The ATM Forum
Technical Committee

PICS Proforma for UNI 3.1 Signalling (User Side)

AF-TEST-0097.000

April 1998

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Contents

1. Introduction

To evaluate conformance of a particular implementation, it is necessary to have a statement of which capabilities and options that have been implemented. Such a statement is called a Protocol Implementation Conformance Statement (PICS).

1.1 Scope

This document provides the PICS proforma for the UNI Signalling Specification 3.1 - user side, as specified in Section 5 of the ATM User-Network Interface Specification [3] in compliance with the relevant requirements, and in accordance with the relevant guidelines, given in ISO/IEC 9646-2[2]. In most cases, statements contained in notes in the specification, which were intended as information, are not included in the PICS.

It does not cover Section 5.8 on Address Registration or network side capabilities and options. It also does not include Section 5.9 on the Signalling AAL; PICS for this section are covered in separate documents:

- AAL Type 5 Common Part PICS: ATM Forum/af-test-0042 [4]
- SSCOP PICS: ITU Recommendation Q.2110 [5]
- SSCF at UNI PICS: ITU Recommendation Q.2130 [6]

1.2 Normative References

[1] ISO/IEC 9646-1:1994, Information technology - Open systems interconnection - Conformance testing methodology and framework - Part 1: General Concepts. (See also ITU Recommendation X.290(1995)).

[2] ISO/IEC 9646-2:1994, Information technology - Open systems interconnection - Conformance testing methodology and interconnection - Part 2: Abstract test suite specification. (See also ITU Recommendation X.291(1995)).

[3] ATM Forum: ATM User-Network Interface Specification, Version 3.1, September 1994.

[4] ATM Forum af-test-0042.000, PICS Proforma for the AAL Type 5, August, 1995.

[5] ITU-T Recommendation Q.2110, B-ISDN - ATM Adaptation Layer - Service Specific Connection Oriented Protocol (SSCOP).

[6] ITU-T Recommendation Q.2130, B-ISDN Signalling ATM Adaptation Layer - Service Specific Coordination Function (SSCF) for support of signalling at the user-to-network interface (SSCF at UNI).

1.3 Definitions

This document uses the following terms defined in ISO/IEC 9646-1[1]:

- A Protocol Implementation Conformance Statement (PICS) is a statement made by the supplier of an implementation or system, stating which capabilities have been implemented for a given protocol.
- A PICS proforma is a document, in the form of a questionnaire, designed by the protocol specifier or conformance test suite specifier, which when completed for an implementation or system becomes the PICS.

1.4 Acronyms

I.E.	Information Element
IUT	Implementation under test
M	Mandatory requirements (these are to be observed in all cases)
N/A	Not supported, not applicable, or the conditions for status are not met.
O	Optional (may be selected to suit the implementation, provided that any requirements applicable to the options are observed)
O.n	Optional, but support is required for either at least one or only one of the options in the group labelled with the same numeral "n".
PICS	Protocol Implementation Conformance Statement
PMP	Point-to-Multipoint
SUT	System under test

1.5 Conformance

The supplier of a protocol implementation which is claimed to conform to the ATM Forum UNI Specification Signaling interface is required to complete a copy of the PICS proforma provided in this document and is required to provide the information necessary to identify both the supplier and the implementation.

2. Identification of the Implementation

Implementation Under Test (IUT) Identification

IUT Name: ____

IUT Version: ____

____

System Under Test (SUT) Identification

SUT Name: ____

Hardware Configuration: ____

____

____

Operating System: ____

Product Supplier

Name: ____

Address: ____

____

Telephone Number: ____

Facsimile Number: ____

Email Address: ____

Additional Information: ____

Client

Name: ____

Address: ____

____

Telephone Number: ____

Facsimile Number: ____

Email Address: ____

Additional Information: ____

PICS Contact Person

Name: ____

Address: ____

____

Telephone Number: ____

Facsimile Number: ____

Email Address: ____

Additional Information: ____

PICS/System Conformance Statement

Provide the relationship of the PICS with the System Conformance Statement for the system:

Identification of the protocol

This PICS proforma applies to the following:

* ATM Forum User-Network Specification Version 3.1 - User side, September 1994

3. PICS Proforma

3.1 Global statement of conformance

The implementation described in this PICS meets all of the mandatory requirements of the reference protocol.

[ ] YES
[ ] NO

Note: Answering "No" indicates non-conformance to the specified protocol. Non-supported mandatory capabilities are to be identified in the following tables, with an explanation by the implementor explaining why the implementation is non-conforming.

3.2 Instructions for Completing the PICS Proforma

The PICS Proforma is a fixed-format questionnaire. Answers to the questionnaire should be provided in the rightmost columns, either by simply indicating a restricted choice (such as Yes or No), or by entering a value or a set of range of values.

A supplier may also provide additional information, categorized as exceptional or supplementary information. These additional information should be provided as items labeled X.<i> for exceptional information, or S.<i> for supplemental information, respectively, for cross reference purposes, where <i> is any unambiguous identification for the item. The exception and supplementary information are not mandatory and the PICS is complete without such information. The presence of optional supplementary or exception information should not affect test execution, and will in no way affect interoperability verification. The column labeled ‘Reference’ gives a pointer to sections of the protocol specification for which the PICS Proforma is being written.

3.3 Roles

Roles are used as Conditions for Status in the PICS tables.

Item	Role	Status	Support
R1	user is an ATM endpoint	O.1	Yes__No__
R2	user is not an ATM endpoint	O.1	Yes__No__
Comments: O.1 = mandatory to support exactly one of these roles.			

3.4 Major Capabilities (MC)

Item	Does the Implementation...	Status	Conditions for status	Reference	Support
MC 1	support outgoing calls?	O.1		5.5.1	Yes__No__
MC 1.1	support point-to-point calls?	M		5.5	Yes__No__
MC 1.2	support transit network selection?	O	MC 1	5.5.1.9 Annex D	Yes__No__
MC 1.3	support end-to-end compatibility parameter identification?	O		5.1.2.13	Yes__No__
MC 2	support incoming calls?	O.1		5.5.2	Yes__No__
MC 3	support user-initiated call clearing?	M		5.5.4.3	Yes__No__
MC 4	support call clearing initiated by the network?	M		5.5.4.4	Yes__No__
MC 5	support restart procedure?	M		5.5.5	Yes__No__
MC 6.1	support response to STATUS ENQUIRY message?	M		5.5.6.11	Yes__No__
MC 6.2	support sending of STATUS ENQUIRY message?	M		5.5.6.11	Yes__No__
MC 7	support symmetric call operation?	O		5.5.1.10	Yes__No__
MC 8	For point-to-multipoint connections, does the IUT support return bandwidth of zero?	M		5.1.2.3	Yes__No__
MC 9.1	support for Class X ATM Service?	O.2		5.1.2.6	Yes__No__
MC 9.2	support for Class A ATM Service?	O.2		5.1.2.6	Yes__No__
MC 9.3	support for Class C ATM Service?	O.2		5.1.2.6	Yes__No__
MC 10	support for a single virtual channel, VPI=0 and VCI =5 for all signaling?	M		5.1.2.9	Yes__No__
MC 11	support for Error Recovery?	M		5.1.2.10	Yes__No__
MC 12	support for Private and Public Addressing formats?	M		5.1.3 and Annex A	Yes__No__
MC 13	support point-to-multipoint procedures?	O		5.6	Yes__No__
Comments:					

O.1 = mandatory to support at least one of these features. O.2 = mandatory to support at least one service.

3.5 Subsidiary Capabilities (SC)

Item	Does the Implementation ...	Status	Conditions for status	Reference	Support
Call procedures					
SC 1	establish an assured mode signalling AAL connection before invoking call/connection procedures?	M		5.5.1	Yes__No__
SC 2	request a call/connection by sending a SETUP message containing a call reference (according to 5.4.3) and not containing Connection identifier, start T303 and enter the Call Initiated state?	M		5.5.1.1, 5.5.1.2.1	Yes__No__
SC 3	send the called party address information in the Called party number information element in the SETUP message?	M		5.5.1.1	Yes__No__
SC 4	include ATM Traffic descriptor, Broadband bearer capability, and Quality of service parameter information elements in the SETUP message?	M	MC 1	5.5.1.1	Yes__No__
SC 5	include Broadband sending complete I.E. in the SETUP message?	O		5.5.1.1	Yes__No__
SC 6	retransmit SETUP on expiry of T303?	O		5.5.1.1	Yes__No__
SC 7	internally clear the call on final expiry of T303?	M		5.5.1.1	Yes__No__
SC 8	first respond to a valid SETUP with CALL PROCEEDING, RELEASE COMPLETE, or CONNECT?	M		5.5.2.5.1.1	Yes__No__
SC 9	accept an incoming call by sending a CONNECT, then start T313 and enter the Connect Request state?	M		5.5.2.6	Yes__No__
SC 10	stop T313 and enter the Active state on receiving a CONNECT ACKNOWLEDGE message while in the Connect Request state?	M		5.5.2.7	Yes__No__
SC 11	initiate clearing with (cause #102) on expiry of T313?	M		5.5.2.7	Yes__No__
SC 12	stop T303, start T310, and enter the Outgoing Call Proceeding state on receiving a CALL PROCEEDING message while in the Call Initiated state?	M		5.5.1.5	Yes__No__
SC 13	initiate clearing procedures (with cause #102) on expiry of T310 if no CONNECT or RELEASE message was received while in the Outgoing Call Proceeding state?	M		5.5.1.5	Yes__No__
SC 14	stop T303 or T310, send a CONNECT ACKNOWLEDGE message, and enter the Active state on receiving a CONNECT message while in the Outgoing Call Proceeding or Call Initiated state?	M		5.5.1.7	Yes__No__
SC 15	on receiving a SETUP message while in the Null state, either accept the indicated	M		5.5.2.3	Yes__No__

Item	Does the Implementation ...	Status	Conditions for status	Reference	Support
	VPCI/VCI or reject the call with RELEASE COMPLETE?				
Call clearing					
SC 16	reject a call in response to a SETUP message by sending a RELEASE COMPLETE message, if this is the first response to the SETUP?	O		5.5.4.2	Yes__No__
SC 17	with the exception in 5.5.4.2 and 5.5.6, initiate clearing by sending a RELEASE message, start T308, disconnect the virtual channel, and enter the Release Request state?	M		5.5.4.3	Yes__No__
SC 18	stop T308, release the virtual call and call reference, and enter the Null state on receiving a RELEASE COMPLETE message while in the Release Request state?	M		5.5.4.3	Yes__No__
SC 19	retransmit a RELEASE message (with the same cause number as in the first RELEASE sent) and restart T308 on the first expiry of T308?	M		5.5.4.3	Yes__No__
SC 20	include a second Cause I.E. (with cause #102) in addition to actions in SC 19?	O		5.5.4.3	Yes__No__
SC 21	release the call reference and enter the Null state on the second expiry of T308?	M		5.5.4.3	Yes__No__
SC 22	initiate normal call/connection clearing using cause #16 in the first clearing message?	M		5.5.4.3	Yes__No__
SC 23	send a RELEASE COMPLETE message, release the call reference and virtual channel, and enter the Null state on receiving a RELEASE message while in any state other than the Release request state?	M		5.5.4.4, 5.5.4.5	Yes__No__
SC 24	release the call reference and virtual channel, and enter the Null state on receiving a RELEASE message while in the Release request state?	M		5.5.4.5	Yes__No__
Handling error conditions					
SC 25	handle errors described in sections 5.5.6.1 through 5.5.6.8 in the order of precedence listed ?	M		5.5.6	Yes__No__
SC 26	follow the explicit instruction in the Action Indicator field for message errors when the Flag field is set to one?	O.1		5.4.4.1 Note 1	Yes__No__
SC 27	ignore the contented of the Action Indicator field for message errors when the Flag field is set to one?	O.1		5.4.4.1 Note 1	Yes__No__
General errors					
SC 28	ignore a received message with protocol discrimination error ?	M		5.5.6.1	Yes__No__

Item	Does the Implementation ...	Status	Conditions for status	Reference	Support
SC 29	ignore a received message too short to contain a complete Message length information element ?	M		5.5.6.2	Yes__No__
Call reference errors					
SC 30	ignore a received message with call reference bits 5 to 8 in octet 1 not equal to '0000'?	M		5.5.6.3.1	Yes__No__
SC 31	ignore a received message if the call reference information element octet 1, bits 1 through 4 indicate a length other than 3 octets?	M		5.5.6.3.1	Yes__No__
SC 32	clear the call on receiving any message other than SETUP, RELEASE COMPLETE, STATUS, and STATUS ENQUIRY with a call reference which is not active by sending RELEASE COMPLETE with cause #81?	M		5.5.6.3.2 a	Yes__No__
SC 33	take no action on receiving a RELEASE COMPLETE message with call reference not recognized as relating to an active call or to a call in progress?	M		5.5.6.3.2 b	Yes__No__
SC 34	ignore a received SETUP message with a call reference which is not recognized as relating to an active call or to a call in progress, and with a call reference flag incorrectly set to '1'?	M		5.5.6.3.2 c	Yes__No__
SC 35	ignore a received SETUP message with a call reference which is recognized as relating to an active call or to a call in progress?	M		5.5.6.3.2 d	Yes__No__
SC 36	transmit a STATUS message with global call reference and with cause #81, on receiving any message other than RESTART, RESTART ACKNOWLEDGE or STATUS with global call reference?	M		5.5.6.3.2 e	Yes__No__
SC 37	implement the procedures in section 5.5.6.12 on receiving a STATUS message with call reference which is not recognized as relating to an active call or to a call in progress?	M		5.5.6.3.2f	Yes__No__
SC 38	implement the procedures in section 5.5.6.11 on receiving a STATUS ENQUIRY message which is not recognized as relating to an active call or to a call in progress?	M		5.5.6.3.2 g	Yes__No__
Message Type, Message sequence, Message length errors					
SC 39	transmit a STATUS message with cause #97 or #101 on receipt of an unexpected message other than RELEASE, RELEASE COMPLETE or of an unrecognized message in any other state than the Null state?	M	NOT SC 26	5.5.6.4	Yes__No__
SC 40	clear the call on receipt of an unexpected RELEASE COMPLETE message ?	M		5.5.6.4	Yes__No__
SC 41	clear the call and send a RELEASE	M		5.5.6.4	Yes__No__

Item	Does the Implementation ...	Status	Conditions for status	Reference	Support
	COMPLETE message on receipt of an unexpected RELEASE?				
SC 42	handle message as much as possible if message length in the Message length information element is inconsistent with length of message received ?	M		5.5.6.5	Yes__No__
General Information element errors					
SC 43	process variable length information elements regardless of their order in the message ?	M		5.5.6.6.1	Yes__No__
SC 44	send the first four information elements in the order specified in section 5.4.1?	M		5.5.6.6.1	Yes__No__
SC 45	for not permitted repeated I.E.s, only process the contents of the I.E.s appearing first (and ignore all subsequent repetitions ?	M		5.5.6.6.2	Yes__No__
SC 46	handle permitted repetitions (up to a limit) of an information element ?	M		5.5.6.6.2	Yes__No__
SC 47	process unknown coding standard as an IE with a content error ?	M		5.5.6.6.3	Yes__No__
SC 48	follow the explicit instruction in the Action Indicator field for IE errors when the Flag field is set to one?	O.2		5.4.5.1 Note 3	Yes__No__
SC 49	ignore the contented of the Action Indicator field for IE errors when the Flag field is set to one?	O.2		5.4.5.1 Note 3	Yes__No__
Mandatory Information elements errors					
SC 50	take no action, except for the sending of a STATUS message with cause #96, on receipt of a message other than SETUP, RELEASE, or RELEASE COMPLETE, with mandatory information elements missing ?	M		5.5.6.7.1	Yes__No__
SC 51	take no action, except for the sending of a STATUS message with cause #100, on receipt of a message other than SETUP, RELEASE, or RELEASE COMPLETE, with mandatory information elements with invalid content ?	M	NOT SC 48	5.5.6.7.2	Yes__No__
SC 52	return a RELEASE COMPLETE message with cause #96, on receipt of a SETUP or RELEASE message with one or more mandatory information elements missing?	M		5.5.6.7.1	Yes__No__
SC 53	return a RELEASE COMPLETE message with cause #100, on receipt of a SETUP or RELEASE message with one or more mandatory information elements with invalid content?	M		5.5.6.7.2	Yes__No__
SC 54	take action, as if a RELEASE message with cause #31 is received, on receipt of a RELEASE message with mandatory information element missing or with mandatory information element content error?	M		5.5.6.7	Yes__No__
SC 55	handle a RELEASE COMPLETE message as	M		5.5.6.7	Yes__No__

Item	Does the Implementation ...	Status	Conditions for status	Reference	Support
	received with cause #31 even if it has mandatory information elements missing or with invalid content?				
SC 56	treat mandatory information elements with length exceeding the maximum as with invalid content error ?	M		5.5.6.7.2	Yes__No__
SC 57	pass on to another entity, the cause values, location codes, and diagnostics that are not understood by the user equipment?	O	NOT SC 48	5.5.6.7.2	Yes__No__
Non-mandatory information element errors					
SC 58	take action on message and those information elements which are recognized and have valid content on receipt of a message with one or more unrecognized information elements?	M	R1 AND NOT SC 48	5.5.6.8.1	Yes__No__
SC 59	transmit a STATUS message with cause #99 on receipt of a message other than RELEASE or RELEASE COMPLETE, with unrecognized non-mandatory information elements?	O	NOT SC 48	5.5.6.8.1	Yes__No__
SC 60	transmit a RELEASE COMPLETE message with cause #99 on receipt of a RELEASE message with unrecognized non-mandatory information elements?	M	NOT SC 48	5.5.6.8.1 a	Yes__No__
SC 61	take no action on the unrecognized information elements on receipt of a RELEASE COMPLETE message with unrecognized non-mandatory information elements?	M	NOT SC 48	5.5.6.8.1 b	Yes__No__
SC 62	include diagnostic(s) for cause #99?	O	NOT SC 48	5.5.6.8.1	Yes__No__
SC 63	transmit a STATUS message with cause #100 on receipt of a non-mandatory information element with invalid contents?	O	NOT SC 48	5.5.6.8.2	Yes__No__
SC 64	take action on the message and those information elements which are recognized and have valid content on receipt of a message with one or more non-mandatory information elements with invalid content?	M	NOT SC 48	5.5.6.8.2	Yes__No__
SC 65	transmit a STATUS message with cause #43 on receipt of a non-mandatory information element with length exceeding the maximum length and the I.E.s are either B-LLI, AAL, B-HLI, Called Subaddress or Calling Subaddress ?	O	NOT SC 48	5.5.6.8.2	Yes__No__
SC 66	take action on the message and those information elements which are recognized and have valid content on receipt of a message with one or more non-mandatory information elements with length exceeding the maximum?	M	NOT SC 48	5.5.6.8.2	Yes__No__
SC 67	transmit a STATUS message with cause	O	NOT SC 48	5.5.6.8.2	Yes__No__

Item	Does the Implementation ...	Status	Conditions for status	Reference	Support
	#43 on receipt of a message with one or more non-mandatory access I.E.s with length exceeding the maximum?				
SC 68	transmit a STATUS message with cause #100 on receipt of a message with one or more non-mandatory information elements (other than access information elements) with length exceeding the maximum?	O	NOT SC 48	5.5.6.8.2	Yes__No__
SC 69	send STATUS with cause #100 and pass on to another entity, the cause values, location codes, and diagnostics that are not understood by the user equipment on receipt of cause values, location codes, and diagnostics which are not understood by the user equipment?	O	NOT SC 48	5.5.6.8.2	Yes__No__
SC 70	either treat the information element as an unrecognized information element and follow the procedures defined in section 5.5.6.8.1 or process the unexpected recognized information elements when the procedure for processing the information element is independent of the message in which it is received on receipt of a message with a recognized information element that is not defined to be contained in that message?	M		5.5.6.8.3	Yes__No__
Signalling AAL Reset					
SC 71	maintain calls in the active and establishment states ?	M		5.5.6.9b, 5.5.6.9c	Yes__No__
SC 72	invoke status enquiry procedures for calls in the active state according to section 5.5.6.11?	M		5.5.6.9c	Yes__No__
SC 73	invoke status enquiry procedure for calls in the establishment phase?	O		5.5.6.9b	Yes__No__
SC 74	take no action for calls in the clearing states ?	M		5.5.6.9a	Yes__No__
Signalling AAL Failure					
SC 75	clear any call not in the active state?	M		5.5.6.10a	Yes__No__
SC 76	start timer T309 if any calls are in the active state and if the timer is not already running?	M		5.5.6.10b	Yes__No__
SC 77	request layer 2 re-establishment?	M		5.5.6.10	Yes__No__
SC 78	perform Status Enquiry procedure for active calls when layer 2 is re-established ?	M		5.5.6.10	Yes__No__
SC 79	stop timer T309 when receiving indication that the layer 2 connection is re-established ?	M		5.5.6.10	Yes__No__
SC 80	clear the connection with cause #27 if layer 2 fails to be re-established ?	M		5.5.6.10	Yes__No__
Status Enquiry procedure					
SC 81	have only one STATUS ENQUIRY outstanding per call at a given time when	M		5.5.6.11	Yes__No__

Item	Does the Implementation ...	Status	Conditions for status	Reference	Support
	T322 is active?				
SC 82	start T322 on sending a STATUS ENQUIRY message?	M		5.5.6.11	Yes__No__
SC 83	stop T322 and continue clearing if a clearing message is received before T322 expires?	M		5.5.6.11	Yes__No__
SC 84	retransmit STATUS ENQUIRY message on expiry of T322 a number of times up to a maximum retransmission limit?	O		5.5.6.11	Yes__No__
SC 85	stop T322 if a STATUS message is received containing cause #30?	M		5.5.6.11	Yes__No__
SC 86	clear the call with cause #41 if the maximum retransmission limit is reached on expiry of T322?	M		5.5.6.11	Yes__No__
SC 87	send a STATUS message with cause #30 and reporting the current call state on receipt of a STATUS ENQUIRY message ?	M		5.5.6.11	Yes__No__
Status Procedures					
SC 88	clear the call by sending the appropriate clearing message with cause #101 on receipt of a STATUS message reporting an incompatible state?	O.3		5.5.6.12	Yes__No__
SC 89	take other actions (implementation option) which attempt to recover from a mismatch on receipt of a STATUS message reporting an incompatible state?	O.3		5.5.6.12	Yes__No__
SC 90	send a RELEASE COMPLETE message with cause #101 (and remain in the Null state) on receipt of a STATUS message indicating any call state except the Null state, which is received in the Null state?	M		5.5.6.12	Yes__No__
SC 91	take no action on receipt of a STATUS message indicating any call state except the Null state, which is received in the Release Request or Release Indication state?	M		5.5.6.12	Yes__No__
SC 92	release all resources and move to the Null state on receipt of a STATUS message indicating the Null state, which is received in any state except the Null state?	M		5.5.6.12	Yes__No__
SC 93	take no action other than to discard the message on receipt of a STATUS message indicating the Null state, which is received in the Null state?	M		5.5.6.12	Yes__No__
SC 94	clear the call with the appropriate procedure in section 5.5.4 using the cause in the received STATUS message on receipt of a STATUS message with compatible call state but with cause #96, #97, #99, #100, or #101, if other procedures are not defined?	O.4		5.5.6.12	Yes__No__
SC 95	take action which is an implementation option on receipt of a STATUS message	O.4		5.5.6.12	Yes__No__

Item	Does the Implementation ...	Status	Conditions for status	Reference	Support
	with compatible call state but with cause #96, #97, #99, #100, or #101?				
SC 96	inform layer management and take no further action on receipt of a STATUS message specifying the global call reference and reporting an incompatible state in the Restart Request or Restart state?	M		5.5.6.12	Yes__No__
SC 97	take no action on receipt of a STATUS message with global call reference, which is received in the Null state?	M		5.5.6.12	Yes__No__
Restart procedures: Sending RESTART					
SC 98	return virtual channels to the idle condition by sending a RESTART message with Restart indicator I.E. indicating whether *an indicated virtual channel* or *all virtual channels controlled by the layer 3 entity* are to be restarted?	M		5.5.5.1	Yes__No__
SC 99	include the Connection identifier I.E. in the RESTART message to indicate which virtual channel is to be returned to the idle condition when the Restart indicator I.E. is coded as "indicated virtual channel"?	M		5.5.5.1	Yes__No__
SC 100	not include the Connection identifier I.E. in the RESTART message when the Restart indicator I.E. is coded as "all virtual channels controlled by the layer 3 entity which sends the RESTART message"?	M		5.5.5.1	Yes__No__
SC 101	start timer T316 and wait for a RESTART ACKNOWLEDGE message after sending the RESTART message?	M		5.5.5.1	Yes__No__
SC 102	not send further RESTART messages until a RESTART ACKNOWLEDGE is received or timer T316 expires?	M		5.5.5.1	Yes__No__
SC 103	stop timer T316, release the virtual channel and call reference value, and enter the Null state on receiving a RESTART ACKNOWLEDGE message?	M		5.5.5.1	Yes__No__
SC 104	resend one or more RESTART messages on expiry of timer T316 until a RESTART ACKNOWLEDGE message is received?	O		5.5.5.1	Yes__No__
SC 105	neither place nor accept calls over the virtual channel(s) under restart while timer T316 is running?	M		5.5.5.1	Yes__No__
SC 106	make no further restart attempts, enter the Null state (REST 0), indicate the restart failure to the maintenance entity and consider the virtual channel(s) to be in an out-of-service condition (until maintenance action has been taken) when the number of restart attempts limit (default is 2) is reached?	M		5.5.5.1	Yes__No__
SC 107	discard the RESTART ACKNOWLEDGE message on receiving a RESTART ACKNOWLEDGE message indicating a	M		5.5.5.1	Yes__No__

Item	Does the Implementation ...	Status	Conditions for status	Reference	Support
	different set of virtual channels from the set indicated in the RESTART message?				
SC 108	include the global call reference value (all zeros) to which the Restart Request state is associated in RESTART and RESTART ACKNOWLEDGE messages?	M		5.5.5.1	Yes__No__
SC 109	clear remote parties on indicated virtual channel using cause #41?	M	R2	5.5.5.1	Yes__No__
Restart procedures: Receipt of RESTART					
SC 110	enter the Restart state associated to the global call reference and start timer T317 on receiving a RESTART message?	M		5.5.5.2	Yes__No__
SC 111	after following SC 110, (then initiate the appropriate internal actions to return the specified virtual channels to the idle condition and) release all call references associated with the specified virtual channels?	M		5.5.5.2	Yes__No__
SC 112	stop timer T317 after completing internal clearing, send a RESTART ACKNOWLEDGE to the originator of the RESTART, and enter the Null state (REST 0)?	M		5.5.5.2	Yes__No__
SC 113	(send an indication to the maintenance entity and) enter the Null state (REST 0) upon expiry of timer T317 prior to completion of internal clearing?	M		5.5.5.2	Yes__No__
SC 114	clear remote parties on indicated virtual channel using cause #41?	M	R2	5.5.5.2	Yes__No__
SC 115	transmit a RESTART ACKNOWLEDGE message to the originator of the RESTART on receiving a RESTART, even if all the specified virtual channels are in the idle condition?	M		5.5.5.2	Yes__No__
SC 116	clear all calls on all interfaces associated with the signalling virtual channel on receiving a RESTART with Restart indicator I.E. coded as “all virtual channels controlled by the layer 3 entity which sends the RESTART message”?	M		5.5.5.2	Yes__No__
SC 117	treat the Connection identifier I.E. as described in 5.5.6.8.3 on receiving a RESTART with Restart indicator I.E. coded as “all virtual channels controlled by the layer 3 entity which sends the RESTART message” and a Connection identifier I.E. is included?	M		5.5.5.2	Yes__No__
SC 118	follow procedures in 5.5.6.7.1 on receiving a RESTART message with the Restart indicator I.E. coded as “indicated virtual channel” and the Connection identifier I.E. is not included?	M		5.5.5.2	Yes__No__
SC 119	follow procedures in 5.5.6.7.2 on receiving a RESTART message with the	M		5.5.5.2	Yes__No__

Item	Does the Implementation ...	Status	Conditions for status	Reference	Support
	Restart indicator I.E. coded as "indicated virtual channel" and the Connection identifier I.E. contains an unrecognized VPCI?				
SC 120	take no action on the virtual channels, but send a RESTART ACKNOWLEDGE message containing the appropriate indications on receiving a RESTART message with permanent virtual connections established by management procedures implicitly specified (by specifying "all virtual channels controlled by the layer 3 entity which sends the RESTART")?	M		5.5.5.2	Yes__No__
SC 121	take no action on the virtual channel, but send a STATUS message with cause #82, indicating in the diagnostics field the virtual channel that could not be handled, on receiving a RESTART with permanent virtual connections established by management procedures or a reserved VPCI/VCI (e.g., the point-to-point signalling virtual channel) explicitly specified (by including a Connection identifier I.E. in the RESTART message)?	M		5.5.5.2	Yes__No__
SC 122	follow procedures in 5.5.6.4 on receiving a RESTART message while in the Restart state?	M		5.5.5.2	Yes__No__

Comments:
O.1 = mandatory to support at least one of these procedures.
O.2 = mandatory to support at least one of these procedures.
O.3 = mandatory to support at least one of these procedures.
O.4 = mandatory to support at least one of these procedures.

3.6 Point-to-Multipoint (PMP) Procedures

Item	If point-to-multipoint (PMP) procedures are supported, does the implementation ...	Status	Conditions for status	Reference	Support
PMP 1	act as a Root (calling user) in point-to-multipoint calls?	O.1	MC1	5.6	Yes__No__
PMP 2	act as a Leaf (called user) of a point-to-multipoint call?	O.1	MC2	5.6	Yes__No__
Adding a party at the originating interface: set up of the first party					
PMP 3	follow procedures of Q.2931 to set up the first party of a PMP call?	M		5.6.1.1	Yes__No__
PMP 4	support link states for the call change according to call state changes in section 5.5?	M		5.6.1.1	Yes__No__
PMP 5	send SETUP with Endpoint Reference value = 0 for the 1st party and with Broadband Bearer capability I.E. indicating point-to-multipoint in the user plane connection configuration plane?	M	PMP1	5.6.1.1	Yes__No__
Adding a party at the originating interface: adding a party					
PMP 6	send an ADD PARTY message only if the link is in the Active link-state?	M		5.6.1.2	Yes__No__
PMP 7	start timer T399 after sending ADD PARTY?	M		5.6.1.2	Yes__No__
PMP 8	send ADD PARTY with the same Call reference value as specified in the initial setup of the call to which the party is to be added and with endpoint reference value as described in 5.4.8.1?	M		5.6.1.2, 5.4.8.1	Yes__No__
PMP 9	use the same connection identifier, QoS, Bearer Capability and ATM traffic descriptor for the new party as in the original call?	M		5.6.1.2	Yes__No__
PMP 10	transmit one of the ADD PARTY messages as a SETUP message with a new call reference value and same I.E. values as the previous call, if a RELEASE message is received for a call which has one or more parties which have not progressed past the Add Party Initiated party-state?	O		5.6.1.2	Yes__No__
PMP 11	after receiving the CONNECT message for the SETUP message in PMP 10, then retransmit the remaining ADD PARTY messages (using the new call reference value)?	M	PMP 10	5.6.1.2	Yes__No__
PMP 12	clear all the parties associated with the call on the link if the procedures in PMP 10 and PMP 11 are not implemented?	M	NOT PMP 10	5.6.1.2	Yes__No__
Adding a party at the originating interface: Add Party Connected					
PMP 13	enter the active party-state and stop timer T399 on receipt of the ADD PARTY ACKNOWLEDGE message?	M		5.6.1.5	Yes__No__

Item	If point-to-multipoint (PMP) procedures are supported, does the implementation ...	Status	Conditions for status	Reference	Support
PMP 14	internally clear the party on expiry of T399?	M		5.6.1.5	Yes__No__
Add party establishment at the destination interface					
PMP 15	for a party, when transmitting messages containing call reference and endpoint reference, use the same call reference and endpoint reference values specified in the SETUP or ADD PARTY messages (delivered by the network) in sending messages containing those I.E.s?	M		5.6.2	Yes__No__
Add party establishment at the destination interface: incoming add party request					
PMP 16	enter the Add Party Received party-state on receipt of an ADD PARTY message?	M		5.6.2.1	Yes__No__
Add party establishment at the destination interface: QoS and Traffic parameter selection procedures					
PMP 17	reject the Add Party request by returning an ADD PARTY REJECT message with cause #47 or #49 if unable to support the requested ATM traffic descriptor or QoS class?	M	R2	5.6.2.4	Yes__No__
PMP 18	follow procedures in 5.6.2.5 if able to support the requested ATM traffic descriptor or QoS class?	M		5.6.2.4	Yes__No__
Add party establishment at the destination interface: Call/Connection confirmation: response to ADD PARTY when user is an ATM endpoint					
PMP 19	if the user wishes to accept the call/connection, respond with an ADD PARTY ACKNOWLEDGE message (and enter the Active party-state) on receipt of an ADD PARTY message?	M	PMP2 AND R1	5.6.2.5.1.1	Yes__No__
PMP 20	reject an Add Party request by sending an ADD PARTY REJECT message (and entering the Null party-state)?	M	R1	5.6.2.5.1.1	Yes__No__
PMP 21	reject the request by sending an ADD PARTY REJECT message with cause #88, 17, 21, or 23 when the user is incompatible, is busy, wishes to refuse the call, or rejects all incoming calls that do not provide the calling party number, respectively?	M	PMP2 AND R1	5.6.2.5.1.1	Yes__No__
Add party establishment at the destination interface: Call/Connection confirmation: response to ADD PARTY when user is not an ATM endpoint					
PMP 22	send an ADD PARTY ACKNOWLEDGE toward the calling user (Root) (and enter the Active party-state) upon receiving an indication that the add has been accepted by the ATM endpoint?	M	PMP2 AND R2	5.6.2.5.1.2	Yes__No__
Add party establishment at the destination interface: Call/Connection					
PMP 23	send an ADD PARTY ACKNOWLEDGE to indicate acceptance of an incoming add party request (and enters the Active party-state)?	M	PMP2	5.6.2.6	Yes__No__
Party Clearing: Exception conditions					
PMP 24	use call clearing procedures in 5.5.4.2 in response to a SETUP message (when the call is still in point-to-point configuration)?	M		5.6.3.2a	Yes__No__

Item	If point-to-multipoint (PMP) procedures are supported, does the implementation ...	Status	Conditions for status	Reference	Support
PMP 25	reject an Add Party request by responding with an ADD PARTY REJECT (if no other response has previously been sent) in response to an ADD PARTY message?	O		5.6.3.2b	Yes__No__
PMP 26	drop a party using RELEASE or DROP PARTY and follow 5.5.4.3, 5.5.4.4, 5.6.3.3 and 5.6.3.4 except for the procedures in PMP 24 and PMP 25?	M		5.6.3.2	Yes__No__
Party Clearing: Dropping a party initiated by the user					
PMP 27	initiate dropping a party by sending a RELEASE message (if all other parties belonging to the same call on the interface are in the Null party-state, a Drop Party Initiated party-state, or a Drop Party Received party-state), and follow procedures in 5.5.4?	M		5.6.3.3	Yes__No__
PMP 28	initiate party clearing by first sending a DROP PARTY message when the party is in the Active or Add Party initiated party-states, and there are other parties to the call on this interface in the Add Party Initiated, Add Party Received, or Active party-state, and then start timer T398 (and enter the Drop Party Initiated party-state)?	M		5.6.3.3	Yes__No__
PMP 29	cancel timer T398, release the endpoint reference and return to the Null party-state on receipt of the DROP PARTY ACKNOWLEDGE message?	M		5.6.3.3	Yes__No__
PMP 30	in addition to actions in PMP 29, send a RELEASE when all parties are in the Null (drop party received) party-state (receipt of a DROP PARTY ACKNOWLEDGE message)?	M		5.6.3.3	Yes__No__
PMP 31	send a DROP PARTY ACKNOWLEDGE message (with cause number originally contained in the DROP PARTY message) (and enter the Null party-state) if one or more parties associated with the call are in the Active, Add Party Initiated or Add Party Received party-state on expiry of timer T398?	M		5.6.3.3	Yes__No__
PMP 32	in addition to PMP31, indicate a second Cause information element #102 on expiry of timer T398?	O		5.6.3.3	Yes__No__
PMP 33	use implementation-dependent recovery procedures, such as initiating status enquiry procedures, to verify that the party has been dropped on expiry of timer T398?	O		5.6.3.3	Yes__No__
PMP 34	send a RELEASE message (with the cause number originally contained in the DROP PARTY message) if all parties associated with the call are in the Null, Drop Party Received, or Drop Party Initiated party-state on expiry of timer T398?	M		5.6.3.3	Yes__No__

Item	If point-to-multipoint (PMP) procedures are supported, does the implementation ...	Status	Conditions for status	Reference	Support
PMP 35	on expiry of timer T398, in addition to PMP34, indicate a second Cause information element #102?	O		5.6.3.3	Yes__No__
Party Clearing: Dropping a party initiated by the network					
PMP 36	enter the Null party-state upon receipt of a RELEASE message for parties in the Drop Party Initiated and Drop Party Received party-state?	M		5.6.3.4	Yes__No__
PMP 37	clear towards the remote user upon receipt of a RELEASE message (using the cause contained in the RELEASE message or cause #31 if no cause was included in the RELEASE message) for parties in the Add Party Received party-state and the Active party-state?	M	R2	5.6.3.4	Yes__No__
PMP 38	reoffer parties on a new call reference upon receipt of a RELEASE message for parties in the Add Party Initiated party-state?	M	R2	5.6.3.4	Yes__No__
Party Clearing: Dropping a party initiated by the network - Clearing with a DROP PARTY message					
PMP 39	send a RELEASE message in response to a DROP PARTY message if all other parties associated with the call are in the Null party-state, Drop Party Initiated party-state, or Drop Party Received party-state?	M		5.6.3.4.1	Yes__No__
PMP 40	release the endpoint reference, send a DROP PARTY ACKNOWLEDGE message, and enter the Null party-state in response to a DROP PARTY message if any other parties associated with the call are in the Active party-state, Add Party Initiated party-state, or Add Party Received party-state?	M		5.6.3.4.1	Yes__No__
Party Clearing: Clear collision					
PMP 41	stop timer T398, release the endpoint reference, send a DROP PARTY ACKNOWLEDGE message, and enter the Null party-state in response to a DROP PARTY message received in the Drop Party Initiated party-state, and while there are one or more parties associated with the call in the Active, Add Party Initiated or Add Party Received party-state?	M		5.6.3.5	Yes__No__
PMP 42	stop timer T398, release the endpoint reference, disconnect the bearer virtual channel, and send a RELEASE message in response to a DROP PARTY message received in the Drop Party Initiated party-state, and while all parties associated with the call are in the Null party-state, Drop Party Initiated party-state, or a Drop Party Received party-state?	M		5.6.3.5	Yes__No__

Item	If point-to-multipoint (PMP) procedures are supported, does the implementation ...	Status	Conditions for status	Reference	Support
PMP 43	initiate link clearing procedures by returning a RELEASE message and following clearing procedures in 5.5.4 in the case of receiving a crossed clearing message (i.e., DROP PARTY, DROP PARTY ACKNOWLEDGE or ADD PARTY REJECT) pertaining to the last two parties on an interface?	M		5.6.3.5	Yes__No__
Restart Procedure					
PMP 44	in addition to other user side procedures in section 5.5.5, set the party-state of all parties associated with the virtual channel to Null when the virtual channel (connection) is restarted?	M		5.6.4	Yes__No__
PMP 45	in addition to PMP 44, clear all parties associated with the virtual channel?	M		5.6.4	Yes__No__
Handling of error conditions: Call reference and Endpoint Reference errors - Call reference procedural errors					
PMP 46	send a RELEASE COMPLETE message with cause #81 and follow the procedures in 5.5.4 specifying the call reference in the received message on receipt of an ADD PARTY, ADD PARTY ACKNOWLEDGE, ADD PARTY REJECT, DROP PARTY, or DROP PARTY ACKNOWLEDGE message while in the Null link-state?	M		5.6.5.3.1	Yes__No__
Handling of error conditions: Call reference and Endpoint Reference errors - Endpoint reference error: Invalid endpoint reference format					
PMP 47	send a STATUS message with cause #100 with no Endpoint reference information element and follow procedures in 5.5.6.7.2[1] on receipt of a message with endpoint reference information element not properly formatted?	M		5.6.5.3.2.1	Yes__No__
Handling of error conditions: Call reference and Endpoint Reference errors - Endpoint reference error: Endpoint reference procedural errors					
PMP 48	send a DROP PARTY ACKNOWLEDGE message with cause #89 (and remain in the Null party-state) on receiving any message except SETUP, ADD PARTY, or DROP PARTY ACKNOWLEDGE while in the NULL party-state?	M	NOT SC 26	5.6.5.3.2.2a	Yes__No__
PMP 49	take no action on receiving a DROP PARTY ACNOWLEDGE message while in the Null party-state?	M		5.6.5.3.2.2b	Yes__No__
PMP 50	send a STATUS message containing the Active link-state value, the associated	M		5.6.5.3.2.2c	Yes__No__

[1] Note: the reference in UNI 3.1 is to 5.5.7.7.2; the correct reference is 5.5.6.7.2.

Item	If point-to-multipoint (PMP) procedures are supported, does the implementation ...	Status	Conditions for status	Reference	Support
	endpoint reference and endpoint state information elements and values, and with cause #101 on receiving an ADD PARTY while not in the Null or Add Party Received party-state?				
PMP 51	ignore the ADD PARTY message on receiving an ADD PARTY message while in the Add Party Received party-state?	M		5.6.5.3.2.2d	Yes__No__
Handling of error conditions: Message type or message sequence errors					
PMP 52	follow procedures specified in 5.5.6.4 on receiving a message type or message sequence error?	M	NOT SC 26	5.6.5.4, 5.5.6.4	Yes__No__
PMP 53	enter the Null party-state upon receipt of an unexpected RELEASE COMPLETE message for parties in the Drop Party Initiated and Drop Party Received party-state?	M		5.6.5.4, 5.6.3.4	Yes__No__
PMP 54	clear towards the remote user upon receipt of an unexpected RELEASE COMPLETE message (using the cause contained in the RELEASE COMPLETE message or cause #111 if no cause was included in the RELEASE COMPLETE message) for parties in the Add Party Received party-state and the Active party-state?	M	R2	5.6.5.4, 5.6.3.4	Yes__No__
PMP 55	reoffer parties on a new call reference upon receipt of an unexpected RELEASE COMPLETE message for parties in the Add Party Initiated party-state?	M	R2	5.6.5.4, 5.6.3.4	Yes__No__
PMP 56	release the endpoint reference, stop all timers, and enter the Null party-state on receiving an unexpected DROP PARTY ACKNOWLEDGE?	M		5.6.5.4	Yes__No__
PMP 57	disconnect the bearer virtual channel and send a RELEASE message on receiving a DROP PARTY ACKNOWLEDGE if no other parties remain in the Active, Add Party Initiated or Add Party Received party-state on the call at the interface?	M		5.6.5.4	Yes__No__
PMP 58	follow procedures in 5.5.6.4 on receiving an ADD PARTY, ADD PARTY ACKNOWLEDGE, or DROP PARTY ACKNOWLEDGE in any link-state other than the Active link-state?	M		5.6.5.4	Yes__No__
Handling of error conditions: Message length errors					
PMP 59	follow procedures in 5.5.6.5 on receiving a message with message length error for adding or dropping parties in point-to-multipoint calls?	M		5.6.5.5	Yes__No__
Handling of error conditions: General Information Element errors					

Item	If point-to-multipoint (PMP) procedures are supported, does the implementation ...	Status	Conditions for status	Reference	Support
PMP 60	follow procedures in 5.5.6.6 on receiving a message with general information element error for adding or dropping parties in point-to-multipoint calls?	M	NOT SC 48	5.6.5.6	Yes__No__
Handling of error conditions: Mandatory information element error - Mandatory information element missing					
PMP 61	send an ADD PARTY REJECT message with cause #96 on receiving an ADD PARTY message which has one or more mandatory information elements missing?	M	NOT SC 48	5.6.5.7.1	Yes__No__
PMP 62	send a RELEASE message (with cause #96) in response to a DROP PARTY message with Cause information element missing if all other parties associated with the call are in the Null party-state, Drop Party Initiated party-state, or Drop Party Received party-state?	M		5.6.5.7.1, 5.6.3	Yes__No__
PMP 63	release the endpoint reference, send a DROP PARTY ACKNOWLEDGE message with cause #96, and enter the Null party-state in response to a DROP PARTY message with Cause information element missing if any other parties associated with the call are in the Active party-state, Add Party Initiated party-state, or Add Party Received party-state?	M		5.6.5.7.1, 5.6.3	Yes__No__
PMP 64	assume that the message was received with cause #31 on receiving a DROP PARTY ACKNOWLEDGE or ADD PARTY REJECT message with a Cause I.E. missing?	M		5.6.5.7.1	Yes__No__
Handling of error conditions: Mandatory information element error - Mandatory information element content error					
PMP 65	send ADD PARTY REJECT or RELEASE message, as appropriate, with cause #100 on receiving an ADD PARTY message with one or more mandatory I.E.s with invalid content?	M	NOT SC 48	5.6.5.7.2	Yes__No__
PMP 66	take action as if a DROP PARTY message with cause #31 was received (section 5.5.4), except that the DROP PARTY ACKNOWLEDGE or RELEASE message is sent with cause #100, on receiving a DROP PARTY message with invalid content of the Cause information element?	M		5.6.5.7.2	Yes__No__
PMP 67	assume that a DROP PARTY ACKNOWLEDGE message was received with cause #31 on receiving a DROP PARTY ACKNOWLEDGE message with invalid content of the Cause information	M		5.6.5.7.2	Yes__No__

Item	If point-to-multipoint (PMP) procedures are supported, does the implementation ...	Status	Conditions for status	Reference	Support
	element?				
PMP 68	treat messages with a mandatory information element with a length exceeding the maximum length (section 5.4) as a mandatory information element with content error?	M		5.6.5.7.2	Yes__No__
Handling of error conditions: Non-mandatory information element error - Unrecognized information element					
PMP 69	take action on the message and those information elements which are recognized and have valid content on receiving a message with one or more non-mandatory unrecognized information elements?	M	NOT SC 48	5.6.5.8.1	Yes__No__
PMP 70	send a STATUS message which indicates the link-state and endpoint reference state of the receiver after taking action on the message and which contains one cause I.E. with cause #99 on receiving an ADD PARTY, ADD PARTY ACKNOWLEDGE, or ADD PARTY REJECT message with one or more non-mandatory unrecognized I.E.s?	O	NOT SC 48	5.6.5.8.1	Yes__No__
PMP 71	include the diagnostics field in the STATUS message sent in PMP 70?	O	NOT SC 48	5.6.5.8.1	Yes__No__
PMP 72	include an I.E. identifier for each unrecognized I.E. (subject to the length constraint of the Cause I.E. size) in the diagnostics field, if present, in the STATUS message sent in PMP 70?	M	PMP 71 AND NOT SC 48	5.6.5.8.1	Yes__No__
PMP 73	send a DROP PARTY ACKNOWLEDGE or RELEASE message with cause #99 (and the Cause I.E. diagnostic field, if present, containing the I.E. identifier for each unrecognized I.E.) on receiving a DROP PARTY message with one or more non-mandatory unrecognized information elements?	M	NOT SC 48	5.6.5.8.1a	Yes__No__
PMP 74	take no action on the unrecognized information on receiving a DROP PARTY ACKNOWLEDGE message with one or more non-mandatory unrecognized information elements?	M	NOT SC 48	5.6.5.8.1b	Yes__No__
Handling of error conditions: Signalling AAL reset					
PMP 75	take no action for parties in the clearing phase (party-states Drop Party Initiated and Drop Party Received) when an indication of a Signalling AAL reset is received from the Q.SAAL layer [by means of AAL-ESTABLISH-INDICATION primitive]?	M		5.6.5.9a	Yes__No__
PMP 76	maintain parties in the establishment	M		5.6.5.9b	Yes__No_

Item	If point-to-multipoint (PMP) procedures are supported, does the implementation ...	Status	Conditions for status	Reference	Support
	phase(party-states Add Party Initiated and Add Party Received) when an indication of a Signalling AAL reset is received from the Q.SAAL layer [by means of AAL-ESTABLISH-INDICATION primitive]?				_
PMP 77	use status enquiry procedures for parties in the establishment phase when an indication of a Signalling AAL reset is received from the Q.SAAL layer [by means of AAL-ESTABLISH-INDICATION primitive]?	O		5.6.5.9b	Yes__No__
PMP 78	maintain parties in the active party-state according to procedures in other parts of section 5.6 when an indication of a Signalling AAL reset is received from the Q.SAAL layer [by means of AAL-ESTABLISH-INDICATION primitive]?	M		5.6.5.9c	Yes__No__
Handling of error conditions: Signalling AAL failure					
PMP 79	internally clear any parties not in the Active party-state whenever the network layer entity is notified by its Signalling AAL entity [via the AAL-RELEASE-INDICATION primitive] that there is a Signalling AAL malfunction?	M		5.6.5.10	Yes__No__
Handling of error conditions: Status enquiry procedure					
PMP 80	send a STATUS ENQUIRY with endpoint reference of the party-state to be checked in response to procedural error conditions described in 5.6.5.9 and 5.6.5.10?	O		5.6.5.11	Yes__No__
PMP 81	start T322 on sending a STATUS ENQUIRY message?	M		5.6.5.11	Yes__No__
PMP 82	have only one STATUS ENQUIRY for party-state information outstanding per call at a given time when T322 is active?	M		5.6.5.11	Yes__No__
PMP 83	stop T322 and continue clearing if a party clearing message is received before T322 expires?	M		5.6.5.11	Yes__No__
PMP 84	stop T322 and take appropriate action based on the current state in that STATUS message, if a STATUS message is received containing cause #30?	M		5.6.5.11	Yes__No__
PMP 85	send a STATUS message (with cause # 30 and with the current party-state (the current party-state of an active party or a party in progress, or the Null party-state if the endpoint reference does not relate to an active party or a party in progress)) in response to a STATUS ENQUIRY?	M		5.6.5.11	Yes__No__
PMP 86	retransmit STATUS ENQUIRY message one or more times until a response is	O		5.6.5.11	Yes__No__

Item	If point-to-multipoint (PMP) procedures are supported, does the implementation ...	Status	Conditions for status	Reference	Support
	received on expiry of T322 if no STATUS message was received?				
PMP 87	clear the party to the local interface with cause #41 if STATUS ENQUIRY has been retransmitted the maximum number of times (implementation dependent)?	M		5.6.5.11	Yes__No__
Handling of error conditions: Receiving a STATUS message					
PMP 88	clear the party by sending the appropriate clearing message with cause #101 on receipt of a STATUS message reporting an incompatible party-state?	O.3		5.6.5.12	Yes__No__
PMP 89	take actions which attempt to recover, other than clearing the party, on receipt of a STATUS message reporting an incompatible party-state?	O.3		5.6.5.12	Yes__No__
PMP 90	send a DROP PARTY ACKNOWLEDGE message with cause #101 and remain in the Null party-state on receiving a STATUS message indicating any party-state except the Null party state while in the Null party-state?	M		5.6.5.12	Yes__No__
PMP 91	take no action on receiving a STATUS message indicating any party-state except the Null party-state while in the Drop Party Initiated party-state?	M		5.6.5.12	Yes__No__
PMP 92	internally clear the party and enter the Null party-state on receiving a STATUS message indicating the Null party-state while in any party-state except the Null party-state and initiate call clearing by sending a RELEASE message if no other party of the call is in the Active, Add Party Initiated or Add Party Received party-states?	M		5.6.5.12c	Yes__No__
PMP 93	take no action other than to discard the message (and remain in the Null party-state) on receiving a STATUS message indicating the Null party-state while in the Null party-state?	M		5.6.5.12	Yes__No__
PMP 94	take actions which are implementation dependent on receiving a STATUS indicating compatible party-state, but containing cause #96, #97, #99, or #100?	O.4		5.6.5.12	Yes__No__
PMP 95	clear the party with the appropriate procedure defined in section 5.6.3 (using the cause specified in the received STATUS message) on receiving a STATUS message indicating compatible party-state, but containing cause #96, #97, #99, or #100, if other procedures are not defined?	O.4		5.6.5.12	Yes__No__

Comments:

Item	If point-to-multipoint (PMP) procedures are supported, does the implementation ...	Status	Conditions for status	Reference	Support
O.1 = mandatory to support at least one of these procedures for point-to-multipoint calls. O.2 = mandatory to support at least one of these procedures for point-to-multipoint calls. O.3= mandatory to support at least one of these procedures. O.4 = mandatory to support at least one of these procedures.					

3.7 Call States (CS)

Item	Does the implementation support the ...	Status	Conditions for status	Reference	Support
CS 1	Null state (U0) ?	M		5.2.1.1	Yes__No__
CS 2	Call Initiated state (U1)?	M	MC 1	5.2.1.1	Yes__No__
CS 3	Outgoing Call Proceeding state (U3)?	M	MC 1	5.2.1.1	Yes__No__
CS 4	Call present state (U6)?	M	MC 2	5.2.1.1	Yes__No__
CS 5	Connect request state (U8)?	M	MC 2	5.2.1.1	Yes__No__
CS 6	Incoming Call Proceeding state (U9)?	M	MC 2	5.2.1.1	Yes__No__
CS 7	Active state (U10)?	M		5.2.1.1	Yes__No__
CS 8	Release request state (U11)?	M		5.2.1.1	Yes__No__
CS 9	Release indication state (U12)?	M		5.2.1.1	Yes__No__
CS 10	Null state (Rest 0)?	M		5.2.3.1	Yes__No__
CS 11	Restart request state (Rest 1)?	M		5.2.3.1	Yes__No__
CS 12	Restart state (Rest 2)?	M		5.2.3.1	Yes__No__
Comments					

3.8 Party States (PS)

Item	Does the implementation support the ...	Status	Conditions for status	Reference	Support
PS 1	Null party state ?	M	MC 13	5.6	Yes__No__
PS 2	Add Party Initiated party state ?	M	MC 13	5.6	Yes__No__
PS 3	Add Party Received party state ?	M	MC 13	5.6	Yes__No__
PS 4	Drop Party Initiated party state ?	M	MC 13	5.6	Yes__No__
PS 5	Drop Party Received party state ?	M	MC 13	5.6	Yes__No__
PS 6	Active party state?	M	MC 13	5.6	Yes__No__

Item	Does the implementation support the ...	Status	Conditions for status	Reference	Support
Comments					

3.9 Supported Messages Network to User (Received by the User) (MR)

Item	Does the implementation support the interpretation of ...	Status	Conditions for status	Reference	Support
MR 1	CALL PROCEEDING?	M	MC 1	5.3.1.2	Yes__No__
MR 2	CONNECT?	M	MC 1	5.3.1.3	Yes__No__
MR 3	CONNECT ACKNOWLEDGE?	M	MC 2	5.3.1.4	Yes__No__
MR 4	RELEASE?	M		5.3.1.5	Yes__No__
MR 5	RELEASE COMPLETE?	M		5.3.1.6	Yes__No__
MR 6	SETUP?	M	MC 2	5.3.1.7	Yes__No__
MR 7	STATUS?	M		5.3.1.8	Yes__No__
MR 8	STATUS ENQUIRY?	M		5.3.1.9	Yes__No__
MR 9	ADD PARTY?	M	MC 2 AND MC 13	5.3.5.1	Yes__No__
MR 10	ADD PARTY ACKNOWLEDGE?	M	MC 13 AND PMP 2	5.3.5.2	Yes__No__
MR 11	ADD PARTY REJECT?	M	MC 13 AND PMP 2	5.3.5.3	Yes__No__
MR 12	DROP PARTY?	M	MC 13	5.3.5.4	Yes__No__
MR 13	DROP PARTY ACKNOWLEDGE?	M	MC 13	5.3.5.5	Yes__No__
MR 14	RESTART ?	M		5.3.4.1	Yes__No__
MR 15	RESTART ACKNOWLEDGE ?	M		5.3.4.2	Yes__No__
Comments					

3.10 Supported Messages User to Network (Transmitted by the User) (MT)

Item	Does the implementation support the inclusion of ...	Status	Conditions for status	Reference	Support
MT 1	CALL PROCEEDING?	O	MC 2	5.3.1.2	Yes__No__
MT 2	CONNECT?	M	MC 2	5.3.1.3	Yes__No__
MT 3	CONNECT ACKNOWLEDGE?	M	MC 1	5.3.1.4	Yes__No__
MT 4	RELEASE?	M		5.3.1.5	Yes__No__
MT 5	RELEASE COMPLETE?	M		5.3.1.6	Yes__No__
MT 6	SETUP?	M	MC 1	5.3.1.7	Yes__No__
MT 7	STATUS?	M		5.3.1.8	Yes__No__
MT 8	STATUS ENQUIRY?	M		5.3.1.9	Yes__No__
MT 9	ADD PARTY?	M	PMP 1	5.3.5.1	Yes__No__
MT 10	ADD PARTY ACKNOWLEDGE?	M	PMP 2	5.3.5.2	Yes__No__
MT 11	ADD PARTY REJECT?	M	PMP 2	5.3.5.3	Yes__No__
MT 12	DROP PARTY?	M	MC 13	5.3.5.4	Yes__No__
MT 13	DROP PARTY ACKNOWLEDGE?	M	MC 13	5.3.5.5	Yes__No__
MT 14	RESTART ?	M		5.3.4.1	Yes__No__
MT 15	RESTART ACKNOWLEDGE ?	M		5.3.4.2	Yes__No__
Comments					

3.11 Supported Messages (Message structure) (MS)

Item	Message parts Does the message include	Status	Conditions for status	Reference	Support
MS 1	CALL PROCEEDING			5.3.1.2	
MS 1.1	Protocol discriminator, call reference, message type and message length?	M			Yes__No__
MS 1.2	Connection Identifier?	O			Yes__No__
MS 1.3	Endpoint Reference?	O Note 1	MC 13		Yes__No__
Comments					

Note 1: Mandatory if an Endpoint reference was included in the SETUP message.

Item	Message parts Does the message include	Status	Conditions for status	Reference	Support
MS 2	CONNECT			5.3.1.3	
MS 2.1	Protocol discriminator, call reference, message type and message length?	M			Yes__No__
MS 2.2	AAL parameters ?	O Note 1			Yes__No__
MS 2.3	Broadband low layer information?	O			Yes__No__
MS 2.4	Connection Identifier?	O			Yes__No__
MS 2.5	Endpoint reference?	O Note 2	MC 13		Yes__No__
Comments					

Note 1: AAL parameters information element shall not be present when the endpoint reference information element was present in the SETUP message and had a non-zero value.

Note 2: Mandatory if an Endpoint reference was included in the SETUP message.

Item	Message parts Does the message include	Status	Conditions for status	Reference	Support
MS 3	CONNECT ACKNOWLEDGE			5.3.1.4	
MS 3.1	Protocol discriminator, call reference, message type and message length?	M			Yes__No__
Comments					

Item	Message parts Does the message include	Status	Conditions for status	Reference	Support
MS 4	RELEASE			5.3.1.5	
MS 4.1	Protocol discriminator, call reference, message type and message length ?	M			Yes__No__
MS 4.2	Cause?	M			Yes__No__
Comments					

Item	Message parts Does the message include	Status	Conditions for status	Reference	Support
MS 5	RELEASE COMPLETE			5.3.1.6	
MS 5.1	Protocol discriminator, call reference, message type and message length ?	M			Yes__No__
MS 5.2	Cause?	O Note 1			Yes__No__
Comments					

Note 1: Mandatory in the first call clearing message; including when the RELEASE COMPLETE message is sent as a result of an error condition.

Item	Message parts Does the message include	Status	Conditions for status	Reference	Support
MS 6	SETUP			5.3.1.7	
MS 6.1	Protocol discriminator, call reference, message type and message length ?	M			Yes__No__
MS 6.2	AAL parameters ?	O			Yes__No__
MS 6.3	ATM traffic parameters ?	M			Yes__No__
MS 6.4	Broadband bearer capability ?	M			Yes__No__
MS 6.5	Broadband high layer information?	O			Yes__No__
MS 6.6	Broadband repeat indicator?	O Note 1			Yes__No__
MS 6.7	Broadband low layer information?	O			Yes__No__
MS 6.8	Called party number?	M			Yes__No__
MS 6.9	Called party subaddress?	O			Yes__No__
MS 6.10	Calling party number?	O			Yes__No__
MS 6.11	Calling party subaddress?	O			Yes__No__
MS 6.12	Connection identifier?	N/A			Yes__No__
MS 6.13	QoS parameter?	M			Yes__No__
MS 6.14	Broadband sending complete?	O			Yes__No__
MS 6.15	Transit network selection?	O			Yes__No__
MS 6.16	Endpoint reference?	M	PMP 1		Yes__No__
Comments					

Note 1: Must be included when 2 or more Broadband low-layer information elements are included for Broadband low layer information negotiation.

Item	Message parts Does the message include	Status	Conditions for status	Reference	Support
MS 7	STATUS			5.3.1.8	
MS 7.1	Protocol discriminator, call reference, message type and message length?	M			Yes__No__
MS 7.2	Call state?	M			Yes__No__
MS 7.3	Cause?	M			Yes__No__
MS 7.4	Endpoint reference?	O	MC 13		Yes__No__
MS 7.5	Endpoint state?	M	MS 7.4		Yes__No__
Comments					

Item	Message parts Does the message include	Status	Conditions for status	Reference	Support
MS 8	STATUS ENQUIRY			5.3.1.9	
MS 8.1	Protocol discriminator, call reference, message type and message length?	M			Yes__No__
MS 8.2	Endpoint reference?	O	MC 13		Yes__No__
Comments					

Item	Message parts Does the message include	Status	Conditions for status	Reference	Support
MS 9	RESTART			5.3.4.1	
MS 9.1	Protocol discriminator, call reference (global call reference), message type and message length?	M			Yes__No__
MS 9.2	Connection identifier?	O Note 1			Yes__No__
MS 9.3	Restart indicator?	M			Yes__No__
Comments					

Note 1: Included when necessary to indicate the particular virtual channel to be restarted.

Item	Message parts Does the message include	Status	Conditions for status	Reference	Support
MS 10	RESTART ACKNOWLEDGE			5.3.4.2	
MS 10.1	Protocol discriminator, call reference (global call reference), message type and message length?	M			Yes__No__
MS 10.2	Connection identifier?	O Note 1			Yes__No__
MS 10.3	Restart indicator?	M			Yes__No__
Comments					

Note 1: Included when necessary to indicate the particular virtual channel which has been restarted.

Item	Message parts Does the message include	Status	Conditions for status	Reference	Support
MS 11	ADD PARTY			5.3.5.1	
MS 11.1	Protocol discriminator, call reference, message type and message length?	M			Yes__No__
MS 11.2	AAL parameters?	O Note			Yes__No__
MS 11.3	Broadband high layer information?	O Note			Yes__No__
MS 11.4	Broadband low layer information?	O Note			Yes__No__
MS 11.5	Called party number?	M			Yes__No__
MS 11.6	Called party subaddress?	O			Yes__No__
MS 11.7	Calling party number?	O			Yes__No__
MS 11.8	Calling party subaddress?	O			Yes__No__
MS 11.9	Broadband sending complete?	O			Yes__No__
MS 11.10	Transit network selection?	O			Yes__No__
MS 11.11	Endpoint reference?	M			Yes__No__
Comments					

Note: Must be same as in initial SETUP message.

Item	Message parts Does the message include	Status	Conditions for status	Reference	Support
MS 12	ADD PARTY ACKNOWLEDGE			5.3.5.2	
MS 12.1	Protocol discriminator, call reference, message type and message length ?	M			Yes__No__
MS 12.2	Endpoint reference ?	M Note			Yes__No__
Comments					

Note: Must be the same value as in the ADD PARTY message being responded to.

Item	Message parts Does the message include	Status	Conditions for status	Reference	Support
MS 13	ADD PARTY REJECT			5.3.5.3	
MS 13.1	Protocol discriminator, call reference, message type and message length ?	M			Yes__No__
MS 13.2	Cause ?	M			Yes__No__
MS 13.3	Endpoint reference ?	M Note			Yes__No__
Comments					

Note: Must be the same value as in the ADD PARTY message being responded to.

Item	Message parts Does the message include	Status	Conditions for status	Reference	Support
MS 14	DROP PARTY			5.3.5.4	
MS 14.1	Protocol discriminator, call reference, message type and message length ?	M			Yes__No__
MS 14.2	Cause ?	M			Yes__No__
MS 14.3	Endpoint reference ?	M			Yes__No__
Comments					

Item	Message parts Does the message include	Status	Conditions for status	Reference	Support
MS 15	DROP PARTY ACKNOWLEDGE			5.3.5.5	
MS 15.1	Protocol discriminator, call reference, message type and message length ?	M			Yes__No__
MS 15.2	Cause ?	O Note 1			Yes__No__
MS 15.3	Endpoint reference ?	M Note 2			Yes__No__
Comments					

Note 1: Mandatory when DROP PARTY ACKNOWLEDGE is sent as a result of an error condition

Note 2: Must be the same value as in the DROP PARTY message being responded to.

3.12 Information elements Network to User (received by the user) (IER)

Item	Information element Does the implementation support the interpretation of ...	Status	Conditions for status	Reference	Support
IER 1	ATM adaptation layer parameters ?	M	MC 2	5.4.5.5	Yes__No__
IER 2	ATM traffic descriptor ?	M	MC 2	5.4.5.6	Yes__No__
IER 3	broadband bearer capability ?	M	MC 2	5.4.5.7	Yes__No__
IER 4	broadband high layer information ?	M	MC 2	5.4.5.8	Yes__No__
IER 5	broadband low layer information ?	M	MC 2	5.4.5.9	Yes__No__
IER 6	broadband locking shift ?	M		5.4.5.3	Yes__No__
IER 7	broadband non-locking shift ?	M		5.4.5.4	Yes__No__
IER 8	broadband repeat indicator ?	M	MC 2	5.4.5.19	Yes__No__
IER 9	broadband sending complete ?	M	MC 2	5.4.5.21	Yes__No__
IER 10	call state ?	M		5.4.5.10	Yes__No__
IER 11	called party number ?	M	MC 2	5.4.5.11	Yes__No__
IER 12	called party subaddress ?	M	MC 2	5.4.5.12	Yes__No__
IER 13	calling party number ?	M	MC 2	5.4.5.13	Yes__No__
IER 14	calling party subaddress ?	M	MC 2	5.4.5.14	Yes__No__
IER 15	cause ?	M		5.4.5.15	Yes__No__
IER 16	connection identifier ?	M		5.4.5.16	Yes__No__
IER 17	endpoint reference ?	M	MC 13	5.4.8.1	Yes__No__
IER 18	endpoint state ?	M	MC 13	5.4.8.2	Yes__No__
IER 19	quality of service parameter ?	M	MC 2	5.4.5.18	Yes__No__
IER 20	restart indicator ?	M		5.4.5.20	Yes__No__
Comments					

3.13 Information elements User to Network (Transmitted by the user) (IET)

Item	Information element Does the implementation support the inclusion of ...	Status	Conditions for status	Reference	Support
IET 1	ATM adaptation layer parameters ?	O		5.4.5.5	Yes__No__
IET 2	ATM traffic descriptor ?	M	MC 1	5.4.5.6	Yes__No__
IET 3	broadband bearer capability ?	M	MC 1	5.4.5.7	Yes__No__
IET 4	broadband high layer information ?	O	MC 1	5.4.5.8	Yes__No__
IET 5	broadband low layer information ?	O		5.4.5.9	Yes__No__
IET 6	broadband repeat indicator ?	O Note 1		5.4.5.19	Yes__No__
IET 7	broadband sending complete ?	O	MC 1	5.4.5.21	Yes__No__
IET 8	call state ?	M		5.4.5.10	Yes__No__
IET 9	called party number ?	M	MC 1	5.4.5.11	Yes__No__
IET 10	called party subaddress ?	O	MC 1	5.4.5.12	Yes__No__
IET 11	calling party number ?	O	MC 1	5.4.5.13	Yes__No__
IET 12	calling party subaddress ?	O	MC 1	5.4.5.14	Yes__No__
IET 13	cause ?	M		5.4.5.15	Yes__No__
IET 14	connection identifier ?	O Note 2		5.4.5.16	Yes__No__
IET 15	endpoint reference ?	M	MC 13	5.4.8.1	Yes__No__
IET 16	endpoint state ?	M	MC 13	5.4.8.2	Yes__No__
IET 17	quality of service parameter ?	M	MC 1	5.4.5.18	Yes__No__
IET 18	restart indicator ?	M		5.4.5.20	Yes__No__
IET 19	transit network selection ?	O	MC 1.2	5.4.5.22	Yes__No__

Comments

Note 1: Mandatory if sending multiple Broadband low layer information elements.
Note 2: Included when necessary to indicate the particular virtual channel to be restarted.

3.14 Timers (TM)

Item	Timer Does the implementation support…	Status	Conditions for status	Value	Reference	Support
TM 1	T303? Indicate its default value.	M	MC 1		5.7.2	Yes__No__
TM 2	T308? Indicate its default value.	M			5.7.2	Yes__No__
TM 3	T309? Indicate its default value.	M			5.7.2	Yes__No__
TM 4	T310? Indicate its default value.	M	MC 1		5.7.2	Yes__No__
TM 5	T313? Indicate its default value.	M	MC 2		5.7.2	Yes__No__
TM 6	T316? Indicate its default value.	M			5.7.2	Yes__No__
TM 7	T317? Indicate its default value.	M			5.7.2	Yes__No__
TM 8	T322? Indicate its default value.	M			5.7.2	Yes__No__
TM 9	T398? Indicate its default value.	M	MC 13		5.7.2	Yes__No__
TM10	T399? Indicate its default value.	M	PMP 1		5.7.2	Yes__No__
Comments						