



ATNP/WG2/
WP171/
14 September 1995

AERONAUTICAL TELECOMMUNICATIONS NETWORK PANEL

WORKING GROUP TWO

Banff 9.10.95-13.10.95

Review of Route Initiation APRL (ATNP/WG2 Action 5/6)

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SUMMARY

In response to action 5/6, a review of the Route Initiation APRLs has been undertaken. This has resulted in the identification of several defects and mis-alignment with the current SARPs for Route Initiation, requiring changes to the APRLs. This paper provides a proposed replacement APRL that fixes the identified defects.

DOCUMENT CONTROL LOG

SECTION	DATE	REV. NO.	REASON FOR CHANGE OR REFERENCE TO CHANGE
	14-Sep-95	Issue 1.0	

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1. Introduction

At the ATNP/WG2 Rome Meeting, the APRL provided in appendix 10 for Route Initiation was reviewed, and deficiencies noted. An action was then accepted by Eurocontrol to provide a more detailed review. The result of this review is contained in this paper, together with a proposed updated APRL.

2. Review Comments

1. Generally, the APRL in A1.13 of Draft 2.1 has been overtaken by events. The Rome meeting introduced a third mode of operation (symmetric) and the editing work done for appendix 6 had made significant changes to the structure of the requirements text and which needs to be reflected in the APRL.
2. Emergency Mode is not included in the APRL
3. The APRL assumes that the Leave Event is only appropriate to networks that also provide a Join Event. This is not true.
4. ISH in Call Confirm is only appropriate to networks that provide Fast Select and when the Mobile Sndcf is employed. This dependency needs to be made clear.
5. Validation of Call Requests is not included in the APRL.
6. Optional non-use of IDRPs is not included in the APRL.
7. Recommendation on ISH PDU Suppression missing.

3. Proposed APRL

3.1 APRL for Air/Ground Route Initiation

3.1.1 General

Item	Description	ATN SARP Reference	CNS/ATM Package-1 Support
njSubnet	Support of Subnetworks that do not provide Join Event	3.5.2	O.1
jSubnet	Support of Subnetworks do provide a Join Event	3.5.2	O.1
giSubnet	Support of Ground Initiated Subnetworks	3.5.2	O.2
aiSubnet	Support of Air Initiated Subnetworks	3.5.2	O.2
agSubnet	Support of Air or Ground Initiated Subnetworks	3.5.2	O.2
fsSubnet	Support of Subnetworks that support Fast Select	-	O
noIDRP	Support of optional non-use of IDRPs	3.5.2.11	O
lvSubnet	Support of Subnetworks that provide a Leave Event	3.5.2.12	M

3.1.2 Airborne Router - Connection Responder

Item	Description	ATN SARPs Reference	CNS/ATM Package-1 Support
respAR-ar	Response to incoming Call Requests	3.5.2.1	giOragSubnet: M
valCR-ar	Validation of incoming Call Request	3.5.2.1	giOragSubnet:O
RespISH-ar	Generation of ISH PDU	3.5.2.5	giOragSubnet: M
ISHinCC-ar	Encoding ISH PDU in Connect Confirm User Data	3.5.2.5	RespISH-ar & fsSubnet: O
negNoIDRP-ar	Transmission of ISH with SEL field set to 0FEh	3.5.2.5	noIDRP:M
negIDRP-ar	Transmission of ISH with SEL field set to zero	3.5.2.5	¬noIDRP:M
autoRoute-ar	Inference of available routes from A/G Router NET	3.5.2.11.2	noIDRP:M
initIDRP-ar	IDRP startup procedures - ListenForOpen set to true	3.5.2.9	¬noIDRP:M
supISH-ar	Suppression of multiple ISH PDUs	3.5.2.9	¬noIDRP: O
valNET-ar	Validation of received NET	3.5.2.6	¬noIDRP: O

giOragSubnet: giSubnet ^ agSubnet

3.1.3 Airborne Router - Connection Initiator

Item	Description	ATN SARPs Reference	CNS/ATM Package-1 Support
polling-ai	Procedures for polling a list of subnet addresses	3.5.2.2.1	pollReq: M
backoff-ai	Backoff Procedure	3.5.2.2.1.1	pollReq: M
connect-ai	Connect on receipt of Join Event	3.5.2.2.2	EventDrvn: M
ValJoin-ai	Validation of Join Event	3.5.2.2.2	EventDrvn: O
SendISH-ai	Generation of ISH PDU	3.5.2.5	EventDrvn ^ pollReq:M
ISHinCR-ai	Encoding of ISH PDU in Connect Request	3.5.2.5	SendISH-ar & fsSubnet: O
negNoIDRP-ai	Transmission of ISH with SEL field set to 0FEh	3.5.2.7	noIDRP:M
negIDRP-ai	Transmission of ISH with SEL field set to zero	3.5.2.7	¬noIDRP:M
autoRoute-ai	Inference of available routes from A/G Router NET	3.5.2.11.2	noIDRP:M
initIDRP-ai	IDRP startup procedures - listenForOpen set to false	3.5.2.9	¬noIDRP:M
supISH-ai	Suppression of multiple ISH PDUs	3.5.2.9	¬noIDRP: O
valNET-ai	Validation of received NET	3.5.2.6	¬noIDRP: O

pollReq: aiSubnet & njSubnet

EventDrvn: jSubnet & (aiSubnet ^ agSubnet)

3.1.4 Air/Ground Router - Connection Responder

Item	Description	ATN SARPs Reference	CNS/ATM Package-1 Support
respAR-agr	Response to incoming Call Requests	3.5.2.1	aiOragSubnet: M
valCR-agr	Validation of incoming Call Request	3.5.2.1	aiOragSubnet: O
emgncy-agr	Emergency Procedures	3.5.2.1.1	M
RespISH-agr	Generation of ISH PDU	3.5.2.5	aiOragSubnet: M
ISHinCC-agr	Encoding ISH PDU in Connect Confirm User Data	3.5.2.5	RespISH-agr & fsSubnet: O
negNoIDRP-agr	Receipt of ISH with SEL field set to 0FEh	3.5.2.7	M
negIDRP-agr	Receipt of ISH with SEL field set to zero	3.5.2.7	M
autoRoute-agr	Inference of available routes from Airborne Router NET	3.5.2.11.1	M
initIDRP-agr	IDRP startup procedures - ListenForOpen set to true	3.5.2.9	M
supISH-agr	Suppression of multiple ISH PDUs	3.5.2.9	¬noIDRP: O
valNET-agr	Validation of received NET	3.5.2.6	¬noIDRP: O

aiOragSubnet: aiSubnet ^ agSubnet

3.1.5 Air/Ground Router - Connection Initiator

Item	Description	ATN SARPs Reference	CNS/ATM Package-1 Support
connect-agi	Connect on receipt of Join Event	3.5.2.3	goOragSubnet: M
ValJoin-agi	Validation of Join Event	3.5.2.3	connect-agi: O
SendISH-agi	Generation of ISH PDU	3.5.2.5	connect-agi: M
ISHinCR-agi	Encoding of ISH PDU in Connect Request	3.5.2.5	Send-ISH-agi & fsSubnet: O
negNoIDRP-agi	Receipt of ISH with SEL field set to 0FEh	3.5.2.7	M
negIDRP-agi	Receipt of ISH with SEL field set to zero	3.5.2.7	M

Item	Description	ATN SARPs Reference	CNS/ATM Package-1 Support
autoRoute-agi	Inference of available routes from Airborne Router NET	3.5.2.11.1	noIDRP:M
initIDRP-agi	IDRP startup procedures - listenForOpen set to false	3.5.2.9	¬noIDRP:M
supISH-agi	Suppression of multiple ISH PDUs	3.5.2.9	¬noIDRP: O
valNET-agi	Validation of received NET	3.5.2.6	¬noIDRP: O

goOragSubnet: giSubnet ^ agSubnet

3.1.6 Termination Procedures

Item	Description	ATN SARPs Reference	CNS/ATM Package-1 Support
lvEvent	Processing of Leave Event	3.5.2.12	M
Watchdog	Watchdog Timer	3.5.2.12	M
ConfigWD	Configurability of Watchdog for Subnetwork Characteristics	3.5.2.12	O
conLeave	Processing of a per connection Leave Event	3.5.2.12	M
subnetLeave	Processing of a per Subnetwork Leave Event	3.5.2.12	M