

AERONAUTICAL TELECOMMUNICATIONS NETWORK PANEL

WORKING GROUP 3 MEETING

Phuket, Thailand, 4 - 6 March 1997

Agenda Item 4: VALIDATION OF SUB VOLUME 2

ADS DEFECT REPORTS

Presented by M J A Asbury

1. INTRODUCTION

1.1 ADS Defect Reports are attached.

SARPs Version Number ADS 3.0
Defect Report Number ADS-0040
Originator Tom Kraft/Catherine Gandolfi/Rachel Daeschler
Originator's Reference (where applicable) REPORT.DOC 26 July 1996
Date 29 July 1996
Location in SARPs 2.2.1.4.1.1
Status (OPEN, CLOSED or REJECTED) CLOSED
Problem (optionally including proposed solution)

The parameter ranges and resolutions differ from those in the draft ICAO Manual of ATS Data Link Applications (section 4B.1: ADS Variables Range and Resolution). In particular: Aircraft Id, Altitude, Mach airspeed, Distance, Lateral deviation change.

Proposed solution:

Resolve issue of aircraft Id - which is 2-8 characters of IA5 text in the ICAO manual, and 24 bits in the draft SARPs.

Delete:

Altitude ::= INTEGER (-10..6640)

and replace with:

Altitude ::= INTEGER (-10..10000)

Delete:

Mach ::= INTEGER (0..4000)

and replace with:

Mach ::= INTEGER (500..4000)

Delete:

IntermediateIntent ::= SEQUENCE SIZE (0..7) OF SEQUENCE

{
 distance *INTEGER (1..8000),*
 -- units = Nautical miles
 -- range = 1 to 8000 nautical miles ...

and replace with:

IntermediateIntent ::= SEQUENCE SIZE (0..7) OF SEQUENCE

{
 distance *INTEGER (1..2000),*
 -- units = Distance units
 -- range = 1 to 2000 distance units ...

Delete:

LateralChange ::= INTEGER (0..255)

 -- units = 0.125 Nautical miles

 -- range = 0 nautical miles to 31.875 nautical miles

and replace with:

LateralChange ::= INTEGER (1..200)

 -- units = Distance units

 -- range = 1 to 200 distance units

Insert in 2.2.1.4.1.1. Note 1 a definition of distance units

Agreed Solution

Change all references to "Aircraft-id" to "Aircraft address".

Delete:

Altitude ::= INTEGER (-10..6640)

and replace with:

Level ::= INTEGER (-10..10000)

Change all references to "altitude" to "level".

Change all references to "alt-unit" to level-unit"

Delete:

Mach ::= INTEGER (0..4000)

and replace with:

Mach ::= INTEGER (500..4000)

Delete:

IntermediateIntent ::= SEQUENCE SIZE (0..7) OF SEQUENCE

{
 distance *INTEGER (1..8000),*
 -- units = Nautical miles
 -- range = 1 to 8000 nautical miles ...

and replace with:

IntermediateIntent ::= SEQUENCE SIZE (0..7) OF SEQUENCE

{
 distance *INTEGER (1..8000),*
 -- units = Distance units
 -- range = 1 to 8000 distance units ...

Delete:

LateralChange ::= INTEGER (0..255)

-- units = 0.125 Nautical miles

-- range = 0 nautical miles to 31.875 nautical miles

and replace with:

LateralChange ::= INTEGER (1..200)

-- units = Distance units

-- range = 1 to 200 distance units

Insert in 2.2.1.4.1.1. Note 1 a definition of distance units

One distance unit = 0.769813 Nautical miles or 1.426568 Kilometres, assuming 1 Nautical mile to be 6079.935 feet.

18/12/96

SARPs Version Number ADS V 3.0
Defect Report Number ADS-0057
Originator Eurocontrol TES
Originator's Reference (where applicable) tes-ads-054
Date 17 Sept 1996
Location in SARPs 2.2.1.3.4
 2.2.1.3.5
 2.2.1.3.6
 2.2.1.7.1.5.3
Status (OPEN, CLOSED or REJECTED) CLOSED

Problem

If the ADS-air-user is already working at maximum capacity (e.g. 4 connections already) 2.2.1.7.1.5.3 requires the ADS-air-user to send to the ground an indication of the existing ICAO facility designators. However, in the ADS-demand-contract, ADS-event-contract and ADS-periodic-contract primitives, there is no indication of which ICAO facility designator is using the service. Therefore the ADS-air-user has no knowledge of which facility is using it.

Editor's Proposed Solution (optional)

In tables 2.2.1.3-1 to 2.2.1.3.-6 insert one of the following two lines (as appropriate):

<i>ICAO facility designator</i>	<i>C</i>	<i>C(=)</i>		
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<i>ICAO facility designator</i>	<i>C</i>	<i>C(=)</i>
---------------------------------	----------	-------------

In sections 2.2.1.3.4 to 2.2.1.3.6 add the following paragraphs:

2.2.1.3.XX ICAO facility designator

Note.— This parameter contains the 8 character ICAO facility designator of the ICAO facility which is initiating the contract.

2.2.1.3.XX.1 The ICAO facility designator parameter value shall conform to an abstract value corresponding to an 8 character ICAO facility designator.

2.2.1.3.XX.2 The ICAO facility designator parameter value shall be provided when the ADS-ground-user has no other contracts in place with the aircraft.

In section 2.2.1.5.3.6.2.1, 2.2.1.5.3.8.2.1 and 2.2.1.5.3.10.2.1, point b) after "*aircraft identifier parameter value*", add
 , *ICAO facility designator parameter*

In section 2.2.1.5.3.15.2.1, in Table 2.2.1.5-61, delete the line:

<i>Calling peer Id</i>	<i>Not used</i>
------------------------	-----------------

and replace with:

<i>Calling peer Id</i>	<i>ICAO facility designator parameter value from contract request</i>
------------------------	-----------------------------------------------------------------------

In section 2.2.1.5.3.16.5 a), after "user data" add
and the calling peer id parameter value

In sections 2.2.1.5.3.7.5.1 in Table 2.2.1.5-15, 2.2.1.5.3.9.7.2 in Table 2.2.1.5-30, and in 2.2.1.5.3.11.6.2 in Table 2.2.1.5-46 add the following line:

<i>ICAO facility designator</i>	<i>Calling peer id, if provided by the air LI module</i>
---------------------------------	----------------------------------------------------------

Agreed Solution

Proposed solution agreed. Also add to 2.2.1.3.X.X.2

Note: If contracts are currently in place, the facility designator parameter is not used by the ADS-service-provider

SARPs Version Number ADS V 3.0
Defect Report Number ADS-0057
Originator Eurocontrol TES
Originator's Reference (where applicable) tes-ads-054
Date 17 Sept 1996
Location in SARPs 2.2.1.3.4
 2.2.1.3.5
 2.2.1.3.6
 2.2.1.7.1.5.3
Status (OPEN, CLOSED or REJECTED) CLOSED

Problem

If the ADS-air-user is already working at maximum capacity (e.g. 4 connections already) 2.2.1.7.1.5.3 requires the ADS-air-user to send to the ground an indication of the existing ICAO facility designators. However, in the ADS-demand-contract, ADS-event-contract and ADS-periodic-contract primitives, there is no indication of which ICAO facility designator is using the service. Therefore the ADS-air-user has no knowledge of which facility is using it.

Editor's Proposed Solution (optional)

In tables 2.2.1.3-1 to 2.2.1.3.-6 insert one of the following two lines (as appropriate):

<i>ICAO facility designator</i>	<i>C</i>	<i>C(=)</i>		
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2.2.1.3.XX.2 The ICAO facility designator parameter value shall be provided when the ADS-ground-user has no other contracts in place with the aircraft.

In section 2.2.1.5.3.6.2.1, 2.2.1.5.3.8.2.1 and 2.2.1.5.3.10.2.1, point b) after "*aircraft identifier parameter value*", add
, ICAO facility designator parameter

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and replace with:

<i>Calling peer Id</i>	<i>ICAO facility designator parameter value from contract request</i>
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In section 2.2.1.5.3.16.5 a), after "user data" add
and the calling peer id parameter value

In sections 2.2.1.5.3.7.5.1 in Table 2.2.1.5-15, 2.2.1.5.3.9.7.2 in Table 2.2.1.5-30, and in 2.2.1.5.3.11.6.2 in Table 2.2.1.5-46 add the following line:

<i>ICAO facility designator</i>	<i>Calling peer id, if provided by the air LI module</i>
---------------------------------	----------------------------------------------------------

Agreed Solution

Proposed solution agreed. Also add to 2.2.1.3.X.X.2

Note: If contracts are currently in place, the facility designator parameter is not used by the ADS-service-provider

SARPs Version Number ADS V 3.0
Defect Report Number ADS-0057
Originator Eurocontrol TES
Originator's Reference (where applicable) tes-ads-054
Date 17 Sept 1996
Location in SARPs 2.2.1.3.4
 2.2.1.3.5
 2.2.1.3.6
 2.2.1.7.1.5.3
Status (OPEN, CLOSED or REJECTED) CLOSED

Problem

If the ADS-air-user is already working at maximum capacity (e.g. 4 connections already) 2.2.1.7.1.5.3 requires the ADS-air-user to send to the ground an indication of the existing ICAO facility designators. However, in the ADS-demand-contract, ADS-event-contract and ADS-periodic-contract primitives, there is no indication of which ICAO facility designator is using the service. Therefore the ADS-air-user has no knowledge of which facility is using it.

Editor's Proposed Solution (optional)

In tables 2.2.1.3-1 to 2.2.1.3.-6 insert one of the following two lines (as appropriate):

<i>ICAO facility designator</i>	<i>C</i>	<i>C(=)</i>		
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<i>ICAO facility designator</i>	<i>C</i>	<i>C(=)</i>
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2.2.1.3.XX ICAO facility designator

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2.2.1.3.XX.2 The ICAO facility designator parameter value shall be provided when the ADS-ground-user has no other contracts in place with the aircraft.

In section 2.2.1.5.3.6.2.1, 2.2.1.5.3.8.2.1 and 2.2.1.5.3.10.2.1, point b) after "*aircraft identifier parameter value*", add
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<i>Calling peer Id</i>	<i>Not used</i>
------------------------	-----------------

and replace with:

<i>Calling peer Id</i>	<i>ICAO facility designator parameter value from contract request</i>
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In section 2.2.1.5.3.16.5 a), after "user data" add
 and the *calling peer id parameter value*

In sections 2.2.1.5.3.7.5.1 in Table 2.2.1.5-15, 2.2.1.5.3.9.7.2 in Table 2.2.1.5-30, and in 2.2.1.5.3.11.6.2 in Table 2.2.1.5-46 add the following line:

<i>ICAO facility designator</i>	<i>Calling peer id, if provided by the air LI module</i>
---------------------------------	----------------------------------------------------------

Agreed Solution

Proposed solution agreed. Also add to 2.2.1.3.X.X.2

Note: If contracts are currently in place, the facility designator parameter is not used by the ADS-service-provider

SARPs Version Number	ADS 3.0 / 28-06-1996
Defect Report Number	ADS-0060
Originator	TES (EUROCONTROL)
Originator's Reference (where applicable)	tes-ads-054
Date	18 th September 1996
Location in SARPs	2.2.1.3.4, 2.2.1.3.5, 2.2.1.3.6
Status (OPEN, CLOSED or REJECTED)	CLOSED
Date of Resolution	18/12/96
Fixed in	

Problem

ICAO Facility Designator missing in the initial ADS requests and indication.

In section 2.2.1.3.4 (demand-contract), 2.2.1.3.5 (event-contract) and 2.2.1.3.6 (periodic-contract), the ICAO Facility Designator parameter (i.e. the calling system identifier) is not present as parameter of the request and the indication.

As a consequence, the aircraft does not know with which ground system it has ADS contract. The aircraft need this information in case a 5th ground system tries to establish an ADS-contract. In that case, the Reason of the reject contains the list of the ICAO facility designator (ASN.1 type GroundSystemsUsingService).

The proposed solution is to add the ICAO Facility Designator parameter in the ADS-demand/event/periodic requests and indications.

Agreed Solution

This has been superceded by ADS-0057.

SARPs Version Number	ADS 3.0 / 28-06-1996
Defect Report Number	ADS-0061
Originator	TES (EUROCONTROL)
Originator's Reference (where applicable)	tes-ads-063
Date	3 December 1996
Location in SARPs	2.2.1.3.7.3.2
Status (OPEN, CLOSED or REJECTED)	OPEN
Date of Resolution	18/12/96
Fixed in	

Problem

In section 2.2.1.3.7.3.2, the format of the Event Type parameter should refer to the ASN.1 type 'EventTypeReported' instead of 'EventType'.

Agreed Solution

Superseded by ADS-0059

SARPs Version Number ADS 3.0 / 28-06-1996
Defect Report Number ADS-0062
Originator TES (EUROCONTROL)
Originator's Reference (where applicable) tes-ads-066

Date 9 December 1996
Location in SARPs Table 2.2.1.5-73
Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 18/12/96
Fixed in ICAO V1.1

Problem

Table 2.2.1.5-73 (Ground ADS LI module state table) contains states and events related to the ADS-Forward service (e.g. LI-START-R, LI-G-END-R, ADS-end-forward-service-PDU, ...). This material comes from the time the ground ASE was suppose to handle both the air-ground and the ground-ground protocols.

Agreed Solution

Remove states from table.

SARPs Version Number ADS 3.0 / 28-06-1996
Defect Report Number ADS-0063
Originator TES (EUROCONTROL)
Originator's Reference (where applicable) tes-ads-067

Date 9 December 1996
Location in SARPs 2.2.1.5.3.15.8
Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 18/12/96
Fixed in IV1.1

Problem

The condition expressed in 2.2.1.5.3.15.8 is not accurate enough. The condition should be "Upon receipt of a D_END confirmation *with the result parameter value containing the abstract value accepted*".

Note. This new wording is aligned with requirement 2.2.1.5.3.15.6.

Agreed Solution

Proposed solution accepted.

SARPs Version Number ADS 3.0 / 28-06-1996
Defect Report Number ADS-0064
Originator TES (EUROCONTROL)
Originator's Reference (where applicable) tes-ads-068

Date 9 December 1996
Location in SARPs 2.2.1.4.1
Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 18/12/96
Fixed in ICAO V1.1

Problem

The ASN.1 type "RequestType" should not contain an enumerated value for 'end-forward-contract'.

Agreed Solution

Agreed.

SARPs Version Number ADS 3.0 / 28-06-1996
Defect Report Number ADS-0065
Originator TES (EUROCONTROL)
Originator's Reference (where applicable) tes-ads-069

Date 9 December 1996
Location in SARPs Table 2.2.1.5-62
Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 18/12/96
Fixed in ICAO V1.1

Problem

In Table 2.2.1.5-62, the subfield 'RequestType' of the PDUs 'ADS-positive-acknowledgement-PDU' and 'ADS-negative-acknowledgment-PDU' should not contain the value 'ground-cancel-emergency' for two reasons:

1. there is not such value defined in the ASN.1 type 'RequestType',
2. the cancel emergency service is air-initiated; the ground ASE can not therefore received an ADS-positive acknowledgement-PDU from the aircraft).

Agreed Solution SARPs Version Number ADS 3.0 / 28-06-1996
Defect Report Number ADS-0066
Originator TES (EUROCONTROL)
Originator's Reference (where applicable) tes-ads-070

Date 9 December 1996
Location in SARPs 2.2.1.5.3.16.5.1
Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 18/12/96
Fixed in ICAO V1.1

Problem

In section 2.2.1.5.3.16.5.1, the reference to the table should be 2.2.1.5-64 (instead of 2.2.1.5-63).

Editor's Proposed Solution (optional)

Agreed

SARPs Version Number ADS 3.0 / 28-06-1996
Defect Report Number ADS-0067
Originator TES (EUROCONTROL)
Originator's Reference (where applicable) tes-ads-071

Date 9 December 1996
Location in SARPs 2.2.1.5.4.3.5
Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 18/12/96
Fixed in ICAO V1.1

Problem

Requirement 2.2.1.5.4.3.5 is wrong since the ADS-air-ASE shall be able to receive a D-END indication primitive containing as UserData parameter an ADS-cancel-all-PDU.

It is proposed to rephrase the requirement as follows:

When the user data parameter value of a D-END indication is present *but does not contain an ADS-cancel-all-contracts-PDU*, the air LI module shall request the AB module to abort with reason invalid-PDU.

Note. The reference to the ground ASE is not required any more since the D-END service is only initiated by the ground-ASE (therefore the D-END indication cannot be received by the ground ASE).

Agreed Solution

Proposed solution accepted.

SARPs Version Number ADS 3.0 / 28-06-1996
Defect Report Number ADS-0068
Originator TES (EUROCONTROL)
Originator's Reference (where applicable) tes-ads-072

Date 9 December 1996
Location in SARPs 2.2.1.5.4.3
Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 18/12/96
Fixed in ICAO V1.1

Problem

A new requirement describing the situation of an Invalid PDU should be added to cover the reception of a D-END confirmation containing an invalid PDU.

The proposed requirement is as follows:

When the user data parameter value of a D-END confirmation is present but does not contain an ADS-positive-acknowledgement-PDU(cancel-all-contracts), the ground LI module shall request the AB module to abort with reason invalid-PDU.

Editor's Proposed Solution (optional)

Proposed solution agreed.

SARPs Version Number ADS 3.0 / 28-06-1996
Defect Report Number ADS-0069
Originator TES (EUROCONTROL)
Originator's Reference (where applicable) tes-ads-074

Date 9 December 1996
Location in SARPs Tables 2.2.1.5-62 and 2.2.1.5-71
Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 18/12/96
Fixed in ICAO V1.1

Problem

When the ADS-ground-user has invoked the ADS-modify-emergency-contract service, it shall expect two possible reactions from the ADS-air-user:

- 1/ the modification is rejected. In such a case an ADS-negative-ack-PDU(modify-emergency-contract) is received by the ADS-ground-ASE,
- 2/ the modification is accepted. In such a case an ADS-emergency-report-PDU containing a positive ack is received by the ADS-ground-ASE.

In table 2.2.1.5-62, the entry ADS-positive-ack PDU with the RequestType subfield containing the value 'modify-emergency-contract' shall be deleted.

In table 2.2.1.5-71, the entry ADS-positive-ack-PDU(modify-emergency-contract) shall be replaced by ADS-negative-ack-PDU(modify-emergency-contract).

Agreed Solution

Proposed solution agreed

SARPs Version Number	ADS 3.0 / 28-06-1996
Defect Report Number	ADS-0070
Originator	TES (EUROCONTROL)
Originator's Reference (where applicable)	tes-ads-075
Date	9 December 1996
Location in SARPs	2.2.1.5.3.16.8, 2.2.1.5.3.16.9, 2.2.1.5.3.15.6.1, 2.2.1.5.3.15.7.1
Status (OPEN, CLOSED or REJECTED)	CLOSED
Date of Resolution	18/12/96
Fixed in	ICAO V1.1

Problem

The solution proposed by SG2 to fix the problem raised in ADS-0048 (TES-PCR12) goes not far enough.

1/ in 2.2.1.5.3.16.8 and 2.2.1.5.3.16.9, upon receipt of a D-ABORT and D-P-ABORT indication, the first action shall be to stop the t-LI-1 timer. This can occur when the abort indication is received when a D-END confirmation is expected. It is proposed to add a new item in the enumerated list of actions as follows:

a) stop any timer,

2/ in 2.2.1.5.3.15.6.1 and 2.2.1.5.3.15.7.1, the timer t-LI-1 shall be started.

Agreed Solution

The proposed solution is agreed.

Also, the following change was agreed:

Move section 2.2.1.5.3.16.10 to 2.2.1.5.3.15.11.

SARPs Version Number ADS 3.0 / 28-06-1996
Defect Report Number ADS-0071
Originator TES (EUROCONTROL)
Originator's Reference (where applicable) tes-ads-077

Date 12 December 1996
Location in SARPs 2.2.1.5.3.10
Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 18/12/96
Fixed in ICAO V1.1

Problem

There is no action described in the ground ADS PC module (2.2.1.5.3.10) when a t-PC-1, t-PC-2 or t-PC-3 timeout occurs.

It is proposed to add the following requirement:

2.2.1.5.3.10.14 Upon expiry of the t-PC-1 timer, t-PC-2 timer or t-PC-3 timer, the ground PC module shall:
a) request the ground AB module to abort with reason timer-expiry, and
b) enter the PC-G-IDLE state.

Agreed Solution

The proposed solution is agreed.

SARPs Version Number ADS 3.0 / 28-06-1996
Defect Report Number ADS-0072
Originator TES (EUROCONTROL)
Originator's Reference (where applicable) tes-ads-078

Date 12 December 1996
Location in SARPs 2.2.1.5.3.1.1 Note 5
Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 18/12/96
Fixed in ICAO V1.1

Problem

In 2.2.1.5.3.1.1 Note 5, bullet d), the primitives invoked by the ADS-air-user should be an ADS-demand-contract *response*, an ADS-event-contract *response* and an ADS-periodic-contract *response*.

Agreed Solution

Agreed

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0073
Originator ATNP/WG3/SG2
Originator's Reference (where applicable) Bracknell Meeting

Date 18 December 1996
Location in SARPs Various
Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 18/12/96
Fixed in ICAO V1.1

Problem

The ADS panel has made various terminology changes that should be reflected in the SARPs:

"Altitude" is now always referred to as "Level".

"Airframe Id" is now always referred to as "Aircraft address".

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0074
Originator ATNP/WG3/SG2
Originator's Reference (where applicable) Bracknell Meeting

Date 18 December 1996
Location in SARPs 2.2.1.5.3.16.5.1

Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 18/12/96
Fixed in ICAO V1.1

Problem

There is no check to ensure that the ground system has sent a valid set of QOS parameters. This fact could be used by a ground system to enable it to get a better network service at the expense of other applications.

Agreed Solution

In 2.2.1.5.3.16.5.1, after "the LI-A-IDLE state", and in 2.2.2.5.3.5.3.1 after "ADS-RF-ASE" add

, and the application service priority parameter value is "high priority flight safety messages", and the RER quality of service parameter is the abstract value "low"

Add 2.2.1.5.4.8 as follows:

2.2.1.5.4.8 Invalid QOS

2.2.1.5.4.8.1 Upon receipt of a D-START indication with the application service priority parameter set to a value other than the abstract value "high priority flight safety messages", or with the RER quality of service parameter set to a value other than the abstract value "low", the air LI module shall request the air AB module to abort with reason invalid-qos-parameter.

Add 2.2.2.5.4.7 as follows:

2.2.2.5.3.5.3 Invalid QOS

2.2.2.5.3.5.3.1 Upon receipt of a D-START indication with the application service priority parameter set to a value other than the abstract value "high priority flight safety messages", or the RER quality of service parameter set to a value other than the abstract value "low", the ADS-RF-ASE shall:

- a) invoke D-ABORT with Originator parameter value DS user and user data parameter value aDS-provider-abort-PDU with value invalid-qos-parameter, and*
- b) invoke ADS-provider-abort indication with reason invalid-qos-parameter, and*
- c) enter the RF-R-IDLE state.*

In 2.2.1.4.2.1 under the AbortReason decoding-error (9), add the line *invalid-qos-parameter (10)*,

It is also noted that the term "ICAO facility designator" should read "ICAO facility designation".

Agreed Solution

Change wording through SARPs wherever it occurs.

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0077
Originator TES (EUROCONTROL)
Originator's Reference (where applicable) tes-ads-086

Date 24 January 1997
Location in SARPs

Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 11 February 1997
Fixed in ICAO V1.1

Problem

Due to the fact that the D-END service is hidden to the ADS-users, there is a major problem when the ADS-user receives a termination service primitive (i.e. positive response for a demand-contract, non-compliant response, negative response, a report closing a demand contract, a cancel, a cancel all or a cancel emergency) of a Demand, Event or Periodic Contract and when there is no other contract in place. In all these cases, the ADS ASE performs a D-END service hidden to the ADS-users.

In fact, the ADS-ground-user can initiate a new ADS contract on receipt of the termination service primitive. In that case, the new contract can be rejected because the D-END sequence is in progress.

There are two possible solutions for the ASE:

1. defer the delivery of the termination service primitive to the ADS-user after the effective release of the dialogue (i.e. on receipt of the D-END conf). If the D-END service is disrupted by an abort, an ADS-provider-abort indication is delivered to the user.
2. memorise the second ADS contract and wait for the termination of the D-END sequence to establish this contract. If the D-END service is disrupted by an abort, and ADS-provider-abort indication is delivered to the user.

Agreed Solution

Add the following text:

2.2.1.5.3.4.5 The ground HI module shall reject requests and responses, apart from ADS-user-abort request, when the ground LI module is in the LI-G-START state or the LI-G-END state.

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0078
Originator Jane Hamelink / Dung Nguyen
Originator's Reference (where applicable) 2.2.1.5.3.11.2.1, Table 41
2.2.1.5.3.9.8.1, Table 32

Date 11 February 1997

Location in SARPs

Status (OPEN, CLOSED or REJECTED) CLOSED

Date of Resolution 11 February 1997

Fixed in ICAO V1.1

Problem

2.2.1.5.3.11.2.1, Table 41

The value of the parameter value should be 'periodic-contract', not 'NULL'

2.2.1.5.3.9.8.1, Table 32

The value of the parameter value should be 'cancel-event-contract', not 'event-contract'.

Agreed Solution

Correct as indicated.

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0078
Originator Jane Hamelink / Dung Nguyen
Originator's Reference (where applicable) 2.2.1.5.3.11.2.1, Table 41
2.2.1.5.3.9.8.1, Table 32

Date 11 February 1997

Location in SARPs

Status (OPEN, CLOSED or REJECTED) CLOSED

Date of Resolution 11 February 1997

Fixed in ICAO V1.1

Problem

2.2.1.5.3.11.2.1, Table 41

The value of the parameter value should be 'periodic-contract', not 'NULL'

2.2.1.5.3.9.8.1, Table 32

The value of the parameter value should be 'cancel-event-contract', not 'event-contract'.

Agreed Solution

Correct as indicated.

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0078
Originator Jane Hamelink / Dung Nguyen
Originator's Reference (where applicable) 2.2.1.5.3.11.2.1, Table 41
2.2.1.5.3.9.8.1, Table 32

Date 11 February 1997

Location in SARPs

Status (OPEN, CLOSED or REJECTED) CLOSED

Date of Resolution 11 February 1997

Fixed in ICAO V1.1

Problem SARPs Version Number ADS ICAO V1.0

Defect Report Number ADS-0079

Originator Jane Hamelink / Dung Nguyen

Originator's Reference (where applicable) 2.2.1.5.3.9.8.1, Table 2.2.1.5-32
2.2.1.5.3.11.7.1, Table 2.2.1.5-52

Date 11 February 1997

Location in SARPs

Status (OPEN, CLOSED or REJECTED) CLOSED

Date of Resolution 11 February 1997

Fixed in ICAO V1.1

Problem

There is an inconsistency in the way the PDU element name is presented.

Agreed Solution

Change 2.2.1.5.3.11.7.1, Table 2.2.1.5-48 'PositiveAcknowledgement' should be 'RequestType'

2.2.1.5.3.11.2.1, Table 41

The value of the parameter value should be 'periodic-contract', not 'NULL'

2.2.1.5.3.9.8.1, Table 32

The value of the parameter value should be 'cancel-event-contract', not 'event-contract'.

Agreed Solution

Correct as indicated.

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0080
Originator Jane Hamelink / Dung Nguyen
Originator's Reference (where applicable)

Date 11 February 1997
Location in SARPs 2.2.1.7

Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 11 February 1997
Fixed in ICAO V1.1

Problem

There is a requirement that the aircraft has only on periodic contract (& event, & emergency). This is not possible to manage easily if two connections are set up between the same aircraft and ground system. Therefore, the accepted method is to allow only one connection between aircraft and ground. The resolution to ADS-0057 has required the first (and only the first) contract (i.e. the one that creates the connection) to include the ICAO facility designator of the sender. The words chosen in the solution to this defect have fortuitously prevented the ground system setting up two connections.

The problem remains that the aircraft does not check that a new connection is not from an existing ground system.

Agreed Solution

Add an additional requirement for the ADS-air-user.

2.2.1.7.1.5.4 If the ICAO facility designation parameter is provided in an ADS-demand-contract indication, an ADS-event-contract indication or an ADS-periodic-contract indication, and if this ICAO facility designation is equal to the ICAO facility designations of any other ground system with which the aircraft has one or more contracts, the ADS-air-user shall invoke ADS-user-abort in place of the normal response.

Note.- The intention is that the new connection will be aborted; the existing connection and all the contracts on it will be retained.

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0081
Originator Jane Hamelink / Dung Nguyen
Originator's Reference (where applicable)

Date 11 February 1997
Location in SARPs 2.2.1.7.3

Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 11 February 1997
Fixed in ICAO V1.1

Problem

There is no description of the heading change event.

Agreed Solution

Add the following requirement:

2.2.1.7.3.5.13 When heading-change is provided in the ADS-event-contract contract details parameter, and not indicated in the noncompliance notification if sent, then for the duration of the event contract, whenever the aircraft's heading differs negatively or positively from the value transmitted in the previous ADS report containing an air-vector element by an amount exceeding the value of the heading-change element specified in the event contract request, then the ADS-air-user shall invoke ADS-report request including the air-vector element in the report details parameter.

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0082
Originator Jane Hamelink / Dung Nguyen
Originator's Reference (where applicable)

Date 11 February 1997
Location in SARPs 2.2.1.7.4.4.6

Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 11 February 1997
Fixed in ICAO V1.1

Problem

The ground system does not know when the aircraft received the contract request. The ground system can only understand the report on the basis of the report timestamp.

Agreed Solution

Delete:

as measured from the time of arrival of the ADS-periodic-contract indication.

and replace with

as measured from the timestamp on the ADS-report.

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0084
Originator Jane Hamelink / Dung Nguyen
Originator's Reference (where applicable)

Date 11 February 1997
Location in SARPs 2.2.1

Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 11 February 1997
Fixed in ICAO V1.1

Problem

When an aircraft receives an ADS-event-contract indication it is able to reject some parts of the contract (using a noncompliance notification). This may be because some of the equipment that detects the event is not working. If the equipment fails once the contract has been set up, there is no way for the aircraft to tell the ground system that it can no longer fulfill the contract.

Agreed Solution

The solution is to add a new event type that means "some of the aircraft equipment that detects events may not be operational". This is to be reported on all event contracts.

Add the following to the ASN.1 definition of EventTypeReported in 2.2.1.4:
ability-to-detect-events-impaired (12),

Add the following:

2.2.1.7.3.5.14 If the ability of the aircraft to detect the occurrence of events changes during the event contract to the extent that it may effect the ability of the aircraft to meet the terms of the event contract, the ADS-air-user shall invoke ADS-report request including the *ability-to-detect-events-impaired* element in the *report details* parameter.

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0085
Originator Jane Hamelink / Dung Nguyen
Originator's Reference (where applicable)

Date 11 February 1997
Location in SARPs 2.2.1.5.1.1

Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 11 February 1997
Fixed in ICAO V1.1

Problem

Figures 2.2.1.5-29 and 30 - the timer indicated on the figure should be t-EM-2 not t-EM-1

Figure 2.2.1.5-30 should have the timer t-LI-1 indicated.

In table 2.2.1.5-1, the timer stop event for t-EM-2 should be ADS-cancel-emergency-contract or ADS-emergency-report.

Agreed Solution

Change as described above.

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0086
Originator Jane Hamelink / Dung Nguyen
Originator's Reference (where applicable)

Date 11 February 1997
Location in SARPs 2.2.1.4

Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 11 February 1997
Fixed in ICAO V1.1

Problem

The user requirement for projected profile and the extended projected profile within an ADS-report is for the times reported to be absolute time, not time relative to the current time stamp.

Agreed Solution

In 2.2.1.4 delete:

Eta ::= INTEGER (0..960)

and the subsequent comments

and replace with:

Eta ::= Time

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0087
Originator Jane Hamelink / Dung Nguyen
Originator's Reference (where applicable)

Date 11 February 1997
Location in SARPs 2.2.1.4

Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 11 February 1997
Fixed in ICAO V1.1

Problem

In the ASN.1 definition of intermediate intent, the specification of distance and track is not specific as to whether it is relative to current position or the previous point in the intermediate intent.

Agreed Solution

Add the following comments to the ASN.1

- *distance is relative to the position at time of the ADS-report*
- *projected time is relative to the time of the ADS-report*
- *track is absolute track*
- *level is absolute level*

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0088
Originator TES (EUROCONTROL)
Originator's Reference (where applicable) tes-ads-92

Date 26 February 1997
Location in SARPs 2.2.1.3.13 and 2.2.2.3.7

Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 5 March 1997
Fixed in ICAO V1.1

Summary of Defect:

Due to the way the ULCS handles aborts, the indication provided on a user abort that is initiated before a D-START confirmation is received may be changed from a ADS-user-abort.indication to a ADS-provider-abort.indication, and the user data will be provided as “communication-error”.

Editor's Proposed Solution (optional)

Change the note of 2.2.1.3.13 and 2.2.2.3.7.1

Note 1.— The ADS-user-abort service allows...

Add second note to 2.2.1.3.13 and 2.2.2.3.7.1

Note 2.— If the service is invoked prior to complete establishment of the dialogue, the ADS-user-abort indication may not be provided. An ADS-provider-abort indication may result instead.

Agreed Solution.

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0089
Originator TES (EUROCONTROL)
Originator's Reference (where applicable) tes-ads-90

Date 26 February 1997
Location in SARPs 2.2.1.5.4.5.1, 2.2.1.5.4.5.2

Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 5 March 1997
Fixed in ICAO V1.1

Summary of Defect:

In sections 2.2.1.5.4.5.1 and 2.2.1.5.4.5.2, the reception of a negative D-START confirmation causes the AB module to request the LI module to abort the dialogue.

However, the dialogue abort is not possible since the dialogue has not been established and the LI module is back to the IDLE state.

Proposed Solution:

A new requirement shall be added in section 2.2.1.5.3.15.5 to cope with the situation described above:

2.2.1.5.3.15.5.2 If in the LI-G-IDLE state, the ground LI module shall ignore the request.

In Table 2.2.1.5-73, the content of cell (ADS-provider-Abort-PDU, LI-G-IDLE)

Old text

Not permitted

New text

LI-G-IDLE

Redlined text

LI-G-IDLE

Agreed Solution

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0090
Originator ATNP WG 3
Originator's Reference (where applicable) WG3/9 Report, Phuket

Date 6 March 1997
Location in SARPs 2.2.1.4.2.1

Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 7 March 1997
Fixed in ICAO V1.1

Summary of Defect:

Early validation work has indicated that the use of distance, altitude and speed units as defined in the ADS SARPs could cause confusion and possible rounding errors when compared with existing ICAO approved systems of Units of Measurement (SI/non-SI) identified in Annex 5.

Editor's Proposed Solution

ADS should use the non-SI system of Units of Measurement identified in Annex 5.

Agreed Solution

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0091
Originator ICAO ATNP Secretary
Originator's Reference (where applicable) n/k

Date 7 March 1997
Location in SARPs 2.2.1

Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 10 March 1997
Fixed in ICAO V1.1

Summary of Defect:

The ADS SARPs should start at paragraph 2.2, not 2.2.1.

Editor's Proposed Solution

Insert a new initial heading and note, outlining the structure of 2.2 as having two parts - 2.2.1 dealing with the air/ground application, and 2.2.2 dealing with ground forwarding

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0092
Originator WG3
Originator's Reference (where applicable)

Date 28 February 1997
Location in SARPs 2.2.1.3.4.4.1, 2.2.1.3.5.4.1, 2.2.1.3.6.4.1, 2.2.1.6.2.2.3,
2.2.2.3.4.4.1, 2.2.2.6.2.2.3

Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 4 March 1997
Fixed in ICAO V1.1

Problem

The references to “1.2” in notes is now “1.3”. In order to minimize future impacts due to Sub-volume 1 paragraph/reference changes, all notes that refer to Sub-volume 1 will be deleted except for the note in 2.1.6. Note numbering that is affected will be updated accordingly.

Agreed Solution

Change the note to read the correct reference in 2.2.1.6.2.2.3, 2.2.2.6.2.2.3.

Note.— *ATSC values are defined in 1.32.*

Delete note 1 and renumber following notes 2.2.1.3.4.4.1, 2.2.1.3.5.4.1, 2.2.1.3.6.4.1

Note 1.— *Class of Communication Service parameter values are detailed in 1.2.*

Note 12.—...

Note 22.—...

or in 2.2.2.3.4.4.1

Note 1.— *Class of Communication Service parameter values are detailed in 1.2.*

Note 2.—...

SARPs Version Number ADS ICAO V1.0
Defect Report Number ADS-0093
Originator T Reille (Thomson/CSF)
Originator's Reference (where applicable) EOLIA Project

Date 3 December 1996
Location in SARPs 2.2.1.3.7

Status (OPEN, CLOSED or REJECTED) CLOSED
Date of Resolution 11 February 1997
Fixed in ICAO V1.1

Problem

In the ADS-report service, the Positive acknowledgement parameter must be usable for a new event contract and for new periodic and demand contracts as well (for a technical reason and in order to be compliant with the chapter 7 of the same ADS SARPs: 2.2.1.7.4.2.1 and 2.2.1.7.2.2).

The technical reason is in the case a periodic contract is already active and a new periodic contract request is sent: a report received from the active contract can be considered as a positive acknowledgement for the new one (because nothing in the ADS report identifies the specific periodic contract and the positive acknowledgement).

Editor's Proposed Solution

In the paragraph 2.2.1.3.7.4 add in the note 'or in a new periodic contract, or a new demand contract'.

Agreed Solution