgement **shall** be returned.

OLDI-LOF-70-M   If a corresponding flight plan is not found or a discrepancy is present in the message that would inhibit correct processing, the acknowledgement **shall** be inhibited.
> ***Note:*** *The LOF acknowledgment may not be provided in the case of unavailability of one of the local datalink services or message with incorrect syntax.*

10.1.3.3 Criteria for Message Transmission

OLDI-LOF-80-M   The LOF message **shall** be transmitted at or as soon as possible after the earlier of the times determined from the following:

- a parameter number of minutes before the estimated time at the COP;

> - the time at which the flight is at a bilaterally agreed distance from the COP.

OLDI-LOF-90-R   The LOF message **should** be transmitted after the flight has been notified to the receiving unit.

OLDI-LOF-100-M   The LOF generation parameter(s) **shall** be included in the LoA between the ATC units concerned.

OLDI-LOF-110-M   The LOF generation parameter(s) **shall** be variable based on the provisions of the LoA.

OLDI-LOF-120-R   The LOF generation parameters **should** be defined separately for each of the COPs.

10.1.3.4 Acknowledgement of LOF

OLDI-LOF-130-M   The LOF message **shall** be acknowledged by a LAM message.

OLDI-LOF-140-M   If no acknowledgement has been received within a bilaterally agreed parameter time, an air / ground data link contact request to the aircraft **shall** be initiated.

Note: The preliminary transmission of a CPDLC Next Data Authority message to the aircraft before the contact request may improve the transfer of the CPDLC connection as it allows the aircraft to accept a CPDLC connection request from the receiving ATS unit. However, if the CPDLC uplink message fails, the contact request must be sent. .

10.1.4 Examples

American Airlines, a Boeing 767-300ER operating as flight AAL9599 and registered as N678DL, from Washington to Athens, flying at FL330 at a true airspeed of 454 knots has logged on to Maastricht UAC. At a certain time before entering Reims airspace at entry point MEDIL, Maastricht UAC sends the "LOF" message to Reims UAC. The following are equivalent examples of the "LOF" message sent from MUAC to Reims UAC.

During Wizzair ATN B1+B2 flight 178 from Rome to Istanbul, a LOF message is sent from Skopje ACC to Sofia ACC.

10.1.4.1 ADEXP

10.1.4.1.1 ATN Flight

```
-TITLE LOF
-REFDATA
      -SENDER -FAC MC
      -RECVR -FAC E
      -SEQNUM 002
-ARCID AAL9599
-ADEP KIAD
-ADES LGAT
-AF ATN
-ARCADDR 47BDFB
-ATNLOGON
      -CMLTSP 414554440089649D000041435230303101010101
      -ADSQVLTSP
            -AGAPPQUALIFIER 0
            -AGAPPVERSION 00
      -CPCQVLTSP
            -AGAPPQUALIFIER 22
            -AGAPPVERSION 01
            -CPDLCADDRESS 414554440089649D000041435230303101011601
      -ATIQV
            -AGAPPQUALIFIER 3
            -AGAPPVERSION 00
```

> ***Note 1:*** *If an aircraft did not indicate that it wants to use one of the applications, the associated AGAPPVERSION is set to '00' and the associated application address field is omitted in the LOF.*

> ***Note 2:*** *The transmitting unit transmits the LOF message, containing the CPCQVLTSP with AGAPPQUALIFIER or '22' and its corresponding CPDLCADDRESS. The receiving data-link equipped unit will use whatever has been indicated in the LOF message.*

10.1.4.1.2 ATN B1 + B2 Flight

```
-TITLE LOF
-REFDATA
        -SENDER -FAC LWSS
        -RECVR -FAC LBSR
        -SEQNUM 047
-ARCID WZZ178
-ADEP LIRF
-ADES LTBA
-AF ATN
-ARCADDR ABC123
-ATNLOGON
        -CMLTSP 8183657500A49CD7000100004747313301111
        -ADSQVLTSP
                -AGAPPQUALIFIER 0
                -AGAPPVERSION 00
        -CPCQVLTSP
                -AGAPPQUALIFIER 22
                -AGAPPVERSION 01
                -CPDLCADDRESS 8183657500A49CD700010000474731330AAAA
        -ATIQV
        -AGAPPQUALIFIER 3
        -AGAPPVERSION 00
-ATNLOGONB2
        -ADSQVLTSP
                -AGAPPQUALIFIER 0
                -AGAPPVERSION 01
                -ADSADDRESS 8183657500A49CD7000100004747313301111
        -CPCQVLTSP
                -AGAPPQUALIFIER 22
                -AGAPPVERSION 02
                -CPDLCADDRESS 8183657500A49CD700010000474731330AAAA
```

10.2 Next Authority Notified Message (NAN)

10.2.1 Purpose

The NAN message satisfies the following operational requirements:

- Notify the receiving air/ground data link equipped ATC unit that it can initiate a Controller Pilot Data Link Communication (CPDLC) Start Request with the aircraft because the aircraft is authorised to accept a CPDLC connection request from the receiving air/ground data link equipped ATC unit.

10.2.2 Message Contents

OLDI-NAN-10-M   The NAN message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification;
- Departure Aerodrome;
- Destination Aerodrome.

10.2.3 Rules of Application

10.2.3.1 Transferring Unit

OLDI-NAN-20-M   One NAN message **shall** be sent for each eligible flight crossing the boundary.
Note: *The eligible flight is the one for which LOF message was sent to the downstream ATS unit and NDA message to the aircraft.*

10.2.3.2 Receiving Unit

OLDI-NAN-30-M   The ATC system receiving a NAN message **shall** attempt association with the corresponding flight plan.

OLDI-NAN-40-M   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, a Controller Pilot Data Link Communication (CPDLC) Start Request **shall** be initiated with the aircraft.

Note: *Whether a CPDLC (AEQualifier 22) Start Request is used depends on the data provided for a given aircraft and the local data link capabilities.*

OLDI-NAN-50-M   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, an acknowledgement **shall** be returned.

OLDI-NAN-60-M   If a corresponding flight plan is not found or a discrepancy is present in the message that would inhibit correct processing, the acknowledgement **shall** be inhibited.

OLDI-NAN-70-M   If no NAN message has been received within a bilaterally agreed parameter time, local air/ground data link procedures **shall** apply to initiate the Start Request.
Note 1: *Whether a CPDLC (AEQualifier 22) Start Request is used depends on the data provided for a given aircraft and the local data link capabilities.*
Note 2: *These local air/ground data link procedures define conditions and parameters under which it is operationally wanted to apply CPDLC with an equipped aircraft (e.g.: time parameter/distance before first sector or aircraft calling the first sector).*

10.2.3.3 Criteria for Message Transmission

OLDI-NAN-80-M   The NAN message **shall** be generated and transmitted after the Next Data Authority Request with the aircraft has been acknowledged by the airborne system.

Note: NAN is sent if the preceding LOF was acknowledged.

10.2.3.4 Acknowledgement of NAN

OLDI-NAN-90-M   The NAN message **shall** be acknowledged by a LAM message.

OLDI-NAN-100-M If no acknowledgement has been received within a specified time, local air/ground data link procedures **shall** apply.

10.2.4 Examples

10.2.4.1 ADEXP

10.2.4.1.1 ATN Flight
```
-TITLE NAN
-REFDATA
        -SENDER -FAC MC
        -RECVR -FAC E
        -SEQNUM 003
-ARCID AAL9599
-ADEP KIAD
-ADES LGAT
```

PART B – COMPLEMENTARY MESSAGES

11. Basic Procedure - Complementary Messages

11.1 General

11.1.1 Description of Requirement

This section describes facilities applicable to the basic procedure which are additional to those described in section 6 'Basic Procedure'.

11.1.2 Implementation

OLDI-COMP-20-M   When the BASIC PROCEDURE-COMPLEMENTARY MESSAGES are used based on bilateral agreement, the rules described in this section **shall** be applied.

11.2 SSR Code Assignment Message (COD)

11.2.1 Purpose of the COD Message

The Originating Region Code Allocation Method (ORCAM) is provided to permit a flight to respond on the same code to successive units within a participating area. Unless code allocation is performed centrally, e.g. by an ACC, airports may need to be individually allocated a set of discrete SSR codes. Such allocations are very wasteful of codes.

The COD message satisfies the operational requirement for the issue of a Mode A SSR code by one Air Traffic Service Unit to another for a specified flight when requested.

The COD message also satisfies the operational requirement to inform the transferring Air Traffic Service Unit of the next Mode A SSR code when the code assigned cannot be retained by the accepting Air Traffic Service Unit.

11.2.2 Message Contents

OLDI-COD-10-M	The COD message **shall** contain the following items of data: • Message type; • Message number; • Aircraft identification; • SSR mode and code; • Departure aerodrome; • Destination aerodrome.
OLDI-COD-20-M	If bilaterally agreed, the COD message **shall** contain the following item of data: • Message reference.

11.2.3 Rules of Application

OLDI-COD-30-M	A COD message **shall** be generated and transmitted automatically in response to a code assignment request received within a message.
OLDI-COD-40-M	The COD message **shall** be transmitted a parameter time before the boundary when bilaterally agreed.
OLDI-COD-50-M	The COD message **shall** be transmitted upon reception of an ABI or PAC message when bilaterally agreed.
OLDI-COD-60-M	The SSR code **shall** be the code being assigned to the flight.
OLDI-COD-65-O	If the assigned SSR code has changed, then a new COD message **may** be generated.
OLDI-COD-70-M	The approved saturation code, as specified in the Air Navigation Plan for the European Region, **shall** be inserted if a discrete code is not available.
OLDI-COD-80-M	If bilaterally agreed, the message reference containing the message number of the message to which the COD message is in response **shall** be included.
OLDI-COD-90-M	Acceptance of the SSR code by the unit receiving the COD message **shall** be assumed.

11.2.4 Acknowledgement of COD

11.2.4.1 Acknowledgement

OLDI-COD-100-M	Provided there is no discrepancy in the message that would inhibit correct processing, a LAM **shall** be returned.
OLDI-COD-110-M	If the message cannot be associated with a flight plan or if a discrepancy is found that inhibits correct processing of the message, the transmission of the LAM **shall** be inhibited.

11.2.4.2 No Acknowledgement Cases

OLDI-COD-120-M If no LAM message is received as an acknowledgement for a COD message, a warning **shall** be displayed at an appropriate position.

11.2.5 Examples

11.2.5.1 ICAO

(CODP/PO011PO/P007-AAL905/A0767-LFPO-KEWR)

11.2.5.2 ADEXP

-TITLE **COD**
-REFDATA
    -SENDER -FAC **P**
    -RECVR -FAC **PO**
    -SEQNUM **011**
-ADEP **LFPO**
-ADES **KEWR**
-ARCID **AAL905**
-SSRCODE **A0767**
-MSGREF
    -SENDER -FAC **PO**
    -RECVR -FAC **P**
    -SEQNUM **007**

11.3 Skip Communication Message (SCO)

11.3.1 Purpose

The Skip Communication message is sent by the accepting unit to indicate that communication with the flight is to pass directly to a sector other than the accepting sector.

Note: *SCO messages are not to be used to request that a flight be transferred to the next unit after the accepting unit.*

11.3.2 Message Contents

OLDI-SCO-10-M   The SCO message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification;
- Departure Aerodrome;
- Destination Aerodrome;
- Frequency.

OLDI-SCO-20-O   The SCO message **may** contain the following item of data:

- Sector identifier.

11.3.3 Rules of Application

11.3.3.1 General

OLDI-SCO-30-O   A SCO message **may** be initiated and transmitted after co-ordination is completed by the unit that will accept control of the flight.

OLDI-SCO-40-M   The frequency field **shall** contain the RTF on which the flight is to communicate with the accepting unit.

OLDI-SCO-50-M   If included, the sector identifier **shall** contain the identifier of the sector with which the flight is to communicate.

OLDI-SCO-60-M   The sector with which the flight is to communicate **shall** be notified when a Skip Communication message is sent.

Note: *This document does not specify when such notification should take place in relation to LAM reception. This may be decided locally.*

OLDI-SCO-70-M   Where Transfer of Communication facilities are in use as described in section 15 of this document, SCO message transmission **shall** be inhibited on transfer initiation.

Note: *It is the responsibility of the accepting unit to ensure that the SCO message is sent in sufficient time for the transferring controller to assimilate the information and transfer the aircraft in accordance with the SCO message.*

11.3.3.2 Cancellation of a SCO message

11.3.3.3 Implicit Cancellation

OLDI-SCO-80-M   The skip of the first sector in the accepting unit **shall** be cancelled, when:

- the COP, route of flight or co-ordinated level is amended;
- the co-ordination is abrogated.

Note: *An implicit SCO cancellation does not require the transmission of a Skip Cancellation message (SKC).*

OLDI-SCO-90-O   The skip of the first sector in the accepting unit **may** be re-applied by the issue of a further SCO message.

Note: *In these circumstances the accepting unit may send the message automatically, depending on local criteria.*

11.3.3.3.1 Explicit Cancellation

OLDI-SCO-100-O A SCO message **may** be cancelled before the transfer of communications by the use of a SKC message.

11.3.3.4 Processing on Receipt of a SCO Message

OLDI-SCO-110-M The ATC unit receiving an SCO message **shall** attempt association with the corresponding system flight plan.

OLDI-SCO-120-M If the SCO message can be unambiguously associated with a system flight plan, it **shall** be acknowledged by the generation and the transmission of a LAM message.

OLDI-SCO-130-M If the SCO message can be unambiguously associated with a system flight plan, the operational content of the SCO message **shall** be indicated to the transferring controller without delay.

OLDI-SCO-140-M If the SCO message cannot be associated with a system flight plan, the transmission of a LAM message **shall** be inhibited.

OLDI-SCO-150-R If the SCO message cannot be associated with a system flight plan, a warning **should** be displayed at an appropriate position.

OLDI-SCO-160-M A SCO message received after the initiation or receipt of any transfer of communication message (except SDM) **shall** be ignored.

11.3.3.5 Processing After Transmission of a SCO Message

OLDI-SCO-170-M If a LAM message is received which corresponds with the SCO message, the transfer conditions **shall** be made available to the sector of the accepting unit to which communication is to be transferred in addition to the entry sector.

OLDI-SCO-180-M If no LAM message is received as an acknowledgement for an SCO message, a warning **shall** be displayed at the accepting sector.

11.3.4 Example

```
-TITLE SCO
-REFDATA
      -SENDER -FACL
      -RECVR -FAC   E
      -SEQNUM 030
-ARCID AMM253
-ADES LIRF
-ADEP EGPF
-FREQ 127325
-SECTOR SA
```

11.4 Skip Cancellation Message (SKC)

11.4.1 Purpose

The message may be used when it is required to cancel an existing Skip Communication state for a flight after the skip of the first sector in the accepting unit has been established and before the transfer of communications.

11.4.2 Message Contents

OLDI-SKC-10-M   The SKC message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification;
- Departure Aerodrome;
- Destination Aerodrome.

11.4.3 Rules of Application

11.4.3.1 General

OLDI-SKC-20-O   A SKC message **may** be transmitted only after a Skip Communications has been established and before the transfer of communication.

OLDI-SKC-30-M   The sector with which the flight was previously to communicate **shall** be notified when a Skip Cancellation message is sent.
Note: *This document does not specify when such notification should take place in relation to LAM reception. This may be decided locally.*

11.4.3.2 Processing on Receipt of a SKC Message

OLDI-SKC-40-M   The ATC unit receiving an SKC message **shall** attempt association with the corresponding system flight plan.

OLDI-SKC-50-M   If the SKC message can be unambiguously associated with a system flight plan, it **shall** be acknowledged by the generation and the transmission of a LAM message.

OLDI-SKC-60-M   If the SKC message cannot be associated with a system flight plan, the transmission of a LAM message **shall** be inhibited.

OLDI-SKC-70-R   If the SKC message cannot be associated with a system flight plan, a warning **should** be displayed at an appropriate position.

OLDI-SKC-80-M   If the SKC message can be unambiguously associated with a system flight plan, the effect of the Skip Cancellation **shall** be indicated to the transferring controller without delay.

OLDI-SKC-90-M   On receipt of a Skip Communication Cancellation message, the frequency and identifier of the sector to which the flight is to communicate **shall** revert to the first sector in the receiving unit.

11.4.3.3 Processing After Transmission of a SKC Message

OLDI-SKC-100-O   If a LAM message is received which corresponds with the SKC message, the transfer conditions **may** be deleted from the sector of the accepting unit to which communication was to have been transferred prior to the cancellation of the SCO message.

OLDI-SKC-110-M   If no LAM message is received as an acknowledgement for an SKC message, a warning **shall** be displayed at the accepting sector.

11.4.4 Example

```
-TITLE SKC
-REFDATA
        -SENDER -FAC L
        -RECVR -FAC  E
        -SEQNUM 031
-ARCID AMM253
-ADES LIRF
-ADEP EGPF
```

11.5 Point Message (PNT)

11.5.1 Purpose

The Point message is sent to an adjacent unit to point out a flight in order to facilitate verbal co-ordination, irrespective of whether co-ordination has taken place.
The Point message causes the data block and/or the flight data to be highlighted to the controller. Where the flight is uncoordinated and possibly unknown, flight plan data is provided to be available at the sector at which the flight is to be highlighted.

11.5.2 Message Contents

OLDI-PNT-10-M   The PNT message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification;
- Departure Aerodrome;
- Destination Aerodrome;
- Sector Identifier.

OLDI-PNT-20-M   If bilaterally agreed, the PNT message **shall** contain any of the following items of data:

- Pointed Sector Identifier;
- Position of the Flight;
- SSR Mode and Code;
- Number and type of aircraft;
- Route.

11.5.3 Rules of Application

11.5.3.1 General

OLDI-PNT-30-M   A PNT message for a flight which is not co-ordinated **shall** contain the sector designator.

OLDI-PNT-40-M   The Point message **shall** be manually initiated by the transferring controller.

OLDI-PNT-50-M   The position of the flight **shall** be included for a flight that has not been co-ordinated.

OLDI-PNT-60-O   The position of the flight **may** be included for co-ordinated flights.

OLDI-PNT-70-M   The position of the flight, where inserted, **shall** be specified by the use of latitude/longitude unless it has been agreed bilaterally to use range and bearing from a known point.

OLDI-PNT-80-M   Time data **may** be included with position data.

OLDI-PNT-90-M   The time data **shall** include seconds.

OLDI-PNT-100-M   For an uncoordinated flight, the sector identifier **shall** contain the logical position identifier, e.g. sector identifier or approach control position, at which the data is to be presented/ highlighted.
Note: *For an uncoordinated flight, the sector identifier would normally be input via the HMI.*

OLDI-PNT-110-M   Where route data is included in the PNT message, it shall contain the TAS and requested level for the current segment plus the route, optionally amended to remove expired elements.
Note: *For an uncoordinated flight the transmission of the Point message does not remove the need for an Activate message; this is sent subject to the result of the verbal co-ordination and the update of flight data in the transferring unit.*

11.5.3.2 Processing in the Accepting Unit

OLDI-PNT-120-M An attempt **shall** be made to correlate the received flight data with the track for the flight.
Note: The flight data received by PNT message may be presented in some flight plan lists, subject of HMI requirements at the receiving unit.

OLDI-PNT-130-M Subject to the HMI requirements at the receiving unit and the area being displayed at the position concerned, the flight data **shall** be made available at the specified sector or the sector that will take control of the flight if one is not specified.

OLDI-PNT-140-M Subject to the HMI requirements at the receiving unit and the area being displayed at the position concerned, the flight data block for the flight **shall** be displayed and highlighted at the specified sector or the sector that will take control of the flight if one is not specified.
Note: The data is highlighted for a period of time determined by the receiving unit.

OLDI-PNT-150-M If the message can be processed successfully, including the identification of the sector to which the data is to be routed, a LAM **shall** be returned.

11.5.3.3 Processing in the Transferring Unit

OLDI-PNT-160-O If no LAM message is received as acknowledgement, a warning **may** be displayed at the sector which originated the Point.

OLDI-PNT-170-M When the verbal co-ordination is completed, the standard co-ordination procedure **shall** be initiated by the transmission of an ACT or RAP message.

11.5.4 Example

```
-TITLE PNT
-REFDATA
        -SENDER -FAC E
        -RECVR -FAC L
        -SEQNUM 005
-ARCID AMM253
-SSRCODE A7012
-ADEP LMML
-ADES EGBB
-ARCTYP B757
-NBARC 2
-ROUTE N0480F390 UT10 ALESO UT420 BUZAD UL10 HON
-POSITION REF01
-REF
        -REFID REF01
        -PTID ALESO
        -BRNG 345
        -DISTNC 15
-SECTOR TANGO
-PNTSECTOR UZ
```

11.6 Arrival Management Message (AMA)

11.6.1 Purpose

Arrival management requires the capability for an accepting unit to pass to the transferring unit information on the time that a flight is required to delay (lose) or gain in order to optimise the approach sequence.
The AMA message satisfies the following operational requirements in order to alleviate ATC workload in co-ordinating arriving flights:

- provide the transferring ATC unit with the time that the flight is to delay/gain at the arrival management metering fix;

- where procedures have been bilaterally agreed between the units concerned, provide the transferring ATC unit with a target time for the flight to be at the COP;

- when bilaterally agreed, provide the transferring unit with a speed advisory. The speed advisory needs to be communicated to the flight, prior to transfer.

11.6.2 Message Contents

OLDI-AMA-10-M   The AMA message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification;
- Departure Aerodrome;
- Destination Aerodrome;

and based on bilateral agreement, contain one or more of the following items of data:

- Metering Fix and Time over Metering Fix;
- Total Time to Lose or Gain;
- COP and AMAN time;
- Assigned speed;
- Application point;
- Route;
- Arrival sequence number.

Note: The item Route contains the requested routing.

11.6.3 Rules of Application

11.6.3.1 General

OLDI-AMA-20-M   The use of AMA messages **shall** be as specified in the Letters of Agreement between participating units governing the application of the arrival management procedure.

OLDI-AMA-30-M   The Letters of Agreement **shall** specify the airports for which arrival management procedures are to apply and whether the unit performing the arrival management function is authorised to issue a time at which eligible flights are to cross the boundary or COP.

OLDI-AMA-40-M   An AMA message **shall** be sent when it is required to notify the transferring unit that a flight eligible as specified in the LoA is required to absorb delay as the result of arrival management processing,.
Note: This document does not describe the basis for the calculation.

OLDI-AMA-50-M   The time associated with the metering fix **shall** contain the proposed time at which the flight should arrive at the point as calculated by the arrival management process.

OLDI-AMA-60-M   The ATC unit providing the arrival management service for the destination aerodrome **shall** generate the initial AMA message for a flight.

OLDI-AMA-70-M   An AMA message **shall** be sent to the preceding unit on the route of flight by a unit receiving an AMA message if bilaterally agreed.

OLDI-AMA-80-M   An additional AMA message **shall** be sent when the time at which the flight is required at the metering fix has changed from that in the previous message by a value at or greater than the time specified in the LoA.

OLDI-AMA-90-M   The Total Time to Lose or Gain **shall** contain the adjustment required at the Metering Fix.

11.6.3.2 AMAN Time

OLDI-AMA-100-M   The AMA message **shall** include the AMAN time if bilaterally agreed.

OLDI-AMA-110-M   If included, the time **shall** contain the proposed time at which the flight should arrive at the point as calculated by the arrival management process.

OLDI-AMA-120-M   An additional message **shall** be sent when AMAN time has changed from that in the previous AMA message by a time value at or greater than the value specified in the LoA.

11.6.3.3 Criteria for Message Transmission

OLDI-AMA-130-M   The initial message **shall** be sent when arrival management has calculated the position in an optimised sequence of a flight which is subject to a time adjustment strategy which involves at least one other ATC unit.

OLDI-AMA-140-M   The initial message **shall** be sent not later than a bilaterally agreed number of minutes before the AMAN time.

OLDI-AMA-150-R   With the exception of shorter distance flights, the AMA message **should** be sent after the receipt of an ABI message.

11.6.3.4 Processing in the Receiving Unit

OLDI-AMA-160-M   If the message can be associated with a flight and the content can be processed correctly, a LAM **shall** be returned.

OLDI-AMA-170-M   If the message can be associated with a flight and the content can be processed correctly, the operational content of the message **shall** be made known to the relevant controllers either directly or through the arrival management advisory process.

OLDI-AMA-180-M   If the message cannot be associated with a flight or processed correctly, the message **shall** be referred to a specified working position.

OLDI-AMA-190-M   If the message cannot be associated with a flight or processed correctly, the transmission of a LAM message **shall** be inhibited.

11.6.3.5 Processing in the Sending Unit

OLDI-AMA-200-M   The arrival management process **shall** be advised if no LAM message is received in acknowledgement of the AMA message.

11.6.4 Examples

1) Flight AZA354 from Rome to Madrid routes via the airspace of Barcelona ACC to that of Madrid ACC, initially estimating to be at COP CLS at 0950. This results in a time at metering fix PRADO of 1010. The flight is eligible for arrival management processing which calculates that an optimum time for the flight to leave PRADO is 10.22 (12 minutes delay).

- The first examples assume that no delay apportionment agreement exists; only the time to lose is passed to Barcelona ACC for onward transmission to the aircraft.

- In the second example, in accordance with a hypothetical bilateral agreement, Madrid must absorb 6 minutes of the delay. For the remainder, the AMA message proposes a 6 minute delay within Barcelona ACC airspace with a resultant time at CLS of 0956.

It should be noted that where the time at the COP is included in ICAO format, field 14 is located between fields 13 and 16.

2)   Flight THY667 from Berlin Tegel to Istanbul Ataturk routes via the airspace of Sofia ACC initially estimating to be at COP RIXEN at 1215. This results in a time at the metering fix within Istanbul TMA of 1225. This flight is subjected to the arrival management process that calculates that an optimum time for the flight to leave the metering fixes within the Istanbul TMA is 1230 (5 minute delay).

In accordance with a hypothetical DHMI – BULATSA Letter of Agreement, Sofia ACC can absorb a delay of 5 minutes. Therefore, the AMA message proposes a 5 minute delay within Sofia ACC with a resulting time at RIXEN of 1220.

3) Flight THY335 from Frankfurt to Istanbul Ataturk routes via the airspace of Sofia ACC initially estimating to be at COP RILEX at 1445. This results in a time at the metering fix within Istanbul TMA of 1500. This flight is subjected to the arrival management process that calculates that an optimum time for the flight to leave the metering fixes within the Istanbul TMA is 1508 (8 minute delay).

In accordance with a hypothetical DHMI – BULATSA Letter of Agreement, Sofia ACC can absorb a delay of 8 minutes. Therefore, the AMA message proposes 8 minute delay within Sofia ACC with a resultant time at RILEX of 1453. In order to achieve this, AMA message proposes the speed reduction to 420 knots starting at 50 NM range and 151 bearing from TIMUR.

11.6.4.1 ICAO

1.   (AMAM/BN112-AZA354-LIRF-LEMD-18/MFX/PRADO TOM/1022 TTL/12)

2.   (AMAM/BN112-AZA354-LIRF-CLS/0956-LEMD-18/MFX/PRADO TOM/1022 TTL/12)

11.6.4.2 ADEXP

```
1. AMA example with metering fix and time
-TITLE AMA
-REFDATA
        -SENDER -FAC M
        -RECVR -FAC BN
        -SEQNUM 112
-ARCID AZA354
-ADEP LIRF
-ADES LEMD
-MFX PRADO
-TOM 102200
-TTL 1200


2. AMA example with metering fix/time and COP/AMANTIME
-TITLE AMA
-REFDATA
        -SENDER -FAC M
        -RECVR -FAC BN
        -SEQNUM 112
-ARCID AZA354
-ADEP LIRF
-COP CLS
-AMANTIME 095600
```

-ADES **LEMD**
-MFX **PRADO**
-TOM **102200**
-TTL **1200**
-ASPEED **K0650**
-APPLIPT **REF05**
-REF
       -REFID **REF05**
       -PTID **CLS**
       -BRNG **270**
       -DISTNC **10**
-SPEEDLIMIT **EQL**
-ROUTE **N0480F390 UB4 BNE UB4 BPK UB3 HON**
-ARRSEQNUMBER **5**

3. AMA example with COP/AMANTIME
-TITLE **AMA**
-REFDATA
       -SENDER -FAC **LTBB**
       -RECVR -FAC **LBSR**
       -SEQNUM **1118**
-ARCID **THY667**
-ADEP **EDDT**
-COP **RIXEN**
-AMANTIME **122000**
-ADES **LTBA**

4. AMA example with COP/AMANTIME and constraint application
-TITLE **AMA**
-REFDATA
       -SENDER -FAC **LTBB**
       -RECVR -FAC **LBSR**
       -SEQNUM **152**
-ARCID **THY335**
-ADEP **EDDF**
-COP **RILEX**
-AMANTIME **145300**
-ADES **LTBA**
-ASPEED **N0420**
-APPLIPT **REF09**
-REF
       -REFID **REF09**
       -PTID **TIMUR**
       -BRNG **151**
       -DISTNC **50**
-SPEEDLIMIT **MAX**

12. Pre-departure Co-ordination

12.1 General

12.1.1 Types of Pre-Departure Co-ordination

The data exchange described in this document supports the following types of co-ordination before take off:
- Between a TWR unit and TMA (departure control); in many cases this is situated within the ACC;
- Between the first and second ACC's for flights where the flying time to the boundary is less than the time parameter used for ACT transmission.

In addition clearance data may or may not be required from the accepting unit.

12.1.2 Message Types

The Preliminary Activation (PAC) message is used where clearance data is not required. The Clearance Request (CRQ) and Clearance Response (CRP) messages are used to request and send clearance data.

The LAM and SBY messages as described in this document are also used.

12.1.3 Inclusion of Time Data

Both the PAC and the CRQ allow the inclusion of the following types of time data:
- An estimated take off time (ETOT);
- A time for and en-route point based an estimated take off time.

Typically co-ordination between TWR and TMA units would use the ETOT and between ACC's would use the same COP as is used in ACT messages. Co-ordination between a TMA unit and an ACC could use either.

12.1.4 SSR Code Assignment

Both the PAC and the CRQ permit the inclusion of either:
- The assigned SSR code; or
- A request for the receiving unit to assign a code.

12.1.5 No Operational Response Required

A PAC message with an ETOT includes the SSR code/request and aircraft capability data. A LAM is returned if the data can be routed to the accepting sector/position. A COD message is separately generated where a SSR code has been requested.

A PAC message used between ACC's contains estimate data, the SSR code and aircraft capability data.

12.1.6 Operational Response Required

A CRQ message may be sent either from:
- the TWR unit to the TMA unit to request a departure clearance;
- the TWR or TMA unit to the ACC to request a departure clearance; or
- one ACC to the next to request an acceptance level where a standard 'climb out' level is not specified by LoA.

The CRQ message has the same time and SSR options as a PAC but the response is a SBY. The request is normally referred to the appropriate controller for issue of a departure clearance. A CRP message is used for the return of the clearance. The notification of the SSR code, if requested, is performed separately by the use of a COD message unless it has been agreed bilaterally to include it in the CRP.

12.1.7 Action After Departure

An ACT message is sent when the flight has taken off when the PAC or CRQ included estimate data. This document does not specify the action to be taken where the ETOT was included. In some states the departure is sensed automatically by surveillance, thus avoiding the need for the take-off time to be notified. In other cases, some form of departure notification must be agreed locally. Options include:

- An ICAO DEP message or locally defined alternative;
- An ACT including special indicators defined locally to identify that the time is a take-off time.

OLDI-PDC-10-M   Where flights are to be co-ordinated before departure using the estimated take-off time, the action to be taken on departure **shall** be determined bilaterally.

12.2 Clearance Request Message (CRQ)

12.2.1 Purpose of the CRQ Message

The CRQ message satisfies the following operational requirements:

- request departure clearance from an aerodrome control to the next ATSU on the route of flight;
- request an acceptance level by the first ACC on the route of flight from the next unit;
- request the assignment of an SSR code from the unit to which the clearance request is sent, if required.

Note: *If only the SSR code is requested then this may be achieved using the PAC/COD messages.*

12.2.2 Message Contents

OLDI-CRQ-10-M   The CRQ message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification;
- Departure Aerodrome;
- Destination Aerodrome;
- Either Estimate Data or Estimated Take-Off Time;
- SSR Mode and Code.

OLDI-CRQ-20-M   If bilaterally agreed, the CRQ message **shall** contain any of the following items of data:

- Message Reference;
- Estimated Off-Block Time;
- Departure Runway;
- Requested Flight Level (if the estimate data are not in the message);
- Number and Type of Aircraft;
- SID or COP (if the estimate data are not in the message);
- Route.

12.2.3 Rules of Application

OLDI-CRQ-30-M   A CRQ message **shall** be sent for each flight that requires a clearance from another unit.

OLDI-CRQ-40-M   A CRQ message **shall** be sent by the Aerodrome/Approach unit to the next unit for each departing flight for which a departure clearance is required.

OLDI-CRQ-50-M   As bilaterally agreed, the message **shall** contain either:

- Estimated Take-Off Time; or
- Estimate Data.

OLDI-CRQ-60-M   When the message reference is included by bilateral agreement, it **shall** be included on second and subsequent CRQ messages only.

OLDI-CRQ-70-M   A revised CRQ message **shall** be sent if the departure runway, the SID, COP or route was included in the previous CRQ and the departure runway to be used by the flight has been changed or the SID, COP or route has been changed.

OLDI-CRQ-80-M   A CRQ message **shall** be sent by the first ACC on the route of flight to next unit for each departing flight for which an acceptance level is required.

OLDI-CRQ-90-M   A message sent in accordance with requirement OLDI-CRQ-80-M **shall** contain the estimate data (refer to OLDI-FC-ESTD-10-M).

OLDI-CRQ-100-M   The message **shall** contain either the assigned SSR code (the normal case) or a request for a code (exceptional case).

OLDI-CRQ-110-M A revised CRQ message **shall** be sent if, before departure, the Estimated Take-Off Time has changed by more than a parameter time.

OLDI-CRQ-120-M CRQ message generation **shall** be inhibited if a Preliminary Activation (PAC) message is to be sent.

12.2.4 Processing in the Receiving Unit

OLDI-CRQ-130-M The ATC system receiving a CRQ message **shall** attempt association with the corresponding flight plan.

OLDI-CRQ-140-M If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, the clearance request **shall** be made available at the appropriate position.

OLDI-CRQ-150-M If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, a Standby (SBY) message **shall** be returned.

OLDI-CRQ-160-M If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, and if the CRQ message includes a request for the assignment of an SSR code and a SBY has been issued in response to the CRQ, an SSR code **shall** be assigned.

OLDI-CRQ-170-M The assigned code shall be notified to the requesting unit by the use of a COD message unless it has been agreed bilaterally to include it in the CRP message.

OLDI-CRQ-180-M If a corresponding flight plan cannot be found, or a discrepancy is found that inhibits correct processing of the message, the transmission of a SBY message **shall** be inhibited.

OLDI-CRQ-190-M The data in a second or subsequent CRQ message **shall** supersede the data in the previous message.

OLDI-CRQ-200-M A Clearance Response (CRP) message **shall** be generated in response to a received CRQ which has not been superseded by a subsequent CRQ message.
Note: *No CRP is required in response to a CRQ message which is superseded as it is considered to be replaced by the second CRQ.*

OLDI-CRQ-210-O A CRQ **may** be issued to a downstream unit if further clearance is required before a CRP can be returned.

12.2.5 Acknowledgement of CRQ

12.2.5.1 Acknowledgement

The messages to be sent in response to a CRQ message are described earlier in this section.

12.2.5.2 No Acknowledgement

OLDI-CRQ-220-M If no SBY message is received as an acknowledgement for a CRQ message, a warning **shall** be displayed at the position in the ATC unit responsible for co-ordination with the next unit and verbal co-ordination shall be initiated.

12.2.5.3 No CRP Message

OLDI-CRQ-230-M If a CRP message is not received in response to a clearance request within a bilaterally agreed time interval, a warning **shall** be displayed at an appropriate position.

12.2.6 Action on Departure

12.2.6.1 En-route Point (COP) Format

Requirement OLDI-ACT-60-M identifies that an ACT message is sent following the departure of a flight previously co-ordinated by the use of a CRQ message using an en-route point. Where a co-ordination

dialogue procedure is in use, no further dialogue other than the CRP/CRQ takes place, i.e. such flights are ineligible for referral for acceptance by the receiving unit.

OLDI-CRQ-240-M   An ACT message **shall** be sent following the departure of a flight previously co-ordinated by the use of a CRQ message using an en-route point irrespective of whether the co-ordination conditions are standard or otherwise.

OLDI-CRQ-250-M   An ACT message for a flight previously co-ordinated by the use of a CRP message **shall** be ineligible for referral for acceptance by the accepting unit irrespective of whether the co-ordination conditions are standard or otherwise.

12.2.6.2 Estimated Take-off Time Format

See section 12.1.7.

12.2.7 Examples

12.2.7.1 ADEXP

12.2.7.1.1 Estimated Take-Off Time

```
-TITLE CRQ
-REFDATA
        -SENDER -FAC D
        -RECVR -FAC L
        -SEQNUM 002
-ARCID CRX922
-SSRCODE REQ
-ADEP EIDW
-ETOT 1638
-RWYDEP 03
-ADES LSZA
-SID EIDWY2F
-ROUTE N0480F390 UB4 BNE UB4 BPK UB3 HON
-MSGREF
        -SENDER -FAC D
        -RECVR -FAC L
        -SEQNUM 001
-RFL F150
-ARCTYP B757
-NBARC 2
-SID 5
-ROUTE N0480F390 UB4 BNE UB4 BPK UB3 HON
-EOBT 1634
```

12.2.7.1.2 Estimate Data

```
-TITLE CRQ
-REFDATA
        -SENDER -FAC D
        -RECVR -FAC L
        -SEQNUM 025
-ARCID EIN636
-SSRCODE 1376
-ADEP EIDW
-COORDATA
        -COP LIFFY
        -TO 1645
        -TFL F180
-ADES LSZA
```

12.3 Clearance Response Message (CRP)

12.3.1 Purpose of the CRP Message

The CRP message satisfies the following operational requirements where manual acceptance is not required:

- issue of departure clearance data from an ACC to an aerodrome/approach control unit;
- issue of an acceptance level to the first ACC on the route of flight from the next unit;
- assignment of an SSR code where requested with the request for departure clearance in place of the COD message.

It should be noted that the CRP is sent only in response to a clearance request. Unsolicited revisions to departure clearances and the cancellation of such clearances should be performed manually.

12.3.2 Message Contents

OLDI-CRP-10-M   The CRP message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Message Reference;
- Aircraft Identification;
- Departure Aerodrome;
- Destination Aerodrome;
- Transfer Flight Level contained in PROPFL field.

OLDI-CRP-20-O   The CRP message **may** contain any of the following items of data:

- SSR Mode and Code;
- SID or COP;
- Approved Take Off Time;
- Estimated Off-Block Time;
- Route;
- Frequency;
- Cleared Flight Level, if different from Transfer Flight Level.

12.3.3 Rules of Application

OLDI-CRP-30-M   One CRP message **shall** be sent as a response for each CRQ message received.

OLDI-CRP-40-M   The message reference **shall** contain the message number of the clearance request to which the message is in response.

OLDI-CRP-50-M   The assigned SSR mode and code **shall** be included if requested in the CRQ message and it has been agreed bilaterally to include it in the CRP message.

> ***Note:***   *Unless bilaterally agreed, the SSR code is notified by the use of a COD message.*

12.3.4 Insertion of Cleared Level

OLDI-CRP-60-M   The level to which the flight is to climb **shall** be inserted using the cfl primary field (flight level format only).

12.3.5 Processing in the Receiving Unit

OLDI-CRP-70-M   The ATC system receiving a CRP message **shall** attempt association with the corresponding flight plan.

OLDI-CRP-80-M   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, a LAM **shall** be returned.

OLDI-CRP-90-M   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, data supplied in the CRP message **shall** be made available to approach control and/or aerodrome control in accordance with the applicable operational procedures.

OLDI-CRP-100-M   If a corresponding flight plan cannot be found, or a discrepancy is found that inhibits correct processing of the message, no LAM **shall** be returned.

OLDI-CRP-110-M   The data in a second or subsequent CRP message **shall** supersede the data in the previous message.

OLDI-CRP-120-O   Data supplied in the CRP **may** be sent in a subsequent CRP to an upstream unit.

12.3.5.1 CRP Received After Second CRQ Sent

OLDI-CRP-130-M   A CRP message received after a second or subsequent CRQ message is sent **may** be displayed or ignored in accordance with the procedures at the unit concerned.
Note: *This requirement is included to cover the case of a second or subsequent CRQ crossing the CRP sent in response to the previous CRQ message; the response to the second CRQ remains outstanding.*

12.3.6 Acknowledgement of CRP

12.3.6.1 Acknowledgement

The messages to be sent in response to a CRP message are described earlier in this section.

12.3.6.2 No Acknowledgement

OLDI-CRP-140-M   If no LAM is received as an acknowledgement for a CRP message, a warning **shall** be displayed at the position in the ATC unit responsible for co-ordination with the upstream unit and verbal co-ordination shall be initiated.

12.3.7 Examples

12.3.7.1 CRP with TFL

```
        -TITLE CRP
        -REFDATA
                -SENDER -FAC D
                -RECVR -FAC L
                -SEQNUM 002
        -MSGREF
                -SENDER -FAC L
                -RECVR -FAC D
                -SEQNUM 014
        -ARCID CRX922
        -ADEP EIDW
        -PROPFL -TFL F290
        -ADES LSZA
        -SSRCODE A3546
        BFD-140-APPTOT 1021
        -EOBT 1004
        -ROUTE N0480F390 UB4 BNE UB4 BPK UB3 HON
        -FREQ 12725
        -SID LIFFY2F
```

12.3.7.2 CRP with CFL

```
        -TITLE CRP
        -REFDATA
                -SENDER -FAC LRBB
```

```
              -RECVR -FAC LBSR
              -SEQNUM 012
-MSGREF
       -SENDER -FAC LRBB
       -RECVR –FAC LBSR
       -SEQNUM 017
-ARCID ROT711
-ADEP LROP
-PROPFL -TFL F170
-CFL
       -FL F150
-ADES LBSF
-SSRCODE A3546
-APPTOT 1215
-EOBT 1211
```

13. Information to Third Parties

13.1 General

13.1.1 Description of Requirement

This section describes the data transfer applicable for the notification and co-ordination of flights between ATSUs where the information is being provided to make the receiving unit aware of the flights concerned but not for an intended later transfer of control. The messages are defined, in particular, for the notification of flights which are to operate adjacent to the boundary of the airspace under the jurisdiction of the ATSU to the ATSU having jurisdiction of the airspace on the other side of the boundary.

13.1.1.1 Flight Data Exchange

The flight data exchange consists of the exchange of a basic set of information when a flight is about to enter the area of interest of the concerned unit. The INF message allows the copying of co-ordination messages described in this document. Although in principle the data exchange should be automatic, in certain cases it may be desirable to initiate the exchange by a specific controller input.

13.1.1.2 Acknowledgement

All flight data exchange and airspace crossing functions are acknowledged automatically if they can be correctly received and processed in the addressed unit.

13.1.2 Implementation

OLDI-INFO-10-M　　　　When based on bilateral agreement the information to third parties message (INF) is implemented, the requirements described in this section **shall** be applied.

13.2 Information Message (INF)

13.2.1 Purpose

The INF message is used to provide information on specific flights to agencies not directly involved in the co-ordination process between two successive ATC units on the route of flight.

The INF message may be used to provide copies of messages and to communicate agreed co-ordination conditions to such agencies following a dialogue between controllers. For this purpose, INF messages may be generated by the systems at the transferring or accepting unit.

The message may also be used to provide information in relation to any point on the route of flight to an agency.

The format allows the communication of initial data, revisions and cancellations.

13.2.2 Message Contents

OLDI-INF-10-M   The INF message **shall** contain the following items of data:

- Message type;
- Message number;
- All items of operational data as contained in the original message or resultant co-ordination being copied;
- Reference Message Type.

13.2.3 Rules of Application

13.2.3.1 Message Types

The type(s) of message(s) to be duplicated by an INF message will be based upon users' requirements and sending unit capabilities.

OLDI-INF-20-M   Type(s) of message(s) and rules of application **shall** be agreed bilaterally.

13.2.3.2 Message Addressees

OLDI-INF-30-O   One or more INF message(s) **may** be transmitted for the same flight to one or more addressee(s).

13.2.3.3 Operational Content

OLDI-INF-40-M   The operational content of the INF message **shall** be in the format of one of the existing messages.

OLDI-INF-60-R   Sending units **should** be capable of forwarding the final agreed co-ordination conditions.
Note: *Conditions forwarded in an initial dialogue message (e.g. ACT, RAP, REV, RRV message) can be changed or rejected before the dialogue is completed.*

OLDI-INF-70-R   The INF message **should** be sent immediately, or at a time related to the time at a point, which is agreed bilaterally with the receiving agency.

13.2.4 Acknowledgement of INF

OLDI-INF-80-O   The INF message **may** be acknowledged dependent on the co-ordination partner by generating and transmitting a LAM message.

OLDI-INF-90-R   Subject to bilateral agreement between the units concerned, if no LAM message is received as an acknowledgement for an INF message, a warning **should** be displayed at an appropriate position.

13.2.5 Examples

13.2.5.1 Example 1

A flight with callsign BAW011, B747 from EGLL to OMDB at FL290, requesting FL410, is estimating Koksy (KOK) VOR at 1905, responding on A5437, proceeding via UG1 and UB6. An ACT message is sent by London to Maastricht for the flight. A copy is sent from London to a unit identified as IT.
The following give examples of the INF message.

13.2.5.1.1 ICAO

(INFL/IT112-BAW011/A5437-EGLL-KOK/1905F290-OMDB-9/B747/H-15/N0490F410 DVR KOK UG1 NTM UB6 KRH-18/MSG/ACT)

13.2.5.1.2 ADEXP

```
-TITLE INF
-REFDATA
        -SENDER -FAC L
        -RECVR -FAC IT
        -SEQNUM 112
-ARCID BAW011
-SSRCODE A5437
-ADEP EGLL
-COORDATA
        -PTID KOK
        -TO 1905
        -TFL F290
-ADES OMDB
-ARCTYP B747
-ROUTE N0490F410 DVR UG1 KOK NTM UB6 KRH
-MSGTYP ACT
```

13.2.5.2 Example 2

A previously co-ordinated flight with call-sign CPT1275 from CYMX to LKPR is no longer planned to enter the airspace of the unit due to a change of route. The cancellation is notified by sending a copy of the MAC message in the format of an INF message.
The following give examples of the INF message.

13.2.5.2.1 ICAO

(INFL/IT117-CPT1275-CYMX-KOK-LKPR-18/STA/INIRTE MSG/MAC)

13.2.5.2.2 ADEXP

```
-TITLE INF
-REFDATA
    -SENDER -FAC L
    -RECVR -FAC IT
    -SEQNUM 117
-ADEP CYMX
-COP KOK
-ADES LKPR
-ARCID CPT1275
-CSTAT
    -STATID INI
    -STATREASON RTE
-MSGTYP MAC
```

14. Dialogue Procedure - Co-ordination

14.1 General

14.1.1 Introduction

The dialogue procedure provides facilities for communication and negotiation between controllers in the co-ordination phase and for communication in the transfer phase.

This section describes messages used in the dialogue procedure in the co-ordination phase where the conditions of transfer are planned. Those messages for the transfer phase where the handover of the flight is accomplished are described in section 15.

Procedures for the two phases are not dependent on each other; they can be implemented individually or together.

A number of additional messages are introduced and the capability for either partner to initiate a dialogue is supported.

The co-ordination dialogue procedure allows the identification of:

- transfers that are in accordance with LoAs and can be accepted automatically; and
- those which require to be referred to the controller at the receiving unit for a decision regarding acceptance.

This procedure also allows the interpretation of the LoAs within the two systems to be monitored and for any discrepancy between them to be identified.

14.1.2 The Filter

14.1.2.1 General

The co-ordination dialogue procedure requires that systems identify whether or not transfers are in accordance with LoAs.

The process which checks such compliance is referred to in this document as "the filter". The database used for the filter will include the following, if required:

- agreed co-ordination points;
- eligible (or ineligible) flight levels which may also be associated with the co-ordination points;
- aerodromes of departure;
- destinations;
- agreed direct routes;
- time and/or distance limits prior to the COP, after which any co-ordination message is considered non-standard;
- any other conditions, as bilaterally agreed.

All items in this list may be combined to define more complex conditions.

OLDI-DIA-10-M	In the dialogue procedure for co-ordination, the term "standard conditions" **shall** be interpreted as "in accordance with the LoA".
OLDI-DIA-20-M	In the dialogue procedure for co-ordination, the term "non-standard conditions" **shall** be interpreted as "not in accordance with the LoA".
OLDI-DIA-30-M	Unless bilaterally agreed, messages sent by transferring units for co-ordinations which are known to be standard **shall** utilise different message types from those for which the conditions are non-standard.

14.1.2.2 Rules for the Transferring Unit

OLDI-DIA-40-M   The filter in the transferring unit **shall** review the transfer conditions that are about to be sent to the accepting unit.

OLDI-DIA-50-R   If the transfer conditions are found to be non-standard, the fact **should** be drawn to the attention of the transferring controller, for confirmation or modification.

14.1.2.3 Rules for the Accepting Unit

OLDI-DIA-60-O   If bilaterally agreed, all ACT and REV messages **may** be checked against the filter.

OLDI-DIA-70-O   If the check indicates that the received transfer conditions are non-standard and it is bilaterally agreed, they **may** be referred to the controller for a decision, otherwise they will be accepted automatically.

14.1.2.4 Synchronisation of the Filters

The use of different messages for standard and non-standard transfer conditions allows the identification of any discrepancy between standard conditions as held in the systems at the transferring and accepting units.

The identification in the accepting unit of non-standard transfer conditions in a message used to co-ordinate only standard transfers will signify a discrepancy between the two filters. Such discrepancies should be resolved for the effective operation of the dialogue procedure.

14.1.3 Message Sequence

14.1.3.1 General

Certain rules require to be followed to ensure that co-ordination is complete before any revisions or transfer of control message exchange takes place and also to ensure that controllers at both units do not simultaneously make proposals on the same flight.

OLDI-DIA-80-M   An ATC unit **shall** only transmit or acknowledge receipt of a Revision (REV or RRV) message for a flight when it is in the co-ordinated state, i.e. an ACT or RAP dialogue has been completed by a LAM or ACP.

OLDI-DIA-90-M   CDN messages **shall** only be eligible for transmission by the accepting unit.

OLDI-DIA-100-M   CDN messages **shall** only be transmitted and acknowledged as part of a dialogue initiated by the receipt of an Activate (ACT, RAP) or Revision (REV or RRV) message or when the flight is in the co-ordinated state.

14.1.4 Simultaneous Message Handling

14.1.4.1 General

OLDI-DIA-110-M   A unit involved in a co-ordination or transfer message exchange for a flight **shall not** initiate a further co-ordination or transfer message exchange for the same flight with the same unit until either a LAM, ACP or RJC has been received, or a time-out has been reached.
   Note: *It is possible for a CDN message to cross with a REV, RRV or MAC message for the same flight sent from the transferring unit. This situation may be identified in the transferring unit by the CDN arriving before the acknowledgement for the transmitted co-ordination message and in the accepting unit by the message from the transferring unit arriving before the acknowledgement of the CDN.*

OLDI-DIA-120-M   When a CDN message crosses with a REV, RRV or MAC message for the same flight sent from the transferring unit, the acknowledgement of the CDN message **shall** be inhibited and the REV, RRV or MAC message processed.

14.1.5 Reject Handling

The RJC message terminates a system dialogue. A new system co-ordination must be initiated which reflects the telephone co-ordination where applicable.

14.1.6 Operational Reply Time-out

14.1.6.1 General

OLDI-DIA-130-M   A time-out mechanism **shall** be applied at the sending and at the receiving units for the reply to messages that are referred to the controller.

OLDI-DIA-140-M   The duration of these time-outs **shall** be bilaterally agreed.

OLDI-DIA-150-M   The expiry of the time-out at the initiating centre **shall** result in a warning being output to the initiating controller, to indicate the need to initiate a telephone co-ordination.

OLDI-DIA-160-R   A warning **should** be displayed to the ATC position at the accepting unit responsible for the flight before the time-out for the operational reply has expired.

OLDI-DIA-170-R   The warning **should** allow for the transmission time of the reply.

OLDI-DIA-180-M   Systems **shall** be able to process replies which are received after the expiry of the time-out, by rejecting them or accept them without a provision of LAM.

14.1.7 Implementation

14.1.7.1 General

The dialogue procedures address two phases, namely the co-ordination phase and the transfer phase. The dialogue in the two phases uses different messages and the required transaction times are different. The co-ordination messages are specified in ICAO and ADEXP formats, the transfer of control messages only in ADEXP.

The minimum HMI requirements for the co-ordination dialogue are different from those for the transfer dialogue:

- the transfer dialogue addresses primarily the executive control function and requires a fast and user-friendly HMI;
- the co-ordination dialogue is not as time-critical and therefore its HMI requirements are of a lower order.

OLDI-DIA-190-M   The dialogue procedure **shall** be implemented using one of the following alternative scenarios:

- co-ordination phase dialogue procedure plus any complementary messages as bilaterally agreed;

- basic co-ordination procedure and transfer phase dialogue procedure;

- co-ordination and transfer phase dialogue procedure plus any complementary co-ordination messages as bilaterally agreed.

OLDI-DIA-200-M   The scenario used for the implementation **shall** be bilaterally agreed.

14.2 Activate Message (ACT)

14.2.1 Purpose of the ACT Message

The purpose of the ACT Message is described in section 6.3.1. In a dialogue procedure, the ACT message is used to meet these requirements provided that the transfer conditions for the flight are standard and the transferring controller does not require to refer the flight to the accepting controller for acceptance.

14.2.2 Message Contents

OLDI-ACT-510-M   The contents of the ACT message used in the dialogue procedure **shall** be the same as described for the ACT message in the basic procedure.

14.2.3 Rules of Application

14.2.3.1 General

The rules of application are as described for the ACT message in section 6.3 with the exception of the special rules described in this section.

OLDI-ACT-520-M   An ACT message **shall** be sent for a flight with standard transfer conditions which the transferring controller does not require to be referred to the accepting controller.
Note: If these requirements do not apply, a RAP is sent (see section 14.3 - Referred Activate Proposal Message (RAP)).

OLDI-ACT-530-R   A new co-ordination procedure **should** be initiated if a Reject Co-ordination (RJC) message is returned in response to an ACT message.

14.2.3.2 Processing in the Receiving Unit

The message is checked against the filter to confirm that the proposed conditions are standard.

OLDI-ACT-540-M   The message **shall** be processed as a RAP message if the transfer conditions are found to be non-standard.

OLDI-ACT-550-M   ACT messages containing transfer conditions found to be standard **shall** be processed in accordance with the rules of application in the receiving unit for the ACT message in the basic procedure.

OLDI-ACT-560-M   If the corresponding flight plan is found and a discrepancy is found that inhibits correct processing of the message and the sector responsible for accepting control of the flight can be identified, the operational content of the message **shall** be displayed at the appropriate working position.

OLDI-ACT-570-M   If the corresponding flight plan is found and a discrepancy is found that inhibits correct processing of the message and the sector responsible for accepting control of the flight can be identified, an acknowledgement **shall** be returned.

OLDI-ACT-580-M   If a corresponding flight plan cannot be found and the sector responsible for accepting control of the flight can be identified and either the transfer conditions are found to be non-standard or there is insufficient information available to identify whether or not the transfer conditions are standard, the operational content of the message **shall** be displayed at the sector responsible for accepting control of the flight.

OLDI-ACT-590-M   If a corresponding flight plan cannot be found and the sector responsible for accepting control of the flight can be identified and either the transfer conditions are found to be non-standard or there is insufficient information available to identify whether or not the transfer conditions are standard, a SBY message **shall** be returned.

OLDI-ACT-600-M   If a corresponding flight plan cannot be found and the sector responsible for accepting control of the flight can be identified and either the transfer conditions are found to be non-standard or there is insufficient information available to identify whether or not the transfer conditions are standard, a system flight plan **shall** be created.

OLDI-ACT-610-M   If a corresponding flight plan cannot be found and the sector responsible for accepting control of the flight can be identified and either the transfer conditions are found to be non-standard or there is insufficient information available to identify whether or not the transfer conditions are standard, the dialogue **shall** continue in accordance with that specified for a RAP message.

OLDI-ACT-620-M   In all other cases an acknowledgement **shall** be inhibited.

OLDI-ACT-630-R   If the transfer conditions in an ACT message are found to be non-standard (there is a discrepancy between the filters in the two systems), the fact that the ACT is non-standard **should** be drawn to the attention of supervisory staff in order that the discrepancy be resolved.

14.2.4 Acknowledgement of ACT

14.2.4.1 Acknowledgement

OLDI-ACT-640-M   In a dialogue procedure an ACT message **shall** be acknowledged by:

- a LAM if the transfer conditions are found to be standard;
- a SBY message in all other cases.

OLDI-ACT-650-M   When a LAM has been received, the operational contents of the ACT message **shall** become operationally binding to both of the ATC units.

OLDI-ACT-660-O   Where bilaterally agreed, an ACP **may** be used in place of a LAM to indicate the acceptance of an ACT containing standard transfer conditions by the accepting unit.

14.2.4.2 No Acknowledgement Cases

OLDI-ACT-670-M   If no acknowledgement is received for an ACT message, a warning **shall** be displayed at the ATC position responsible for the co-ordination of the flight.

14.3 Referred Activate Proposal Message (RAP)

14.3.1 Purpose of the RAP Message

The RAP message satisfies the following operational requirements, in addition to those specified for the ACT message in section 6.3:

- the proposal by the transferring controller and referral to the accepting controller of flights with non-standard transfer conditions;
- allow the transferring controller, if he/she requires to do so, to force the referral to the accepting controller of standard transfer conditions for a specific flight.

14.3.2 Message Contents

OLDI-RAP-10-M   The contents of the RAP message **shall** be the same as described for the ACT message in the basic procedure.

OLDI-RAP-20-M   If bilaterally agreed, the RAP message **shall** contain the following data:

- Manual Referral Reason.

OLDI-RAP-25-O   The RAP message **may** contain the following data:

- Direct Clearance;

14.3.3 Rules of Application

14.3.3.1 General

OLDI-RAP-30-M   A RAP message **shall** be sent in place of the ACT message for flights crossing the boundary meeting one of the following conditions:

- the transferring system has determined the transfer conditions are non-standard;
- the transferring controller has indicated that the proposed transfer conditions are to be referred to the accepting controller.

OLDI-RAP-40-M   The operational contents of the RAP message due to be transmitted **shall** be displayed at the working position responsible for the co-ordination of the flight prior to the actual transmission.

OLDI-RAP-50-R   The time when the RAP message is transmitted automatically **should** be displayed together with its contents.

OLDI-RAP-60-M   The relevant working position **shall** be notified of the transmission of the RAP message.

14.3.3.2 Processing in the Receiving Unit

OLDI-RAP-70-M   The ATC system receiving a RAP message **shall** attempt association with the corresponding flight plan.

OLDI-RAP-80-M   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, the operational contents **shall** be referred to the accepting controller.

OLDI-RAP-90-M   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, an SBY message **shall** be returned.

OLDI-RAP-100-R   An indication of the reason for the referral (non-standard conditions or manual referral) **should** be included.

OLDI-RAP-110-M   If the message cannot be associated with a flight plan, or a discrepancy is found that inhibits correct processing of the message, then the operational content of the message **shall** be displayed at the appropriate working position.

OLDI-RAP-120-M   If the message cannot be associated with a flight plan, or a discrepancy is found that inhibits correct processing of the message, then an acknowledgement **shall** be returned.

OLDI-RAP-130-M   If the message cannot be associated with a flight plan, or a discrepancy is found that inhibits correct processing of the message, then a flight plan **shall** be created.

OLDI-RAP-140-M   In all other cases the acknowledgement of the RAP message **shall** be inhibited.

14.3.3.3 Criteria for Message Transmission

OLDI-RAP-150-M   When it is used to force the referral of a proposed co-ordination with standard transfer conditions to the accepting controller, the RAP **shall** be initiated manually by the transferring controller and transmitted immediately.

OLDI-RAP-155-R   Upon a change in the sequence of concerned ATS units, a delay **should** be applied between the MAC transmission to the unit to which co-ordination had previously been effected for the flight and the initiation of RAP to the new unit.

OLDI-RAP-160-R   Manual triggering of a RAP message before the calculated time of transmission **should** be allowed at the position responsible for co-ordination of the flight.

OLDI-RAP-170-M   The time/distance before the boundary at which RAP messages are automatically transmitted **shall** be the same as for the ACT messages.

14.3.4 Acknowledgement of RAP

14.3.4.1 Acknowledgement

OLDI-RAP-180-M   The RAP message **shall** be acknowledged by the generation and transmission of an SBY message.

14.3.4.2 No Acknowledgement Case

OLDI-RAP-190-M   If no SBY message is received as an acknowledgement for a RAP message, a warning **shall** be displayed at the ATC position responsible for the co-ordination of the flight.

14.3.5 Operational Reply to RAP

OLDI-RAP-200-O   The accepting controller **may** either accept, counter-propose or reject transfer conditions.

14.3.5.1 Acceptance

OLDI-RAP-210-M   When the accepting controller elects to accept the proposed transfer conditions, an ACP message **shall** be returned.
Note: *As soon as the ACP message has been received, the RAP message data becomes operationally binding to both of the ATC units.*

OLDI-RAP-220-M   The co-ordinated transfer conditions and the fact that the ACP has been received **shall** be presented to the transferring controller.

14.3.5.2 Counter-Proposal

OLDI-RAP-230-M   When the accepting controller elects to counter-propose transfer conditions, a CDN message shall be returned.

OLDI-RAP-240-R   When the accepting controller elects to reject the proposed transfer conditions, an RJC message **should** be returned.
Note: *A new co-ordination process should then be initiated.*
        In most cases the new co-ordination will be with a different unit.

14.3.6 Examples

14.3.6.1 ICAO

(RAPE/L022-AMM253/A7012-LMML-ALESO/1226F350-EGBB-9/B757/M)

14.3.6.2 ADEXP

-TITLE **RAP**
-REFDATA
    -SENDER -FAC **E**
    -RECVR -FAC **L**
    -SEQNUM **022**
-ARCID **AMM253**
-SSRCODE **A7012**
-ADEP **LMML**
-COORDATA
    -PTID **ALESO**
    -TO **1226**
    -TFL **F350**
-ADES **EGBB**
-ARCTYP **B757**
-REASON **MANUAL**

14.4 Revision Message (REV)

14.4.1 Purpose of the REV Message

The purpose of the REV message is described in section 6.4.1. In a dialogue procedure, the REV message is used to meet these requirements provided that the transfer conditions for the flight are standard and the transferring controller does not require to refer to the flight to the accepting controller for acceptance.

14.4.2 Message Contents

OLDI-REV-510-M   The contents of the REV message used in the dialogue procedure **shall** be the same as described for the REV message in the basic procedure.

14.4.3 Rules of Application

14.4.3.1 General

OLDI-REV-520-O   One or more REV messages **may** be sent to the unit to which a flight has been currently co-ordinated by the use of an Activate or RAP message.

OLDI-REV-530-M   REV messages **shall** be sent under the conditions specified for the REV message in the basic procedure for flights with standard transfer conditions.

14.4.3.2 Initiation of Transmission

OLDI-REV-540-M   The REV message **shall** be transmitted immediately following a detection of a change in the co-ordination data required to be co-ordinated specified for the REV message in the basic procedure.

14.4.3.3 Processing in the Receiving Unit

OLDI-REV-550-M   If a corresponding flight plan is found in the co-ordinated state and no discrepancy is found that would inhibit correct processing of the message, the REV message **shall** be acknowledged.

OLDI-REV-560-M   If a corresponding flight plan is not found in the co-ordinated state or discrepancy is found that would inhibit correct processing of the message, then the acknowledgement **shall** be inhibited.

OLDI-REV-570-M   The transfer conditions **shall** be examined to ensure that they are standard.

OLDI-REV-580-M   If the transfer conditions are found to be not standard they **shall** be presented to the accepting controller.

OLDI-REV-590-M   If the proposed transfer conditions are found to be standard, they **shall** be included with the flight plan.

OLDI-REV-600-M   If the proposed transfer conditions are found to be standard, the required data **shall** be output at operational ATC and other positions as appropriate.

OLDI-REV-610-R   If the transfer conditions in an REV message are found to be non-standard (there is a discrepancy between the filters in the two systems), the fact that the REV is non-standard **should** be drawn to the attention of supervisory staff in order that the discrepancy be resolved.

14.4.4 Acknowledgement of REV

14.4.4.1 Acknowledgement

OLDI-REV-620-M   If the REV message is to be acknowledged, it **shall** be acknowledged by:

- a LAM message if the transfer conditions are found to be standard;
- a SBY message if the transfer conditions are found to be non-standard.

OLDI-REV-630-M   When a LAM has been received, the operational contents of the REV message **shall** become operationally binding to both of the ATC units.

OLDI-REV-640-O   Where bilaterally agreed, an ACP **may** be used in place of a LAM to indicate the acceptance by the accepting unit of a REV containing standard transfer conditions.

14.4.4.2 No Acknowledgement Cases

OLDI-REV-650-M   If no acknowledgement is received for a REV message, a warning **shall** be displayed at the ATC position responsible for the co-ordination of the flights.

14.4.5 Operational Reply to REV

As the REV message is used to send standard transfer conditions, it will normally be accepted by the system in the accepting unit.

OLDI-REV-660-M   If the transfer conditions are found to be non-standard by the filter in the accepting unit, the message **shall** be processed as an RRV message.

14.5 Referred Revision Proposal Message (RRV)

14.5.1 Purpose of the RRV Message

The RRV message shall provide for revision of previously sent and agreed transfer conditions in the following cases:

- when the proposed transfer conditions in the revision are non-standard;

- when the proposed revision is standard, but the transferring controller wants to refer the revision to the accepting controller.

14.5.2 Message Contents

OLDI-RRV-10-M   The contents of the RRV message **shall** be the same as described for the REV message in the basic procedure.

OLDI-RRV-20-M   If bilaterally agreed, the RRV message **shall** contain the following data:

- Manual Referral Reason.

OLDI-RRV-25-O   The RRV message **may** contain the following data:

- Direct Clearance;

14.5.3 Rules of Application

14.5.3.1 General

OLDI-RRV-30-M   One or more RRV messages **shall** be sent, in place of REV messages, for each revision, if either:

- the transferring system has determined the transfer conditions are non-standard; or

- the transferring controller has indicated that the proposed transfer conditions are to be referred to the accepting controller. This use of the RRV is optional.

14.5.3.2 Initiation of Transmission

OLDI-RRV-40-M   The RRV message **shall** be transmitted immediately following the detection of a change in the co-ordination data or when manually initiated.

14.5.3.3 Processing in the Receiving Unit

OLDI-RRV-50-M   If a corresponding flight plan is found in the co-ordinated state and no discrepancy is found that would inhibit correct processing of the message, then the RRV message **shall** be acknowledged.

OLDI-RRV-60-M   If no corresponding flight plan is found in the co-ordinated state or a discrepancy is found that would inhibit correct processing of the message, the acknowledgement of the message **shall** be inhibited.

OLDI-RRV-70-M   The proposed transfer conditions **shall** be displayed at the ATC position responsible for the co-ordination of the flight.

OLDI-RRV-80-R   An indication of the reason for the referral (non-standard conditions or manual referral) **should** be included.

14.5.4 Acknowledgement of RRV

14.5.4.1 Acknowledgement

OLDI-RRV-90-M   The message **shall** be acknowledged by the generation and transmission of an SBY message.

14.5.4.2 No Acknowledgement Cases

OLDI-RRV-100-M   If no SBY message is received as an acknowledgement for an RRV message, a warning **shall** be displayed at the ATC position responsible for the co-ordination of the flight.

14.5.5 Operational Reply to RRV

The accepting controller can either accept, counter-propose or reject an RRV message.

14.5.5.1 Acceptance

OLDI-RRV-110-M   When the accepting controller elects to accept the proposed amendment to the agreed transfer conditions, an ACP message **shall** be returned.

14.5.5.2 Counter-proposal

OLDI-RRV-120-M   When the accepting controller elects to counter-propose transfer conditions, a CDN message **shall** be returned.

14.5.5.3 Rejection

OLDI-RRV-130-M   When the accepting controller elects to reject the proposed amendment to the agreed transfer conditions, an RJC message **shall** be returned.

OLDI-RRV-140-M   When the accepting controller elects to reject the proposed amendment to the agreed transfer conditions, a new co-ordination process **shall** be initiated.

14.5.6 Examples

14.5.6.1 ICAO

(RRVE/L059-AMM253-LMML-ALESO/1226F310-EGBB)

14.5.6.2 ADEXP

```
-TITLE RRV
-REFDATA
      -SENDER -FAC E
      -RECVR -FAC L
      -SEQNUM 059
-ARCID AMM253
-ADEP LMML
-COORDATA
      -PTID ALESO
      -TO 1226
      -TFL F310
-ADES EGBB
-REASON MANUAL
```

14.6 Co-ordination Message (CDN)

14.6.1 Purpose of the CDN Message

The CDN message satisfies the following operational requirements:

- to forward a counter proposal from the accepting controller to the transferring controller as a reply to an ACT, a RAP, a REV or an RRV message;

- to initiate a proposed modification to agreed transfer conditions by the accepting controller to the transferring controller.

14.6.2 Message Contents

OLDI-CDN-10-M   The CDN message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Message Reference (only if in response to another message);
- Aircraft Identification;
- Departure Aerodrome;
- Destination Aerodrome.

OLDI-CDN-20-M   If bilaterally agreed, the CDN message **shall** contain the following items of data:

- Estimate Data (if an ICAO message) or Proposed Transfer Flight Level (if an ADEXP message);
- Route or Direct Routing Request.

Note: *The item Route contains the requested routing.*

14.6.3 Rules of Application

14.6.3.1 General

OLDI-CDN-30-M   The CDN message **shall** be initiated by the accepting controller only.

OLDI-CDN-40-M   The CDN message **shall** be used to transmit a counter proposal from the accepting controller to the transferring controller.
Note: *This can be in a dialogue as a reply to a proposal forwarded by an ACT, RAP, REV, or RRV, or as the start of a dialogue to amend previously agreed transfer conditions.*

OLDI-CDN-50-M   The message reference **shall** only be inserted when the CDN message is in reply to another message.

OLDI-CDN-60-M   When inserted, the message reference **shall** contain the message number of the message to which the CDN is in reply.

OLDI-CDN-70-M   The Direct Routing Request facility **shall** only be used if bilaterally agreed.

OLDI-CDN-80-M   If bilaterally agreed, the Direct Routing Request facility **shall** define any operational limits to its use.
Note: *The operational limits refer to the acceptable limits for potential direct routing clearances (i.e. only to a defined set of points, only through an agreed set of sectors, etc.).*

OLDI-CDN-90-M   The transmission of the CDN message **shall** be inhibited after a time/distance before the boundary specified in the LoA between the units concerned.

OLDI-CDN-100-M   In the event that a CDN message is transmitted effectively simultaneously with a message for the same flight from the transferring unit, e.g. a revision or an abrogation of co-ordination, the acknowledgement and the operational reply **shall** be inhibited.

>> *Note 1:* *The effect of this is that when two messages cross, the one from the transferring unit takes priority and the CDN is dropped by both. Both units can sense the situation by the receipt of the message from the other before receiving the acknowledgement.*
>>
>> *Note 2:* *As soon as an acceptance has been received the CDN message data becomes operationally binding to both of the ATC units.*

OLDI-CDN-110-M   The co-ordinated transfer conditions and the fact that the ACP message has been received **shall** be presented to the ATC staff concerned.

14.6.3.2 Processing in the Receiving Unit

OLDI-CDN-120-M   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, the operational content **shall** be presented at the ATC position responsible for the co-ordination of the flight.

OLDI-CDN-130-M   If a corresponding flight plan is found and no discrepancy is present in the message that would inhibit correct processing, an acknowledgement **shall** be returned.

OLDI-CDN-140-M   If the CDN cannot be associated, or a discrepancy is found that inhibits correct processing of the message, the acknowledgement **shall** be inhibited.

14.6.4 Acknowledgement of CDN

14.6.4.1 Acknowledgement

OLDI-CDN-150-M   Under the conditions specified above, the CDN message **shall** be acknowledged by the generation and transmission of an SBY message.

14.6.4.2 No Acknowledgement Cases

OLDI-CDN-160-M   If no SBY message is received as an acknowledgement for a CDN message, a warning **shall** be displayed at the ATC position responsible for the co-ordination of the flight.

14.6.5 Operational Reply to CDN

OLDI-CDN-170-O   The controller **may** either accept or reject the transfer conditions proposed in a CDN message.

14.6.5.1 Acceptance

OLDI-CDN-180-M   When the transferring controller elects to accept the proposed transfer conditions, an ACP message **shall** be returned.

OLDI-CDN-190-R   When the transferring controller elects to reject the proposed transfer conditions, an RJC message **should** be sent (explicit rejection).

OLDI-CDN-200-M   The proposed co-ordination **shall** be implicitly rejected if no acceptance has been received by the time that the CDN message times-out.

>> *Note:*   *The HMI presentation of implicitly rejected CDN proposals could differ from the ones that are explicitly rejected.*

14.6.6 Examples

14.6.6.1 ICAO

   (CDNL/D041D/L025 -EIN636 -EIDW -LIFFY/1638F270F110A -EBBR)

14.6.6.2 ADEXP

   -TITLE **CDN**
   -REFDATA
       -SENDER -FAC **L**
       -RECVR -FAC **D**

```
            -SEQNUM 041
-MSGREF
        -SENDER -FAC D
        -RECVR -FAC L
        -SEQNUM 025
-ARCID EIN636
-ADEP EIDW
-ADES EBBR
-PROPFL
        -TFL F270
        -SFL F110A
-ROUTE N0480F390 UB4 BNE UB4 BPK UB3 HON
```

14.7 Release Request Message (RRQ)

14.7.1 Purpose

The Release Request (RRQ) message is sent by the accepting unit to the transferring unit to request the release of a flight from the agreed transfer conditions after initial co-ordination has taken place or immediately if Transfer of Communication has already taken place.

14.7.2 Message Contents

OLDI-RRQ-10-M   The RRQ message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification;
- Release Indication.

OLDI-RRQ-20-M   If bilaterally agreed the RRQ message **shall** contain the following item of data to indicate the request to release a flight to climb/descend to a flight level:

- Cleared Flight Level.

Note: The level to which the flight is requested to be released to climb/descend is inserted using the "*cfl*" primary field.

14.7.3 Rules of Application

14.7.3.1 Accepting Unit

OLDI-RRQ-30-M   A RRQ message **shall** be sent to the transferring unit on manual initiation by the accepting controller at any time after co-ordination of the flight.

14.7.3.2 Transferring Unit

OLDI-RRQ-40-M   If a corresponding flight plan can be found, an acknowledgement **shall** be sent.

OLDI-RRQ-50-M   The operational content **shall** be made available to the transferring sector position.

14.7.4 Acknowledgement of RRQ

OLDI-RRQ-60-M   The RRQ message **shall** be acknowledged by a SBY message.

OLDI-RRQ-70-M   If no acknowledgement has been received with a specified time, a warning **shall** be displayed to the sector who initiated the RRQ message.

14.7.5 Operational Reply to RRQ

OLDI-RRQ-80-M   The transferring controller **shall** either release the flight or reject the release request.

OLDI-RRQ-90-M   When the transferring controller elects to release the flight, a RLS message **shall** be returned.

OLDI-RRQ-100-M   When the transferring controller elects to reject the release request, a RJC message **shall** be returned.

14.7.6 Example (ADEXP only)

```
-TITLE RRQ
-REFDATA
    -SENDER -FAC MC
    -RECVR -FAC E
    -SEQNUM 762
-ARCID KLM4273
-RELEASE D
```

-CFL
  -FL **F190**

14.8 Release Message (RLS)

14.8.1 Purpose

The Release (RLS) message is sent by the transferring unit to the accepting unit to release a flight from the agreed transfer conditions after initial co-ordination has taken place.

The RLS message can be sent at any time after the flight has been co-ordinated either unsolicited or in response to a Release Request (RRQ) message.

14.8.2 Message Contents

OLDI-RLS-10-M   The RLS message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification;
- Release Indication.

OLDI-RLS-20-M   If bilaterally agreed the RLS message **shall** contain the following item of data to indicate the flight level to which a flight is released to climb/descend:

- Cleared Flight Level.

Note: The level to which the flight is released to climb/descend is inserted using the "*cfl*" primary field.

OLDI-RLS-30-M   If in response to an RRQ message, the RLS message **shall** contain the following items of data:

- Message Reference.

14.8.3 Rules of Application

14.8.3.1 Transferring Unit

OLDI-RLS-40-M   A RLS message **shall** be sent to the accepting unit on manual initiation by the transferring controller at any time after initial co-ordination has taken place.

OLDI-RLS-50-M   When the transferring controller elects to release the flight by manual initiation, a RLS message **shall** be sent to the accepting unit in response to a RRQ message from the accepting unit.

14.8.3.2 Accepting Unit

OLDI-RLS-60-M   If a corresponding flight plan can be found, an acknowledgement **shall** be sent.

OLDI-RLS70-M   The operational content **shall** be made available to the accepting sector position.

14.8.4 Acknowledgement of RLS

OLDI-RLS-80-M   The RLS message **shall** be acknowledged by a LAM message.

OLDI-RLS-90-M   If no acknowledgement has been received with a specified time, a warning **shall** be displayed to the sector who initiated the RLS message.

14.8.5 Example (ADEXP only)

```
-TITLE RLS
-REFDATA
    -SENDER -FAC E
    -RECVR -FAC MC
    -SEQNUM 740
-ARCID KLM4273
-RELEASE C
```

```
-CFL
   -FL F190
```

14.9 Request Tactical Instructions Message (RTI)

14.9.1 Purpose

The Request Tactical Instructions (RTI) message is sent by the accepting unit to the transferring unit to request the transfer of a flight on an assigned heading, speed, rate of climb or descent or on a direct routing.

14.9.2 Message Contents

OLDI-RTI-10-M   The RTI message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification;
- Departure Aerodrome;
- Destination Aerodrome.

OLDI-RTI-20-M   The RTI message **shall** contain any of the following items of data:

- Assigned Heading/Track or Direct Clearance;
- Assigned Speed;
- Assigned Rate of Climb/Descent;
- Cleared Flight Level.

OLDI-RTI-30-M   If bilaterally agreed, the RTI message **shall** contain the following items of data:
- Planned transfer position;
- Route.

Note: *The item Route contains the requested routing.*

14.9.3 Rules of Application

14.9.3.1 Accepting Unit

OLDI-RTI-40-M   A RTI message **shall** be sent to the transferring unit on manual initiation by the accepting controller.

14.9.3.2 Transferring Unit

OLDI-RTI-50-M   If a corresponding flight plan can be found, an acknowledgement **shall** be sent.

OLDI-RTI-60-M   The operational content **shall** be displayed immediately to the transferring sector position.

14.9.4 Acknowledgement of RTI

OLDI-RTI-70-M   The RTI message **shall** be acknowledged by a SBY message.

OLDI-RTI-80-M   If no acknowledgement has been received within a specified time, a warning **shall** be displayed to the sector who initiated the RTI message.

14.9.5 Operational Reply to RTI

OLDI-RTI-90-M   The transferring controller **shall** either accept or reject the downstream tactical instructions request.

OLDI-RTI-100-M   When the transferring controller elects to accept the downstream tactical instructions request an ACP message **shall** be returned.

OLDI-RTI-110-M   When the transferring controller elects to reject the downstream tactical instructions request, a RJC message **shall** be returned.

OLDI-RTI-120-M   As soon as an ACP has been received by the receiving unit the message data **shall** become operationally binding to both ATC units.

OLDI-RTI-130-M   If no operational reply is received by the accepting unit within a parameter time, a warning **shall** be displayed at the appropriate ATC position for verbal co-ordination.

14.9.6 Example (ADEXP only)

Example RTI messages using the two possible data items AHEAD and DCT:

<table>
<tr><td>

-TITLE **RTI**
-REFDATA
    -SENDER -FAC **MC**
    -RECVR -FAC **E**
    -SEQNUM **762**
-ARCID **KLM4273**
-ADEP **LMML**
-ADES **EGBB**
-AHEAD **310**
-ASPEED **N0420**
-SPEEDLIMIT **MAX**
-CFL
    -FL **F310**
    -PTID **KOPOR**
    -SFL **F290A**
-RATE **D25**
-RATELIMIT **MIN**
-PLANNEDPOSITION **REF01**
-REF
    -REFID **REF01**
    -PTID **ALESO**
    -BRNG **290**
    -DISTNC **15**
-ROUTE **N0480F390 UT421 KOPOR DCT FINCH UT420**

</td><td>

-TITLE **RTI**
-REFDATA
    -SENDER -FAC **MC**
    -RECVR -FAC **E**
    -SEQNUM **762**
-ARCID **KLM4273**
-ADEP **LMML**
-ADES **EGBB**
-DCT **KOPOR FINCH**
-ASPEED **N0420**
-SPEEDLIMIT **MAX**
-CFL
    -FL **F310**
    -PTID **KOPOR**
    -SFL **F290A**
-RATE **D25**
-RATELIMIT **MIN**
-PLANNEDPOSITION **REF01**
-REF
    -REFID **REF01**
    -PTID **ALESO**
    -BRNG **290**
    -DISTNC **15**
-ROUTE **N0480F390 UT421 KOPOR DCT FINCH UT420**

</td></tr>
</table>

14.10 Tactical Instructions Proposal Message (TIP)

14.10.1 Purpose

The Tactical Instructions Proposal (TIP) message is sent by the transferring unit to the accepting unit to co-ordinate the transfer of a flight on an assigned heading, speed, rate of climb or descent or on a direct routing. The content of the TIP message will supplement the co-ordination data contained in the ACT and REV messages.

14.10.2 Message Contents

OLDI-TIP-10-M   The TIP message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification;
- Departure Aerodrome;
- Destination Aerodrome.

OLDI-TIP-20-M   The TIP message **shall** contain any of the following items of data:
- Assigned Heading/Track or Direct Clearance;
- Assigned Speed;
- Assigned Rate of Climb/Descent;
- Cleared Flight Level.

OLDI-TIP-30-M   If bilaterally agreed, the TIP message **shall** contain the following items of data:
- Planned transfer position;
- Route.

Note: *The item Route contains the assigned routing.*

14.10.3 Rules of Application

14.10.3.1 General

OLDI-TIP-40-M   The revision of co-ordination data **shall** imply that the previously agreed tactical instructions are no longer applicable.

OLDI-TIP-50-M   Data included in a subsequent TIP message as defined in OLDI-TIP-20-M for the same flight, **shall**:

- supersede the equivalent item(s) of data transmitted in the previous TIP message(s),or
- add item(s) of data not included in previous TIP message(s).

14.10.3.2 Transferring Unit

OLDI-TIP-60-M   The TIP message **shall** be sent to the accepting unit on manual initiation by the transferring controller.

14.10.3.3 Accepting Unit

OLDI-TIP-70-M   If an unambiguously corresponding flight plan can be found, an acknowledgement **shall** be sent.

OLDI-TIP-80-M   The operational content **shall** be displayed immediately to the accepting sector position.

14.10.4 Acknowledgement of TIP

OLDI-TIP-90-M   The TIP message **shall** be acknowledged by a SBY message.

OLDI-TIP-100-M   If no acknowledgement has been received within a specified time, a warning **shall** be displayed to the sector who initiated the TIP message.

14.10.5 Operational Reply to TIP

OLDI-TIP-110-M   The receiving controller **shall** either accept or reject the tactical instructions proposed.

OLDI-TIP-120-M   When the accepting controller elects to accept the tactical instructions proposal an ACP message **shall** be returned.

OLDI-TIP-130-M   When the accepting controller elects to reject the downstream tactical instructions request, a RJC message **shall** be returned.

OLDI-TIP-140-M   As soon as an ACP has been received by the transferring unit the message data **shall** become operationally binding to both ATC units.

OLDI-TIP-150-M   If no operational reply is received by the accepting unit within a parameter time, a warning **shall** be displayed at the appropriate ATC position for verbal co-ordination.

14.10.6 Examples (ADEXP only)

Example TIP messages using the two possible data items AHEAD and DCT:

```
-TITLE TIP                          -TITLE TIP
-REFDATA                            -REFDATA
    -SENDER -FAC MC                     -SENDER -FAC MC
    -RECVR -FAC E                       -RECVR -FAC E
    -SEQNUM 762                         -SEQNUM 762
-ARCID KLM4273                      -ARCID KLM4273
-ADEP LMML                          -ADEP LMML
-ADES EGBB                          -ADES EGBB
-AHEAD 310                          -DCT KOPOR FINCH
-ASPEED N0420                       -ASPEED N0420
-SPEEDLIMIT EQL                     -SPEEDLIMIT EQL
-RATE D25                           -RATE D25
-RATELIMIT EQL                      -RATELIMIT EQL
-CFL                                -CFL
    -FL F310                            -FL F310
    -PTID KOPOR                         -PTID KOPOR
    -SFL F290A                          -SFL F290A
-PLANNEDPOSITION REF01              -PLANNEDPOSITION REF01
-REF                                -REF
    -REFID REF01                        -REFID REF01
    -PTID ALESO                         -PTID ALESO
    -BRNG 290                           -BRNG 290
    -DISTNC 15                          -DISTNC 15
-ROUTE N0480F390 UT421 KOPOR        -ROUTE N0480F390 UT421 KOPOR
DCT FINCH UT420                     DCT FINCH UT420
```

15. Dialogue Procedure - Transfer of Communication

15.1 General

15.1.1 Introduction

This section of the specification describes the facilities and messages that support the radar hand-over aspect of the transfer of control procedure in addition to section 9-DIALOGUE PROCEDURE - TRANSFER OF COMMUNICATION. TIM, HOP or COF can initiate the transfer of communication phase.

15.2 Transfer Phase Initiation Message (TIM)

15.2.1 Purpose of the TIM Message

The purpose of the TIM is to:

- signify the Transfer Initiation (TI) event (the end of the co-ordination phase and the start of the transfer phase);
- simultaneously forward executive control data from the transferring to the accepting unit.

15.2.2 Message Contents

OLDI-TIM-10-M   The TIM message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification.

OLDI-TIM-20-M   If the data are available, the TIM message **shall** contain the following item of data:

- Cleared Flight Level;

OLDI-TIM-30-M   If bilaterally agreed, the TIM message **shall** contain any of the following items of data:

- Assigned Heading/Track or Direct Clearance;
- Assigned Speed;
- Assigned Rate of Climb/Descent;
- Position of the Flight;
- Route.

Note: *The item Route contains the assigned routing.*

15.2.3 Rules of Application

15.2.3.1 General

OLDI-TIM-40-M   The TIM message **shall** be generated and transmitted by the transferring unit to the accepting unit without human intervention at a bilaterally agreed time/distance of the flight from the boundary, unless it has already been sent as a result of controller acceptance of a ROF message.

OLDI-TIM-50-M   The transmission of a TIM message **shall** be inhibited until the flight has been co-ordinated.

OLDI-TIM-60-M   The TIM message **shall** contain the most recent data available in the system.

OLDI-TIM-65-M   The TIM message **shall not** be transmitted in case a HOP or COF message has already been sent.

15.2.3.2 Criteria for Message Transmission

OLDI-TIM-70-M   The TIM generation parameter **shall** be the system parameter which may be changed, based on the provisions of the LoAs.

Note: *The system parameters in the context of the OLDI Specification and particularly for the TIM message (OLDI-TIM-70-M, OLDI-TIM-80-R, OLDI-TIM-100-M) are considered to be the adaptation data parameters that are modifiable off-line.*

OLDI-TIM-80-R   The TIM generation system parameter **should** be defined separately for each of the COPs.

OLDI-TIM-90-M   The co-ordination partners **shall** include the TIM generation parameters in their LoA.

Note: *The system parameter triggering the TIM message may be related to the calculated ground speed of the aircraft.*

OLDI-TIM-100-M   The specified system parameter for TIM transmission **shall** allow sufficient time for verbal co-ordination before the hand-over.

15.2.3.3 Processing in the Receiving Unit

OLDI-TIM-110-M   The data received in a TIM **shall** be made available to the accepting controller.

15.2.4 Acknowledgement of TIM

15.2.4.1 Acknowledgement

OLDI-TIM-120-M   If the TIM message can be unambiguously associated with a flight plan, it **shall** be acknowledged by the generation and transmission of a LAM message.

OLDI-TIM-130-M   If the TIM message cannot be unambiguously associated with a flight plan, the acknowledgement of the TIM message **shall** be inhibited.

15.2.4.2 No Acknowledgement Cases

OLDI-TIM-140-M   If no LAM message is received as an acknowledgement for a TIM message, a warning **shall** be displayed at the appropriate position.

15.2.5 Examples (ADEXP only)

Example TIM messages using the two possible data items AHEAD and DCT:

```
-TITLE TIM                          -TITLE TIM
-REFDATA                            -REFDATA
        -SENDER -FAC L                      -SENDER -FAC L
        -RECVR -FAC E                       -RECVR -FAC E
        -SEQNUM 029                         -SEQNUM 029
-ARCID AMM253                       -ARCID AMM253
-AHEAD 290                          -DCT ROTNO DTY
-ASPEED N0420                       -ASPEED N0420
-SPEEDLIMIT MIN                     -SPEEDLIMIT MIN
-RATE D25                           -RATE D25
-RATELIMIT EQL                      -RATELIMIT EQL
-CFL                                -CFL
        -FL F190                            -FL F190
-POSITION REF01                     -POSITION REF01
-REF                                -REF
        -REFID REF01                        -REFID REF01
        -PTID ALESO                         -PTID ALESO
        -BRNG 345                           -BRNG 345
        -DISTNC 15                          -DISTNC 15
-ROUTE N0480F390 UT10 ALESO         -ROUTE N0480F390 UT10 ALESO
UT420 BUZAD UL10 HON                UT420 BUZAD UL10 HON


-TITLE TIM                          -TITLE TIM
-REFDATA                            -REFDATA
        -SENDER -FAC LWSS                   -SENDER -FAC LWSS
        -RECVR -FAC LBSR                    -RECVR -FAC LBSR
        -SEQNUM 042                         -SEQNUM 042
-ARCID WZZ178                       -ARCID WZZ178
-DCT GEO01 REF07                    -DCT GEO01 REF07
-REF                                -REF
        -REFID REF07                        -REFID REF07
        -PTID VELBA                         -PTID VELBA
        -BRNG 010                           -BRNG 010
        -DISTC 45                           -DISTC 45
-GEO                                -GEO
        -GEOID GEO01                        -GEOID GEO01
        -LATTD 420597                       -LATTD 420597
```

<table>
<tr><td>

-LONGTD **230174**
-ASPEED **N0420**
-SPEEDLIMIT **MIN**
-RATE **D22**
-RATELIMIT **EQL**
-CFL
    -FL **F350**
-POSITION **REF09**
-REF
    -REFID **REF09**
    -PTID **VELBA**
    -BRNG **178**
    -DISTNC **45**
-ROUTE **N0450F350 SARAX T215**
VELBA T343 DOTAM

</td><td>

-LONGTD **230174**
-ASPEED **N0420**
-SPEEDLIMIT **MIN**
-RATE **D22**
-RATELIMIT **EQL**
-CFL
    -FL **F350**
-POSITION **REF09**
-REF
    -REFID **REF09**
    -PTID **VELBA**
    -BRNG **178**
    -DISTNC **45**
-ROUTE **N0450F350 SARAX T215**
VELBA T343 DOTAM

</td></tr>
</table>

15.3 Supplementary Data Message (SDM)

15.3.1 Purpose of the SDM Message

15.3.1.1 General

The primary purpose of the SDM is to transmit control data and changes thereto from the transferring unit to the accepting unit.

The SDM message may also be used by the accepting unit to notify the transferring unit of the radio telephony frequency to which the flight is to be transferred.

15.3.2 Message Contents

15.3.2.1 Messages from the Transferring Unit

OLDI-SDM-10-M The SDM message **shall** contain the following items of data:
- Message Type;
- Message Number;
- Aircraft Identification.

OLDI-SDM-20-M The SDM message **shall** contain any of the following items of data:
- Assigned Heading/Track or Direct Clearance;
- Assigned Speed;
- Assigned Rate of Climb/Descent;
- Cleared Flight Level.

  Note: This requirement refers to the direct clearances that do not need to be acknowledged or coordinated.

OLDI-SDM-30-M If bilaterally agreed the SDM **shall** contain the following item of data:
- Route.

  Note: The item Route contains the assigned routing.

15.3.2.2 Messages from the Accepting Unit

OLDI-SDM-40-M The SDM message **shall** contain the following items of data:
- Message Type;
- Message Number;
- Aircraft Identification;
- Frequency.

OLDI-SDM-50-M If bilaterally agreed the SDM **shall** contain the following items of data:
- Route;
- Sector Identifier.

  Note: The item Route contains the requested routing.

OLDI-SDM-55-M When inserted, the sector identifier shall contain the identifier of the position expected to receive the flight as defined in the Letter of Agreement.

15.3.3 Rules of Application

15.3.3.1 Messages from the Transferring Unit

OLDI-SDM-60-M SDM messages **shall** be transmitted by the transferring unit, provided that it has been bilaterally agreed that the changes do not need to be acknowledged by the accepting controller, and following changes to any of the items of data described in requirements OLDI-SDM-20-M and OLDI-SDM-20-M.

Note: *The HOP message is used when approval by the accepting controller is required prior to the transfer of communication.*

OLDI-SDM-70-M The message **shall** contain only the fields which have changed.

OLDI-SDM-75-R If a HOP message has been sent to the accepting unit, the transferring unit **should** inhibit the transmission of SDM until the reception of a ROF/ACP from the accepting unit.

OLDI-SDM-80-M SDM messages containing the data described in requirements OLDI-SDM-10-M and OLDI-SDM-20-M **shall** be transmitted before Transfer Initiation if bilaterally agreed.

OLDI-SDM-90-M SDM messages transmitted before Transfer Initiation **shall** commence as bilaterally agreed, provided that there is data for which there is a value available in the system.

OLDI-SDM-95-O SDM messages transmitted before the Transfer Initiation **may** be used for the notification of agreed changes that are not communicated via REV/RRV**.**

OLDI-SDM-100-M The co-ordination data **shall** remain unmodified irrespective of the content of a SDM message.

15.3.3.2 Messages from the Accepting Unit

OLDI-SDM-110-O SDM messages **may** be automatically transmitted to indicate the frequency on which the flight is to contact the accepting unit on the reception of TIM message

Note: *Units may agree bilaterally to send other information. Such transfer is not defined in, and therefore, not part of, this Specification.*

OLDI-SDM-115-O SDM messages **may** be automatically transmitted to indicate the frequency on which the flight is to contact the accepting unit at the agreed time/distance before COP.

OLDI-SDM-120-M SDM messages containing the data described in requirement OLDI-SDM-40-M and OLDI-SDM-50-M from the accepting unit **shall** be transmitted during the co-ordination phase and transfer phase if bilaterally agreed.

15.3.3.3 Processing in the Receiving Unit

OLDI-SDM-130-M The ATC system receiving an SDM message **shall** attempt association with the corresponding flight plan.

OLDI-SDM-140-M If a corresponding flight plan in the co-ordinated state is found, an acknowledgement **shall** be returned.

OLDI-SDM-150-M If a corresponding flight plan in the co-ordinated state is found, the operational contents of the SDM message **shall** be made available to the appropriate controller.

OLDI-SDM-160-M If a corresponding flight plan cannot be found, or a discrepancy is found that inhibits correct processing of the message, the acknowledgement **shall** be inhibited.

OLDI-SDM-170-M If a corresponding flight plan cannot be found, or a discrepancy is found that inhibits correct processing of the message, a warning **shall** be output at an appropriate position.

15.3.4 Acknowledgement of SDM

15.3.4.1 Acknowledgement

OLDI-SDM-180-M The SDM message **shall** be acknowledged by the generation and transmission of a LAM message.

15.3.4.2 No Acknowledgement Cases

OLDI-SDM-190-M   If no LAM message is received as an acknowledgement for an SDM message, a warning **shall** be displayed at an appropriate position.

15.3.5 Examples (ADEXP only)

15.3.5.1 SDM message from the Transferring unit

Example SDM messages using the two possible data items AHEAD and DCT:

```
-TITLE SDM                              -TITLE SDM
-REFDATA                                -REFDATA
    -SENDER -FAC L                          -SENDER -FAC L
    -RECVR -FAC E                           -RECVR -FAC E
    -SEQNUM 028                             -SEQNUM 028
-ARCID AMM253                           -ARCID AMM253
-AHEAD 290                              -DCT ROTNO DTY
-ASPEED N0420                           -ASPEED N0420
-RATE D25                               -RATE D25
-CFL                                    -CFL
    -FL F190                                -FL F190
-ROUTE N0480F390 UT10 ALESO             -ROUTE N0480F390 UT10 ALESO
UT420 BUZAD UL10 HON                    UT420 BUZAD UL10 HON
```

15.3.5.2 SDM message from the Accepting unit

```
-TITLE SDM
-REFDATA
    -SENDER -FAC L
    -RECVR -FAC E
    -SEQNUM 037
-ARCID AMM253
-FREQ 187175
-ROUTE N0480F390 UT10 ALESO UT420 BUZAD UL10 HON
-SECTOR UEAST
```

15.3.5.3 SDM message from the Transferring unit with LAT/LONG

```
-TITLE SDM
-REFDATA
    -SENDER -FAC LWSS
    -RECVR -FAC LBSR
    -SEQNUM 037
-ARCID WZZ178
-DCT GEO01 REF07
-REF
    -REFID REF07
    -PTID VELBA
    -BRNG 010
    -DISTC 45
-GEO
    -GEOID GEO01
    -LATTD 420597
    -LONGTD 230174
-ASPEED N0420
-RATE D22
-CFL
    -FL F350
-ROUTE N0450F350 SARAX T215 VELBA T343 DOTAM
```

15.4 Hand-Over Proposal Message (HOP)

15.4.1 Purpose of the HOP Message

The purpose of the HOP Message is:

- for the transferring controller to propose the flight for hand-over to the accepting controller;

- to forward modifications to the executive control data which require the approval of the accepting controller, as bilaterally agreed (the SDM is used to forward such modifications which do not require the approval of the accepting controller).

It is not necessary to utilise the HOP for all flights; it is used at the discretion of the transferring controller.

15.4.2 Message Contents

OLDI-HOP-10-M   The HOP message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification.

OLDI-HOP-20-M   The HOP message **shall** contain any of the following items of data:

- Cleared Flight Level;
- Assigned Heading/Track/Direct Clearance;
- Assigned Speed;
- Assigned Rate of Climb/Descent.

Note: *This requirement applies irrespective of whether or not any such executive data has been passed previously using a SDM message.*

OLDI-HOP-30-M   If bilaterally agreed, the HOP message **shall** contain the following item of data:

- Position of the Flight.

15.4.3 Rules of Application

15.4.3.1 General

OLDI-HOP-40-M   The HOP message, when used, **shall** be manually initiated by the transferring controller.

OLDI-HOP-50-M   The Transfer Phase **shall** be initiated if a HOP message is sent before the Transfer Phase has been initiated.
Note: *A Transfer Initiation Message (TIM) is not required in addition to the HOP.*

OLDI-HOP-60-M   The earliest time or distance before the COP or boundary at which a HOP may be sent **shall** be bilaterally agreed.

OLDI-HOP-70-R   The time/distance at which a HOP may be sent **should** be specified separately for each COP.

OLDI-HOP-80-M   The co-ordination data **shall** remain unmodified irrespective of the content of a HOP message.

15.4.3.2 Processing in the Receiving Unit

OLDI-HOP-90-M   The ATC system receiving a HOP message **shall** attempt association with the corresponding flight plan.

OLDI-HOP-100-M   The flight data received in the message **shall** be displayed immediately to the accepting controller.

OLDI-HOP-110-R   If the accepting controller accepts the flight under the conditions proposed in the HOP message, a ROF message **should** be sent in response to the transferring unit.

OLDI-HOP-120-O   An ACP **may** be sent as a reply to a HOP.

OLDI-HOP-130-M   If the accepting controller is unable to accept the flight, the transfer **shall** be agreed verbally.

Note: *Due to the urgency of the hand-over procedure, system support in monitoring the return of the ROF (or ACP) is not required by this Specification; it is assumed that the transferring controller will be well aware of the absence of a response from the accepting controller and will take action as necessary. However, this Specification does not prevent a warning being provided to the transferring controller if it is considered operationally necessary.*

OLDI-HOP-140-M   As soon as a ROF message (or ACP message) has been received, the HOP message data **shall** become operationally binding to both of the ATC units.

15.4.4 Acknowledgement of HOP

15.4.4.1 Acknowledgement

OLDI-HOP-150-M   If it can be associated with a flight plan, the HOP message **shall** be acknowledged automatically by a LAM.

15.4.4.2 No Acknowledgement Cases

OLDI-HOP-160-M   If no LAM message is received as an acknowledgement for a HOP message, a warning **shall** be displayed at the appropriate position.

15.4.5 Examples (ADEXP only)

Example HOP messages using the two possible data items AHEAD and DCT:

-TITLE **HOP**	-TITLE **HOP**
-REFDATA	-REFDATA
-SENDER -FAC **L**	-SENDER -FAC **L**
-RECVR -FAC **E**	-RECVR -FAC **E**
-SEQNUM **030**	-SEQNUM **030**
-ARCID **AMM253**	-ARCID **AMM253**
-CFL	-CFL
-FL **F190**	-FL **F190**
-ASPEED **N0420**	-ASPEED **N0420**
-RATE **D25**	-RATE **D25**
-AHEAD **290**	-DCT **ROTNO DTY**
-POSITION **REF01**	-POSITION **REF01**
-REF	-REF
-REFID **REF01**	-REFID **REF01**
-PTID **ALESO**	-PTID **ALESO**
-BRNG **345**	-BRNG **345**
-DISTNC **15**	-DISTNC **15**

15.5 Request on Frequency Message (ROF)

15.5.1 Purpose of the ROF Message

The ROF is sent by the accepting unit to the transferring unit, when required, requesting the transferring controller to instruct the aircraft to change to the frequency of the accepting controller. The message may be used:

- in reply to a HOP to signify the acceptance of the flight under the proposed conditions;
- to request the early transfer of the flight and optionally under specific operational conditions.

15.5.2 Message Contents

OLDI-ROF-10-M   The ROF message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification.

OLDI-ROF-20-M   If bilaterally agreed, the ROF message **shall** contain the following item of data:

- Frequency.

OLDI-ROF-25-O   If bilaterally agreed, the ROF message **may** contain any of the following items of data:

- Departure Aerodrome;
- Destination Aerodrome;
- Assigned Heading/Track or Direct Clearance;
- Assigned Speed;
- Assigned Rate of Climb/Descent;
- Release Indication;
- Cleared Flight Level.

Note: The level to which the flight is requested to be released to climb/descend is inserted using the "cfl" primary field.

15.5.3 Rules of Application

15.5.3.1 General

OLDI-ROF-30-M   The ROF message **shall** be manually initiated by the accepting controller.

OLDI-ROF-40-O   The accepting controller **may** trigger a ROF message, either:

- when the accepting controller requires to have the aircraft early on frequency; or
- as a reply to a HOP message.

Note: The earliest time or distance before the boundary at which a ROF is sent can be bilaterally agreed.

15.5.3.2 Processing in the Receiving Unit

OLDI-ROF-50-M   The ATC system receiving an ROF message **shall** attempt association with the corresponding flight plan.

OLDI-ROF-60-M   The reception of the ROF message **shall** be indicated to the transferring controller without delay.

OLDI-ROF-70-R   When the ROF message is received by the transferring unit before a TIM has been sent, a TIM message **should** be sent, as a result of controller acceptance of the downstream request.

15.5.4 Acknowledgement of ROF

15.5.4.1 Acknowledgement

OLDI-ROF-80-M   If the ROF message can be unambiguously associated with a flight plan, it **shall** be acknowledged by the generation and transmission of a LAM message.

OLDI-ROF-90-M   If the ROF message cannot be unambiguously associated with a flight plan, the acknowledgement **shall** be inhibited.

15.5.4.2 No Acknowledgement Cases

OLDI-ROF-100-M   If no LAM message is received as an acknowledgement for an ROF message, a warning **shall** be displayed at the appropriate ATC position.

15.5.5 Example

```
-TITLE ROF
-REFDATA
    -SENDER -FAC L
    -RECVR -FAC E
    -SEQNUM 030
-ARCID AMM253
-FREQ 127000
```

16. Co-ordination between Oceanic Control Centres and Area Control Centres

This section is specifying messages for co-ordination between Area Control Centres and Oceanic Control Centres in support of the request and provision of an oceanic clearance. These messages should be seen as supplementary to the ones intended for co-ordination between Oceanic Control Centres which are defined in the NAT-ICD document.

OLDI-OCC-10-M   When implementing based on bilateral agreement the messages for co-ordination between Oceanic Control Centres and Area Control Centres these messages **shall** meet the requirements defined in this section.

16.1 Oceanic Clearance Message (OCM)

16.1.1 Purpose

The Oceanic Clearance Message (OCM) is sent by the Oceanic Area Control Centre to the Area Control Centre responsible for the flight before entering ICAO NAT Area to satisfy the following operational requirements:

- Provide the last Area Control Centre transferring unit with the acceptance conditions as communicated to the flight crew;

- For traffic departing close to the oceanic boundary, provide in advance the co-ordination acceptance conditions for planning purposes.

16.1.2 Message Contents

OLDI-OCM-10-M   The OCM message **shall** contain the following items of data:

- Message Type;
- Message Number;
- Aircraft Identification;
- Number and Type of Aircraft;
- Departure Aerodrome;
- Assigned Speed;
- Estimate data;
- Route;
- Destination Aerodrome.

OLDI-OCM-20-M   If bilaterally agreed the OCM message **shall** contain:
- Message Reference;
- Operational Data.

OLDI-OCM-30-M   If the OCM contains the Operational Data item in ICAO format the use of ICAO Field 18 or ICAO Field 22 **shall** be subject to bilateral agreement.

16.1.3 Rules of Application

16.1.3.1 Oceanic Area Control Centre

OLDI-OCM-40-M   After the clearance has been issued to the flight crew, an OCM message **shall** be sent to the transferring unit for every flight planned to cross the boundary.

OLDI-OCM-50-M   A revised OCM message **shall** be sent when there is any change in:
- Assigned Speed;
- COP;
- Transfer flight level;
- Route.

OLDI-OCM-60-M   A revised OCM message **shall** be sent when the ETO at the COP differs from that in the previous OCM by more than a value bilaterally agreed, rounded to the nearest integer value.

OLDI-OCM-70-M   A revised OCM **shall** be sent also to the transferring unit that previously received an OCM for the flight, when an OCM is sent to a new transferring unit following a change in:
- COP;
- Transfer flight level;
- Route.

> *Note:* *It is the responsibility of the Area Control Centres involved to co-ordinate the new routing in order to comply with the revised OCM.*

OLDI-OCM-80-R The ATS system **should** send OCM messages at a bilaterally agreed number of minutes before the estimated time at the COP.

OLDI-OCM-90-R If a revised OCM is sent at less than a bilaterally agreed time or distance parameter prior to COP, a warning **should** be displayed at the appropriate working position.

> *Note:* *Based on bilateral agreements the receiving controller might be required to complement the OCM by verbal co-ordination.*

16.1.3.2 Area Control Centre

OLDI-OCM-100-M The ATC system receiving an OCM **shall** attempt association with the corresponding flight plan.

OLDI-OCM-110-M If a corresponding flight plan can be found, and no discrepancy is present in the message that would inhibit correct processing, an acknowledgement **shall** be returned.

OLDI-OCM-120-M If a corresponding flight plan cannot be found, but the OCM can be correctly processed, an acknowledgement **shall** be returned.

OLDI-OCM-130-M If a corresponding flight plan can be found, and no discrepancy is present in the message that would inhibit correct processing, the content of the OCM **shall** be included with the flight plan.

OLDI-OCM-140-M If the message is correctly processed, the content of the OCM **shall** be displayed to the relevant working position, according to local procedures.

OLDI-OCM-150-M if the OCM cannot be correctly processed, the acknowledgement **shall** be inhibited.

OLDI-OCM-160-R If no OCM is received before a bilaterally agreed time or distance parameter prior to COP, a warning **should** be displayed at the appropriate working position.

16.1.3.3 Acknowledgement of OCM

16.1.3.3.1 Acknowledgement

OLDI-OCM-170-M The OCM message **shall** be acknowledged by generating and transmitting a LAM message.

16.1.3.3.2 No Acknowledgement Cases

OLDI-OCM-160-M If no LAM message is received as an acknowledgement for an OCM message, a warning **shall** be displayed at the appropriate working position.

16.1.3.4 Examples

16.1.3.4.1 ICAO Format

Example 1

(OCMO/S100-ACA101-EGLL-DOGAL/1000F330-KLAX-9/B747/H-15/M084F330 DOGAL NATD)

16.1.3.4.2 ADEXP Format

Example 1
-TITLE **OCM**
-REFDATA
   -SENDER -FAC **O**
   -RECVR -FAC **S**
   -SEQNUM **100**
-ARCID **ACA101**
-ARCTYP **B747**

```
-ADEP EGLL
-ADES KLAX
-COORDATA
     -PTID DOGAL
     -TO 1000
     -TFL F330
-ASPEED M084
-ROUTE M084F330 DOGAL NATD
```

17. Special Route Processing Requirements

17.1 Introduction

17.1.1 General

This Annex describes the rules and data insertion requirements in the following cases, when permitted:

- Cross border free route airspace (FRA) (a flight routes on a direct track, off route, across the boundary as the result of a direct route segment filed in the flight plan);
- A flight is re-routed via either:
  - a different ATS route impacting the downstream unit; or
  - a direct track to re-join the original route at a later point beyond the upstream unit AOR boundaries;

With respect to the re-routing of flights, the data exchange described in this section supports the modification of the route of flight as held in both systems by the use of notification and co-ordination messages.

17.2 Application of Messages

17.2.1 Basic Rules for Direct Routings

OLDI-DCT-10-M   The format of COP, exchanges of route field and allowed DCT points that are used by OLDI for the co-ordination of flights on direct routings **shall** be agreed bilaterally.

> *Note:* *The data required for the notification and co-ordination of flights on direct routings is contained in the co-ordination point (estimate data (ICAO format) and co-ordination data (ADEXP format)) and route in the applicable messages.*

17.2.2 Direct Route

When the route indicates that the flight will cross the boundary on a direct track, the direct route segment (if route exchange bilaterally agreed) and the resultant COP will be included in in relevant OLDI messages (ABI, ACT, RAP, REV or RRV)).

OLDI-DCT-15-M   ABI and ACT message **shall** be sent with data corresponding to the route at the time of the sending of the message.

OLDI-DCT-20-M   The COP and route data (if route exchange bilaterally agreed) **shall** be formatted as described in section 17.3.2.

OLDI-DCT-25-M   In case of application of FRA clearances after the initial ABI, a new ABI message **shall** be sent with a new COP and amended route if bilaterally agreed.

OLDI-DCT-30-M   If application of FRA clearance does not change the COP but changes the portion of route, a new ABI **shall** be sent with new route segment if the route change is bilaterally agreed.

OLDI-DCT-35-R   In specific cases when the flight re-routing shortens the flight leg and corresponding timing to exit COP, an ACT message **should** be sent with data corresponding to the new route, without being preceded by ABI due to change of exit COP timing.

OLDI-DCT-40-M   REV message **shall** be used to indicate re-routings after the ACT message has been sent until a bilaterally agreed time before the ETO at the COP previously co-ordinated.

> *Note:* *A REV message is only used where the accepting unit does not change as the result of the modification. If it does change, a MAC message must be sent to the original accepting unit or the co-ordination verbally cancelled.*

OLDI-DCT-80-M   Route revisions sent as part of the dialogue procedure **shall** be sent as RRV messages unless bilaterally agreed to be considered "standard".

17.3 Field Contents

17.3.1 ATS Routes

For flights which re-route via an alternative ATS Route, the estimate and route fields are formatted as for ABI and ACT messages.

17.3.2 Direct Routes

OLDI-DCT-90-M The co-ordination point in the estimate data **shall** either be the dynamic COP or the dynamic COP expressed as a bearing and distance from a reporting point (that corresponds to the same airspace structure as dynamic COP) closest to the dynamic COP according to bilateral agreement.

OLDI-DCT-100-M The coordination points and reporting point used in the estimated data **shall** be bilaterally agreed.

OLDI-DCT-110-M Where the distance is zero or a flight will pass within a bilaterally agreed distance from such a point, only the identifier of the point **shall** be included.

OLDI-DCT-120-M When bilaterally agreed, the co-ordination point for a flight on a direct route **shall** be expressed by reference to latitude/longitude.

OLDI-DCT-130-M The route **shall** contain:

- the point referred to the current aircraft position or point situated on the original route from which the aircraft is routed direct; the point is expressed as a bearing and distance from a reporting point or by reference to latitude/longitude;
- the abbreviation "DCT";
- the point to which the aircraft is to proceed directly;
- the remainder of the further route of flight (FRF), if known to the sending system.

Note: *If bilaterally agreed, the point from/to which the aircraft is to proceed on a direct may be positioned outside the corresponding AoI.*

OLDI-DCT-140-O **The route may contain the route segments/points prior to the DCT starting point.**

17.4 Preliminary System Requirements for Route Info Processing

These system requirements address the best practices of OLDI route info handling without any intention to prescribe the processing of OLDI route info by the receiving systems.

17.4.1 Processing by the Downstream Unit

The route info can be provided by a variety of OLDI messages. The route field info needs to be provided in cases where the OLDI coordination affects the flight trajectory of downstream unit. After the reception of these messages and acceptance if required, the downstream unit ground trajectory is updated with the content of OLDI route field. The downstream unit system identifies the point from which the route change starts and finishes and amends the route segment between these points with the route info contained in OLDI messages.

17.4.2 Processing by the Upstream Unit

The route info can be provided by CDN, TIP or other messages that the upstream unit might receive concerning the route change. After the acceptance of route change proposals, the upstream unit ground trajectory is updated with the content of the message route field. The upstream unit system identifies the point from which the route change starts and finishes and amends the route segment between these points with the route info contained in OLDI messages.

17.5 Examples

The OLDI Guidance material [GUID] Edition 1.2, paragraph 2.5 contains several examples of application of FRA clearances and corresponding OLDI messages. This section elaborates a few examples of dynamic COP application for ABI, ACT and REV.

17.5.1.1 ABI and ACT Messages

AFR511 is planned to enter ATS A at FR1 point and exit via FR2. It is assumed that these ATS units bilaterally agreed route information in ABI message. ATS A sends an ABI message to ATS B as:

-TITLE **ABI**
-REFDATA
       -SENDER -FAC **ATSA**
       -RECVR -FAC **ATSB**
        -SEQNUM **277**
-ARCID **AFR511**
-SSRCODE **A5571**
-ADEP **LFMN**
-COORDATA
       -PTID **FR2**
       -TO **1242**
       -TFL **F330**
-ADES **LCLK**
-ARCTYP **A320**
-ROUTE **N0460F330 LIRIM DCT FR1 DCT FR2 DCT FR4**
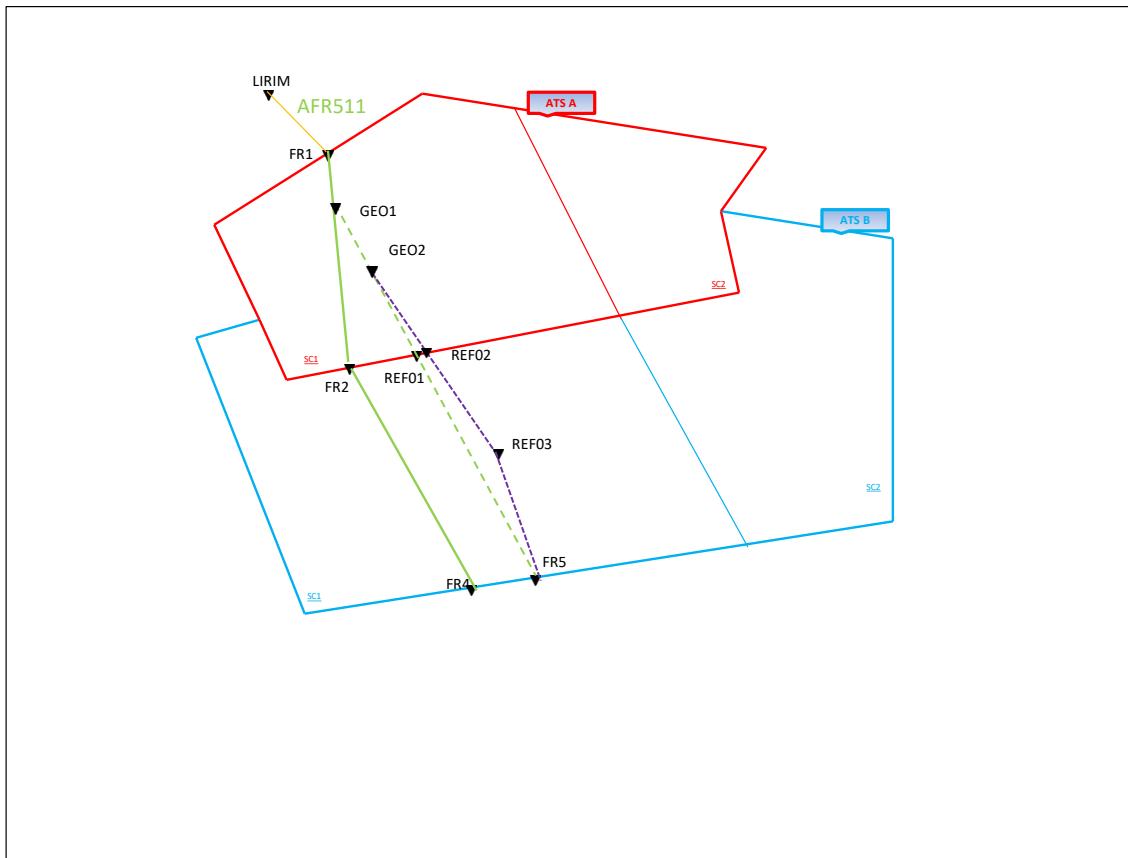
ATS A clears the flight AFR511 from the current position (GEO01) direct to FR5. By clearing the flight direct to FR5, the ATS A exit point changes to dynamic COP (REF01). The revised ABI is sent referencing the dynamic COP with range and bearing to the published COP as:

-TITLE **ABI**
-REFDATA
      -SENDER -FAC **ATSA**
      -RECVR -FAC **ATSB**
      -SEQNUM **321**
-ARCID **AFR511**
-SSRCODE **A5571**
-ADEP **LFMN**
-COORDATA
      -PTID **REF01**
      -TO **1240**
      -TFL **F330**
-ADES **LCLK**
-ARCTYP **A320**
-REF
      -REFID **REF01**
      -PTID **FR2**
      -BRNG **010**
      -DISTNC **015**
-ROUTE **N0460F330 4205N02301E DCT REF01 DCT FR5**

The ACT message has the same format as the ABI message. The route info can be included in ACT message if bilaterally agreed.

17.5.1.2 REV Message

For the avoidance of tactical conflict, AFR511 is put on open-heading 295, re-joining the original route at GEO point REF03. The REV message is sent as:

-TITLE **REV**
-REFDATA
      -SENDER -FAC **ATSA**
      -RECVR -FAC **ATSB**
      -SEQNUM **459**
-ARCID **AFR511**
-SSRCODE **A5571**
-ADEP **LFMN**
-COORDATA
      -PTID **GEO02**
      -TO **1242**
      -TFL **F330**
-ADES **LCLK**
-ARCTYP **A320**
-GEO
      -GEOID **GEO02**
      -LATTD **420556N**
      -LONGTD **0230456E**
GEO
      -GEOID **GEO03**
      -LATTD **420633N**
      -LONGTD **0230557E**
 -ROUTE **N0460F330 4205N02302W DCT GEO02 DCT GEO3 DCT FR5**

18. Data Insertion Rules

18.1 Purpose

This Annex describes the general rules for the insertion of data in the messages described in this Specification. These rules apply to all messages except where other alternatives or exceptions to these rules are specifically stated in the Rules of Application for a specific message.

18.2 Generic Message Formats

OLDI-FC-GEN-10-M If bilaterally agreed, all messages described for the following procedures **shall** be transmitted using the ICAO format:

- Basic procedure;
- Basic procedure - complementary messages;
- Dialogue procedure – Co-ordination.

Note: *ICAO message field formats are specified in the Procedures for Air Navigation Services - Rules of the Air and Air Traffic Control (Document 4444).*

OLDI-FC-GEN-20-M In messages where they occur, the following ICAO Field types **shall** be transmitted before any other Field types in the following order: 3, 7, 13, 14, and 16.
Note 1: *The order of the items that are expressed in Field type 22 format is not important, other than that they do not precede the Field types listed above.*
Note 2: *In some instances a pseudo ICAO field type number is used where a suitable ICAO field does not exist. Such numbers contain two digit values equal to or greater than 80.*

OLDI-FC-GEN-30-M If bilaterally agreed, all messages described in this document **shall** be transmitted using the EUROCONTROL ADEXP format.

Note 1: *Only the primary ADEXP data fields are listed in this Appendix, except where associated Sub-fields require specific comment. The ADEXP Specification lists all optional and mandatory Sub-fields required within each primary field.*

Note 2: *Some of the messages defined in this specification are described only in ADEXP format.*

18.3 Message Type

OLDI-FC-TYPE-10-M The message type **shall** be the abbreviation for the message as described in the following list:

- **ABI**:   Advance Boundary Information Message;
- **ACP**:   Acceptance Message;
- **ACT**:   Activate Message;
- **AMA:**   Arrival Management Message;
- **BFD**:   Basic Flight Data Message;
- **CDN**:   Co-ordination Message;
- **CFD**:   Change Flight Data Message;
- **COD**:   SSR Code Assignment Message;
- **COF**:   Change of Frequency Message;
- **CRQ**:   Clearance Request Message;
- **CRP**:   Clearance Response Message;
- **HOP**:   Hand-Over Proposal Message;
- **INF**:   Information Message;
- **LAM**:   Logical Acknowledgement Message;

- **LOF**: Log-On Forwarding Message;
- **MAC**: Message for Abrogation of Co-ordination Message;
- **MAS**: Manual Assumption of Communications Message;
- **NAN**: Next Authority Notified Message;
- **OCM**: Oceanic Clearance Message;
- **PAC**: Preliminary Activation Message;
- **PNT**: Point Message;
- **RAP**: Referred Activate Proposal Message;
- **REV**: Revision Message;
- **RJC**: Reject Co-ordination Message;
- **RLS**: Release Message;
- **ROF**: Request on Frequency Message;
- **RRQ**: Release Request Message;
- **RRV**: Referred Revision Proposal Message;
- **RTI**: Request Tactical Instructions Message;
- **SBY**: Stand-by Message;
- **SCO**: Skip Co-ordination Message;
- **SDM**: Supplementary Data Message;
- **SKC**: Skip Cancellation Message;
- **TFD**: Terminate Flight Data Message;
- **TIM**: Transfer Initiation Message;
- **TIP:** Tactical Instructions Proposal Message;
- **XAP**: Crossing Alternate Proposal Message;
- **XCM**: Crossing Cancellation Message;
- **XIN**: Crossing Intention Notification Message;
- **XRQ**: Crossing Clearance Request Message.

18.3.1 ICAO

Field type 3, element (a).

18.3.2 ADEXP

Primary field "*title*".

18.4 Message Number

OLDI-FC-NR-10-M The message number data **shall** include the identifiers assigned to the transmitting and receiving units, sectors or workstations and the message sequence number.

OLDI-FC-NR-20-M The message sequence number **shall** progress sequentially from 001 to 000 (representing 1000), thence repeats from 001, for all messages sent to the same addressee, regardless of the type of message.

18.4.1 ICAO

Field type 3, element (b).

18.4.2 ADEXP

Primary field "*refdata*".

OLDI-FC-NR-30-M Sub-field "*fac*", within sub-fields "*sender*" and "*recvr*", **shall** contain the identifiers assigned to the ATC units or logical sectors.

OLDI-FC-NR-40-M These identifiers **shall** be not greater than eight characters in length.

OLDI-FC-NR-50-M Sub-field "*seqnum*" **shall** contain the sequence number.

18.5 Message Reference

18.5.1 ICAO

Field type 3, element (c) (called 'reference data' in ICAO document 4444).

OLDI-FC-REF-10-M The content of element (c) **shall** be that of Field type 3, element (b), of the OLDI message referred to.

18.5.2 ADEXP

Primary field "*msgref*".

OLDI-FC-REF-20-M The values of Sub-fields "*sender*", "*recvr*", and "*seqnum*", within Primary field "msgref", **shall** be those of the same Sub-fields within Primary field "*refdata*" of the OLDI message referred to.

18.6 Aircraft Identification

18.6.1 ICAO

Field type 7, element (a).

18.6.2 ADEXP

Primary field "*arcid*".

18.7 SSR Mode and Code

Either:
- if known, the SSR mode/code on which the receiving unit can expect the aircraft to respond at the transfer of control point; or
- an indicator that the SSR code is being requested from the receiving unit.

OLDI-FC-SSR-10-M When the SSR code is a designated conspicuity code, it **shall** indicate that the flight is using Mode S and that aircraft identification was used as the primary correlation method.

    Note: *Depending on the aircraft identification method applied, this item of data may contain the current SSR code or the SSR code at the transfer of control point.as bilaterally agreed.*

18.7.1 ICAO

Field type 7, elements (b) and (c).

OLDI-FC-SSR-20-M If no SSR code is assigned or the mode/code is not known, elements (b) and (c) **shall** be omitted.

OLDI-FC-SSR-30-M When requesting an SSR code/mode, elements b) and c) **shall** contain the value "A9999".

18.7.2 ADEXP

Primary field "*ssrcode*".

OLDI-FC-SSR-40-M If no valid SSR code is assigned or the mode/code is not known, the field **shall** be omitted.

OLDI-FC-SSR-50-M   When requesting an SSR code/mode via the PAC or ABI message, primary field "*ssrcode*" **shall** contain the indicator "*REQ*".

18.8 Departure Aerodrome

18.8.1 ICAO

Field type 13, element (a).

18.8.2 ADEXP

Primary field "*adep*".

18.9 Estimate Data

18.9.1 General

OLDI-FC-ESTD-10-M   Estimate data **shall** include the COP, time at the COP and transfer flight level.

OLDI-FC-ESTD-20-M   The co-ordination point **shall** be defined as either a known reference point, a range and bearing from a known reference point, or a latitude and longitude.

18.9.2 Level Data

OLDI-FC-ESTD-30-M   The level **shall** correspond to the proposed transfer conditions, if available. For notification messages, it shall contain the level at which it is currently planned that the flight will be cleared on transfer.

OLDI-FC-ESTD-40-R   For climbing or descending flights, the estimate data **should** also contain supplementary flight level and crossing condition.

OLDI-FC-ESTD-50-M   Supplementary flight level and crossing condition **shall** be inserted only if the flight is co-ordinated to be climbing or descending.

OLDI-FC-ESTD-60-M   If used, this item **shall** contain the supplementary flight level at the transfer of control point; the crossing condition shall be:

- Letter 'A'; if the flight will be at or above the supplementary flight level; or
- Letter 'B'; if the flight will be at or below the supplementary flight level.

18.9.3 ICAO

Field type 14.

18.9.4 ADEXP

Primary field "*coordata*".

OLDI-FC-ESTD-70-M   Subfield "*ptid*" within primary field "*coordata*" **shall** contain either:

- a known reference point; or
- a bearing and distance from a known reference point, as defined in the same message by primary field "*ref*" or "*geo*".

Note: *Primary field "coordata" is to be formatted to contain subfield "to" (format hhmm) in place of "eto" (format yymmddhhmmss) as described in Edition 1 of the ADEXP specification. An alternative format using sub-field 'sto' (hhmmss) is to be included in future versions of the ADEXP Specification to allow for anticipated development (see Appendix C).*

18.10 Co-ordination Point

18.10.1 General

The co-ordination point referred to by the transferring and receiving ATC units for the purposes of the transfer concerned.

OLDI-FC-COP-10-M   The co-ordination point **shall** be defined as either a known reference point, a range and bearing from a known reference point, or a latitude and longitude.

18.10.2 ICAO

Field 14, element (a).

18.10.3 ADEXP

Primary field "*cop*" containing:
- a known reference point; or
- a bearing and distance from a known reference point, as defined in the same message by primary field "*ref*" or "*geo*".

18.11 Destination Aerodrome

18.11.1 ICAO

Field 16, element (a).

18.11.2 ADEXP

Primary field "*ades*".
> *Note:*   *In case of a change of destination, the ADEXP primary field "adesold" may be used in addition to "ades" field if bilaterally agreed.*

18.12 Number and Type of Aircraft

OLDI-FC-AC-10-M   Number and type of aircraft **shall** contain the type of aircraft.

OLDI-FC-AC-20-M   The number of aircraft **shall** be included in the case of formation flights.

18.12.1 ICAO

OLDI-FC-AC-30-M   Field type 9 in field type 22 format. Element c of field type 9 **shall** contain the wake turbulence category appropriate to the type of aircraft when available.
> *Note:*   *The wake turbulence category is included in ICAO format messages to make the field compliant with [PANS-ATM].*

OLDI-FC-AC-40-O   If bilaterally agreed, the element c of field type 9 **may** contain the letter 'Z' for flights for which the wake turbulence category is unknown.

18.12.2 ADEXP

Primary field "*arctyp*". In addition, if there is more than one aircraft in the flight, primary field "*nbarc*". If bilaterally agreed, the primary field 'wktrc' is used for the indication of wake turbulence category.

18.13 Route

Both formats support the route description as defined for ICAO messages which also includes speed and requested flight level or altitude information.

OLDI-FC-ROUTE-10-M   After the speed level group, the route data **shall** include as a minimum the route data specified in section 18.13.1.

OLDI-FC-ROUTE-20-O Further route data **may** be inserted after the route data specified in the third bullet of section 18.13.1.1 or 18.13.1.2, if available.

> *Note:* *See also section 17 'Special Route Processing Requirements' for insertion rules for route data.*

18.13.1 Content

18.13.1.1 Flights Proceeding via a Defined COP

- the route element before the COP (ATS route, SID identifier, DCT or significant point);
- the COP;
- the route element after the COP (ATS route, STAR identifier, DCT or significant point) or either VFR or OAT if a change in flight rules or category occurs at the COP.

> *Note:* *The COP and the route element after the COP may be omitted if the SID or ATS route element after the COP is the same as that before the COP.*

18.13.1.2 Flights Proceeding Off ATS Route

- the point from which the flight is proceeding on the direct route segment;
- the element 'DCT';
- the point to which the flight is proceeding on the direct route segment.

> *Note:* *See also section 17 'Special Route Processing Requirements' for insertion rules for route data.*

18.13.2 Format

18.13.2.1 ICAO

Field type 15, in field type 22 format.

18.13.2.2 ADEXP

Primary field "*route*".

18.14 Other Flight Plan Data

This field allows the option of including in specified messages flight plan data not normally included as part of the co-ordination procedure and not described elsewhere in this appendix. The inclusion of the following items as described in [PANS-ATM], Appendix 2, Field Types 8 and 18 are permitted:

- Flight Rules;
- Registration markings;
- Name of the operator;
- Reason for special handling by ATS;
- Number and type(s) of aircraft if no ICAO codes exist;
- Aircraft Performance Category;
- Name of departure, destination if no ICAO location indicator exists;
- The ICAO location indicator of the first/second destination alternate aerodrome;
- Plain language remarks;
- En-route alternate aerodrome(s);
- Navigation equipment, other than specified in PBN.

18.14.1 ICAO

Field type 8, element (a) Flight Rules in field type 22 format.
One or more of the following field type 18 elements in field type 22 format:
REG, OPR, STS, TYP, PER, DEP, DEST, ALTN, RALT, RMK, NAV.

18.14.2 ADEXP

Primary fields: "*fltrul*", "*depz*", "*destz*", "*opr*", "*per*", "*reg*", "*rmk*", "*altrnt1*", "*altrnt2*", "*sts*", "*typz*", "*ralt*", "*nav*".
> *Note:* Item A.14 contains a catalogue of possible items to be exchanged and they need to be bilaterally agreed.

18.15 Other Flight Data

This field allows the option of including in specified messages any Item in the ICAO FPL or any other bilaterally agreed data item.

18.15.1 ADEXP

OLDI-FC-OFD-10-M   For the exchange of data Items in the ICAO FPL the corresponding ADEXP field **shall** be used.

OLDI-FC-OFD-20-M   For the exchange of data items not defined in the ICAO FPL and for which ADEXP fields have been defined, the corresponding ADEXP field **shall** be used.

OLDI-FC-OFD-30-M   For the exchange of data items for which no ADEXP fields have been defined, the name and syntax of the fields in ADEXP format **shall** be bilaterally agreed.
> *Note:* Item A.15 contains a catalogue of possible items to be exchanged and they need to be bilaterally agreed.

18.16 Co-ordination Status and Reason

OLDI-FC-CSR-10-M   Co-ordination status and Reason **shall** include the following elements:
- a three letter indicator confirming the new status of the system flight plan, to be one of the following:
    - INI, when the system flight plan is to be in an initial state, i.e. no notification message received;
    - NTF, when the system flight plan is to be in a notified status;
- a three letter indicator specifying the reason for the status to be one of the following:
    - TFL, if the reason is a change of transfer flight level;
    - RTE, if the reason is a change of route;
    - HLD, to indicate that the flight is holding for an indefinite period and will be subject to a further message;
    - DLY, to indicate that the departure is delayed;
    - CAN, if the reason is a cancellation;
    - OTH, for any other reason or if the reason is unknown.

18.16.1 ICAO

OLDI-FC-CSR-20-M   The co-ordination status and reason **shall** be in the Field type 18 format.

OLDI-FC-CSR-30-M   The co-ordination status and reason **shall** include the following elements as a ten character group:
- STA followed by an oblique stroke;
- the indicator to confirm the new status of the notification/co-ordination;
- the indicator specifying the reason.

18.16.2 ADEXP

Primary field "*cstat*".

OLDI-FC-CSR-40-M   Auxiliary items "*coorstatusident*" and "*coorstatusreason*" **shall** contain the new status and reason as specified above respectively.

18.17 Assigned Heading/Track (ADEXP only)

The Assigned Heading/Track field contains either the assigned heading or the assigned track (but not both) or the letters "ZZZ" to indicate that a previously assigned heading or track no longer applies. The receipt of heading or track data supersedes any previous heading or track data.

OLDI-FC-AHD-10-M   The assigned heading **shall** be included by the use of primary field "*ahead*".

OLDI-FC-AHD-12-M   The assigned heading field **shall** contain either:
- the heading assigned to a flight, expressed in degrees; or
- if no heading or track is assigned, the indicator "ZZZ".

OLDI-FC-AHD-13-O   The heading or the indicator "ZZZ" **may** be replaced by:
- "PH" if aircraft is instructed to hold the present heading; or
- "AW" if aircraft is cleared to avoid weather on a heading, but the heading is not specified;

  Note: The "PH" indicator can be used for relative heading clearances and when the exact value of heading has not be given.

OLDI-FC-AHD-15-M   The assigned track **shall** be included by the use of primary field "*track*".

OLDI-FC-AHD-16-M   Primary field "*track*" **shall** contain either:
- the track assigned to a flight, expressed in degrees; or
- if no heading or track is assigned, the indicator "ZZZ".

18.18 Assigned Speed (ADEXP only)

OLDI-FC-ASP-10-M   Primary field "*aspeed*" **shall** contain either:
- the speed assigned to a flight, expressed in knots, mach number, or kilometres/hour; or
- if no speed is assigned, the indicator "ZZZ", e.g. when an SDM message is used to indicate that a previously assigned speed no longer applies.

OLDI-FC-ASP-20-M   If bilaterally agreed the primary field "speedlimit" **shall** be used to indicate that the assigned speed is:
- a speed equal to or larger than a minimum value by using the indicator "MIN";
- a speed equal to or smaller than a maximum value by using the indicator "MAX"; or
- an exact assigned speed by using the indicator "EQL".

18.19 Assigned Rate of Climb/Descent (ADEXP only)

OLDI-FC-ARCD-10-M   Primary field "*rate*" **shall** contain:
- the climb or descent rate assigned to a flight, expressed in hundreds of feet per minute; or
- if no rate of climb/descent is assigned, the indicator "ZZZ" in the digit portion of the field, e.g. when an SDM message is used to indicate that a previously assigned rate of climb/descent no longer applies.

OLDI-FC-ARCD-20-M   If bilaterally agreed the primary field "*ratelimit*" **shall** be used to indicate that the assigned rate of climb/descent is:
- a rate equal to or larger than a minimum value by using the indicator "MIN";
- a rate equal to or smaller than a maximum value by using the indicator "MAX"; or
- an exact assigned rate by using the indicator "EQL".

18.20 Direct Clearance (ADEXP only)

A direct route, not defined as an ATS route, between two points. The points can be defined as either a known reference point or a range and bearing from a reference point or as reference to latitude/longitude.

OLDI-FC-DCLR-10-M All endpoint designators used **shall** be bilaterally agreed, i.e. known to both systems. The ADEXP primary field "dct" contains:

- the point at which the deviation has or will commence, defined as one of:
  - a known reference point;
  - a range and bearing from a known reference point, as defined in the same message by primary field "*ref*";
  - the value "*ZZZ*" if the sending unit does not require to designate the deviation point.
- the point situated on the original flight plan route to which the aircraft has been or will be cleared, defined as:
  - a known reference point;
  - a range and bearing from a known reference point, as defined in the same message by primary field "*ref*".

OLDI-FC-DCLR-20-O When bilaterally agreed, the start and end DCT points for a flight on a direct route **may** be expressed by reference to latitude/longitude.

18.21 Direct Routing Request

Request for a direct route, not defined as an ATS route, between two points. The points can be defined as either a known reference point or a range and bearing from a reference point or as reference to latitude/longitude.

OLDI-FC-DRTR-10-M All endpoint designators used **shall** be bilaterally agreed, i.e. known to both systems.

18.21.1 ICAO

Field type 15, excluding the initial speed/level group, in field 22 format.

OLDI-FC-DRTR-20-M It **shall** contain:

- the point at which the deviation is requested to commence, defined as one of:
  - a known reference point;
  - a range and bearing from a known reference point;
  - the value "ZZZ" if a direct routing is being requested by the receiving ATC unit.
- the abbreviation 'DCT';
- the point situated on the original flight plan route to which the aircraft is requested to be cleared, defined as:
  - a known reference point; or
  - a range and bearing from a known reference point.

OLDI-FC-DRTR-30-O When bilaterally agreed, the start and end DCT points for a flight on a direct route **may** be expressed by reference to latitude/longitude.

18.21.2 ADEXP

Primary field "*dct*" containing:
- the point at which the deviation is requested to commence, defined as either:
  - a known reference point;
  - a range and bearing from a known reference point, as defined in the same message by primary field "*ref*"; or
  - a reference point defined by latitude and longitude by primary field "*geo*".
- the value "*ZZZ*" if a direct routing is being requested by the receiving ATC unit but the precise point at which it would commence is not known. The point situated on the original flight plan route to which the aircraft is requested to be cleared, defined as either:

- a known reference point;
- a range and bearing from a known reference point, as defined in the same message by primary field "*ref*"; or
- a reference point defined by latitude and longitude by primary field "*geo*".

18.22 Position of the Flight (ADEXP only)

18.22.1 General

The current position of the flight is expressed in either geographic co-ordinates or by bearing and distance from a designated point.

OLDI-FC-POS-05-M	The current position of the flight **shall** be included by the use of the "*position*" primary field.
OLDI-FC-POS-10-M	Primary field "*ref*" or "*geo*" **shall** define the current horizontal location of the aircraft.
OLDI-FC-POS-20-M	Points used for range and bearing purposes in primary field "*ref*" **shall** be bilaterally agreed, i.e. known to both systems.
OLDI-FC-POS-30-M	Primary field "position" **shall** contain the subfield "*ptid*" which refers to the defined reference or geographic point.
OLDI-FC-POS-40-M	If time information is to be included, either subfield "*to*" (hhmm) or "*sto*" (hhmmss) **shall** be used, as bilaterally agreed.

18.23 Planned Transfer Position (ADEXP only)

18.23.1 General

The planned transfer position of the flight is expressed in either geographic co-ordinates or by bearing and distance from a designated point.

OLDI-FC-POS-50-M	The planned position of the flight **shall** be included by the use of the "*plannedposition*" primary field.
OLDI-FC-POS-60-M	Primary field "*ref*" or "*geo*" **shall** define the current horizontal location of the aircraft.
OLDI-FC-POS-70-M	Points used for range and bearing purposes in primary field "*ref*" **shall** be bilaterally agreed, i.e. known to both systems.
OLDI-FC-POS-80-M	Primary field "*position*" **shall** contain the subfield "*ptid*" which refers to the defined reference or geographic point.
OLDI-FC-POS-90-M	If time information is to be included, either subfield "*cto*" either subfield "*to*" (hhmm) or "*sto*" (hhmmss) **shall** be used, as bilaterally agreed.

18.24 Release Indication (ADEXP only)

OLDI-FC-RELI-10-M	Primary field "*release*" **shall** contain one of the following: • C, if the flight is released for climb; • D, if the flight is released for descent; • T, if the flight is released for turns; • F, if the flight is fully released for all actions.

18.25 Frequency

18.25.1 ICAO

OLDI-FC-FREQ-10-M	Field type 18 **shall** include the following elements in field 22 format: • FRQ, followed by an oblique stroke; • 6 digits indicating the frequency, expressed in MHz to three decimal places.

18.25.2 ADEXP

Primary field "*freq*".

18.26 Reason (ADEXP only)

Primary field "*reason*", containing the value "*MANUAL*" for manually referred messages. This is a bilaterally agreed field within RAP and RRV messages addressing the manually referral reason.

18.27 Cleared Flight Level (ADEXP only)

Primary field "*cfl*".

18.28 Proposed Transfer Flight Level (ADEXP only)

Primary field "*propfl*".

18.29 Estimated Take-Off Time

18.29.1 ICAO

Field type 13 element (b).

18.29.2 ADEXP

Primary field "*etot*".

18.30 Reference Message Type

The field contains the message type as specified in section 18.3.

18.30.1 ICAO

Field type 18 in field type 22 format.

OLDI-FC-RMT-10-M   The reference message type field in ICAO format messages **shall** use the element indicator 'MSG'.

OLDI-FC-RMT-20-M   The reference message type field in ICAO format messages **shall** be inserted as the last element in the message.

18.30.2 ADEXP

Primary field "*msgtyp*".

18.31 Type of Flight

This item is as filed in the flight plan or equivalent data originating from an alternative source. The letter 'X' is inserted if the Type of Flight was omitted in the flight plan or it is not known for any other reason.

18.31.1 ICAO

OLDI-FC-FLT-10-M   The type of flight **shall** be inserted as a single letter in field type 22 format utilising the pseudo field type number 80.

18.31.2 ADEXP

Primary field "*flttyp*".

18.32 Equipment Capability and Status

This item indicates the capability and status of equipment that is either a pre-requisite for flight in certain airspaces or on specified routes or has a significant effect on the provision of ATC service. The presence of a capability is identified in the flight plan but may be found to be incorrect or to have changed during the flight. The Equipment Capability and Status specifies the current status.

OLDI-FC-EQCS-10-M The status of the following items **shall** be included:
- RVSM capability;
- 8.33kHz RTF equipage.

OLDI-FC-EQCS-20-M The status of the following **shall** be included for State flights as specified in the Type of Flight in the flight plan for which 8.33 kHz RTF equipment is not known to be available for use or not equipped:
- UHF equipage.

OLDI-FC-EQCS-30-M If bilaterally agreed the status of the following items **shall** be included:
- PBN capability;
- Mode S capability.

> *Note:* *The Mode S capability will be expressed using the ICAO designator for Mode S transponders including both pressure altitude and aircraft identification transmission. This is justified by the fact that in Europe most aircraft will be equipped with the transmission of the pressure altitude capability, although this is not significant for transmission within the OLDI context. Flights for which the FPL was filed with the letter I in field 10 may also be considered Aircraft Identification capable.*

18.32.1 ICAO

OLDI-FC-EQCS-40-M The RVSM capability, 8.33kHz and UHF equipage **shall** be inserted in field type 22 format utilising the pseudo field number 81.
Two elements are inserted for each capability:
- The equipment capability expressed as a single letter as specified in field type 10 "Equipment and Capabilities" in the ICAO flight plan (see Appendix 3 of [PANS-ATM]), followed immediately by;
- Element separator - oblique stroke (/), followed immediately by;
- Status expressed as two letters.

OLDI-FC-EQCS-50-M The status **shall** be expressed by the use of following indicators as applicable to the flight:
- EQ meaning the flight is equipped and the equipment is available for use by the flight;
- NO meaning the flight is not equipped or for any reason the equipment cannot be used by the flight;
- UN meaning compliance with the capability is unknown.

> *Note 1*: *For Mode S the indicator EQ has the meaning that the flight is equipped, the equipment is available for use by the flight and the aircraft identification has been correctly selected on board and verified by ATCO.*

> *Note 2:* *The first capability group is inserted directly after the oblique stroke following the field number. Subsequent groups are separated by a space character. The order of equipment capabilities is not significant.*

OLDI-FC-EQCS-60-M The PBN capability and, if applicable, the RNAV and/or RNP specifications mentioned under the indicator PBN in the Item 18 of the flight plan **shall** be inserted in field type 22 format utilising the pseudo field number 81.
The following elements are inserted:
- The PBN indicator (letter R), followed immediately by;
- Element separator - oblique stroke (/), followed immediately by;
- Status expressed as two letters, followed immediately by;

- Element separator - oblique stroke (/), followed immediately by;
- If available, the equipment capability expressed in field type 18 "Other information" under the indicator PBN in the ICAO flight plan (see Appendix 3 of [PANS-ATM]).

Note 1: Include as many of the descriptors as apply to the flight, up to a maximum of 8 entries.

Note 2: The equipment capability expressed in field type 18 is inserted only if the status is "equipped" (see examples below).

Examples: *R/EQ/D1O1;*

R/NO;

R/UN.

OLDI-FC-EQCS-70-M The Mode S capability **shall** be inserted in field type 22 format utilising the pseudo field number 81.

The following elements are inserted:

- A generic Mode S indicator (letter S), followed immediately by;
- Element separator - oblique stroke (/), followed immediately by;
- Status expressed as two letters, followed immediately by;
- Element separator - oblique stroke (/), followed immediately by;
- If available, the appropriate surveillance equipment indicators as per Item 10b of the ICAO flight plan (see Appendix 3 of [PANS-ATM]).

Note: The surveillance equipment indicators are inserted only if the status is "equipped" (see examples below).

Examples: *S/EQ/EH;*

S/NO;

S/UN.

18.32.2 ADEXP

Primary fields "*eqcst*", "*sureqpt*" and "*pbn*".

18.33 Sector Identifier (ADEXP Format only)

OLDI-FC-SECID-10-M The sector identifier **shall** be included by using primary field "*sector*".

18.34 Pointed Sector Identifier (ADEXP Format only)

OLDI-FC-SECID-20-M The pointed sector identifier **shall** be included by using primary field "*pntsector*".

18.35 AMAN Time

This item contains the time that the flight should be at the COP as calculated by the arrival manager.

18.35.1 ICAO

Field 14 elements a and b.

18.35.2 ADEXP

Primary field "*amantime*". This time should be expressed as calculated time (hhmmss).

18.36 Metering Fix

This contains a known reference point or a bearing and distance from a known reference point.

18.36.1 ICAO

The metering fix is inserted as element MFX of field 18 in field type 22 format. The element comprises:

- The three letter element name MFX;
- An oblique stroke (/);
- The metering fix identity.

Where the element 'metering fix identity' is a bearing and distance from a named point, the format is as described in section 1.6.3 e) of [PANS-ATM] Appendix 3.

18.36.2 ADEXP

Primary field "*mfx*".

18.37 Time Over Metering Fix

This contains the computed time that the flight is to leave the metering fix, based on the sequence provided by the arrival manager.

18.37.1 ICAO

The Time Over Metering Fix is inserted as element TOM of field 18 in field type 22 format. The element comprises:

- The three letter element name TOM;
- An oblique stroke (/);
- The calculated time (hhmm).

18.37.2 ADEXP

Primary field "*tom*". This time should be expressed as calculated time (hhmmss).

18.38 Total Time to Lose or Gain

This field contains the number of minutes (mm) that a flight is required to lose or gain at the metering fix. TTL is used when time is to be lost, i.e. a delay is to be absorbed by the flight, and TTG when time is to be gained.
If bilaterally agreed, the time indication includes seconds (mmss). This option is available in ADEXP format only.
***Note:** A minus symbol is not permissible as it is used as a field separator in both formats.*

18.38.1 ICAO

The total time to lose or gain is inserted as element TTL or TTG of field 18 in field type 22 format. The element comprises:

- The three letter element name TTL if time is to be absorbed or TTG if time is to be gained;
- An oblique stroke (/);
- Two digits specifying the number of minutes calculated to be lost or gained (as identified by the element name).

18.38.2 ADEXP

Primary field "*ttl*" or "*ttg*".

18.39 Route Points (ADEXP Format only)

This item contains a list of one or more points derived from the expanded route of flight. The time and level information at each point is included.

18.39.1 ADEXP

Primary field "*rtepts*". Subfield "*pt*" **shall** include time using either subfield "*to*" or "*sto*".

OLDI-FC-RTEPTS-10-M The route points data **shall** utilise primary field "*rtepts*" and include the time at each point using either the "*to*" or "*sto*" subfield.

OLDI-FC-RTEPTS-20-M The route points data **shall** include level data at each point using the "*fl*" subfield.

18.40 Previous SSR Mode and Code (ADEXP only)

The previous SSR Mode and Code contain the SSR mode and code the flight is transponding before it transponds the mode and code specified in the "SSR Mode and Code".

18.40.1 ADEXP

Primary field "*prevssrcode*".

OLDI-FC-PSSR-10-M If no valid SSR code is assigned or the mode/code is not known, the field **shall** be omitted.

18.41 Next SSR Mode and Code (ADEXP only)

The next SSR Mode and Code contain the SSR mode and code the flight is transponding after it transponds the mode and code specified in the "SSR Mode and Code".

18.41.1 ADEXP

Primary field "*nextssrcode*".

OLDI-FC-NSSR-10-M If no valid SSR code is assigned or the mode/code is not known, the field **shall** be omitted.

18.42 Requested Flight Level (ADEXP only)

The requested flight level is the planned cruising level as filed in field 15 of the flight plan.

18.42.1 ADEXP

Primary field "*rfl*".

18.43 Speed (ADEXP only)

The speed is the true airspeed as filed in field 15 of the flight plan.

18.43.1 ADEXP

Primary field "*speed*".

18.44 Approved Take-Off Time (ADEXP only)

The approved take off time is the time at which the flight should take off at the aerodrome as approved by the next ATC unit.

18.44.1 ADEXP

Primary field "*apptot*".

18.45 Estimated Off-Block Time (ADEXP only)

The estimated off-block time is the estimated time at which the aircraft will commence movement associated with departure.

18.45.1 ADEXP

Primary field "*eobt*".

18.46 Actual Take-Off Time (ADEXP only)

The actual time at which the flight has taken off.

18.46.1 ADEXP

Primary field "*atot*".

18.47 Departure Runway (ADEXP only)

This item contains the departure runway to be used by the flight in the context of the message.

18.47.1 ADEXP

Primary field "*rwydep*".

18.48 SID Identifier (ADEXP only)

The SID Identifier is the identifier of a Standard Instrument Departure procedure.

18.48.1 ADEXP

Primary field "*sid*".

18.49 Aircraft Address (ATN) (ADEXP only)

OLDI-ACAD-10-M   The Aircraft Address **shall** contain the ICAO 24-bit aircraft address (ICAO, Annex 10, Vol. 3, Ch. 9) of the aircraft initiating the CM-logon service.

OLDI-ACAD-20-M   The Aircraft Address **shall** be expressed in the form of an alphanumerical code of six hexadecimal characters.

18.49.1 ADEXP

Primary field "*arcaddr*".

18.50 Logon Type (ADEXP only)

The logon type shall contain the type of logon parameters ATN.

18.50.1 ADEXP

Primary field "*af*".

18.51 ATN Logon Parameters (ADEXP only)

This item contains the communication addresses and parameters related to the ATN applications.

18.51.1 ADEXP

Primary field "*atnlogon*".
Subfields "*cmltsp*", "*cpcqvltsp*", "*adsqvltsp*", "*atiqv*", "*agappqualifier*", "*agappversion*", "*cpdlcaddress*", "*adsaddress*".

18.51.2 cmltsp

Transport layer address, which defines the CM application of the aircraft.
It shall be expressed in the form of an alphanumerical code of 36 or 38 hexadecimal characters.
cmltsp=RDP+ARS+LOC+SYS+NSEL+TSEL (18 or 19 bytes in total)

- RDP=Routing Domain Part (5 bytes); Address is exclusively assigned to ICAO and IATA;

- ARS=Administrative Region Selector (3 bytes); It contains the 24-bit aircraft address;
- LOC+SYS+NSEL=9 bytes address, defining the address of an End- or Intermediate system in a particular routing domain;
- TSEL=Transport Selector (1 or 2 bytes), assigned locally.

18.51.3 atiqv

This parameter contains ATN ATI application type and ATN ATI application version.

18.51.4 cpcqvltsp

This parameter contains the ATN CPDLC application type, version and corresponding address.

18.51.5 adsqvltsp

This parameter contains the ATN ADS-C application type, version and address.

18.51.6 agappqualifier

This parameter contains the ATN air - ground application type.
- ADS-C=0;
- CPDLC=22;
- ATI = 3.

> *Note:* *The transmitting unit may transmit the LOF message, containing the CPCQVLTSP with AGAPPQUALIFIER 22 and its corresponding CPDLCADDRESS. The receiving data-link equipped unit provides the appropriate CPDLC service as indicated in the LOF message.*

18.51.7 agappversion

If the aircraft does not use a certain application, this parameter contains the version number of each air - ground application.
- '00': if the application is not available;
- ADS-C application='01' or '02';
- CPDLC application = '01' or '02';
- ATI application = '01' or '02'.

> *Note:* *If an aircraft did not indicate that it wants to use one of the applications, the associated agappversion is set to '00' in the LOF and the associated application address field is omitted.*

18.51.8 cpdlcaddress

This parameter contains the ATN address of the CPDLC application.
It shall be expressed in the form of an alphanumerical code of 36 or 38 hexadecimal characters.
cpdlcaddress=RDP+ARS+LOC+SYS+NSEL+TSEL (18 or 19 bytes in total)
- RDP=Routing Domain Part (5 bytes); Address is exclusively assigned to ICAO and IATA;
- ARS=Administrative Region Selector (3 bytes); It contains the 24-bit aircraft address;
- LOC+SYS+NSEL=9 bytes address, defining the address of an End- or Intermediate system in a particular routing domain;
- TSEL=Transport Selector (1 or 2 bytes), assigned locally.

18.51.9 adsaddress

This parameter contains the ATN address of the ADS-C applications.
It shall be expressed in the form of an alphanumerical code of 36 or 38 hexadecimal characters.
adsaddress=RDP+ARS+LOC+SYS+NSEL+TSEL (18 or 19 bytes in total)
- RDP=Routing Domain Part (5 bytes); Address is exclusively assigned to ICAO and IATA;

- ARS=Administrative Region Selector (3 bytes); It contains the 24-bit aircraft address;
- LOC+SYS+NSEL=9 bytes address, defining the address of an End- or Intermediate system in a particular routing domain;
- TSEL=Transport Selector (1 or 2 bytes), assigned locally.

18.51.10   ADEXP

Primary field "*atnlogon*".
Subfields "*cmltsp*", "*cpcqvltsp*", "*adsqvltsp*", "*atiqv*", "*agappqualifier*", "*agappversion*", "*cpdlcaddress*", "*adsaddress*".

18.52 Arrival Sequence Number (ADEXP only)

OLDI-ARRSEQ-10-M   The Arrival Sequence Number **shall** contain the expected position of the flight in the arrival sequence at the time of the AMA transmission.

18.52.1 ADEXP

Primary field "*arrseqnumber*".

18.53 Application Point (ADEXP only)

This item contains the point on the route of flight from which an ATC constraint applies (e.g. the assigned speed used in AMA).

18.53.1 ADEXP

Primary field "*applipt*" containing:
- a known reference point; or
- a bearing and distance from a known reference point, as defined in the same message by primary field *"ref"* or *"geo"*.

18.54 Previous Aerodrome of Destination (ADEXP only)

This item contains the previous aerodrome of destination to be used by the flight in the context of the message.

18.54.1 ADEXP

Primary field *"adesold"*.

18.55 ATNB2 Logon Parameters (ADEXP only)

18.55.1 cpcqvltsp

This parameter contains the ATN CPDLC application type, version and corresponding address.

18.55.2 adsqvltsp

This parameter contains the ATN ADS-C application type, version and address.

18.55.3 agappqualifier

This parameter contains the ATNB2 air - ground application type.

- ADS-C=0;
- CPDLC=22.

18.55.4 agappversion

This parameter contains the ATNB2 version number of each air - ground application

- ADS-C application='01' (or other values that might be defined in the future);
- CPDLC application = '02' (or other values that might be defined in the future).

18.55.5 cpdlcaddress

This parameter contains the ATNB2 address of the CPDLC application.
It shall be expressed in the form of an alphanumerical code of 36 or 38 hexadecimal characters.
cpdlcaddress=RDP+ARS+LOC+SYS+NSEL+TSEL (18 or 19 bytes in total)

- RDP=Routing Domain Part (5 bytes); Address is exclusively assigned to ICAO and IATA;
- ARS=Administrative Region Selector (3 bytes); It contains the 24-bit aircraft address;
- LOC+SYS+NSEL=9 bytes address, defining the address of an End- or Intermediate system in a particular routing domain;
- TSEL=Transport Selector (1 or 2 bytes), assigned locally.

18.55.6 adsaddress

This parameter contains the ATNB2 address of the ADS-C applications.
It shall be expressed in the form of an alphanumerical code of 36 or 38 hexadecimal characters.
adsaddress=RDP+ARS+LOC+SYS+NSEL+TSEL (18 or 19 bytes in total)

- RDP=Routing Domain Part (5 bytes); Address is exclusively assigned to ICAO and IATA;
- ARS=Administrative Region Selector (3 bytes); It contains the 24-bit aircraft address;
- LOC+SYS+NSEL=9 bytes address, defining the address of an End- or Intermediate system in a particular routing domain;
- TSEL=Transport Selector (1 or 2 bytes), assigned locally.

18.55.7 ADEXP

- Primary field *'atnlogonb2'*;
- Subfields *'cpcqvltsp', 'adsqvltsp', 'agappqualifier', 'agappversion', 'cpdlcaddress', 'adsaddress'.*

18.56 Approach Type (ADEXP only)

This item contains the approach type information as free text indicating the approach type for particular flight.

18.56.1 ADEXP

Primary field "*apptyp*".

18.57 Formation Flight Information (ADEXP only)

This item contains callsigns and aircraft types of all aircraft that are part of formation flight.

18.57.1 ADEXP

Primary field "*frmfli*".

18.58 Actual Time of Arrival (ADEXP only)

This item contains the time at which the aircraft arrived at the destination aerodrome.

18.58.1 ADEXP

Primary field *"ata".*

18.59 Estimated off-block date (ADEXP only)

This item contains the estimated date at which the aircraft will commence movement associated with departure.

18.59.1 ADEXP

Primary field *"eobd"*.

INFORMATIVE ANNEXES

ANNEX A – DIALOGUE PROCEDURE (SYSCO LEVEL 1) PHASES - MESSAGE SEQUENCE

A.1   Message Sequence
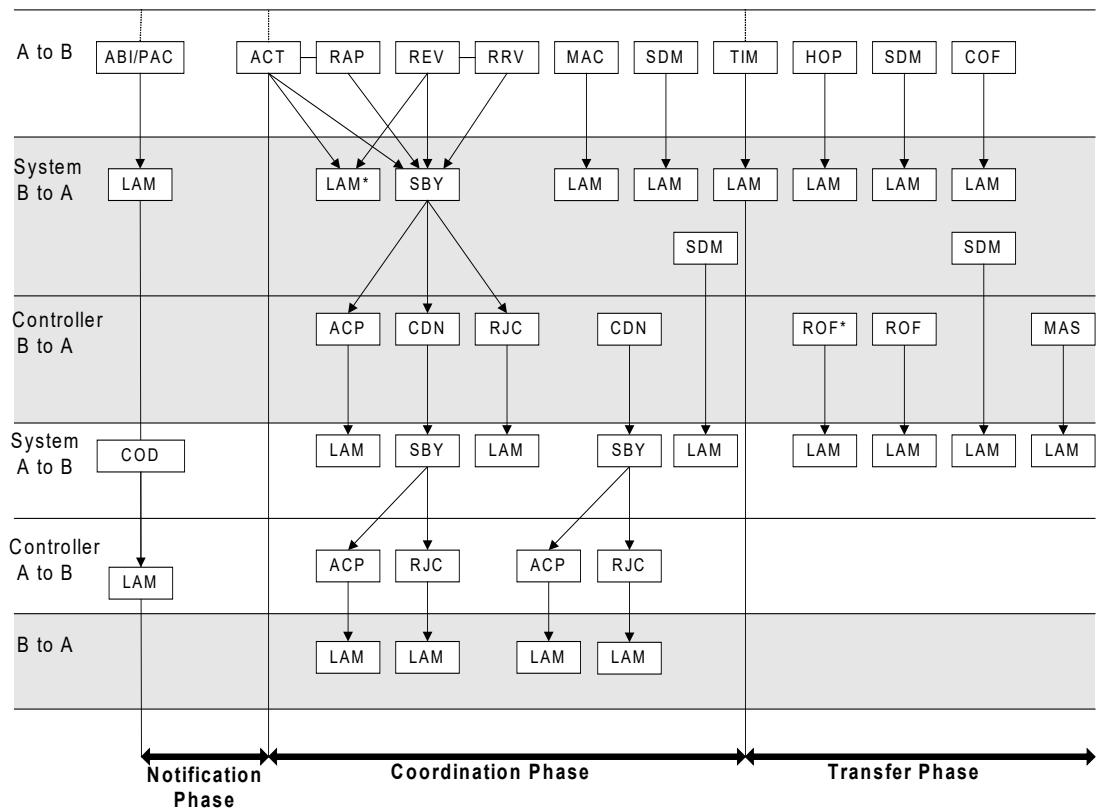
Figure A.1 – Message Sequence - Part 1
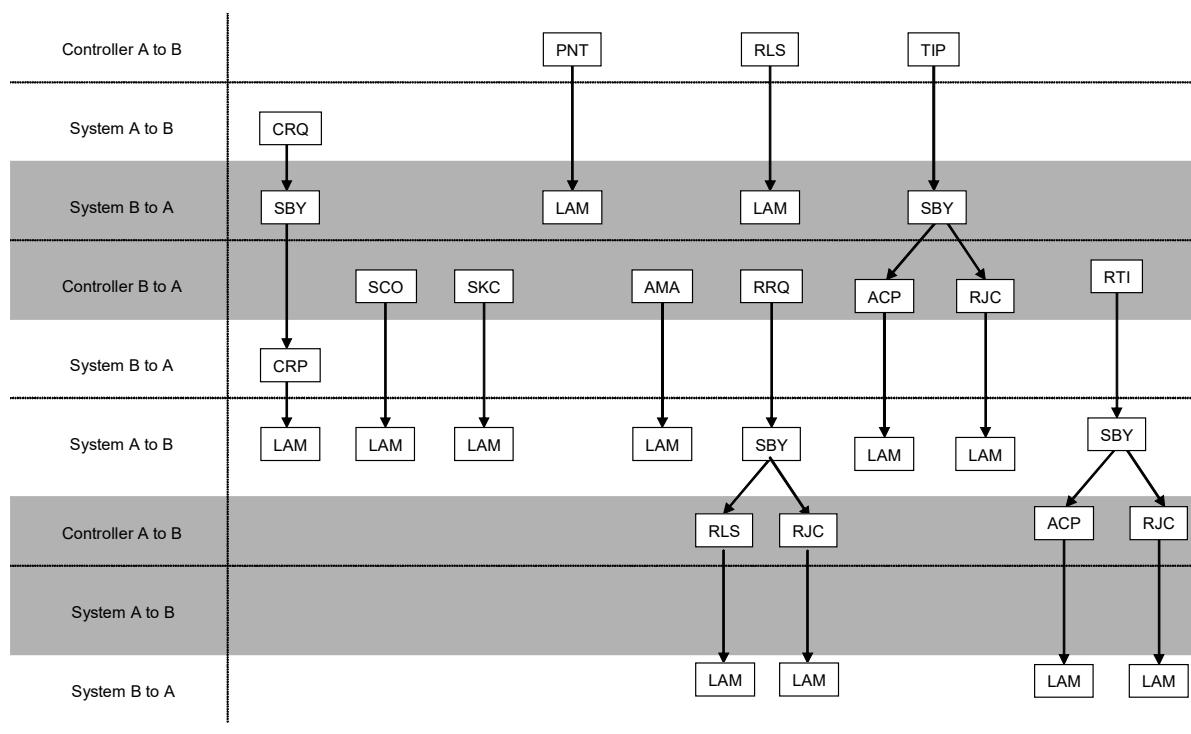
Figure A.2 – Message Sequence – Part 2

ANNEX B – CIVIL/MILITARY - MESSAGE SEQUENCE

B.1   Civil - Military Message Sequence

Civil-military flight data exchange and airspace crossing are dynamic system components as they both require a dialogue between civil and military units. These dialogues are described briefly in the data flow diagram in Figure D-1**Error! Reference source not found.**. The diagram shows the exchange of messages expected between the System A and the System B. The system sends a message either automatically (BFD, CFD, TFD, XIN, LAM, XCM) or when triggered by a controller input (XIN, XRQ, XAP, ACP, RJC, XCM). For those messages having both possibilities (XIN, XCM) only the normal case is shown in the diagram.
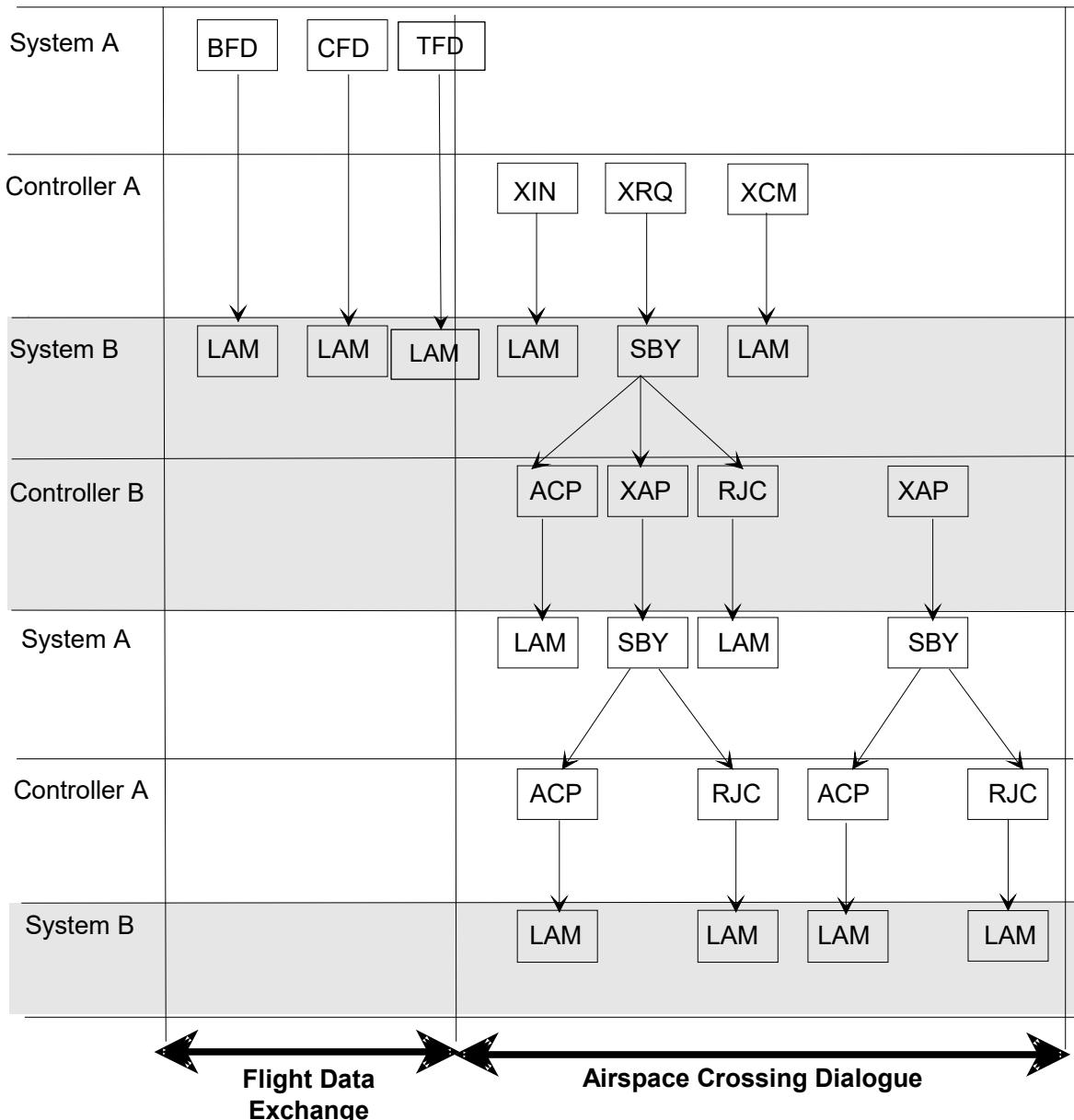
Figure B.1 – Civil/Military Co-ordination

ANNEX C – AIR / GROUND DATA LINK – SEQUENCE DIAGRAMS
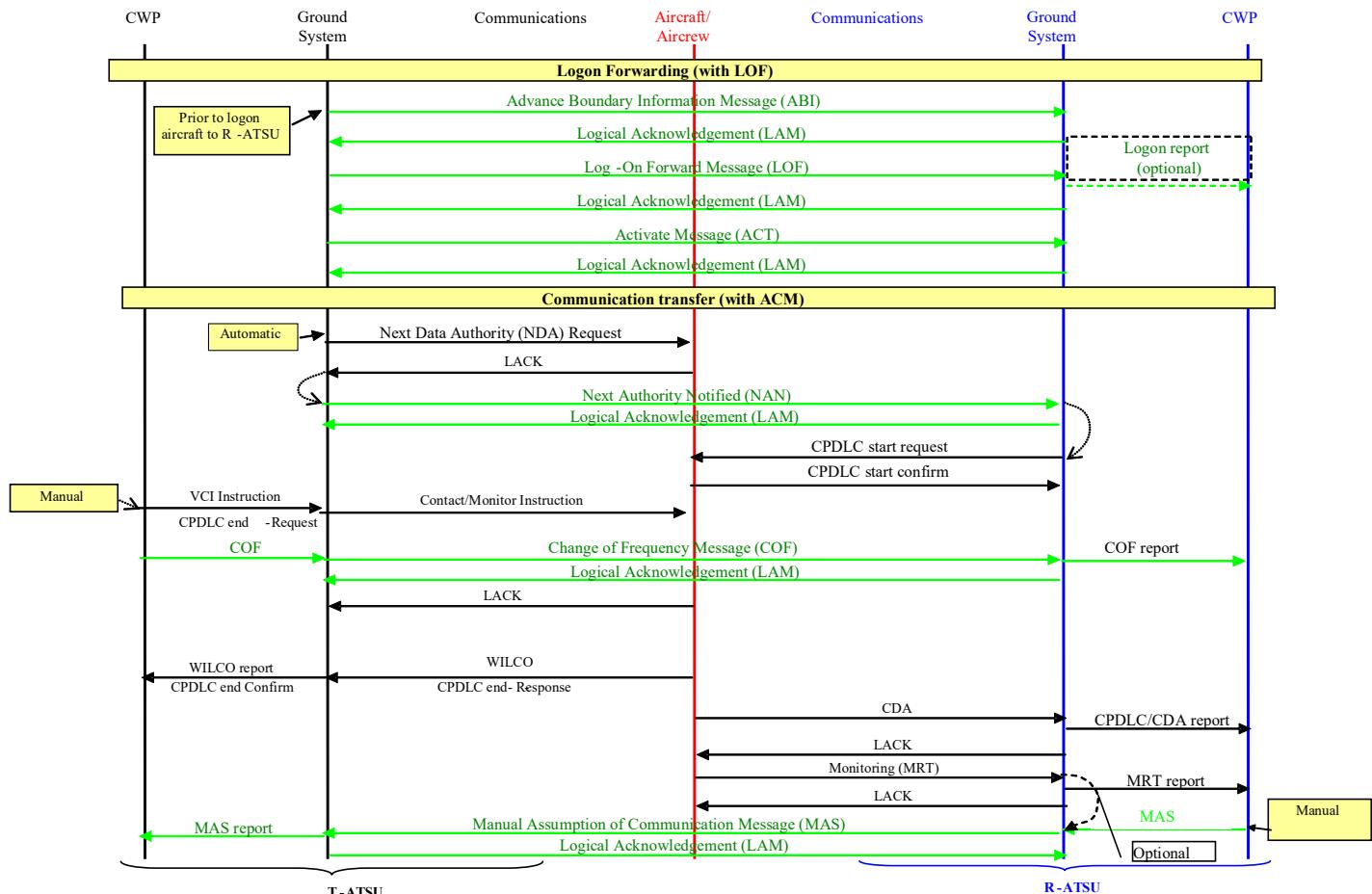
Note: *The Ground-ground co-ordination is not coupled with the air-ground message exchange.*

Figure.C-1 – Logon Forwarding, using LOF, and communication transfer for ATN
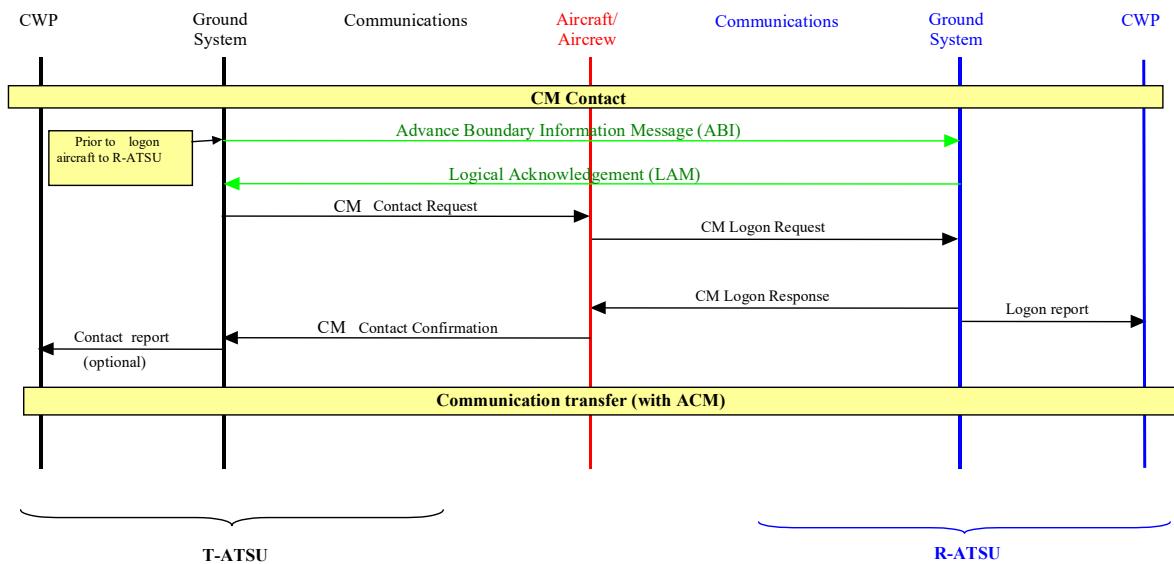
Figure C.2 – Logon Forwarding, using CM-contact, and communication transfer
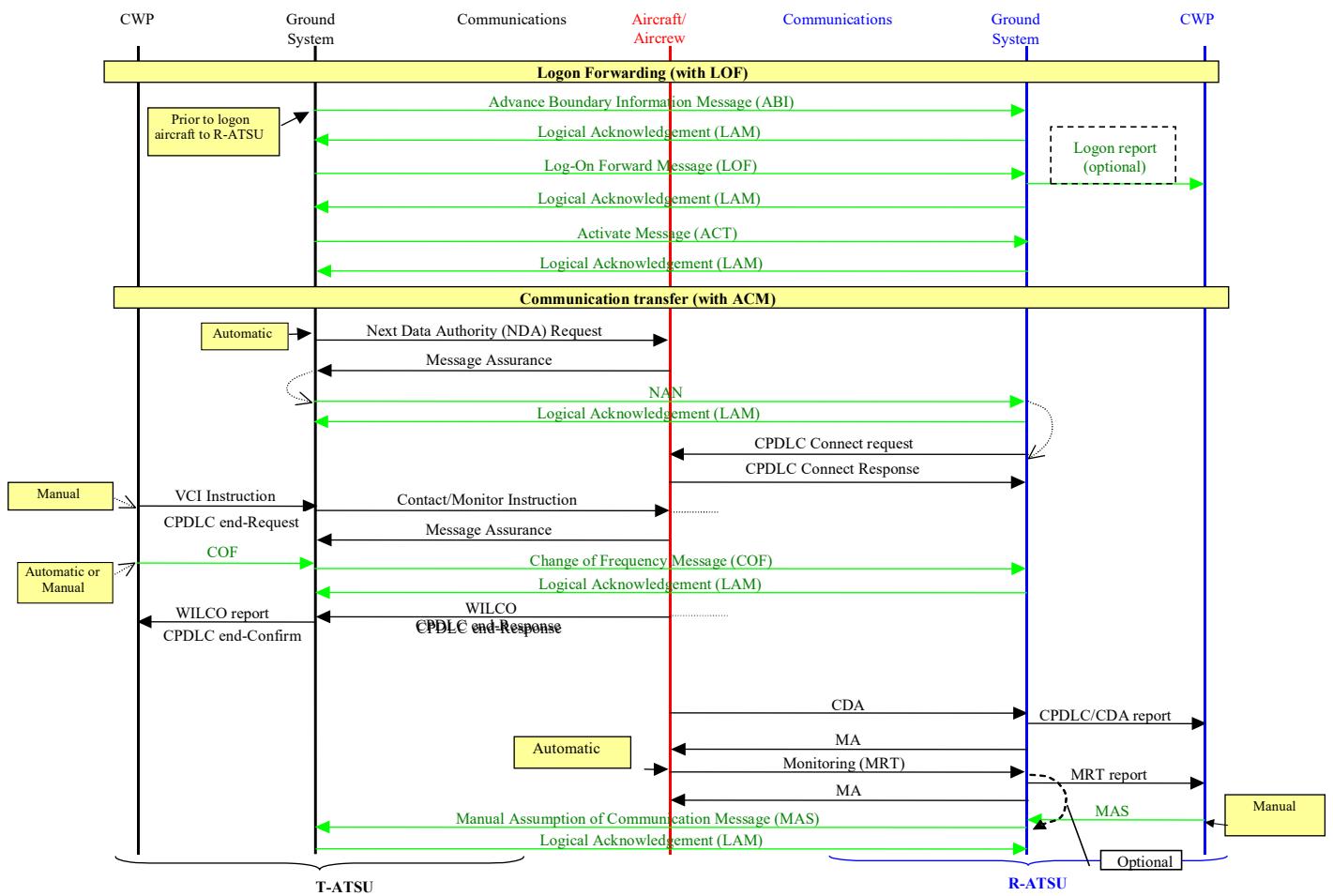
Figure C.3 – Logon Forwarding, using LOF

ANNEX D – STATE TRANSITION AND SEQUENCE DIAGRAMS

The state transition and sequence diagrams illustrate the requirements of the basic procedure detailed in this specification.

Not all messages and combinations of messages are covered in order to avoid too much complexity. Furthermore, they only cover the OLDI message exchanges between two ATSU units, independently of any other information flows or message exchanges with other ATSUs or facilities.

The flight plan state transitions depend of many factors linked with the local deployment modalities.

- Figure D.1 illustrates the possible flight plan state transitions triggered by transmission of OLDI messages.
- Figure D.2 illustrates the possible flight plan state transitions triggered by reception of OLDI messages.

Sequence diagrams are illustrated by Figures D.3 to D.7.

D.1 State Transition Diagrams
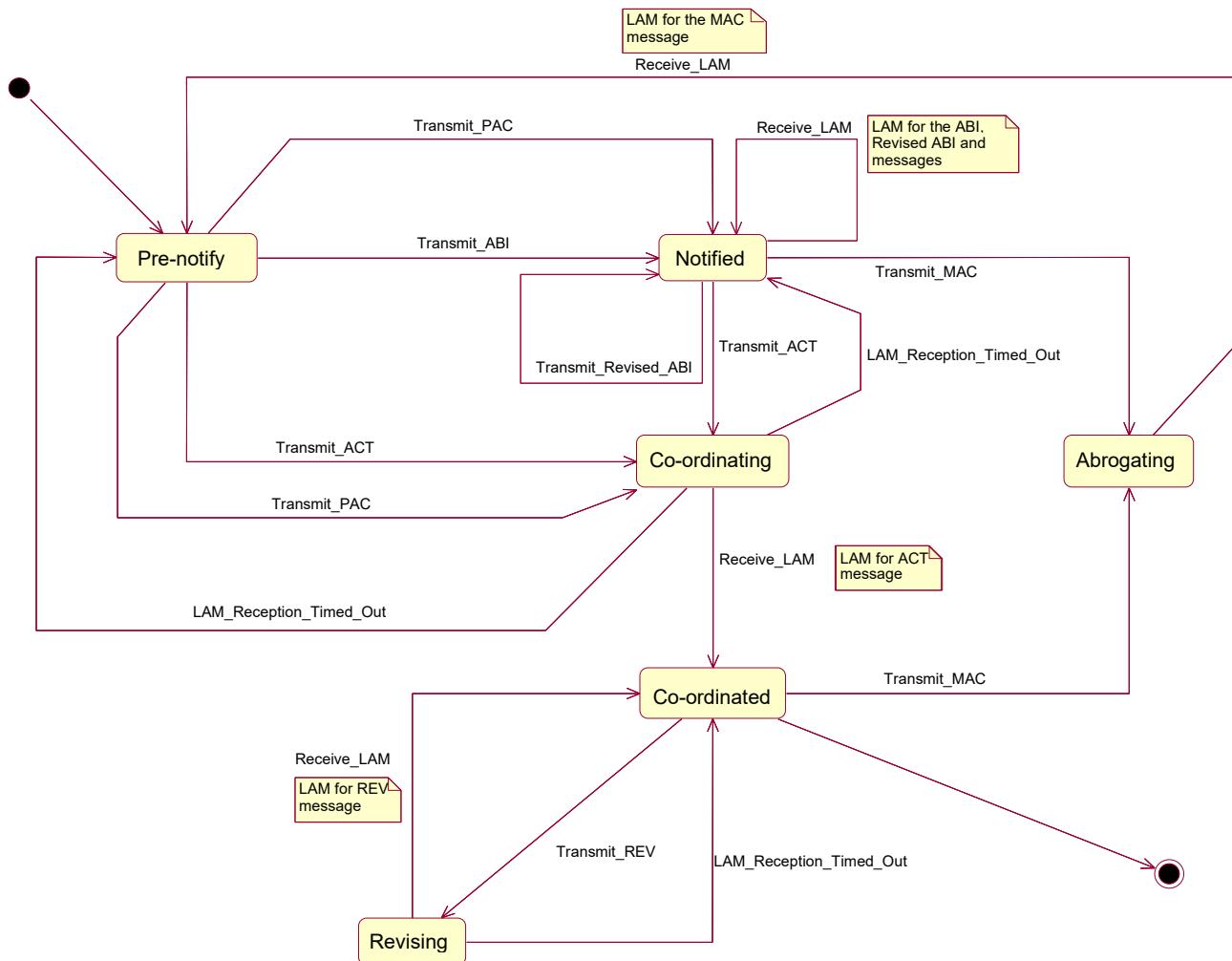
Figure D.1 – Transferring Unit – Coordination States
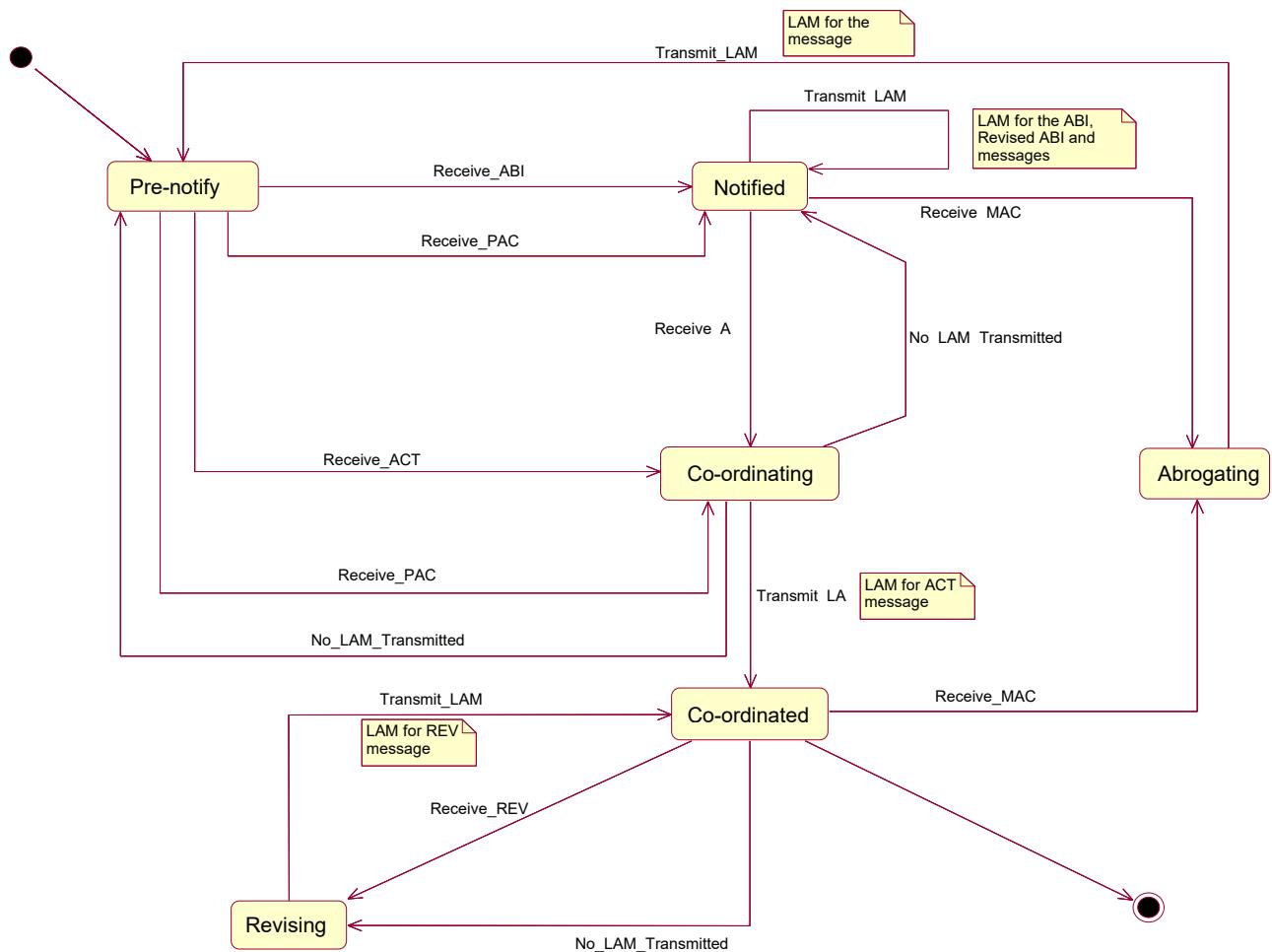
Figure D.2 – Receiving Unit – Coordination States

D.2 Sequence Diagrams
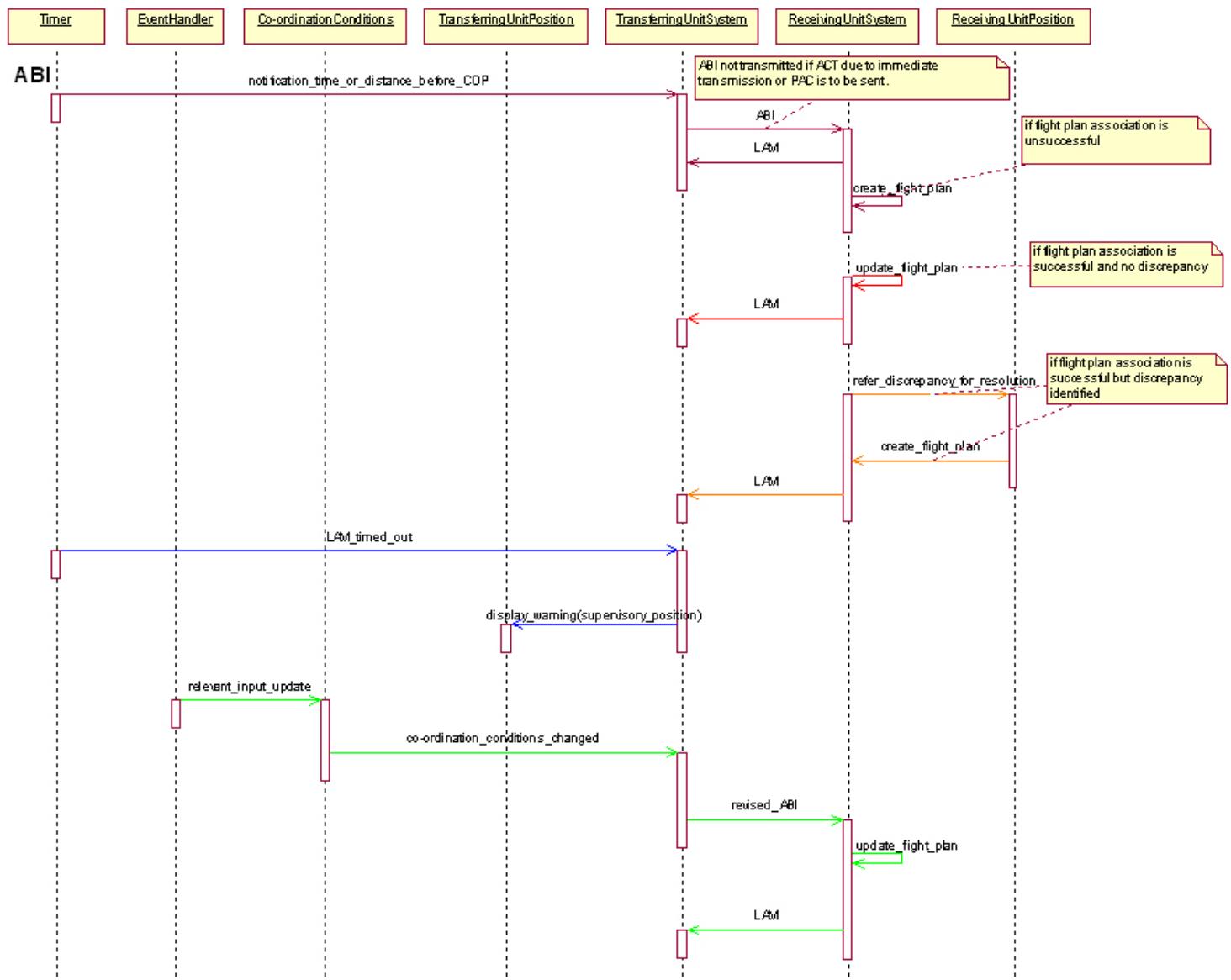
Figure D.3 – Sequence Diagram – ABI Message
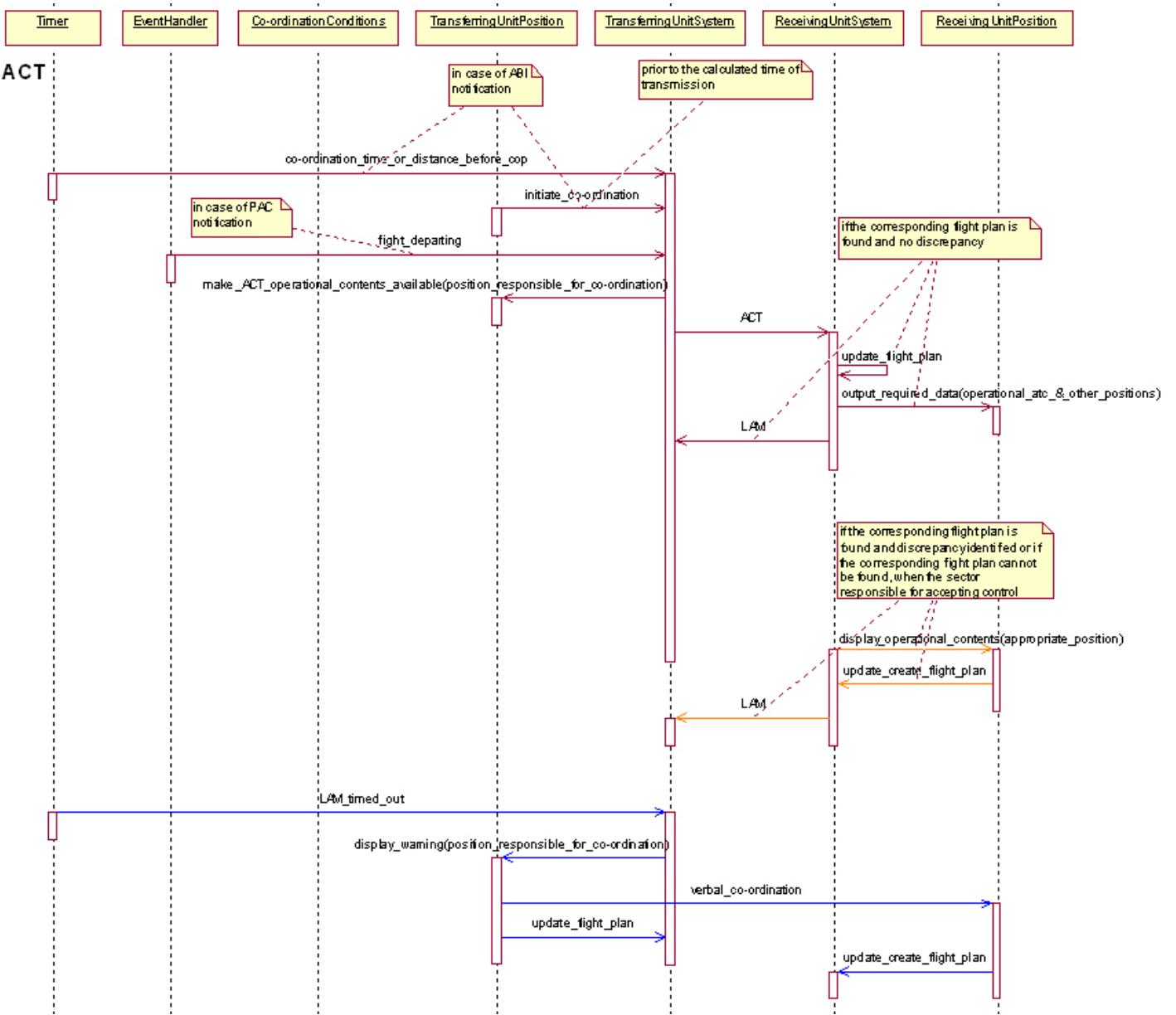
Figure D.4 – Sequence Diagram – ACT Message
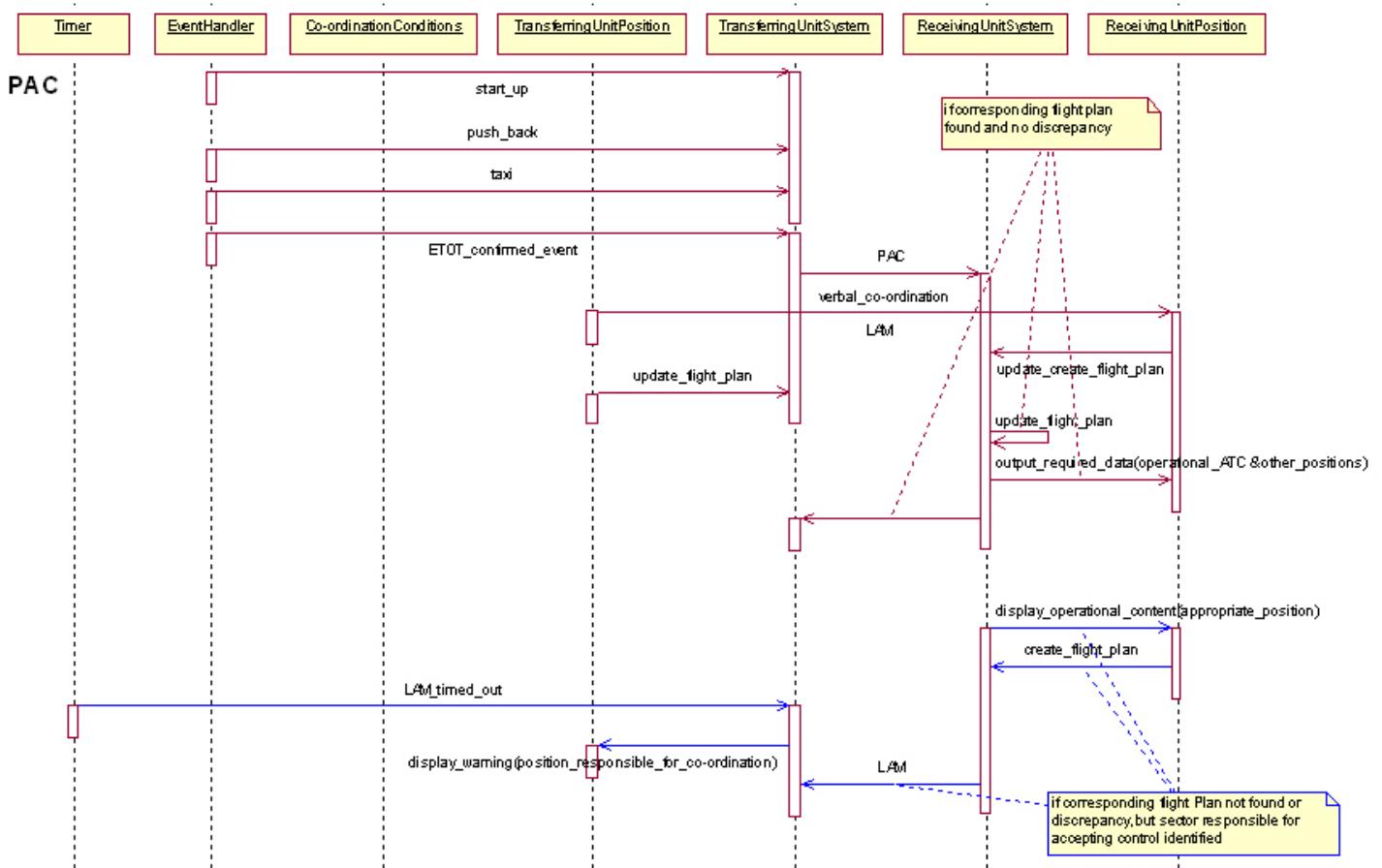
Figure D.5 – Sequence Diagram – PAC Message
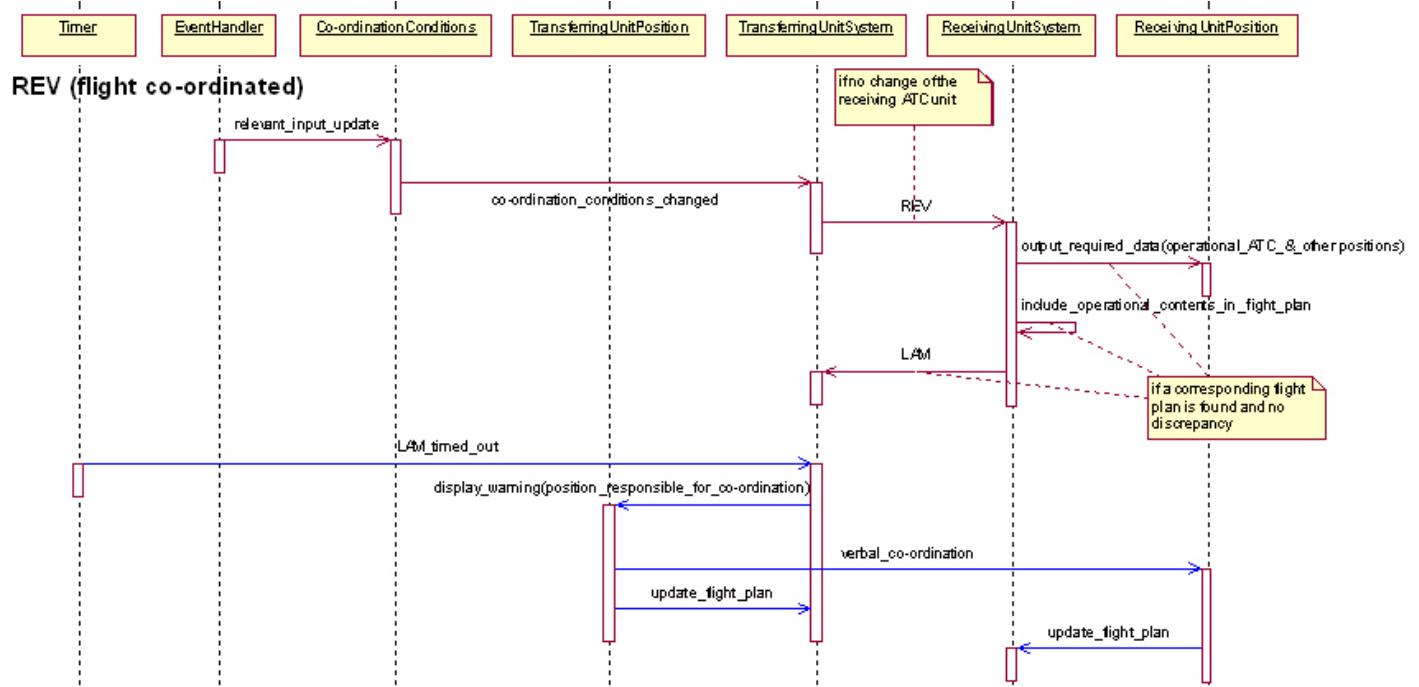
Figure D.6 – Sequence Diagram – REV Message
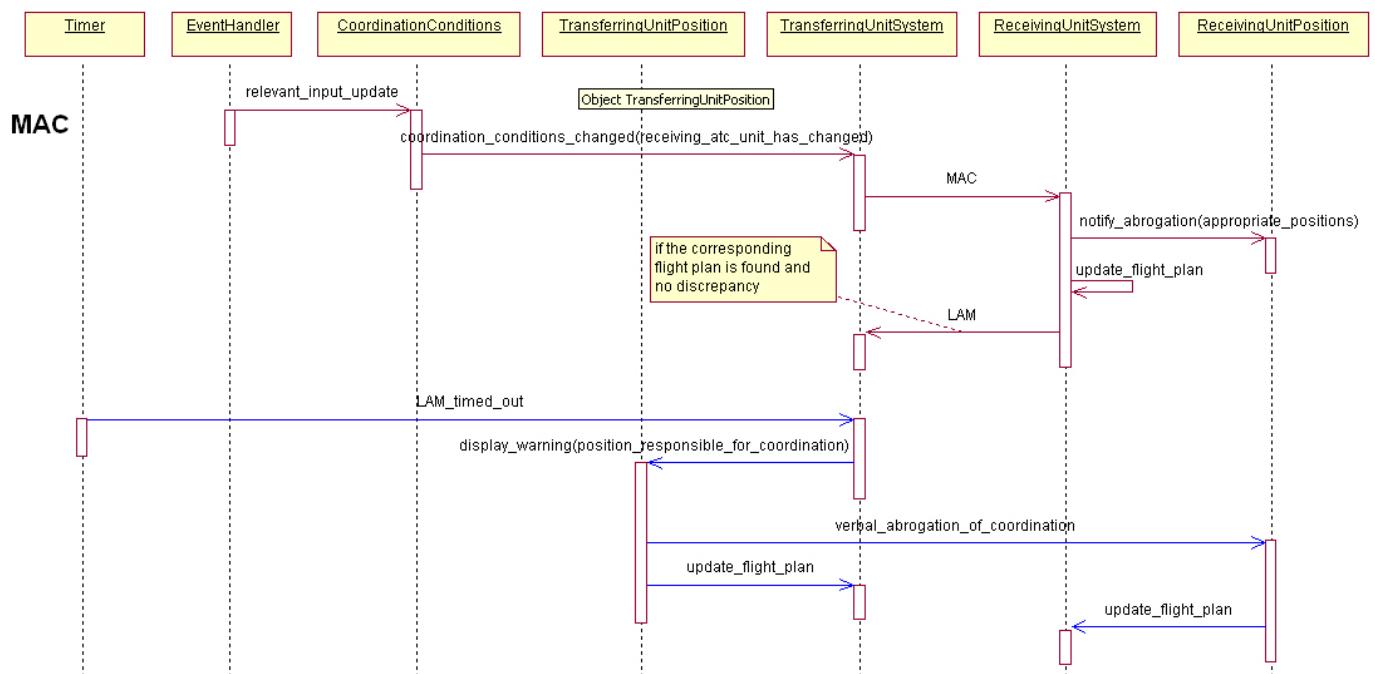
Figure D.7 – Sequence Diagram – MAC Message

ANNEX E – DOCUMENT UPDATE PROCEDURES

It is necessary to periodically check this EUROCONTROL Specification for consistency with referenced material. In addition, the content of these Specifications is expected to evolve following feedback from implementation projects and field experience.

The main objectives of a regular review are:
   a) to improve the quality of the requirements (e.g. clarity, testability, etc.);
   b) to verify that the level of detail published is adequate;
   c) to make all stakeholders including industry aware of the latest developments.

The update of these Specifications is expected to be initiated by the OLDI group or NETOPS as working arrangement to whom the OLDI group reports. Any stakeholder that wishes to request a change to this Specification can submit a change request (CR) to the document editor (page ii), the generic email address: standardisation@eurocontrol.int or the OLDI group / NETOPS working arrangements.

The CR needs to provide following minimum elements:

- Originator information (name, Organisation, contact details)

- Specification title, number and edition date

- Page, chapter, section (subsection) where the issue appears

- Description of the issue and reason for change

- Specific change proposal text (incl. potential alternatives, if any).

Main steps towards a revised edition:

- EUROCONTROL with the OLDI Group will assess each CR.

- The CR will be classified in terms of urgency and impact.

- A resolution proposal(s) will be prepared and, if needed, discussed with the originator.

- Agreed changes will be integrated into a revised version "Proposed Issue" including a summarised list of changes in the document record.

- The "Proposed Issue" will be consulted with the relevant working arrangements such as the NETOPS.

Note: Identified errors which may cause potential problems when implementing, may be corrected directly via separate "Corrigendum".

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