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**ATNP NSAP Address Repository
User Manual**

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SUMMARY

This document is the ATNP NSAP Address Repository User Manual. The ATNP NSAP Address Repository has been developed in response to ATNP WG2 Action 7/22 (Brisbane) and consists of an MS Access file, available on the ATNP archive. After having transferred this MS Access file from the ATNP Archive to their PC, users have the capability to scan or interrogate the data base locally on their system, using the Microsoft Access software and the procedures described in this document.

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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). At the Langen WG2 Meeting, the ATNP NSAP Address Repository was proposed to consist of a Microsoft Access file that users could transfer from the ATNP Archive to their own environment and consult locally. The proposal was accepted by the Group, and France has since developed a first version of the repository.

The ATNP NSAP Address Repository is a tool allowing the 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. In the same way, the Repository allows the user to identify which system is associated with a given NSAP address value. The tool may ease the initial ATN implementation and the first communication trials by making quickly available the ATN addressing plans of various organisations. It may additionally allow the early detection of potential ATN address allocation conflicts, and may provide for an outline of the ATN systems deployment status.

This document is the user manual of the ATNP NSAP Address Repository. It describes the procedures for downloading and consulting the database.

For completeness, the ATN NSAP registration procedures that were presented and accepted at the Langen meeting have been repeated in this document.

2. Structure of the ATNP NSAP Address Repository

The ATNP NSAP Address Repository consists of a Microsoft Access (Version 2.0) file, available on the ATNP archive. It is managed by STNA;

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e-mail:	mathe_jacques@stna.dgac.fr

3. ATN Addresses Registration Procedures

Any person willing to register a new ATN NSAP address or NSAP prefix into the ATNP NSAP Address Repository has 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@cmail.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 Location							
	Mobile						
	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 Values	Fields	Nb Octets	Authorised Values		Hexadecimal Value		
	AFI	1	47		47		
	ID	2	0027		0027		
	VER	1	01-41-81-C1				
	ADM	3	<i>n/a</i>				
	RDF	1	00		00		
	ARS	3	<i>n/a</i>				
	LOC	2	<i>n/a</i>				
	SYS	6	<i>n/a</i>				
	SEL	1	<i>n/a</i>				

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: <ul style="list-style-type: none">• 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: <ul style="list-style-type: none">• 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 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: <ul style="list-style-type: none">• 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 collocated 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.

4.1 Transferring the NSAP Repository From The Archive

The ATNP Archive/Server is located at CENA (in Toulouse, France), on a unix machine. The archive is made of a ftp server giving either read or read/write access to a number of directories, which current organization is detailed in the working paper WG2/WP392

The NSAP address repository can be retrieved from the ATNP Archive with ftp or a web browser.

With ftp, the following procedure must be followed:

```
ftp ftp.cenatls.cena.dgac.fr
(connect as) atnp
(password) upplval
bin
get nsap0001.mdb
bye
```

Access via the Web server is in a same way restricted to user "atnp", with the password "upplval".

Retrieval of the ATNP NSAP Address Repository with a web browser is possible at URL:

```
http://www.cenatls.cena.dgac.fr/atnp/nsap0001.mdb
```

4.2 Launching the database manager

Once the file is installed locally on the disk, the ATN NSAP data base manager may be launched either by double-clicking on the **nsap0001.mdb** file in the file system explorer (provided that the MS Access application has been associated with .mdb files) or by starting the MS Access application and by opening the **nsap0001.mdb** file under the 'file' pop-up menu and with the 'open a data base' command.

4.3 Consulting the database manager

4.3.1 Matching criteria definition

At the end of the start-up phase, the application displays on the screen a form entitled '*Matching criteria Selection*'. This form is represented on Figure 1 below. It consists of 3 buttons and 19 matching criteria definition zones.

The '*Display result*' button allows the user to display the set of registered NSAP addresses/prefixes matching the criteria currently defined. If no criteria have been selected, the whole set of NSAP addresses/prefixes registered in the repository are displayed.

The 'Exit' button allows to shutdown the data base manager

The 'Reset Selection' button allows the user to abandon all currently selected criteria and hence to resume the matching rules definition.

Figure 1: Matching Criteria Selection Form

The matching criteria definition zones allow the user to specify the NSAP address/prefix attributes values for which a match is to be found in the repository. There are 19 matching criteria definition zones, each corresponding to a different NSAP address/prefix attribute. Namely, the user has the capability to search for all NSAP addresses/prefixes matching the user specified values for zero, one or more of the following attributes:

1. Administrative Authority
2. Geographical Location - Country
3. Geographical Location - City
4. Geographical Location - Site Name
5. System Type
6. System Status
7. Fixed/Mobile
8. Aircraft Type
9. Aircraft Registration
10. Associated Contact Person
11. Address Type
12. Address Length
13. NSAP VER field value
14. NSAP ADM field value
15. NSAP RDF field value

- 16.NSAP ARS field value
- 17.NSAP LOC field value
- 18.NSAP SYS field value
- 19.NSAP SEL field value

As an example, a user may be willing to display all ATN NSAP addresses in France having a selector field set to 02. This may be done by:

- a) selecting 'France' in the 'Geographical Location - Country' matching criteria definition zone
- b) selecting '02' in the 'SEL' matching criteria definition zone
- c) and clicking the 'Display result' button.

The matching criteria definition zones are controlled input areas restricting the range of values that the user may specify, to the values for which an NSAP addresses/prefixes matching is currently possible. As an example, it will not be possible for the user to specify 'France' in the 'Country' matching criteria definition zone, if there are no ATN addresses in France being currently registered in the data base.

A matching criteria definition zone is materialised by an input box associated with a pop-up menu. When activated, the pop-up menu displays the possible matching values. For specifying a value, the user has the choice between clicking one of the pop-up menu values or keying one of the possible values in the box.

Certain matching criteria definition zones may be disabled when they are not appropriate in the scope of another current selection criteria. This is the case for instance of the 'City' and 'Site Name' zones which are irrelevant when the 'Fixed/Mobile' zone has been used to pre-select mobile addresses only. Another example is the 'Aircraft type' and 'Registration' zones when the 'Fixed/Mobile' zone has been used to pre-select fixed addresses only.

Disabled matching criteria definition zones are displayed with a grey background. They cannot be used to specify matching criteria.

Enabled matching criteria definition zones are displayed with a white background and can be used to specify new matching criteria.

The NSAP address repository consultation consists therefore for a user in specifying (zero,) one or more values in the enabled matching criteria definition zones and in clicking the 'display result' button.

A user making a mistake in the specification of a matching value may resume the operation either by resetting all currently specified criteria with the 'reset' button or by resetting the specific erroneous matching value only by double clicking within the associated matching criteria definition zone.

After having specified a value in zero, one or several matching criteria definition zones, and clicked the 'display result' button, the set of NSAP addresses/prefixes matching the criteria are displayed.

4.3.2 Displaying the detail of selected ATN addresses

The selected set of NSAP addresses or prefixes is displayed on a specific form. This form is represented on Figure 2 below.

The screenshot shows a Microsoft Access window titled 'Microsoft Access' with a menu bar: 'Fichier', 'Edition', 'Affichage', 'Enregistrements', 'Fenêtre', and '?'. The main window is titled 'ATN Addresses Matching the selection' and is divided into two main sections.

The top section, 'Detail of selected Entry', has a cyan background and contains several input fields and buttons. On the right, there are two buttons: 'New Selection' and 'Exit'. The fields are arranged in three columns:

- Column 1: Authority: DFS, Country: Germany, City: Langen, Site Name: DFS Academy.
- Column 2: Aircraft Type: \$, Registration: \$, Fixed/Mobile: Fixed, Manager: SCHADE.
- Column 3: System Type: Class 3 IS, System Status: Trials, Address Type: NSAP, Address Length: 20 Octets.

Below these fields is a grid of fields for address details:

AFI	IDI	VER	ADM	RDF	ARS	LOC	SYS	SEL
47	0027	81	444555	00	465331	0001	444653475232	01

Below the grid is a text box containing: 'DFS ground router # 2 of DART Infrastructure'.

The bottom section, '5 Entries found', has a cyan background and contains a table with the following data:

Authority	Country	City	Site Name	Manager	System	Status	Aircraft Type	Registration	Address
DFS	Germany	Langen	DFS Academy	SCHADE	Class 3 IS	Trials	\$	\$	NSAP
DFS	Germany	Frankfurt	TEZ	SCHADE	Class 3 IS	Trials	\$	\$	NSAP
DFS	Germany	Langen	DFS Academy	SCHADE	Class 4 BIS	Trials	\$	\$	NSAP
DFS	Germany	Langen	DFS Academy	SCHADE	Class 5 BIS/ES	Trials	\$	\$	NSAP
DFS	Germany	\$	\$	SCHADE	Class 6 BIS/ES	Reserved	Laboratory	D-BFSA	NSAP

At the bottom of the window, there is a status bar showing 'Enr:1' and 'sur 5'.

Figure 2

The form consists of 2 parts:

1. The bottom part, is entitled '*n* Entries found' and includes a table representing the list of the *n* ATN addresses in the repository having matched the selected criteria. Each row of the table corresponds to one ATN address registered in the database and contains general information about this address (Authority, Country, City, Site Name, Manager, System, Status, Aircraft Type, Registration, Address Type and Length). The detail of all information available on an address can be displayed in the top part of the form, by clicking in the corresponding row in the table
2. The top part, is entitled 'Detail of selected Entry'. It provides the full available detail on the ATN address which is being selected in the table below.

With the 'New Selection' button, the user can return to the matching criteria selection form and hence specify new matching criteria.

The 'Exit' button allows to shutdown the data base manager

5. Conclusion

A first prototype of the ATNP NSAP Address Repository has been developed and is available on the ATNP archive. WG2 members are invited to test this tool and send comment to the responsible person in STNA.