ATNP/WG2-WP/
10 October 1994

AERONAUTICAL TELECOMMUNICATIONS NETWORK PANEL

Working Group Two

San Diego 17.10.94-28.10.94

Mobile SNDCF PICS Proforma

Presented By Eike Meyenberg and Henk Hof

Prepared by Tony Whyman

SUMMARY

The ATN Manual provides a full specification for the Mobile SNDCF. However, it does not provide a complete conformance statement for the Mobile SNDCF or a PICS Proforma. These items are necessary for procurement of systems incorporating the Mobile SNDCF. Eurocontrol, in the course of its procurement activities has prepared a PICS Proforma for the ATN Mobile SNDCF. This forms the subject of this paper and is offered to the working group as text for use in preparing the draft ATN SARPs.

DOCUMENT CONTROL LOG

SECTION	DATE	REV. NO.	REASON FOR CHANGE OR REFERENCE TO CHANGE
	8-Aug-94	Draft 1.0	Document creation
	11-Aug-94	Issue 1.0	Updated after review
	10-Oct-94	Issue 1.1	Version prepared for ATNP WG2

TABLE OF CONTENTS

1. Introduction

1.1. Scope

This document provides a Conformance Statement and a Protocol Implementation Conformance Statement (PICS) Proforma for the ATN Mobile Subnetwork Dependent Convergence Function (SNDCF). This text is supplementary to the ATN Manual (2nd Edition), referred to hereafter as the ATN Manual V2.0.

The PICS proforma may be completed by suppliers of implementations of the ATN Mobile SNDCF and the resulting PICS supplied as a statement of compliance to ATN requirements for the Mobile SNDCF. Administrations and Organisations implementing the ATN may use this proforma to create requirements lists for use in procurement specifications.

1.2. References

	Ref	Title
1.	ATNP/1/WP-4	ATN Manual (2nd Edition)
2.	ISO/IEC 9496-1: 1991	OSI Conformance Testing Methodology and Framework, Part 1: General Concepts
3.	ISO 8208	Information Technology - Data Communications - X.25 Packet Layer Protocol for Data Terminal Equipment (Revision of Second Edition)
4.	ITU-T Recommendation V.42bis	Data Compression Procedures for Data Circuit Terminating Equipment (DCE) using Error Correction Procedures.

2. Conformance

2.1. Static Conformance for All Implementations

A system implementing the ATN Mobile SNDCF shall:

a) implement the mandatory functions for call setup specified in paragraph A10.6.4.3 of the ATN Manual V2.0

b) Generate and accept call request user data, as specified in clause A10.6.4.3.2 of the ATN Manual V2.0.

c) Implement the call clearing procedures specified in A10.6.4.10 of the ATN Manual V2.0

d) Implement the Call Reset procedures specified in A10.6.4.11 of the ATN Manual V2.0

e) Implement the procedures for satisfying SN-UNITDATA requests specified in clause A10.6.4.5 and A10.6.4.5.1. of the ATN Manual V2.0

2.2. Static Conformance: Optional Functions

2.2.1. Negotiation of Compression Algorithm

A system implementing Negotiation of Compression Algorithm shall:

a) support and use the “Fast Select” optional user facility specified in ISO 8208, as specified in clause A10.6.4.3.2 of the ATN Manual V2.0.

b) Generate and accept call accept user data, as specified in clause A10.6.4.3.2 of the ATN Manual V2.0.

2.2.2. Local Reference Header Compression

A system implementing Local Reference Header Compression shall:

a) Implement the procedures for offering the Local Reference Header Compression option during call setup, as specified in clause A10.6.4.3.2 of the ATN Manual V2.0.

b) When the Negotiation of Compression Algorithm optional function is supported, the system shall implement the procedures for accepting Local Reference Header Compression when offered by the call initiator.

c) Implement a local directory as specified in clauses A10.6.4.3.2, A10.6.4.4, A10.6.4.5.2, A10.6.4.5.3, A10.6.4.7.2.2, A10.6.4.7.3.1, A10.6.4.7.3.1.3, A10.6.4.7.3.2.1, A10.6.4.7.3.4, A10.6.4.7.3.4.3, A10.6.4.7.5, A10.6.4.10, and A10.6.4.11 of the ATN Manual V2.0

d) Implement local reference establishment as specified in clauses A10.6.4.5.3., A10.6.4.5.5 and A10.6.4.7.2 of the ATN Manual V2.0

e) Implement compression and decompression of Initial, Derived and Error PDU types, as specified in clauses, A10.6.4.5.2, A10.6.4.6.1, A10.6.4.6.2, A10.6.4.6.3, A10.6.4.7.3, and A10.6.4.7.4 of the ATN Manual V2.0, and subordinate clauses.

f) Implement the procedures for processing incoming PDUs specified in clause A10.6.4.7.1 of the ATN Manual V2.0

g) Implement the procedures for generation of the SNDCF Error Report as specified in clause A10.6.4.8 of the ATN Manual V2.0, and for handling incoming SNDCF Error Reports as specified in clause A10.6.4.7.5. of the ATN Manual V2.0

2.2.3. Local Reference Cancellation

A system implementing Local Reference Cancellation shall:

a) Implement procedures compliant with the specification for Local Reference Header Compression (see 2.2.2 above).

b) Implement the procedures for offering the Local Reference Cancellation option during call setup, as specified in clause A10.6.4.3.2 of the ATN Manual V2.0.

c) When the Negotiation of Compression Algorithm optional function is supported, the system shall implement the procedures for accepting Local Reference Cancellation when offered by the call initiator.

d) Implement the procedures for Local Reference Cancellation specified in clauses A10.6.4.9, A10.6.4.9.1 and A10.6.4.9.2 of the ATN Manual V2.0.

e) Implement the management of local references specified in clause A10.6.5.4 of the ATN Manual V2.0

2.2.4. ICAO Address Compression Algorithm

A system implementing the ICAO Address Compression Algorithm shall:

a) Implement the procedures for offering the ICAO Address Compression Algorithm option during call setup, as specified in clause A10.6.4.3.2 of the ATN Manual V2.0.

b) When the Negotiation of Compression Algorithm optional function is supported, the system shall implement the procedures for accepting ICAO Address Compression when offered by the call initiator.

c) If the Local Reference Compression option is supported then the procedures for ICAO Address Compression shall be applied after local reference compression for outgoing PDUs and before the applicable procedures for incoming PDUs, as specified in clause A10.6.4.3.2 of the ATN Manual V2.0.

d) Implement the procedures for inspection of all outgoing PDUs for compressible NSAPs according to clause A10.9.5.2 of the ATN Manual V2.0.

e) Implement the procedures for inspection of all incoming PDUs for compressed NSAP Addresses, according to clause A10.9.6.2 of the ATN Manual V2.0.

f) Implement the procedures for compression of NSAPs in outgoing PDUs according to clauses A10.9.2 to A10.9.5.1.9 inclusive of the ATN Manual V2.0.

g) Implement the procedures for decompression all compressed PDUs in incoming PDUs according to clauses A10.9.6 to A10.9.6.1.9 inclusive of the ATN Manual V2.0.

2.2.5. V.42bis Compression

A system implementing the V.42bis compression algorithm shall:

a) Implement the procedures for offering the V.42bis Compression Algorithm option during call setup, as specified in clause A10.6.4.3.2 of the ATN Manual V2.0.

b) When the Negotiation of Compression Algorithm optional function is supported, the system shall implement the procedures for accepting V.42bis Compression when offered by the call initiator.

c) If the Local Reference Compression option is supported then the procedures for V.42bis Compression shall be applied after local reference compression for outgoing PDUs and before the applicable procedures for incoming PDUs, as specified in clause A10.6.4.3.2 of the ATN Manual V2.0.

2.3. Dynamic Conformance for all Implementations

An implementation claiming conformance to the ATN Manual V2.0 procedures for the Mobile SNDCF shall exhibit externally observable behaviour consistent with its having implemented:

a) The protocol specified in clause A10.6.4.3.2 of the ATN Manual V2.0 for initiating call setup.

b) The use of the ISO 8208 subnetwork option user facilities specified in clause A10.6.4.3.2 of the ATN Manual V2.0.

c) The protocol for each optional function for which static conformance is claimed.

An implementation which does not support a function specified as optional shall, on receiving a PDU in which that function is selected or wholly concerned with the function, generate an appropriate SNDCF Error Report.

3. Conventions for Interpretation and use of the PICS Proforma

3.1. Introduction

The supplier of a protocol implementation for the Mobile SNDCF, which is claimed to conform to the ATN Manual V2.0 shall complete the following Protocol Implementation Conformance Statement (PICS) proforma.

A completed PICS proforma is the PICS for the implementation in question. The PICS is a statement of which capabilities and options of the protocol have been implemented. The PICS can have a number of uses including use:

- by the protocol implementor, as a check-list to reduce the risk of failure to conform to the specification through oversight;
- by the supplier and acquirer - or potential acquirer - of the implementation, as a detailed indication of the capabilities of the implementation, stated relative to the common basis for understanding provided by the standard PICS proforma;
- by the user - or potential user - of the implementation, as a basis for initially checking the possibility of interworking with another implementation (note that, while interworking can never be guaranteed, failure to interwork can often be predicted from incompatible PICS);
- by a protocol tester, as the basis for selecting appropriate tests against which to assess the claim for conformance of the implementation.

3.2. Abbreviations and Special Symbols

3.2.1. Status Symbols

M	mandatory
O	optional
O.<n>	optional, but support of at least one of the group of options labelled by the numeral <n> is required
X	prohibited
<pred>:	conditional-item symbol, including predicate identification (see 3.3.4)
^	logical negation, applied to a conditional item's predicate

3.2.2. Other Symbols

<r> receive aspects of an item

<s> send aspect of an item

3.3. Instructions for completing the PICS proforma

3.3.1. General structure of the PICS proforma

The first part of the PICS proforma - Implementation identification and Protocol Summary - is to be completed as indicated with the information necessary to identify fully both the supplier and the implementation.

The main part of the PICS proforma is a fixed-format questionnaire divided into a number of major subclauses; these can be divided into further subclauses each containing a group of individual items. Answers to the questionnaire items are to be provided in the rightmost column either by simply marking an answer to indicate a restricted choice (usually Yes or No), or by entering a value or a set or range of values. (Note that there are some items where two or more choices from a set of possible answers can apply: all relevant choices are to be marked.)

Each item is identified by an item reference in the first column; the second column contains the question to be answered; the third column contains the reference or references to the material that specifies the item in the main body of the standard The remaining columns record the status of the item - whether support is mandatory, optional, prohibited or conditional - and provide the space for the answers. see also 3.3.4 below.

A supplier may also provide - or be required to provide - further information categorised as either Additional Information or Exception information. When present, each kind of further information is to be provided in a further subclause of items labelled A<i> or X<i>, respectively for cross-referencing purposes, where <i> is any unambiguous identification for the item (e.g. a number); there are no other restrictions on its format and presentation.

A completed PICS proforma including any Additional Information and Exception information is the Protocol implementation Conformance Statement for the implementation in question.

NOTE - where an implementation is capable of being configured in more than one way, a single PICS may be able to describe all such configurations. However, the supplier has the choice of providing more than one PICS, each covering some subset of implementation's configuration capabilities, in cases where this makes for and clearer presentation of the information.

3.3.2. Additional Information

Items of Additional Information allow a supplier to provide further information intended to assist the interpretation of the PICS. It is not intended or expected that a large quantity will be supplied. and a PICS can be considered complete without any such information. Examples might be an outline of the ways in which a (single) implementation can be set up to operate in a variety of environments and configurations; or a brief rationale - based perhaps upon specific application needs - for the exclusion of features which, although optional, are nonetheless commonly present in implementations of the specification.

References to items of Additional Information may be entered next to any answer in the questionnaire, and may be included in items of Exception information.

3.3.3. Exception Information

It may occasionally happen that a supplier will wish to answer an item with mandatory or prohibited status (after any conditions have been applied) in a way that conflicts with the indicated requirement. No pre-printed answer will be found in the support column for this; instead, the supplier shall write the missing answer into the support column, together with an X<i> reference to an item of Exception information, and shall provide the appropriate - rationale in the Exception item itself.

An implementation for which an Exception item is required in this way does not conform to the ATN Manual V2.0 specification for the Mobile SNDCF.

A possible reason for the situation described above is that a defect in the specification has been reported, a correction for which is expected to change the requirement that has not been met by the implementation.

3.3.4. Conditional status

3.3.4.1. Conditional items

The PICS Proforma contains a number of conditional items. These are items for which the status - mandatory, optional or prohibited - that applies is dependent upon whether or not certain other items are supported, or upon the values supported for other items.

In many cases. whether or not the item applies at all is conditional in this way, as well as the status when the item does apply.

Where a group of items is subject to the same condition for applicability, a separate preliminary question about the condition appears at the head of the group. with an instruction to skip to a later point in the questionnaire if the Not Applicable answer is selected. Otherwise, individual conditional items are indicated by one or more conditional symbols (on separate lines) in the status column.

A conditional symbol is of the form “<pred>:<x>“ where “<pred>” is a predicate as described in 3.3.4.2 below. and “<x>“ is one of the status symbols M, O, O.<n> or X.

If the value of the predicate in any line of a conditional item Is true (see 3.3.4.2), the conditional item is applicable, and its status is that indicated by the status symbol following the predicate: the answer column is to be marked in the usual way. If the value of predicate is false, the Not Applicable answer is to be marked in the relevant line. (Each line in a multi-line conditional Item should be marked: at most one line will require an answer other than N/A.)

3.3.4.2. Predicates

A predicate is one of the following:-

a) an item-reference for an item in the PICS proforma: the value of the predicate is true if the Item is marked as supported, and is false otherwise; or

b) a predicate name, for a predicate defined elsewhere in the PICS proforma (usually in the major capabilities section, or at the end of section containing the conditional item): see below: or

the logical negation symbol “^” prefixed to an item-reference or predicate name: the value of the predicate is true if the value of the predicate formed omitting the “^” is false, and vice versa.

The definition for a predicate name is one of the following

i) an item reference, evaluated as at (a) above: or

ii) an relation containing a comparison operator (=, <, etc.) with at least one of its operands being an item-reference for an item taking numerical values as its answer; the predicate is true if the relation holds when each item-reference is replaced by the value entered in the Support column as an answer to the item referred to; or

iii) a boolean expression constructed by combining simple predicated, as at (i) and (ii), using the boolean operators AND, OR and NOT, and parentheses. in the usual way; the value of such a predicate is true if the boolean expression evaluates to true when the simple predicates are interpreted as described above.

Each item whose reference is used in a predicate or predicate definition is indicated by an asterisk in the Item column.

4. The PICS Proforma for the ATN Mobile SNDCF

4.1. Identification

4.1.1. Implementation Identification

Supplier	
Contact point for queries about the PICS	
Implementation Name(s) and Version (s)	
Other Information necessary for full identification (e.g. name(s) and version(s) of machines and/or operating systems, System name(s))	
Date of Statement	

4.2. Protocol Summary

Identification of protocol specification	ATN Manual 2nd Edition (1994)	
Identification of amendments to the protocol specification		
Protocol Version(s) supported		
Have any Exception items been required (see 3.3.3) *Note: The answer Yes means that the implementation does not conform to the ATN Manual V2.0 specification.*	Yes ❒	No ❒

4.3. Major Capabilities

Item	Capability	Reference	Status	Support
mcSetup	Call Setup and Clearing Procedures	2.1	M	Yes ❒
*mcNego	Negotiation of Compression Algorithm	2.2.1	O	Yes ❒ No ❒
*mcLocRef	Local Reference Header Compression	2.2.2	O.1	Yes ❒ No ❒
*mcCan	Local Reference Cancellation	2.2.3	mcLocRef:O ^mcLocRef:X	Yes ❒ No ❒
*mcACA	ICAO Address Compression Algorithm	2.2.4	O.1[1]	Yes ❒ No ❒
mcV42	V.42bis Compression	2.2.5	O.1[1]	Yes ❒ No ❒

[1] Dynamically, if both V.42bis compression and the ICAO ACA are implemented, only one of these options may be accepted if Negotiation Of Compression Algorithm is implemented. Alternatively, if Negotiation Of Compression Algorithm is not implemented, or Fast Select is not available, then only one of these options may be offered.

4.4. Call Setup and Clearing Procedures

Item	Function	ATN Manual Reference	Status	Support
csDynam	Dynamic Call Setup	A10.6.4.3.2	O.2	Yes ❒ No ❒
csSys	Call Setup by Systems Management	A10.6.4.3.2	O.2	Yes ❒ No ❒
csPri	Mapping onto subnetwork priority[2]	A10.6.4.3.2	M	Yes ❒
csDef	Use of non-standard Default packet size	A10.6.4.3.2	M	Yes ❒
csFast	Use of Fast Select[3]	A10.6.4.3.2	M	Yes ❒
csOther	Use of other optional User Facilities and CCITT-specified DTE facilities	A10.6.4.3.2	O[4]	Yes ❒ No ❒
csAdd	Use of additional call user data in call request	A10.6.4.3.2	O	Yes ❒ No ❒
csReq	Required use of additional user data in incoming call request	A10.6.4.3.2	X	No ❒
csCol	Call Collision Resolution	A10.6.4.3.2	M	Yes ❒
csNeg	Call Acceptance/Rejection Procedures	A10.6.4.3.2	M	Yes ❒
csDiag	Use of call rejection diagnostic codes	A10.6.4.3.2	O	Yes ❒ No ❒
csReset	Call Reset procedures	A10.6.4.11	M	Yes ❒

[2] The supplier shall explain how the mapping between the SN-Unitdata priority and subnetwork priority is performed.

[3] Only required if supported by subnetwork

[4] If answered “yes”, suppliers shall describe each optional User Facilities and CCITT-specified DTE facilities supported and the use made of it.

csSMClear	Call Clearing by Systems Management	A10.6.4.10	O.3	Yes ❒ No ❒
csTimeClear	Call Clearing on an inactivity timeout	A10.6.4.10	O.3	Yes ❒ No ❒
csResClear	Call Clearing when resources required by a higher priority VC	A10.6.4.10	O.3	Yes ❒ No ❒

4.5. Negotiation of Compression Algorithm

Item	Function	ATN Manual Reference	Status	Support
caUserData	Use of Call Accept User data to signal acceptable options	A10.6.4.3.2	mcNego:M	N/A ❒ Yes ❒
caAdd	Use of additional call user data in call accept	A10.6.4.3.2	mcNego:O	N/A ❒ Yes ❒ No ❒
caReq	Required use of additional user data on received call accept	A10.6.4.3.2	mcNego:X	N/A ❒ No ❒

4.6. Local Reference Header Compression

Item	Function	ATN Manual Reference	Status	Support
lrVC	Opening additional virtual circuits	A10.6.4.5	mcLocRef:M	N/A ❒ Yes ❒
*lrDirSize	Local Directory with more than 128 entries	A10.6.4.4	mcLocRef:O	N/A ❒ Yes ❒ No ❒
lrProt	Identification of Network Layer Protocol	A10.6.4.5.1	mcLocRef:M	N/A ❒ Yes ❒
lrMod	Processing of SN-UnitData Requests	A10.6.4.5.2	mcLocRef:M	N/A ❒ Yes ❒
lrEst	Establishment of new local reference	A10.6.4.5.3	mcLocRef:M	N/A ❒ Yes ❒
lrTransfer	Transfer of modified ISO 8473 PDU	A10.6.4.5.5	mcLocRef:M	N/A ❒ Yes ❒
lrInitial	Initial DT PDU Compression	A10.6.4.6.1	mcLocRef:M	N/A ❒ Yes ❒
lrDerived	Derived DT PDU Compression	A10.6.4.6.2	mcLocRef:M	N/A ❒ Yes ❒
*lrError-s	Generation of Error PDU Compression	A10.6.4.6.2	mcLocRef:M	N/A ❒ Yes ❒
lrDiscard	Compression of discarded PDU encapsulated within Error PDU	A10.6.4.6.3	lrError-s:M	N/A ❒ Yes ❒
lrCompTr	Transfer of compressed PDUs	A10.6.4.6.3.10	mcLocRef:M	N/A ❒ Yes ❒
lrReceived	Processing of received PDUs	A10.6.4.7	mcLocRef:M	N/A ❒ Yes ❒
lrUncomp-r	Processing of received uncompressed PDUs	A10.6.4.7.2	mcLocRef:M	N/A ❒ Yes ❒
lrUnMod-r	Processing of received unmodified PDUs	A10.6.4.7.2.1	mcLocRef:M	N/A ❒ Yes ❒
lrComp-r	Processing of received compressed data PDUs	A10.6.4.7.3	mcLocRef:M	N/A ❒ Yes ❒

lrError-r	Processing of received compressed Error PDUs	A10.6.4.7.4	mcLocRef:M	N/A ❒ Yes ❒
lrSNDCFerr-s	Generation of SNDCF Error Report	A10.6.4.8	mcLocRef:M	N/A ❒ Yes ❒
lrSNDCFerr-r	Processing of received SNDCF Error Report	A10.6.4.7.5	mcLocRef:M	N/A ❒ Yes ❒

4.7. Local Reference Cancellation

Item	Function	ATN Manual Reference	Status	Support
lrcMgmt	Management of local references	A10.6.4.5.4	mcCan:M	N/A ❒ Yes ❒
lrcRequest-s	Generation of Cancellation Request PDU	A10.6.4.9	mcCan:M	N/A ❒ Yes ❒
lrcRequest-r	Processing of incoming Cancellation Request PDU	A10.6.4.9	mcCan:M	N/A ❒ Yes ❒
lrcReliable	Reliable transfer of Cancellation Request	A10.6.4.9	mcCan:M	N/A ❒ Yes ❒
lrcAccept-s	Generation of Cancellation Accept PDU	A10.6.4.9	mcCan:M	N/A ❒ Yes ❒
lrcAccept-r	Processing of incoming Cancellation Accept PDU	A10.6.4.9	mcCan:M	N/A ❒ Yes ❒

4.8. ICAO Address Compression Algorithm

Item	Function	ATN Manual Reference	Status	Support
acOut	Compression of outgoing PDUs	A10.9.1	mcACA:M	N/A ❒ Yes ❒
acIn	Decompression of incoming PDUs	A10.9.1	mcACA:M	N/A ❒ Yes ❒
acAddr	Address Length Determination	A10.9.2	mcACA:M	N/A ❒ Yes ❒
acComp	Compression of NSAP Addresses and address prefixes	A10.9.5	mcACA:M	N/A ❒ Yes ❒

acDecomp	Decompression of NSAP Addresses and address prefixes	A10.9.6	mcACA:M	N/A ❒ Yes ❒

4.9. PDU Formats

4.9.1. Call Request User Data

Item	Description	ATN Manual Reference	Status	Support
crLen	Length Indicator	A10.6.4.3.2	M	Yes ❒
crVersion	Version Indicator	A10.6.4.3.2	M	Yes ❒
crSNCR	Subnetwork Connection Reference (SNCR)	A10.6.4.3.2	M	Yes ❒
crComp	Offerred Compression Techniques	A10.6.4.3.2	M	Yes ❒
crDir	Maximum Directory Size	A10.6.4.3.2	mcLocRef: M[5]	N/A ❒ Yes ❒
crAdd-s	Additional User Data on send	A10.6.4.3.2	O[6]	Yes ❒ No ❒
crAdd-r	Additional User Data on receive	A10.6.4.3.2	O[6]	Yes ❒ No ❒

Item	Description	ATN Manual Reference	Range	Support
MaxDir	Maximum number of directory entries supported	A10.6.4.3.2	128..32767	

4.9.2. Call Accept User Data

Item	Description	ATN Manual Reference	Status	Support

[5] Dynamically, this field is only generated if Local Reference Compression is offered.

[6] If Yes, suppliers shall specify the format and use made of this field.

caComp	Offerred Compression Techniques	A10.6.4.3.2	mcNego:M	N/A ❒ Yes ❒
caAdd-s	Additional User Data on send	A10.6.4.3.2	mcNego:O[6]	N/A ❒ Yes ❒ No ❒
caAdd-r	Additional User Data on receive	A10.6.4.3.2	mcNego:O[6]	N/A ❒ Yes ❒ No ❒

4.9.3. Modified ISO 8473 NPDU

Item	Description	ATN Manual Reference	Status	Support
npLocRef-s	Local Reference Option field	A10.6.4.5.2	mcLocRef:M	N/A ❒ Yes ❒

4.9.4. Compressed Initial PDU

Item	Description	ATN Manual Reference	Status	Support
inType	PDU Type	A10.6.4.6.1.1	mcLocRef:M	N/A ❒ Yes ❒
inPri	Priority	A10.6.4.6.1.2	mcLocRef:M	N/A ❒ Yes ❒
inLifetime	Lifetime	A10.6.4.6.1.3	mcLocRef:M	N/A ❒ Yes ❒
inFlags	Flag Bits	A10.6.4.6.1.4 to A10.6.4.6.1.7	mcLocRef:M	N/A ❒ Yes ❒
inLocRef	Local Reference (1 octet)	A10.6.4.6.1.7	mcLocRef:M	N/A ❒ Yes ❒
inLocRef2	Local Reference (2 octet)	A10.6.4.6.1.7	lrDirSize:M ^lrDirsize:X	N/A ❒ Yes ❒ No ❒
inPDUId	PDU Identifier	A10.6.4.6.1.9	mcLocRef: M[7]	N/A ❒ Yes ❒
inNSDU	User Data	Figure A10.3	mcLocRef:M	N/A ❒ Yes ❒

[7] Note that dynamically this field is only present if the SP flag is set to one.

4.9.5. Compressed Derived PDU

Item	Description	ATN Manual Reference	Status	Support
drType	PDU Type	A10.6.4.6.2.1	mcLocRef:M	N/A ❒ Yes ❒
drPri	Priority	A10.6.4.6.2.2	mcLocRef:M	N/A ❒ Yes ❒
drLifetime	Lifetime	A10.6.4.6.2.3	mcLocRef:M	N/A ❒ Yes ❒
drFlags	Flag Bits	A10.6.4.6.2.4 to A10.6.4.6.2.7	mcLocRef:M	N/A ❒ Yes ❒
drLocRef	Local Reference (1 octet)	A10.6.4.6.1.7	mcLocRef:M	N/A ❒ Yes ❒
drLocRef2	Local Reference (2 octet)	A10.6.4.6.1.7	lrDirSize:M ^lrDirsize:X	N/A ❒ Yes ❒ No ❒
drPDUId	PDU Identifier	A10.6.4.6.2.8	mcLocRef: M	N/A ❒ Yes ❒
drSegOff	Segment Offset	A10.6.4.6.2.9	mcLocRef: M	N/A ❒ Yes ❒
drTotalLen	Total Length	A10.6.4.6.2.10	mcLocRef: M	N/A ❒ Yes ❒
drNSDU	User Data	Figure A10.3	mcLocRef:M	N/A ❒ Yes ❒

4.9.6. Compressed Error PDU

Item	Description	ATN Manual Reference	Status	Support
erType	PDU Type	A10.6.4.6.3.1	mcLocRef:M	N/A ❒ Yes ❒
erPri	Priority	A10.6.4.6.3.2	mcLocRef:M	N/A ❒ Yes ❒
erLifetime	Lifetime	A10.6.4.6.3.3	mcLocRef:M	N/A ❒ Yes ❒
erFlags	Flag Bits	A10.6.4.6.3.4 to A10.6.4.6.3.7	mcLocRef:M	N/A ❒ Yes ❒
erLocRef	Local Reference (1 octet)	A10.6.4.6.1.7	mcLocRef:M	N/A ❒ Yes ❒
erLocRef2	Local Reference (2 octet)	A10.6.4.6.1.7	lrDirSize:M ^lrDirsize:X	N/A ❒ Yes ❒ No ❒
erReason	Discard Reason	A10.6.4.6.3.8	mcLocRef: M	N/A ❒ Yes ❒
erNSDU	Compressed Header of discarded PDU	A10.6.4.6.3	mcLocRef:M	N/A ❒ Yes ❒

4.9.7. SNDCF Error Report PDU

Item	Description	ATN Manual Reference	Status	Support
sfType	PDU Type	A10.6.4.8	mcLocRef:M	N/A ❒ Yes ❒
sfReason	Discard Reason	A10.6.4.8	mcLocRef:M	N/A ❒ Yes ❒
sfLocRef	Local Reference	A10.6.4.8	mcLocRef:M	N/A ❒ Yes ❒
sfLocRef2	Local Reference (2 octet)	A10.6.4.6.1.7	lrDirSize:M ^lrDirsize:X	N/A ❒ Yes ❒ No ❒

4.9.8. Cancellation Request

Item	Description	ATN Manual Reference	Status	Support
cqType	PDU Type	A10.6.4.9	mcCan:M	N/A ❒ Yes ❒
cqRef	Cancellation Reference	A10.6.4.9	mcCan:M	N/A ❒ Yes ❒
cqLocRef	Local Reference	A10.6.4.9	mcLocRef:M	N/A ❒ Yes ❒
cqLocRef2	Local Reference (2 octet)	A10.6.4.6.1.7	lrDirSize:M ^lrDirsize:X	N/A ❒ Yes ❒ No ❒

4.9.9. Cancellation Accept

Item	Description	ATN Manual Reference	Status	Support
ccType	PDU Type	A10.6.4.9	mcCan:M	N/A ❒ Yes ❒
ccRef	Cancellation Reference	A10.6.4.9	mcCan:M	N/A ❒ Yes ❒