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AERONAUTICAL TELECOMMUNICATIONS NETWORK PANEL

WORKING GROUP 2

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Validation Tool Descriptions

(Information Paper)

Prepared by Jean-Pierre Briand

Presented by Henk Hof

SUMMARY

This document contains the validation tool descriptions submitted so far by WG2 members. The descriptions are made using the tool description template distributed to atn-internet-technical-list in November 95 (action 6/17).

TABLE OF CONTENTS

1. Introduction

This document contains the validation tool descriptions submitted so far by WG2 members. The descriptions are made using the tool description template distributed to atn-internet-technical-list in November 95 (action 6/17). This document will contribute to the ATN Validation Report. WG2 members are invited to submit additional descriptions of tools they intend to use within their organisation and provide comments on the current template.

2. Comments on description template

To date, no specific comments were received on the description template itself. However, its use brought up a number of issues which can be summarised as follows:

a) tool description is meant to describe "classes" of tools, it is not suitable at present to describe real topologies/platforms by describing "how many systems", "actual capacities", etc. This has been solved in the European validation initiative by having a separate description of configurations in terms of actual capacities. This configuration description makes reference to tool descriptions.

b) There has been some difficulty in filling checkboxes, especially in CNS/ATM-1 Specifics section. It should be clear that this description cannot replace a compliance statement (i.e. PICS) an that the ultimate reference should be that compliance statement. The main use of this tool description is classification.

c) adoption of WORD Forms features seems to be a failure since all forms which were received were unprotected by their authors (probably to add their own comments and notes to the existing form). Unfortunately, when unprotected, a form cannot be protected again without erasing its content! Either some tutorial is provided on how to use forms, or the template is reissued without form features.

Attachment 1: Prototype Implementations

1) ADS-Europe

2) DEMISIS

3) EURATN

4) TAR D

Tool Identification

Name	**ADS-Europe**
Full Name	
Category	PROTOTYPE IMPLEMENTATION
Description	Ground ADS application over ATN (interface at transport level)
Contact Point and/or Supplier	STNA, Martine Blaize, tel: (33) 62 14 58 88 e-mail: blaize_martine@ccmail.dgac.fr or CENA, Jean-Francois Grout tel: +33 62 25 95 36 e-mail: grout@cenatls.cena.dgac.fr
Tool Version and Date	
Supporting Hardware	SUN Sparc 20
Supporting Operating System and/or Software	SUNOS 4.3.1-U1

CNS/ATM-1 SARPs Scope

ATN Systems	☒ End System ☐ Intra-domain Intermediate System ☐ Ground-ground BIS ☒ Air-ground BIS ☐ Airborne BIS ☐ Not Applicable
Protocols	☒ ISO 8073 ☒ ISO 8602 but not used ☒ ISO 8473 ☒ ISO 9542 ☒ ISO 10747 ☒ ISO 8802 SNDCF ☒ ISO 8208 SNDCF ☒ ISO 8208 Mobile SNDCF Other:
CNS/ATM-1 Specifics	☒ ATN Addressing ☐ ATN Routing Policy ☒ Air-Ground Route Initiation ☐ ATN Priority ☐ ATN Security Other: ADS application (A745-2) + « basic CMA » (log on message only)

Connectivity Information

Type	Connector Type and Number	Notes
V24/V28	DB 25 (1)	

Notes

- Interoperable ADS/ATN avionics are being installed on commercial aircraft (A310 and B747)
- Next version of ground and airborne software may support additional Package 1 functions

Tool Identification

Name	**DEMISIS**
Full Name	DEMISIS (Development/Modification of ISO 10747, ISO 8473 and the SNDCF for ISO 8208 Subnetworks)
Category	PROTOTYPE IMPLEMENTATION
Description	DEMISIS is a configurable ATN Intermediate System/ End System. It can be configured to operate as various types of ATN routers (see below) and End Systems. This release conforms to the ATN Manual 2.0, but currently does not comply to the Draft CNS/ATM-1 SARPs. The upgrade is planned for 1996. DEMISIS was developed by ESG for EUROCONTROL.
Contact Point and/or Supplier	DFS Deutsche Flusicherung Dr. Andreas Herber Tel: +49 69 6335 263 Fax: +49 69 6335 219 Email: herber@se.dfs.com
Tool Version and Date	Release dfs-1.1a-TP4, 951123
Supporting Hardware	HP 9000/700 series
Supporting Operating System and/or Software	HP-UX 9.0

CNS/ATM-1 SARPs Scope

ATN Systems	☒ End System ☒ Intra-domain Intermediate System ☒ Ground-ground BIS ☒ Air-ground BIS ☒ Airborne BIS
Protocols	☒ ISO 8073 ☐ ISO 8602 ☒ ISO 8473 ☒ ISO 9542 ☒ ISO 10747 ☒ ISO 8802 SNDCF ☒ ISO 8208 SNDCF ☒ ISO 8208 Mobile SNDCF Other: ISO 10589
CNS/ATM-1 Specifics	☒ ATN Addressing ☐ ATN Routing Policy ☒ Air-Ground Route Initiation (currently, only ATN Manual compliant) ☒ ATN Priority ☒ ATN Security

Connectivity Information

Type	Connector Type and Number	Notes
ISO 8802-3 LAN	As per workstation configuration	
X.25	As per workstation configuration	

Notes
forseen to be upgraded to conform to Draft CNS/ATM-1 SARPs

Tool Identification

Name	**EURATN**
Full Name	EUROpean ATN
Category	PROTOTYPE IMPLEMENTATION
Description	EURATN is an experimental ATN network, including systems that can be configured as ES, IS, G/G BIS, A/G BIS and Airborne BIS, a real Data-3 satellite link and ground X.25 WANs and Ethernet LANs.
Contact Point and/or Supplier	STNA/8CA, Jean-Michel Crenais, tel: (33) 62 14 54 88 e-mail: crenais_jean-michel@ccmail.dgac.fr or CENA, Thomas Kircher tel: +33 62 25 95 57 e-mail: kircher@cenatls.cena.dgac.fr
Tool Version and Date	Release 1.2, 11 Sep 95
Supporting Hardware	SUN Sparc IPX
Supporting Operating System and/or Software	SUNOS 4.3.1-U1

CNS/ATM-1 SARPs Scope

ATN Systems	☒ End System ☒ Intra-domain Intermediate System ☒ Ground-ground BIS ☒ Air-ground BIS ☒ Airborne BIS ☐ Not Applicable
Protocols	☒ ISO 8073 ☒ ISO 8602 ☒ ISO 8473 ☒ ISO 9542 ☒ ISO 10747 ☒ ISO 8802 SNDCF ☒ ISO 8208 SNDCF ☒ ISO 8208 Mobile SNDCF Other:
CNS/ATM-1 Specifics	☒ ATN Addressing ☐ ATN Routing Policy ☒ Air-Ground Route Initiation ☒ ATN Priority at transport and network level, not supported at X.25 level (would require a SOLARIS porting) ☐ ATN Security Other:

Connectivity Information

Type	Connector Type and Number	Notes

ISO 8802-3 LAN	As per workstation configuration	
X.25	As per workstation configuration	
AMSS satellite link (Data-3)		

Notes

Next version of EURATN (Package-1 Upgrade) will add the following Package-1 Specifics:

ATN Security

ATN Routing Policies

Tool Identification

Name	**TAR D**
Full Name	Trials ATN Router Release D
Category	PROTOTYPE IMPLEMENTATION
Description	TAR is a configurable ATN Intermediate System. It can be configured to operate as various types of ATN routers (see below). The release D supports the ATN security scheme and the ATN IDRP profiles as specified in CNS/ATM-1 SARPs. TAR was developed by Telegenics for EUROCONTROL.
Contact Point and/or Supplier	EUROCONTROL Henk HOF Tel: +32 2 729 3329 Fax: +32 2 729 3783 Email: hof.henk@eurocontrol.be
Tool Version and Date	Release D, 20 Nov 95
Supporting Hardware	HP 9000/700 series
Supporting Operating System and/or Software	HP-UX 9.0

CNS/ATM-1 SARPs Scope

ATN Systems	☐ End System ☒ Intra-domain Intermediate System ☒ Ground-ground BIS ☒ Air-ground BIS ☒ Airborne BIS ☐ Not Applicable
Protocols	☐ ISO 8073 ☐ ISO 8602 ☒ ISO 8473 ☒ ISO 9542 ☒ ISO 10747 ☒ ISO 8802 SNDCF ☒ ISO 8208 SNDCF ☒ ISO 8208 Mobile SNDCF Other: ISO 10589
CNS/ATM-1 Specifics	☒ ATN Addressing ☐ ATN Routing Policy ☒ Air-Ground Route Initiation ☒ ATN Priority ☒ ATN Security Other:

Connectivity Information

Type	Connector Type and Number	Notes
ISO 8802-3 LAN	As per workstation configuration	
X.25	As per workstation configuration	

Notes		

Attachment 2: Simulation Models

1) CLNP Model

2) IDRP Model

Tool Identification

Name	**CLNP Model**
Full Name	Connectionless Network Protocol Model
Category	SIMULATION MODEL
Description	The CLNP Model is a detailed simulation model of the Connectionless Network Protocol. The model implements static FIBs support. Protocol functions are controlled by configuration parameters. Version 2.0 will enable the simulation of CLNP congestion situations.
Contact Point and/or Supplier	EUROCONTROL Henk HOF Tel: +32 2 729 3329 Fax: +32 2 729 3783 Email: hof.henk@eurocontrol.be
Tool Version and Date	Version 1.0, October 1994 Version 2.0, to be delivered
Supporting Hardware	as supported by OPNET Release 2.5
Supporting Operating System and/or Software	OS as supported by OPNET Release 2.5 Software: OPNET Release 2.5

CNS/ATM-1 SARPs Scope

ATN Systems	☒ End System ☒ Intra-domain Intermediate System ☒ Ground-ground BIS ☒ Air-ground BIS ☒ Airborne BIS ☐ Not Applicable
Protocols	☐ ISO 8073 ☐ ISO 8602 ☒ ISO 8473 ☐ ISO 9542 ☐ ISO 10747 ☐ ISO 8802 SNDCF ☐ ISO 8208 SNDCF ☐ ISO 8208 Mobile SNDCF Other:
CNS/ATM-1 Specifics	☐ ATN Addressing ☐ ATN Routing Policy ☐ Air-Ground Route Initiation ☒ ATN Priority ☐ ATN Security Other: ATN Internetwork Service and Protocol Guidance

Connectivity Information

Type	Connector Type and Number	Notes

Notes		

Tool Identification

Name	**IDRP Model**
Full Name	IDRP Convergence Model
Category	SIMULATION MODEL
Description	The IDRP Convergence Model was developped to study the propagation within the ground network of routes to mobiles. The forwarding Process, and the interface to ISO 8473 are not modelled. ATN Transit Routing policies of backbone, off-backbone transit routing domains, and end routing domains can be simulated. Route merging and route aggregation in general are not supported.
Contact Point and/or Supplier	CENA, Thomas Kircher, tel (33) 62 25 95 57, e-mail: kircher@cenatls.cena.dgac.fr
Tool Version and Date	Version 3.0, December 1995
Supporting Hardware	as supported by OPNET Release 2.5
Supporting Operating System and/or Software	OS as supported by OPNET Release 2.5 Software: OPNET Release 2.5

CNS/ATM-1 SARPs Scope

ATN Systems	☐ End System ☐ Intra-domain Intermediate System ☒ Ground-ground BIS ☒ Air-ground BIS ☐ Airborne BIS ☐ Not Applicable
Protocols	☐ ISO 8073 ☐ ISO 8602 ☐ ISO 8473 ☐ ISO 9542 ☒ ISO 10747 ☐ ISO 8802 SNDCF ☐ ISO 8208 SNDCF ☐ ISO 8208 Mobile SNDCF Other:
CNS/ATM-1 Specifics	☐ ATN Addressing ☒ ATN Routing Policy ☐ Air-Ground Route Initiation ☐ ATN Priority ☐ ATN Security Other:

Connectivity Information

Type	Connector Type and Number	Notes

Notes		
Joint Ownership by CENA and EUROCONTROL		