AERONAUTICAL TELECOMMUNICATIONS NETWORK PANEL

WORKING GROUP TWO

Langen, June/July 1997

ATNP NSAP Address Repository

Presented by Arnaud Dedryvère

Prepared by Stéphane Tamalet

(France)

SUMMARY

This Working Paper proposes the creation of an NSAP Address repository on the ATNP Archive and the associated procedures for the ATN addresses registration and consultation.

TABLE OF CONTENTS

1. Introduction

For long, a requirement has been expressed for a central ATN NSAP address repository. France had been tasked to propose a format for an NSAP Address Directory on the ATNP Archive (Action 7/22 of Brisbane WG2 Meeting).

On the other hand, the ICAO Working Group on Panels has accepted the ATNP/2 Recommendation to prepare for the establishment of an appropriate ICAO ATN address registration and publication process. This recommendation will be presented to the ANC.

While recognising the ICAO authority for the formal management of the ATN Address space, an ATNP NSAP Address Repository would still seem useful in the meantime; such a tool would ease the initial ATN implementation and the first inter-administrations communication trials by making quickly available the ATN addressing plans of various administrations involved in the ATN. It would additionally allow the early detection of potential ATN address allocation conflicts, and would provide for an outline of the ATN systems deployment status.

This Working Paper proposes the creation of an NSAP Address repository on the ATNP Archive maintained by France on the CENA ftp server and associated procedures for the ATN addresses registration and consultation.

2. Structure of the ATNP NSAP Address Repository

Ideally the ATNP NSAP Address Repository should allow the consulting user to retrieve the NSAP address of a system or the NSAP prefix of a Routing domain directly by indicating some general parameters such as the related administrative authority and the geographical location. Inversely, the Repository should allow the user to identify which system is associated with a given NSAP address value

A practical approach to provide advanced maintenance and consultation facilities on data is to use a data base manager. It is therefore proposed that the ATNP NSAP Address Repository relies on such a tool. The Microsoft Access software seems to be a logical choice, since it is commonly available on a lot of PCs and is already used for the ATNP Validation data bases.

The ATNP NSAP Address Repository is proposed to consist of an Access file, available on the ATNP archive. The users willing to consult the data base, will simply transfer the whole Access file from the ATNP Archive to their PC, and will then scan or interrogate the data base locally on their system, using the Microsoft Access software and the procedures described in section 4.

The ATNP NSAP Address Repository Access file on the ATNP archive will be accessible by ftp in read-only mode. Day to day updates of the data base will be done by a single person according to the procedure described in the section 3.

3. ATN Addresses Registration Procedures

Any person willing to register a new ATN NSAP address or NSAP prefix into the ATNP NSAP Address Repository will have to:

1. Fill an NSAP Address Registration Form as provided in the file new_nsap.dot on the ATNP archive, and reproduced below in this document.

2. Complete the table

3. Send the filled form, as an attachment of an electronic mail sent to « mathe_jacques@ccmail.dgac.fr ». The e-mail subject should be set to « ATNP NSAP ADDRESS REGISTRATION REQUEST »

ATN NSAP Registration Form

Administrative Authority				

	Fixed			
	Country	City	Facility	
Geographical				
	Mobile			
Location	Aircraft type		Registration/Tail Number	

Address Status	Operational		Trials		Reserved	

Description/ Comments	

Address Type	NSAP	NET	RDI	RDCI

Address Length (octets)	20	

System Type	Class 1 IS		Class 2 IS		Class 3 IS		Class 4 BIS	
	Class 5 BIS		Class 6 BIS		Class 7 BIS		ES	

	Fields	Nb Octets	Authorised Values	Hexadecimal Value
	AFI	1	47	47
	ID	2	0027	0027
Fields Values	VER	1	01-41-81-C1	
	ADM	3	*n/a*	
	RDF	1	00	
	ARS	3	*n/a*	
	LOC	2	*n/a*	
	SYS	6	*n/a*	
	SEL	1	*n/a*	

Associated Contact Person			
Name	Firstname	Address	
City	Postcode	Region / State	Country
Phone Number	Fax Number	E-Mail	

The user requesting registration of new NSAP address or prefix must fill every blank cell of the table as follows:

Administrative Authority: The adjacent blank cell must be filled with the name of the Organisation/Administration/Airline administering the registered address.

Geographical Location: For a ground address, the adjacent blank cells must be filled with respectively:
- The name of the Country where the addressed entity is located
- The name of the City where the addressed entity is located
- The name of the Facility where the addressed entity is located

For a mobile address, the adjacent blank cells must be filled with respectively:
- The type of the aircraft where the addressed entity is located (e.g. Boeing B747-200, Airbus A320, etc.)
- The registration number (i.e. the tail number) of the aircraft where the addressed entity is located

Address Status: An « X » must flag down the adjacent blank cell corresponding to the status of the registered address, i.e. whether it is used in an operational or experimental ATN context or whether it is reserved for future use

System Description/Comments: The adjacent blank cell must be filled with any associated comments that are deemed necessary to be stored in the data base with the address

Address Type: An « X » must flag down the adjacent blank cell corresponding to the type of the address which is registered (NSAP, NET, Routing Domain Identifier or RDC Identifier)

Address Length: When the registered address is a prefix (a Routing Domain identifier or an RDC identifier), the prefix length must be indicated in the adjacent blank cell

System Type: When applicable, an « X » must flag down the adjacent blank cell corresponding to the system type . The registered system is expected to be of one of the following types:
- Class 1 IS (i.e. static intra-domain router)
- Class 2 IS (i.e. Level 1 intra-domain router)
- Class 3 IS (i.e. Level 2 intra-domain router)
- Class 4 IS (i.e. Ground/Ground BIS)
- Class 5 IS (i.e. Air/Ground BIS)
- Class 6 IS (i.e. Airborne BIS with IDRP)
- Class 7 IS (i.e. Airborne BIS without IDRP)
- ES (i.e. End System)

In case of colocated ES/BIS flag both the ES cell and the relevant IS cell.

Field Values: The ATN NSAP address/prefix fields values must be written down in hexadecimal into the corresponding adjacent blank cells.

Associated Contact Person The adjacent blank cells must be filled with contact details about the person administrating the registered address

The person in charge of the maintenance of the ATNP NSAP address repository will periodically process the new Address Registration Requests, and update the data base that is available from the ATNP archive.

4. ATN Addresses Consultation

ATNP NSAP addresses consultation will be performed by the users locally on their own PC after having retrieved the relevant Microsoft Access file from the ATNP archive.

Basic MS Access input/output screens will be provided together with the database itself, allowing the user to perform standard sorting on the data such as « Find NSAP addresses of all Ess from <Country> ».

5. Management of the ATNP NSAP Address Repository

The ATNP NSAP Address Repository will be managed by STNA.

The responsible person in STNA will be: Jacques Mathé

Address:	1, Av. du Dr GRYNFOGEL
	BP 1084
	31035 TOULOUSE CEDEX
Fax:	+33 5 62 14 54 02
e-mail:	mathe_jacques@stna.dgac.fr

6. Recommendations

Working Group 2 is invited:

- to endorse the creation of an ATNP NSAP address repository available on the ATNP archive

- to accept the proposal to use the Microsoft Access Software (Version 2.0)

- to accept the proposed procedures/principles for the management and consultation of the data base.

7. Proposal

If the previous recommendations are accepted, STNA will present an initial version of the NSAP Address Repository during the October ATNP meetings, based on NSAP Address Registration Forms received up to then.