

**CCITT** 

Q.784

THE INTERNATIONAL
TELEGRAPH AND TELEPHONE
CONSULTATIVE COMMITTEE

(02/91)

SPECIFICATIONS
OF SIGNALLING SYSTEM No. 7

### ISUP BASIC CALL TEST SPECIFICATION

Recommendation Q.784

Superseded by a more recent version



Geneva, 1991

#### **FOREWORD**

The CCITT (the International Telegraph and Telephone Consultative Committee) is a permanent organ of the International Telecommunication Union (ITU). CCITT is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

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Recommendation Q.784 was prepared by Study Group XI and was approved under the Resolution No. 2 procedure on the 15 of February 1991.

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#### CCITT NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication Administration and a recognized private operating agency.

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#### **Recommendation Q.784**

#### ISUP BASIC CALL TEST SPECIFICATION

#### 1 Introduction

This Recommendation contains a detailed set of tests for the Signalling System No. 7 integrated services digital network User Part (ISUP). Thiese tests are intended to validate the protocol specified in the Blue Book (1988) Recommendations Q.761-Q.764. Most tests contained in this Recommendation are applicable to the Recommendation Q.767 (1990). This Recommendation conforms to Recommendation Q.780 which describes the basic rules of the test specification.

#### 2 Objective of the test specification

The objective of the test specification is to provide:

Validation – A level of confidence that a given implementation conforms to the Recommendations Q.761-Q.764 for S.S. No. 7 ISUP.

Compatibility – A level of confidence that two implementations of S.S. No. 7 ISUP are compatible.

In order to ensure that this test specification meets this objective, the following criteria are used:

- 1) The test specification is not intended to provide exhaustive testing of all aspects of the S.S. No. 7 ISUP.
- 2) All tests should add value in meeting the objective stated above. For example, the testing of timers of which the only function is to alert maintenance staff on expiry may not be useful.
- 3) All tests should be of a practical nature and implementable using the available technology.
- 4) The test list should concentrate on the testing of normal signalling sequence. Testing of abnormal signalling procedures will only be identified where this is regarded as particularly useful.

### 3 Scope of the test list

The test list is composed based on the Blue Book Recommendations Q.761-Q.764. However, only stable and clearly specified procedures in the Blue Book Recommendation Q.764 are included, i.e. confusion procedures and congestion control/user flow control procedures are for further study.

#### 4 General principles of tests

The tests are described as "Validation" tests or "Validation" and "Compatibility" tests. Each test description indicates in the field "type of test" whether the test is a "Validation" test or a "Validation" and "Compatibility" test. In addition to signalling protocol testing, some call control functions are also verified, e.g. the transfer of speech/information is possible.

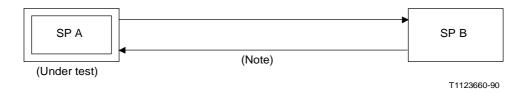
#### 5 Test environment

#### 5.1 Signalling relation

A stable signalling relation is required between "SP A" and "SP B" in order to carry out effective tests. A tested MTP signalling link should be used for compatibility tests. In addition, telephony/data circuits are required for some of the tests.

#### 5.2 Configuration

Only one configuration is required for the performance of these tests as shown in Figure 1/Q.784.



Note - The arrows indicate a signalling relation, and any necessary telephone/data circuits.

#### FIGURE 1/Q.784

#### Test configuration for ISUP basic call tests - Configuration 1

For some tests, the sentence "Repeat the test in the reverse direction" in the test description portion indicates that the "signalling point under test" becomes SP B.

#### 6 ISUP test list

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All tests may be validation tests. Tests marked "\*" are compatibility tests. Tests marked "f" are for further study.

#### 1 Circuit supervision

- \* 1.1 Non-allocated circuits
  - 1.2 Reset of circuits
  - 1.2.1 RSC received on an idle circuit
  - 1.2.2 RSC sent on idle circuit
  - 1.2.3 RSC received on a locally blocked circuit
  - 1.2.4 RSC received on a remotely blocked circuit
  - 1.2.5 Circuit group reset received
  - 1.2.6 Circuit group reset sent
  - 1.2.7 Circuit group reset received on remotely blocked circuits

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	1.3	Blocking of circuits
	1.3.1	Circuit group blocking/unblocking
*	1.3.1.1	CGB and CGU received
*	1.3.1.2	CGB and CGU sent
	1.3.2	Circuit blocking/unblocking
*	1.3.2.1	BLO received
*	1.3.2.2	BLO sent
*	1.3.2.3	Blocking from both ends; removal of blocking from one end
*	1.3.2.4	IAM received on a remotely blocked circuit
	1.4	Continuity check test call
*	1.4.1	CCR received: successful
*	1.4.2	CCR sent: successful
	1.4.3	CCR received: unsuccessful
	1.4.4	CCR sent: unsuccessful
	1.4.5	CCR received: unsuccessful; verify T27 timer
	1.5	Receipt of unreasonable signalling information messages
	1.5.1	Receipt of unexpected messages
	1.5.2	Receipt of unexpected messages during call setup
	1.5.3	Receipt of unexpected messages during a call
f	1.5.4	Confusion procedures
2	Normal	call setup – Ordinary speech calls
	2.1	Both way circuit selection
*	2.1.1	IAM sent by controlling SP
*	2.1.2	IAM sent by non-controlling SP
	2.2	Called address sending
*	2.2.1	"en bloc" operation
*	2.2.2	Overlap operation (with SAM)
	2.3	Successful call setup
*	2.3.1	Ordinary call (with various indications in ACM)
*	2.3.2	Ordinary call (with ACM, CPG, and ANM)
*	2.3.3	Ordinary call (with various indications in CON)
*	2.3.4	Call switched via satellite
*	2.3.5	Echo control procedure for call setup
*	2.3.6	Blocking and unblocking during a call (initiated)
*	2.3.7	Blocking and unblocking during a call (received)

### 3 Normal call release 3.1 Calling party clears before address complete 3.2 Calling party clears before answer 3.3 Calling party clears after answer 3.4 Called party clears after answer 3.5 Suspend initiated by the network Suspend and resume initiated by a calling party 3.6 3.7 Suspend and resume initiated by a called party 3.8 Collision of REL messages Unsuccessful call setup 4.1 Validate a set of known causes for release 5 Abnormal situation during a call 5.1 Inability to release in response to a REL after ANM 5.2 Timers 5.2.1 T7: waiting for ACM or CON 5.2.2 T9: waiting for an answer message 5.2.3 T1 and T5: failure to receive a RLC 5.2.4 T6: waiting for RES (Network) message 5.2.5 T8: waiting for COT message if applicable 5.2.6 T12 and T13: failure to receive a BLA 5.2.7 T14 and T15: failure to receive a UBA 5.2.8 T16 and T17: failure to receive a RLC 5.2.9 T18 and T19: failure to receive a CGBA 5.2.10 T20 and T21: failure to receive a CGUA 5.2.11 T22 and T23: failure to receive a GRA 5.3 Reset of circuits during a call 5.3.1 Of an outgoing circuit 5.3.2 Of an incoming circuit

#### 6 Special call setup

- 6.1 Continuity check call
- \* 6.1.1 Continuity check required
- \* 6.1.2 COT applied on previous circuit
  - 6.1.3 Calling party clears during a COT
- \* 6.1.4 Delay of through connect
  - 6.1.5 COT unsuccessful
  - 6.2 Automatic repeat attempt
- \* 6.2.1 Dual seizure for non-controlling SP
  - 6.2.2 Blocking of a circuit
  - 6.2.3 Circuit reset
  - 6.2.4 Continuity check failure
  - 6.2.5 Reception of unreasonable signalling information
  - 6.3 Dual seizure
- \* 6.3.1 Dual seizure for controlling SP
  - 6.4 Semi-automatic operation
  - 6.4.1 FOT sent following a call to a subscriber
  - 6.4.2 FOT received following a call to a subscriber
  - 6.4.3 FOT sent following a call via codes 11 and 12
  - 6.4.4 FOT received following a call via codes 11 and 12

#### 7 Bearer services

- 7.1 64 kbit/s unrestricted
- \* 7.1.1 Successful call setup
- \* 7.1.2 Unsuccessful call setup
- \* 7.1.3 Dual seizure
  - 7.2 3.1 kHz audio
- \* 7.2.1 Successful call setup

### 8 Congestion control and user flow control

Further study.

TEST NUMBER: 1.1					
REFERI	ENCE:				
TITLE:	Circuit supervision				
SUBTIT	LE: Non-allocated circ	vuits			
PURPOS	SE: To verify that on realert the maintenan	eccipt of a CIC relating to a circuit which does not ce system	t exist, SP A will discard the message and		
PRE-TE		range the data in signalling point B such that the tween SP A and SP B	CIC identifies a circuit that does not exist		
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP		
EXPEC	ΓED MESSAGE SEQUI	ENCE:			
S	SP A		SP B		
	< IAM				
	TEST DESCRIPTION				
1	Arrange for SP B to send an initial address message.  Record the message sequence using a signal monitor.				
2	CHECK A: WAS THE MESSAGE SEQUENCE AS SHOWN ABOVE?				
3	CHECK B: WAS THE INDICATION GIVEN TO THE MAINTENANCE SYSTEM?				
	I				

TEST N	TEST NUMBER: 1.2.1			
REFERI	ENCE: Q.764 Section 2	.10.3.1 a), b)		
TITLE:	Reset of circuits			
SUBTIT	LE: RSC received on a	n idle circuit		
PURPO	SE: To verify that on re	ceipt of a reset circuit message SP A will respond	d by sending a release complete message	
PRE-TE	ST CONDITIONS: Th	e circuit is idle		
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP	
EXPEC	TED MESSAGE SEQUI	ENCE:		
5	SP A SP B			
	RLC	<	RSC	
	TEST DESCRIPTION			
1	Arrange for SP B to send a reset-circuit message.  Record the message sequence using a signal monitor.			
2	CHECK A: IS THE CIRCUIT IDLE?			
3	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE?			

TEST NUMBER: 1.2.2				
REFERENCE: Q.764 Section	n 2.10.3.1			
TITLE: Reset of circuits				
SUBTITLE: RSC sent on an	idle circuit			
PURPOSE: To verify that SI	P A is able to generate reset-circuit message			
PRE-TEST CONDITIONS:	The circuit is idle			
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP		
EXPECTED MESSAGE SEC	QUENCE:			
SP A		SP B		
RSC		RLC		
TEST DESCRIPTI	TEST DESCRIPTION			
	Arrange for SP A to send a reset-circuit message. Record the message sequence using a signal monitor.			
2 CHECK A: IS TH	CHECK A: IS THE CIRCUIT IDLE?			
3 CHECK B: WAS	3 CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE?			

TEST NUMBER: 1.2.3			
REFERE	ENCE: Q.764 Section 2	.10.3.1 c)	
TITLE:	Reset of circuits		
SUBTIT	LE: RSC received on a	locally blocked circuit	
PURPOS		receipt of a reset circuit message while in its local and release complete messages	lly blocked state, SP A will respond by
PRE-TE	ST CONDITIONS: Th	e circuit is idle	
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP
EXPECT	ΓED MESSAGE SEQUI	ENCE:	
SP A SP B			SP B
I	BLO	> <	BLA RSC
BLO RLC (Note)		> 	BLA (Note)
	TEST DESCRIPTION	T.	
1	Arrange for SP A to send a blocking message. Record the message sequence using a signal monitor.		
2	Arrange for SP B to send a reset-circuit message.		
3	CHECK A: DOES THE CIRCUIT REMAIN IN THE LOCALLY BLOCKED STATE?		
4	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE?		
	Note – The message sequence for RLC and BLA may occur in reverse sequence.		

TEST N	TEST NUMBER: 1.2.4			
REFERI	ENCE: Q.764 Section 2.10	0.3.1 d)		
TITLE:	Reset of circuits			
SUBTIT	LE: RSC received on a re	motely blocked circuit		
PURPOS	SE: To verify that SP A is	able to react to a reset-circuit message for a rem	notely blocked circuit	
PRE-TE	ST CONDITIONS: The c	ircuit is idle		
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP	
EXPEC	TED MESSAGE SEQUEN	CE:		
S	SP A SP B			
1	BLA	<	BLO	
RSC		RSC		
	TEST DESCRIPTION			
1	Arrange for SP B to send a blocking message. Record the message sequence using a signal monitor.			
2	Arrange for SP B to send a reset-circuit message.			
3	CHECK A: IS THE CIRCUIT IDLE?			
4	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE?			

TEST N	EST NUMBER: 1.2.5				
REFERI	ENCE: Q.764 Section 2.10.	3.2			
TITLE:	Reset of circuits				
SUBTIT	LE: Circuit group reset rec	eived			
PURPO	SE: To verify that on receip acknowledge message	ot of one circuit group reset message SP A wil	ll respond by sending a circuit group reset		
PRE-TE	ST CONDITIONS: All cir	cuits are idle			
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP		
EXPEC	TED MESSAGE SEQUENC	CE:			
:	SP A		SP B		
,	< GRS>				
	TEST DESCRIPTION				
1		Arrange for SP B to send a circuit group reset message. Record the message sequence using a signal monitor.			
2	CHECK A; ARE THE CIRCUITS IDLE?				
3	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE?				
4	CHECK C: ARE THE STATUS BITS IN GRA SET CORRECTLY?				
5	CHECK D: IF RANGE=0, GRS IS DISCARDED AND GRA IS NOT SENT.				
6	CHECK E: IF RANGE>	CHECK E: IF RANGE>31, GRS IS DISCARDED AND GRA IS NOT SENT.			

TEST N	TEST NUMBER: 1.2.6				
REFERI	ENCE: Q.764 Section 2	.10.3.2			
TITLE:	Reset of circuits				
SUBTIT	LE: Circuit group rese	sent			
PURPOS	SE: To verify that SP A	is able to generate a circuit group reset message			
PRE-TE	ST CONDITIONS: Al	circuits are idle			
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP		
EXPEC	ΓED MESSAGE SEQUI	ENCE:			
5	SP A		SP B		
(	GRS				
	TEST DESCRIPTION				
1	Arrange for SP A to send a circuit group reset message.  Record the message sequence using a signal monitor.				
2	CHECK A: ARE THE CIRCUITS IDLE?				
3	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE?				

TEST NUMBER: 1.2.7				
REFERENCE: Q.764 Section 2	REFERENCE: Q.764 Section 2.10.3.2 d)			
TITLE: Reset of circuits				
SUBTITLE: Circuit group reset	received on remotely blocked circuits			
PURPOSE: To verify that SP A	is able to react to a circuit group reset message	correctly for remotely blocked circuits		
PRE-TEST CONDITIONS: All	circuits are idle			
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP		
EXPECTED MESSAGE SEQUE	ENCE:	•		
SP A		SP B		
BLA	<	BLO (CIC=x)		
BLA	<	BLO (CIC=y)		
GRA	<	GRS (including CIC=x,y)		
TEST DESCRIPTION				
	Arrange for SP B to send a circuit group reset message including the blocked circuits x and y. Record the message sequence using a signal monitor.			
2 CHECK A: ARE THE	CHECK A: ARE THE CIRCUITS IDLE?			
3 CHECK B: WAS TH	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE?			

TEST NUMBER: 1.3.1.1				
REFERI	ENCE: Q.764 Section 2	2.9.2		
TITLE:	Circuit group blocking	/unblocking		
SUBTIT	TLE: CGB and CGU re	ceived		
PURPO	SE: To verify that the c	circuit group blocking feature can be correctly init	ated	
PRE-TE	ST CONDITIONS: A	l circuits are idle	_	
CON	IFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPEC'	TED MESSAGE SEQU	ENCE:		
:	SP A		SP B	
	CGBA	<	CGB	
	CGUA	<	CGU	
	TEST DESCRIPTION			
1	Arrange for SP B to send a circuit group blocking message with the circuit group supervision message type indicator set to "maintenance oriented".  Record the message sequence using a signal monitor.			
2		RIFY THAT A CALL CANNOT BE ORIGINATED FROM SP A ON THE CIRCUITS DICATED BY THE RANGE AND STATUS PARAMETER IN THE CGB MESSAGE.		
3	Arrange for SP B to send one circuit group unblocking message with circuit group supervision message type set to "maintenance oriented".			
4	CHECK B: VERIFY THAT A CALL CAN BE ORIGINATED FROM EITHER SP ON THE CIRCUITS INDICATED BY THE RANGE FIELD.			
5	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE?			
6	CHECK D: If RANC	CHECK D: If RANGE=0, CGB is discarded and CGBA is not sent.		
7	CHECK E: If RANC	CHECK E: If RANGE>31, CGB is discarded and CGBA is not sent.		
8	Repeat steps 1-7 with the circuit group supervision message type indicator set to "hardware failure oriented".			
	Note – A CPC="test c	all" should not be used in CHECK A and CHECK	В.	

TEST NUMBER: 1.3.1.2				
REFERENCE: Q.764 Sec	REFERENCE: Q.764 Section 2.9.2			
TITLE: Circuit group bloc	king/unblocking			
SUBTITLE: CGB and CC	J sent			
PURPOSE: To verify that message	SP A is able to generate	one circuit group blocking me	essage and one circuit group unblocking	
PRE-TEST CONDITIONS	All circuits are idle			
CONFIGURATION: 1	TYPE OF T	EST: VAT and CPT	TYPE OF SP: SP	
EXPECTED MESSAGE S	QUENCE:			
SP A			SP B	
CGB	CGB> < CGBA			
CGU> < CGUA			CGUA	
TEST DESCRIP	TON			
indicator set to "	Arrange for SP A to send a circuit group blocking message with the circuit group supervision message type indicator set to "maintenance oriented".  Record the message sequence using a signal monitor.			
	Arrange for SP A to send a circuit group unblocking message with the circuit group supervision message type indicator set to "maintenance oriented".			
	CHECK A: VERIFY THAT A CALL CAN BE ORIGINATED FROM EITHER SP ON THE CIRCUITS INDICATED BY THE RANGE FIELD.			
4 CHECK B: WA	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE?			
5 Repeat steps 1-4	Repeat steps 1-4 with the circuit group supervision message type indicator set to "hardware failure oriented".			
Note – A CPC="	est call" should not be use	ed in CHECK A.		

TEST N	UMBER: 1.3.2.1			
REFERENCE: Q.764 Section 2.9.2				
TITLE:	Circuit blocking/unblo	cking		
SUBTIT	TLE: BLO received			
PURPOS	SE: To verify that the b	olocking/unblocking procedure can be correctly initi	iated	
PRE-TE	ST CONDITIONS: Th	ne circuit is idle		
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPEC"	TED MESSAGE SEQU	ENCE:		
\$	SP A		SP B	
1	BLA	<	BLO	
BLA UBA		<	UBL	
	TEST DESCRIPTION	N		
1		end a blocking message. equence using a signal monitor.		
2	CHECK A: VERIFY	THAT A CALL CANNOT BE ORIGINATED FR	OM SP A ON THIS CIRCUIT.	
3	Arrange for SP B to s	Arrange for SP B to send an unblocking message.		
4	CHECK B: VERIFY THAT A CALL CAN BE ORIGINATED FROM EITHER SP ON THIS CIRCUIT.			
5	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE?			
	Note – A CPC="test call" should not be used in CHECK A and CHECK B.			

TEST N	NUMBER: 1.3.2.2			
REFER	ENCE: Q.764 Section 2.	9.2		
TITLE:	Circuit blocking/unblock	king		
SUBTI	TLE: BLO sent			
PURPO	OSE: To verify that SP A	is able to generate blocking messages		
PRE-TI	EST CONDITIONS: The	circuit is idle		
COl	NFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPEC	CTED MESSAGE SEQUE	NCE:		
	SP A SP B			
BLO			BLA	
	UBL		UBA	
	TEST DESCRIPTION			
1	Arrange for SP A to send a blocking message. Record the message sequence using a signal monitor.			
2	Arrange for SP A to send an unblocking message.			
3	CHECK A: VERIFY THAT A CALL CAN BE ORIGINATED FROM EITHER SP ON THIS CIRCUIT.			
4	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE?			
	Note – A CPC="test call" should not be used in CHECK A.			

TEST NUMBER: 1.3.2.3			
REFERENCE: Q.764 Section 2.9.2			
TITLE: Circuit b	locking/unbloc	king	
SUBTITLE: Bloc	cking from bot	h ends; removal of blocking from one end	
PURPOSE: To ve	erify that the b	locking/unblocking procedure can be correctly initi	iated
PRE-TEST COND	OITIONS: The	e circuit is idle	
CONFIGURAT	TION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECTED MES	SAGE SEQUE	ENCE:	
SP A			SP B
BLO			BLA
DI A		<	BLO
BLA UBL			
		<	UBA UBL
UBA			
TEST D	TEST DESCRIPTION		
	Arrange for SP A to send a blocking message. Record the message sequence using a signal monitor.		
2 Arrange	for SP B to se	end an unblocking message.	
3 CHECK	A: VERIFY	THAT A CALL CANNOT BE ORIGINATED ON	N THIS CIRCUIT BY EITHER SP.
4 Arrange	for SP A to se	nd an unblocking message.	
5 CHECK	CHECK B: VERIFY THAT A CALL CANNOT BE ORIGINATED BY SP A.		
6 Arrange	Arrange for SP B to send an unblocking message.		
7 CHECK	CHECK C: VERIFY THAT A CALL CAN BE ORIGINATED ON THIS CIRCUIT BY EITHER SP.		
8 CHECK	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?		
Note – A	CPC="test ca	all" should not be used in CHECKs A, B, and C.	

TEST NUMBER: 1.3.2.4				
REFERI	REFERENCE: Q.764 Section 2.9.2.3 xiv)			
TITLE:	Circuit blocking/unblo	cking		
SUBTIT	TLE: IAM received on a	a remotely blocked circuit		
PURPO	SE: To verify that an IA	AM will unblock a remotely blocked circuit		
PRE-TE	ST CONDITIONS: Th	e circuit is idle		
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPEC	TED MESSAGE SEQUI	ENCE:		
	SP A		SP B	
	BLA	<	BLO	
		<	IAM	
	ACM			
ANM Connectivity		<del>-</del>	Connectivity	
< REL RLC>			REL	
	TEST DESCRIPTION	Ī		
1	Arrange for SP B to send a blocking message. Record the message sequence using a signal monitor.			
2	CHECK A: VERIFY THAT A CALL CANNOT BE ORIGINATED FROM SP A ON THIS CIRCUIT.			
3	Arrange for SP B to send an initial address message (non-test call).			
4	CHECK B: VERIFY THAT THE CALL IS PROCESSED NORMALLY AT SP A AND THE BLOCKING STATUS FOR THIS CIRCUIT IS REMOVED AT SP A.			
5	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE?			
	Note – A CPC="test call" should not be used in CHECK A.			

TEST NUMBER: 1.4.1					
REFERI	ENCE: Q.764 Section 2	.1.8			
TITLE:	Continuity check test ca	all			
SUBTIT	TLE: CCR received: suc	cessful			
PURPOS	SE: To verify that the co	ontinuity test call procedure can be correctly perform	rmed		
PRE-TE	ST CONDITIONS: The	e circuit is idle			
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP		
EXPEC	TED MESSAGE SEQUE	ENCE:			
SP A SP B			SP B		
		<	CCR		
	Check tone				
I	< REL RLC>				
	TEST DESCRIPTION	T			
1	Initiate the continuity test call procedure at SP B. Record the message sequence using a signal monitor.				
2	CHECK A: IS THE CIRCUIT IDLE?				
3	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE?				

TEST NUMBER: 1.4.2					
REFERENC	E: Q.764 Section 2	.1.8			
TITLE: Cor	ntinuity check test c	all			
SUBTITLE:	CCR sent: success	ful			
PURPOSE:	To verify that the c	ontinuity test call procedure can be correctly perfor	rmed		
PRE-TEST C	CONDITIONS: Th	e circuit is idle			
CONFIG	URATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP		
EXPECTED	MESSAGE SEQUI	ENCE:			
SP A SP B		SP B			
CCR Check tone					
REL		> <	RLC		
TE	TEST DESCRIPTION				
	Initiate the continuity test call procedure at SP A. Record the message sequence using a signal monitor.				
2 CH	CHECK A: IS THE CIRCUIT IDLE?				
3 CH	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE?				

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TEST N	TEST NUMBER: 1.4.3			
REFERI	ENCE: Q.764 Section 2	2.1.8		
TITLE:	Continuity check test c	all		
SUBTIT	LE: CCR received: un	successful		
PURPO	SE: To verify that the n	nessages associated with continuity check procedur	re can be correct	ly received
PRE-TE	ST CONDITIONS: En	sure that no backward check tone is detected withi	n the specified t	ime out
CON	FIGURATION: 1	TYPE OF TEST: VAT	TY	PE OF SP: SP
EXPEC	ΓED MESSAGE SEQU	ENCE:		
	SP A			SP B
		<		CCR
				Check tone   T24
		<		- COT (failed)
			1-3 mins.	T26 
		<		- CCR
				Check tone   T24
		<		- COT (failed) and
				alert
				the maintenance
				system
				   T26
		<		CCR
	TEST DESCRIPTION	I		
1	1 Initiate the continuity test call procedure at SP B. Record the message sequence using a signal monitor.			
2	CHECK A: WAS TH	HE SECOND CONTINUITY CHECK INITIATED	WITHIN 1-3 M	MINUTES
3	CHECK B: WAS THE MAINTENANCE SYSTEM ALERTED ON FAILURE OF THE SECOND CONTINUITY CHECK?			
4	4 CHECK C: WAS THE CHECK REPEATED AT INTERVALS OF 1 TO 3 MINUTES?			
5	CHECK D: WAS TH	IE MESSAGE SEQUENCE AS ABOVE?		

TEST NUMBER: 1.4.4		
REFERENCE: Q.764 Section 2.1.8		
TITLE: Continuity check test call		
SUBTITLE: CCR sent: unsuccessful		
PURPOSE: To verify that the continuity check procedure can be correctly invoked		
PRE-TEST CONDITIONS: Ensure that no backward check tone is detected within the specified time out		
CONFIGURATION: 1 TYPE OF TEST: VAT TYPE OF SP: SP		
EXPECTED MESSAGE SEQUENCE:		
SP A		
CCR Check tone  T24    COT (failed)  T26   1-3 mins.  CCR Check tone  T24    T24    T24    COT (failed)  T26   1-3 mins.  CCR  T27    T28    T29    T29    T29    T20    T20    T21    T22    T22    T23    T24    T25    T26    T27    T28    T29    T29    T20    T20    T20    T21    T22    T23    T24    T25    T26    T27    T28    T29    T29    T20    T20    T21    T22    T23    T24    T25    T26		
TEST DESCRIPTION		
Initiate the continuity test call procedure at SP A. Record the message sequence using a signal monitor.		
2 CHECK A: WAS THE SECOND CONTINUITY CHECK INITIATED WITHIN 1-3 MINUTES		
3 CHECK B: WAS THE CHECK REPEATED AT INTERVALS OF 1 TO 3 MINUTES?		
CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE?		

#### **ISUP Basic Call Test Specification**

TEST NUMBER: 1.4.5 REFERENCE: Q.764 Section 2.1.8 TITLE: Continuity check test call SUBTITLE: CCR received: unsuccessful; verify T27 timer PURPOSE: To verify that the continuity check procedure can be correctly received PRE-TEST CONDITIONS: a) Continuity check is required. b) Ensure that no backward check tone is detected within the specified time out. The data in SP B is arranged such that a second CCR is not generated. CONFIGURATION: 1 TYPE OF TEST: VAT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B IAM Check tone COT (failed) T27 | 4 mins. RSC **RLC** TEST DESCRIPTION 1 Make a call from SP B to SP A. Record the message sequence using a signal monitor. 2 CHECK A: IS T27 INITIATED AT SP A TO WAIT FOR CCR? 3 CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .

TEST NUMBER: 1.5.1				
REFERE	ENCE: Q.764 Section 2.	.10.5.1 a), b), d)		
TITLE:	Receipt of unreasonable	e signalling information messages		
SUBTIT	LE: Receipt of unexpec	eted messages		
PURPOS	SE: To verify that the ac Section 2.10.5.1	ction taken by a signalling point upon receipt of un	expected messages is as stated in Q.764	
PRE-TES	ST CONDITIONS:			
a) b)	Arrange the data in sig The circuit should be i	gnalling point B such that REL, RLC and other unridle and unblocked.	easonable messages may be initiated.	
CONI	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP	
EXPECT	TED MESSAGE SEQUE	ENCE:		
	SP A		SP B	
a	)	<	REL	
R	RLC			
b	b) < RLC			
С		<	XXX (Note 1)	
K	RSC		RLC	
d		<	YYY	
	TEST DESCRIPTION			
1	Arrange for SP B to ser	nd a release message.		
2	CHECK A: IS THE C	CIRCUIT IDLE?		
3	CHECK B: WAS TH	E MESSAGE SEQUENCE AS IN a) ABOVE?		
4		nd a release complete message.		
5	CHECK C: IS THE CIRCUIT IDLE?			
6	CHECK D: WAS THE MESSAGE SEQUENCE AS IN b) ABOVE?			
7	Arrange for SP B to send an unreasonable message XXX.			
8	CHECK E: IS THE CIRCUIT IDLE?			
9	CHECK F: WAS THE MESSAGE SEQUENCE AS IN c) ABOVE?			
10	Arrange for SP B to ser	nd an unreasonable message YYY.		
11		Y DISCARDED AS IN d) ABOVE?		
	Note 1 – Not all the uni	resonable messages will cause an RSC message to	be sent.	
	Note 2 – This test covers only some of the ambiguous messages which could be received.			

TEST NUMBER: 1.5.2				
REFER	REFERENCE: Q.764 Section 2.10.5.1 d)			
TITLE:	Receipt of unreasonabl	e signalling information messages		
SUBTIT	TLE: Receipt of unexpe	cted messages during call setup		
a) '	Section 2.10.5.1.			
PRE-TEST CONDITIONS:  a) Arrange the data in signalling point B such that other unreasonable messages may be initiated. b) The circuit should be idle and unblocked.				
CON	IFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP	
EXPEC	TED MESSAGE SEQUI	ENCE:		
	SP A		SP B	
	a) IAM		ACM XXX (Note) ANM	
	Connectivity REL		Connectivity	
1	b)	<	IAM	
]	RSC	<	YYY (Note)	
	TEST DESCRIPTION			
1	Make a call from SP A to SP B.  Arrange for SP B to send an unreasonable message XXX after the address complete message.  Record the message sequence using a signal monitor.			
2	CHECK A: IS THE CONNECTION ESTABLISHED?			
3	CHECK B: WAS TH	E MESSAGE SEQUENCE AS IN a) ABOVE?		
4	Make a call from SP B to SP A. Arrange for SP B to send an unreasonable message YYY immediately after sending the initial address message.			
5	CHECK C: IS THE CIRCUIT IDLE?			
6	CHECK D: WAS TH	E MESSAGE SEQUENCE AS IN b) ABOVE?		
	Note – Messages other than the call control messages will be used for XXX and YYY.			

		<del>-</del>		
TEST N	IUMBER: 1.5.3			
REFERI	ENCE: Q.764 Section 2.1	0.5.1 c), d)		
TITLE:	Receipt of unreasonable	signalling information messages		
SUBTIT	TLE: Receipt of unexpect	ed messages during a call		
PURPO	SE: To verify that the acc Section 2.10.5.1	tion taken by a signalling point upon receipt of	unexpected messages is as stated in Q.764	
PRE-TEST CONDITIONS:  a) Arrange the data in signalling point B such that an unexpected RLC and other unreasonable messages may be initiated.  b) The circuit should be idle and unblocked.				
CON	IFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP	
	EXPECTED MESSAGE SEQUENCE:  SP A SP B			
	a) IAM		ACM	
	Connectivity	<	ACM ANM Connectivity RLC	
]	REL	> <	RLC	
b) IAM		ACM ANM		
	Connectivity  Connectivity		Connectivity XXX (Note) Connectivity	
]	RLC	<	REL	
	TEST DESCRIPTION			
1 2 3 4 5	Make a call from SP A to SP B.  Record the message sequence using a signal monitor.  CHECK A: IS THE CONNECTION ESTABLISHED?  Arrange for SP B to send a release complete message.  CHECK B: IS THE CIRCUIT IDLE?  Make a call from SP A to SP B.			
6 7 8 9	CHECK C: IS THE CONNECTION ESTABLISHED?  Arrange for SP B to send an unreasonable message XXX.  CHECK D: IS THE CONNECTION STILL ESTABLISHED?  CHECK E: WAS THE MESSAGE SEQUENCE AS IN b) ABOVE?  Note – Messages other than REL, RLC, RSC and SUS will be used for XXX.			

TEST NUMBER: 2.1.1			
REFERENCE: Q.764 Section	12.1		
TITLE: Both way circuit sele	ction		
SUBTITLE: IAM sent by con	ntrolling SP		
PURPOSE: To verify that sign the controlling SI	gnalling point A can initiate an outgoing call on a ci	rcuit capable of bothway operation when	
PRE-TEST CONDITIONS:  a) Called termination is free.  b) Circuit selected is capable of bothway operation.  c) SP A is the controlling signalling point.			
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPECTED MESSAGE SEQ	UENCE:		
SP A		SP B	
IAM		Ringing tone ANM Connectivity	
TEST DESCRIPTION	N		
1 Make a call from SF Record the message	A to SP B. sequence using a signal monitor.		
2 CHECK A: CAN F	CHECK A: CAN RINGING TONE BE HEARD?		
3 The called party sho	The called party should answer the call.		
4 CHECK B: IS THI	CHECK B: IS THE CONNECTION ESTABLISHED?		
5 The calling party she	The calling party should clear the call.		
6 CHECK C: IS THI	CHECK C: IS THE CIRCUIT IDLE?		
7 CHECK D: WAS 1	THE MESSAGE SEQUENCE AS ABOVE?		

TEST NUMBER: 2.1.2			
REFERE	ENCE: Q.764 Section 2	.1	
TITLE:	Both way circuit selecti	on	
SUBTIT	LE: IAM sent by non-c	ontrolling SP	
PURPOS	E: To verify that signathe non-controlling	alling point A can initiate an outgoing call on a circ	uit capable of bothway operation when
PRE-TEST CONDITIONS:  a) Called termination is free.  b) Circuit selected is capable of bothway operation.  c) SP A is the non-controlling signalling point.			
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECT	TED MESSAGE SEQUE	ENCE:	
S	SP A		SP B
IAM  Connectivity  RLC			ACM Ringing tone ANM Connectivity REL
	TEST DESCRIPTION		
1	Make a call from SP A Record the message se	to SP B. quence using a signal monitor.	
2	CHECK A: CAN RIN	IGING TONE BE HEARD?	
3	The called party should answer the call.		
4	CHECK B: IS THE CONNECTION ESTABLISHED?		
5	The calling party should clear the call.		
6	CHECK C: IS THE CIRCUIT IDLE?		
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?		

TEST NUMBER: 2.2.1			
REFERENCE: Q.764 Sections 2.1.1, 2.1.4, 2.1.7, 2.3			
TITLE: Called address sendi	ing		
SUBTITLE: "en bloc" opera	ition		
PURPOSE: To verify that a	call can be successfully established (all digits included	in the IAM)	
PRE-TEST CONDITIONS:  a) Called termination is free.  b) The exchange data is arranged such that all digits are included in the IAM.			
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPECTED MESSAGE SEC	QUENCE:		
SP A		SP B	
IAM  Connectivity  REL		ACM Ringing tone ANM Connectivity RLC	
TEST DESCRIPTION	ON		
	Make a call from SP A to SP B. Record the message sequence using a signal monitor.		
2 CHECK A: CAN	CHECK A: CAN RINGING TONE BE HEARD?		
The called party she	The called party should answer the call.		
4 CHECK B: IS TH	CHECK B: IS THE CONNECTION ESTABLISHED?		
5 The calling party sh	The calling party should clear the call.		
6 CHECK C: IS TH	CHECK C: IS THE CIRCUIT IDLE?		
7 CHECK D: WAS	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?		
8 For validation testing	For validation testing repeat this test in the reverse direction.		

TEST NUMBER: 2.2.2			
REFERENCE: Q.764 Section 2.1.2			
TITLE:	Called address sending		
SUBTIT	LE: Overlap operation	(with SAM)	
PURPOS	SE: To verify that signa	lling point A can initiate a call using an IAM follow	ved by a SAM
PRE-TEST CONDITIONS:  a) Called termination is free.  b) The signalling point data is arranged such that digits are generated in an IAM followed by a SAM			
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECT	ΓED MESSAGE SEQUE	ENCE:	
S	SP A		SP B
	AM SAM	> 	ACM Ringing tone
	Connectivity REL	<	ANM Connectivity RLC
	TEST DESCRIPTION		
1 2 3 4 5 6	Record the message sequence using a signal monitor.		
7 8	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?  For validation testing repeat this test in the reverse direction.  Where SP A is in a position to know by digit analysis that the final digit has been sent. Confirm that an end-of-pulsing (ST) signal is included in the last address message.  Note – Multiple SAMs may be used.		

TEST N	UMBER: 2.3.1		
REFERI	ENCE: Q.764 Sections	2.1.4.1, 2.1.7	
TITLE:	Successful Call setup		
SUBTIT	LE: Ordinary call (with	various indications in ACM)	
PURPO	SE: To verify that a call	can be successfully completed using various indica	ations in address complete messages
PRE-TE	ST CONDITIONS: Ca	led termination is free	
CON	CONFIGURATION: 1 TYPE OF TEST: VAT and CPT TYPE OF SP: SP		TYPE OF SP: SP
EXPEC	TED MESSAGE SEQUE	ENCE:	
	SP A SP B		SP B
(	IAM Connectivity REL		ACM Ringing tone ANM Connectivity RLC
	TEST DESCRIPTION		
1	Make a call from SP A to SP B. Record the message sequence using a signal monitor.		
2	CHECK A: CAN RINGING TONE BE HEARD?		
3	The called party should answer the call.		
4	CHECK B: IS THE CONNECTION ESTABLISHED?		
5	The calling party should clear the call.		
6	CHECK C: IS THE CIRCUIT IDLE?		
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?		
8	Repeat steps 1-7 with the following combinations of backward call indicators in the address complete message:		
	<ul> <li>Called party status indicator="subscriber free", or, "no indication".</li> <li>ISDN access indicator="ISDN" or "NON ISDN".</li> </ul>		
9	Repeat this test in the reverse direction.		

TEST N	TUMBER: 2.3.2		
REFERENCE: Q.764 Sections 2.1.5			
TITLE:	Successful Call setup		
SUBTIT	TLE: Ordinary call (with	ACM, CPG, and ANM)	
PURPO	SE: To verify that a call answer message	can be successfully completed using address comp	plete message, call progress message and
PRE-TE	EST CONDITIONS: Cal	led termination is free	
CON	IFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPEC'	TED MESSAGE SEQUE	NCE:	
:	SP A		SP B
	IAM		ACM CPG Ringing tone ANM
	Connectivity REL		Connectivity RLC
	TEST DESCRIPTION		
1	Make a call from SP A to SP B. Record the message sequence using a signal monitor.		
2	CHECK A: CAN RINGING TONE BE HEARD?		
3	The called party should answer the call.		
4	4 CHECK B: IS THE CONNECTION ESTABLISHED?		
5	The calling party should clear the call.		
6	CHECK C: IS THE CIRCUIT IDLE?		
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?		
8	Repeat steps 1-7 with the event indicator="alerting" or "progress" or "in-band information or an appropriate pattern is now available" set in the event information parameter in CPG.		
9	Repeat this test in the reverse direction.		

TEST NUMBER: 2.3.3			
REFERENCE: Q.764 Sections 2.1.4.2			
TITLE:	Successful Call setup		
SUBTI	ΓLE: Ordinary call (with	various indications in CON)	
PURPO	SE: To verify that a call	can be successfully completed using various indicates	cations in the connect message
PRE-TE	EST CONDITIONS: Cal SP	lled termination is free. A connect message is ret B	urned instead of an answer message from
CON	NFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPEC	TED MESSAGE SEQUE	ENCE:	
SP A SP B		SP B	
	IAM		CON
	Connectivity		Connectivity
	REL		RLC
	TEST DESCRIPTION		
1	Make a call from SP A to SP B. Record the message sequence using a signal monitor.		
2	The called party should answer the call.		
3	CHECK A: IS THE CONNECTION ESTABLISHED?		
4	The calling party should answer the call.		
5	CHECK B: IS THE CIRCUIT IDLE?		
6	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE?		
7	Repeat steps 1-6 with the following combinations of backward call indicators in the connect message:		
	<ul> <li>Called party status indicators = "subscriber free" or, "no indication".</li> <li>ISDN access indicators = "ISDN" or "NON ISDN".</li> </ul>		
8	Repeat this test in the reverse direction.		

TEST N	UMBER: 2.3.4			
REFERE	EFERENCE: Q.764 Section 2.1			
TITLE:	Successful Call setup			
SUBTIT	LE: Call switched via a	ı satellite		
PURPOS	SE: To verify the satelli	te indicator in the initial address message is correctly	y set	
a) C b) T	C-TEST CONDITIONS:  Called termination is free.  The signalling point data is arranged such that the call is switched via a satellite connection or has a satellite connection already included in the path			
CONI	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPECT	TED MESSAGE SEQUE	ENCE:		
S	SP A		SP B	
C	AM Connectivity REL		ACM Ringing tone ANM Connectivity RLC	
	TEST DESCRIPTION			
1	Make a call from SP A to SP B. Record the message sequence using a signal monitor.			
2	CHECK A: CAN RIN	NGING TONE BE HEARD?		
3	The called party should	d answer the call.		
4	CHECK B: IS THE C	CONNECTION ESTABLISHED?		
5	The calling party shoul	ld clear the call.		
6	CHECK C: IS THE CIRCUIT IDLE?			
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?			
8	CHECK E: WAS THE SATELLITE INDICATOR "BA" BIT IN THE NATURE OF CONNECTION INDICATORS IN THE IAM SET TO "01"?			
9	For validation testing repeat this test in the reverse direction.			

TEST N	UMBER: 2.3.5		
REFERE	RENCE: Q.764 Section 2.8		
TITLE:	Successful Call setup		
SUBTIT	LE: Echo control proce	edure for call set up	
PURPOS	SE: To verify that a call	can be successfully established with the inclusion	of echo control devices
a) ( b) T	RE-TEST CONDITIONS:  Called termination is free.  The signalling point data is arranged such that the call is routed over a route requiring echo control devices or already has an echo control device included in the connection.		
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECT	TED MESSAGE SEQUI	ENCE:	
S	SP A		SP B
I	AM		ACM Ringing tone
	<		Connectivity
	TEST DESCRIPTION		
1	Make a call from SP A to SP B with the echo control indicator set.  Record the message sequence using a signal monitor.		
2	CHECK A: IS THE ECHO CONTROL DEVICE INDICATOR BIT "E" (OUTGOING HALF ECHO DEVICE INCLUDED) IN NATURE OF CONNECTION INDICATORS IN THE IAM SET TO "1"?		
3	CHECK B: IS THE ECHO CONTROL DEVICE INDICATOR BIT "N" (INCOMING HALF ECHO DEVICE INCLUDED) IN THE BACKWARD CALL INDICATORS IN THE ACM SET TO "1"?		
4	CHECK C: CAN RIN	NGING TONE BE HEARD?	
5	The called party should answer the call.		
6	CHECK D: IS THE CONNECTION ESTABLISHED?		
7	CHECK E: ARE THE ECHO DEVICES OPERATING CORRECTLY?		
8	The calling party should clear the call.		
9	CHECK F: IS THE CIRCUIT IDLE?		
10	CHECK G: WAS TH	CHECK G: WAS THE MESSAGE SEQUENCE AS ABOVE?	
11	For validation testing repeat this test in the reverse direction.		

TEST N	UMBER: 2.3.6		
REFERI	ERENCE: Q.764 Section 2.9.2.1		
TITLE:	Successful Call setup		
SUBTIT	TLE: Blocking and unblo	ocking during a call (initiated)	
PURPOS	SE: To verify that the ci	rcuit blocking and unblocking procedure can be con	rrectly initiated during a call
PRE-TE	ST CONDITIONS: Cal	led termination is free	
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPEC	TED MESSAGE SEQUE	NCE:	
S	SP A		SP B
( I	Connectivity BLO		ACM Ringing tone ANM Connectivity BLA
REL UBL			RLC UBA
	TEST DESCRIPTION		
1 2	Make a call from SP A to SP B. Record the message sequence using a signal monitor. CHECK A: CAN RINGING TONE BE HEARD?		
3	The called party should	answer the call.	
4		ONNECTION ESTABLISHED?	
5		cuit blocking relating to the circuit used for this cal	II.
6		ONNECTION STILL ESTABLISHED?	
7 8	The calling party should clear the call.  CHECK D: VERIFY THAT A CALL CANNOT BE ORIGINATED ON THIS CIRCUIT BY SP B.		
9			THIS CINCUIT DI SF D.
10		SP A should send an unblocking signal.  CHECK E: VERIFY THAT A CALL CAN BE SUCCESSFULLY ORIGINATED FROM EITHER SP.	
11	CHECK F: WAS THE MESSAGE SEQUENCE AS ABOVE?		
12	Repeat this test in the reverse direction.		

TEST NU	MBER: 2.3.7			
REFEREN	FERENCE: Q.764 Section 2.9.2.1			
TITLE: S	Successful Call setup			
SUBTITL	E: Blocking and unblo	cking during a call (received)		
PURPOSE	E: To verify that the cir	cuit blocking and unblocking procedure can be con	rrectly received during a call	
PRE-TES	Г CONDITIONS: Call	ed termination is free		
CONF	IGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPECTE	ED MESSAGE SEQUE	NCE:		
SF	' A		SP B	
IAM  Connectivity  BLA			ACM Ringing tone ANM Connectivity BLO	
REL UBA			RLC UBL	
	TEST DESCRIPTION			
	Make a call from SP A to SP B. Record the message sequence using a signal monitor.			
		GING TONE BE HEARD?		
	The called party should			
		ONNECTION ESTABLISHED?  But blocking relating to the circuit used for this cal	11	
		ONNECTION STILL ESTABLISHED?	11.	
	The calling party should clear the call.  CHECK D: VERIFY THAT A CALL CANNOT BE ORIGINATED ON THIS CIRCUIT BY SP A?		THIS CIRCUIT BY SP A?	
	SP B should send an un			
	CHECK E: VERIFY THAT A CALL CAN BE SUCCESSFULLY ORIGINATED FROM EITHER SP.			
		EMESSAGE SEQUENCE AS ABOVE?		
	Repeat this test in the reverse direction.			

TEST N	TEST NUMBER: 3.1			
REFERI	REFERENCE: Q.764 Section 2.3			
TITLE:	Normal call release			
SUBTIT	TLE: Calling party clear	rs before any backward messages		
PURPO	SE: To verify that the c	alling party can successfully release a call prior to	receipt of any backward message	
PRE-TE	EST CONDITIONS: Th	e circuit is idle		
CON	IFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPEC	TED MESSAGE SEQUI	ENCE:		
	SP A		SP B	
]	IAM			
]	REL			
		<	RLC	
	TEST DESCRIPTION			
1	Make a call from SP A to SP B. Record the message sequence using a signal monitor.			
2	The calling party should clear the call prior to receipt of any backward messages.			
3	CHECK A: IS THE CIRCUIT IDLE?			
4	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE?			
5	Repeat this test in the reverse direction.			

TEST N	TEST NUMBER: 3.2			
REFERE	REFERENCE: Q.764 Section 2.3			
TITLE:	Normal call release			
SUBTIT	LE: Calling party clear	rs before answer		
PURPOS	SE: To verify that the c	alling party can successfully release a call prior to re-	ceipt of answer	
PRE-TE	ST CONDITIONS: Ca	alled termination is free		
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPECT	TED MESSAGE SEQU	ENCE:		
S	SP A		SP B	
I	AM			
		<	ACM	
			Ringing tone	
I	REL	>		
		<	RLC	
	TEST DESCRIPTION	ı		
1	Make a call from SP A to SP B. Record the message sequence using a signal monitor.			
2	CHECK A: CAN RINGING TONE BE HEARD?			
3	The calling party should clear the call prior to receipt of an answer message.			
4	CHECK B: IS THE CIRCUIT IDLE?			
5	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE?			
6	For validation testing	this test should be repeated in the reverse direction.		

TEST NUMBER: 3.3				
REFERENCE: Q.764 Section	REFERENCE: Q.764 Section 2.3			
TITLE: Normal call release				
SUBTITLE: Calling party cl	ears after answer			
PURPOSE: To verify that th	PURPOSE: To verify that the calling party can successfully release a call after answer			
PRE-TEST CONDITIONS:	Called termination is free			
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP		
EXPECTED MESSAGE SEC	QUENCE:			
SP A		SP B		
IAM				
	<	ACM		
		Ringing tone		
	<	ANM		
Connectivity		Connectivity		
REL>				
	<	RLC		
TEST DESCRIPTION	ON			
1 Make a call from Si Record the message	P A to SP B. e sequence using a signal monitor.			
2 CHECK A: CAN	RINGING TONE BE HEARD?			
3 The called party sh	ould answer the call.			
4 CHECK B: IS TH	E CONNECTION ESTABLISHED?			
5 The calling party sh	nould clear the call.			
6 CHECK C: IS TH	E CIRCUIT IDLE?			
7 CHECK D: WAS	THE MESSAGE SEQUENCE AS ABOVE?			
8 For validation testing	ng this test should be repeated in the reverse direction.			

TEST NUMBER: 3.4			
REFERENCE: Q.764 Section 2.	FERENCE: Q.764 Section 2.3		
TITLE: Normal call release			
SUBTITLE: Called party clears	after answer		
PURPOSE: To verify that a call	be successfully released in the backward direction	ı	
PRE-TEST CONDITIONS: Cal	led termination is free		
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPECTED MESSAGE SEQUE	NCE:		
SP A		SP B	
IAM	>		
	<	ACM	
		Ringing tone	
	<	ANM	
Connectivity		Connectivity	
	<	REL	
RLC			
TEST DESCRIPTION			
1 Make a call from SP A Record the message sec	to SP B. quence using a signal monitor.		
2 CHECK A: CAN RIN	GING TONE BE HEARD?		
3 The called party should	d answer the call.		
4 CHECK B: IS THE C	CHECK B: IS THE CONNECTION ESTABLISHED?		
5 The called party should	clear the call.		
6 CHECK C: IS THE C	CHECK C: IS THE CIRCUIT IDLE?		
7 CHECK D: WAS THE	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?		
8 For validation testing th	For validation testing this test should be repeated in the reverse direction.		

TEST N	TEST NUMBER: 3.5			
REFERE	REFERENCE: Q.764 Section 2.5.1.3			
TITLE:	Normal call release			
SUBTIT	LE: Suspend initiated b	by the network		
PURPOS	SE: To verify that a call	ed subscriber can successfully clear and reanswer a	call	
PRE-TE	ST CONDITIONS: Cal	lled termination is free		
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPECT	ΓED MESSAGE SEQUE	ENCE:		
S	SP A		SP B	
I	AM	> <	ACM	
			Ringing tone	
		<	ANM	
(	Connectivity		Connectivity	
		<	SUS (network) (Note) RES (network ) (Note)	
(	Connectivity		Connectivity	
F	REL	> <	RLC	
	TEST DESCRIPTION			
1	Make a call from SP A Record the message se	to SP B. quence using a signal monitor.		
2	_	IGING TONE BE HEARD?		
3	The called party shoul	d answer the call.		
4	CHECK B: IS THE C	CONNECTION ESTABLISHED?		
5	The called party should	d clear the call.		
6	The called party should reanswer the call.			
7	CHECK C: IS THE C	CONNECTION STILL ESTABLISHED?		
8	The calling party shoul	d clear the call.		
9	CHECK D: IS THE CIRCUIT IDLE?			
10	CHECK E: WAS TH	E MESSAGE SEQUENCE AS ABOVE?		
11	For validation testing this test should be repeated in the reverse direction.			
	Note – In order to gene	rate these messages, an ISDN-PSTN interworking an	rangement may be needed.	

TEST N	TEST NUMBER: 3.6			
REFERI	REFERENCE: Q.764 Section 2.5.1.1, 2.5.2.1			
TITLE:	Normal call release			
SUBTIT	TLE: Suspend and resume	initiated by a calling party		
PURPO	SE: To verify that the call	ing subscriber can successfully suspend and res	ume a call	
PRE-TE	EST CONDITIONS: Calle	d termination is free		
CON	IFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP	
EXPEC	TED MESSAGE SEQUEN	CE:		
;	SP A		SP B	
3	IAM  Connectivity  SUS (User initiated)		ACM Ringing tone ANM Connectivity	
	RES (User initiated) Connectivity		Connectivity	
]	REL		RLC	
	TEST DESCRIPTION			
1	Make a call from SP A to Record the message sequ	SPB. ence using a signal monitor.		
2		ING TONE BE HEARD?		
3	The called party should	answer the call.		
4	CHECK B: IS THE CO	NNECTION ESTABLISHED?		
5	The calling party should	suspend the call.		
6	The calling party should			
7	CHECK C: IS THE CONNECTION STILL ESTABLISHED?			
8	The calling party should clear the call.			
9	CHECK D: IS THE CII			
10		MESSAGE SEQUENCE AS ABOVE?		
11	Repeat this test in the reverse direction.  Note – An end-to-end ISDN arrangement is needed for this test.			
		6		

TEST NUMBER: 3.7			
REFERENCE: Q.764 Section	FERENCE: Q.764 Section 2.5.1.2, 2.5.2.2		
TITLE: Normal call release			
SUBTITLE: Suspend and rest	ume initiated by a called party		
PURPOSE: To verify that the	called subscriber can successfully suspend and resur	me a call	
PRE-TEST CONDITIONS: (	Called termination is free		
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP	
EXPECTED MESSAGE SEQU	JENCE:		
SP A		SP B	
IAM  Connectivity		ACM Ringing tone ANM Connectivity	
<		RES (User initiated)	
KLL	<	RLC	
TEST DESCRIPTIO	N		
	Make a call from SP A to SP B. Record the message sequence using a signal monitor.		
	INGING TONE BE HEARD?		
3 The called party sho	uld answer the call.		
4 CHECK B: IS THE	CONNECTION ESTABLISHED?		
5 The called party show	The called party should suspend the call.		
6 The called party show	The called party should resume the call.		
7 CHECK C: IS THE	CHECK C: IS THE CONNECTION STILL ESTABLISHED?		
8 The calling party sho	The calling party should clear the call.		
9 CHECK D: IS THE	CHECK D: IS THE CIRCUIT IDLE?		
10 CHECK E: WAS T	CHECK E: WAS THE MESSAGE SEQUENCE AS ABOVE?		
11 Repeat this test in the	Repeat this test in the reverse direction.		
Note – An end-to-end	d ISDN arrangement is needed for this test.		

TEST NUMBER: 3.8			
REFERENCE: Q.764 Section 2.3.1 e)			
TITLE: Normal call release			
SUBTITLE: Collision of REL	messages		
	ease message may be received at an exchange from the switch path is initiated	a succeeding or preceding exchange	
PRE-TEST CONDITIONS: Ca	alled termination is free		
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPECTED MESSAGE SEQU	ENCE:		
SP A		SP B	
IAM  Connectivity		ACM Ringing tone ANM Connectivity	
REL	> <	REL	
RLC (Note)		RLC (Note)	
TEST DESCRIPTION	N		
1 Make a call from SP A Record the message s	A to SP B. equence using a signal monitor.		
2 CHECK A: IS RINC	HING TONE HEARD?		
The called party shou	lld answer the call.		
4 CHECK B: IS THE	CONNECTION ESTABLISHED?		
5 The calling and called	The calling and called parties should clear the call at the same time.		
6 CHECK C: IS THE	CHECK C: IS THE CIRCUIT IDLE?		
7 CHECK D: WAS TI	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?		
Note – The RLC mess	ages may occur in the reverse sequence.		

REFEREN	MBER: 4.1  CE: Q.764 Section 2.2  Insuccessful call setup	<u> </u>	
TITLE: U	Insuccessful call setup		
SUBTITLE	E: Validate a set of kno	own causes for release	
PURPOSE:		I will be immediately released by the outgoing s ed and the correct indication is given to the calling	
PRE-TEST		nge the data in signalling point B such that a ned to the request	a release message with a given cause is
CONFIG	GURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECTE	D MESSAGE SEQUE	NCE:	
SP	A		SP B
a) IAN	M		REL (cause = $xxx$ )
RL	C		
b) IAN	M		ACM
RL	C	<	REL (cause = $xxx$ )
Т	TEST DESCRIPTION		
	Attempt to make a call f	from SP A to SP B. uence using a signal monitor.	
2 0	CHECK A: IS THE AI PARTY? .	PPROPRIATE TONE OR ANNOUNCEMENT F	RETURNED TO THE CALLING
3 0	CHECK B: IS THE CIRCUIT IDLE?		
4	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE?		
5 N	Not all the cause values	are required to be tested.	
Т	The suggested causes ar	e: unallocated number, no circuit available, and s	witching equipment congestion.
	-	sible to confirm that the appropriate tone is return signalling point under test transmits the signal re	- · ·

TEST NUMBER: 5.1				
REFERI	REFERENCE: Q.764 Section 2.10.8.1			
TITLE:	Abnormal situation dur	ring a call		
SUBTIT	LE: Inability to release	e in response to a REL after ANM		
PURPOS	SE: To verify that if the message, the circuit	t will be blocked	he idle condition in response to a release	
PRE-TE		rrange the data in signalling point A such that it indition in response to a release message	is unable to return the circuit to the idle	
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP	
EXPECT	ΓED MESSAGE SEQU	ENCE:		
S	SP A		SP B	
I	ACM Ringing tone ANM	<	IAM	
(	Connectivity		Connectivity	
	BLO and alert the naintenance system	<	REL	
I	RLC	<	BLA	
	TEST DESCRIPTION	ı		
1	Make a call from SP B to SP A. Record the message sequence using a signal monitor.			
2	CHECK A: CAN RINGING TONE BE HEARD			
3	The calling party should answer the call.			
4	CHECK B: IS THE CONNECTION ESTABLISHED?			
5	The calling party should release the call.			
6	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE?			
7	Repeat this test in the	reverse direction.		

#### **ISUP Basic Call Test Specification**

TEST NUMBER: 5.2.1 REFERENCE: Q.764 Section 2.10.8.3 TITLE: Timers SUBTITLE: T7: waiting for ACM or CON PURPOSE: To check that at the expiration of T7 the circuit will be released PRE-TEST CONDITIONS: Arrange the data in signalling point B such that an address complete message is not returned to the call request TYPE OF TEST: VAT CONFIGURATION: 1 TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B IAM T7 | 20-30 secs. REL RLC TEST DESCRIPTION 1 Attempt to make a call from SP A to SP B. Record the message sequence using a signal monitor. 2 CHECK A: WAS THE RELEASE MESSAGE SENT AFTER 20-30 SECONDS? . . . CHECK B: IS THE CIRCUIT IDLE? . . . 3

CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .

4

TEST N	NUMBER: 5.2.2		
REFERENCE: Q.764 Section 2.10.8.3 a)			
TITLE:	: Timers		
SUBTIT	ITLE: T9: waiting for an answer message		
PURPOS	OSE: To verify that if an answer message is not received connection is released by the outgoing signalling po	d within T9 after receiving an address complete message the oint	
PRE-TE	TEST CONDITIONS; The called party should not answer	r the call	
CON	NFIGURATION: 1 TYPE OF TEST: VAT	T and CPT TYPE OF SP: SP	
EXPECT	CTED MESSAGE SEQUENCE:		
S	SP A	SP B	
I	IAM	> ACM	
F	T9       REL		
	TEST DESCRIPTION		
1	Attempt to make a call from SP A to SP B. Record the message sequence using a signal monitor.		
2	CHECK A: CAN RINGING TONE BE HEARD?		
3	The called party should NOT answer the call.	The called party should NOT answer the call.	
4	CHECK B: WAS THE RELEASE MESSAGE SENT WITHIN A PERIOD OF T9?		
5	CHECK C: IS THE CIRCUIT IDLE?		
6	CHECK D: WAS THE MESSAGE SEQUENCE AS A	ABOVE?	
	Note – The timer needs only be run at the outgoing inte	ernational exchange or national controlling exchange.	

TEST N	IUMBER: 5.2.3			
REFER	REFERENCE: Q.764 Sections 2.2 and 2.10.6			
TITLE:	Timers			
SUBTI	ΓLE: T1 and T5: failure	to receive a RLC		
PURPO	SE: To verify that appro	opriate actions take place at the expiration of time	ers T1 and T5	
PRE-TE		range the data in signalling point B such that a sponse to a release message	release complete message is not returned in	
CON	NFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP	
EXPEC	TED MESSAGE SEQU	ENCE:		
SP	A		SP B	
ACI	М	<	IAM	
			Ringing tone	
ANM Connectivity REL			Connectivity	
	T1			
	•	Γ5 I min.		
RSC		>		
syst	rt the maintenance em		DI C	
	TEST DESCRIPTION	<u> </u>	RLC	
_				
1	Make a call from SP B to SP A. Record the message sequence using a signal monitor.			
2	The called party at SP A should clear the call.			
3	CHECK A: WAS A RELEASE MESSAGE SENT BETWEEN 4-15 SECONDS AFTER SENDING OF THE INITIAL RELEASE MESSAGE?			
4	CHECK B: WAS A RESET CIRCUIT MESSAGE SENT AT 1 MINUTE AFTER SENDING OF THE INITIAL RELEASE MESSAGE?			
5	CHECK C: WAS TH	IE MESSAGE SEQUENCE AS ABOVE?		
	Note – T1 is repeated	and REL is retransmitted during T5 interval.		
4	INITIAL RELEASE MESSAGE?  CHECK B: WAS A RESET CIRCUIT MESSAGE SENT AT 1 MINUTE AFTER SENDING OF THE INITIAL			

TEST N	TEST NUMBER: 5.2.4			
REFERI	REFERENCE: Q.764 Sections 2.5.1.3, 2.5.2.3, and 2.5.3			
TITLE:	Timers			
SUBTIT	TLE: T6: waiting for RI	ES (Network) message		
PURPO	SE: To verify that the c	all is released at the expiration of timer T6		
PRE-TE		range the data in signalling point B such that it is rty will not re-answer)	s unable to return a resume message (called	
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP	
EXPEC	TED MESSAGE SEQU	ENCE:		
SP .	A		SP B	
IAM  Connectivity		> <	ACM Ringing tone ANM Connectivity SUS (Network)	
REL		> <	RLC	
	TEST DESCRIPTION			
1	Make a call from SP A Record the message se	A to SP B. equence using a signal monitor.		
2	CHECK A: CAN RII	NGING TONE BE HEARD?		
3	The called party shoul	The called party should answer the call.		
4	CHECK B: IS THE CONNECTION ESTABLISHED?			
5	Arrange SP B to send a suspend message.			
6	CHECK C: WAS A RELEASE MESSAGE SENT WITHIN A PERIOD OF T6 TIMER?			
7	CHECK D: IS THE	CHECK D: IS THE CIRCUIT IDLE?		
8	CHECK E: WAS TH	CHECK E: WAS THE MESSAGE SEQUENCE AS ABOVE?		
	Note – T6 timer needs only to be run at the international or national controlling exchange.			

#### **ISUP Basic Call Test Specification**

TEST NUMBER: 5.2.5 REFERENCE: Q.764 Section 2.10.8.3 TITLE: Timers SUBTITLE: T8: waiting for COT message if applicable PURPOSE: To verify that when the IAM indicates that the continuity check: is required, or, is performed on the previous circuit, and the COT message is not received within T8, the connection is released by the incoming signalling PRE-TEST CONDITIONS: Arrange the data in signalling point B such that: the signalling information in the IAM indicates that a continuity check has been performed on a previous circuit or continuity check is required on this circuit it does not send a continuity message. CONFIGURATION: 1 TYPE OF TEST: VAT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B IAM | T8 10-15 secs. **REL RLC** TEST DESCRIPTION 1 Attempt to make a call from SP B to SP A. Record the message sequence using a signal monitor. 2 CHECK A: WAS THE RELEASE MESSAGE SENT WITHIN 10 TO 15 SECONDS? . . . 3 CHECK B: IS THE CIRCUIT IDLE? . . . 4 CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .

#### **ISUP Basic Call Test Specification**

TEST NUMBER: 5.2.6

REFERENCE: Q.764 Section 2.10.4

TITLE: Timers

SUBTITLE: T12 and T13: failure to receive a BLA

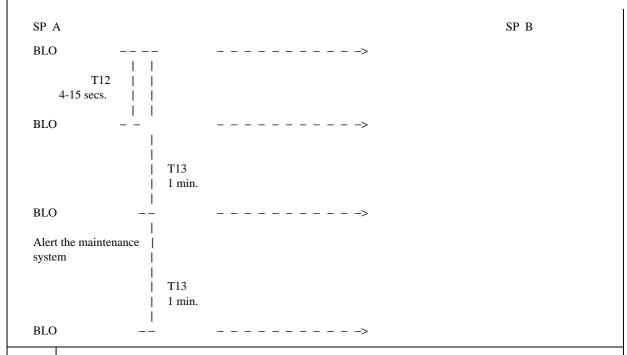
PURPOSE: To verify that appropriate actions take place at the expiration of timers T12 and T13

#### PRE-TEST CONDITIONS:

- a) Circuit is idle.
- b) Arrange the data in signalling point B such that a blocking acknowledgement message is not returned in response to a blocking message.

CONFIGURATION: 1 TYPE OF TEST: VAT TYPE OF SP: SP

#### EXPECTED MESSAGE SEQUENCE:



	TEST DESCRIPTION
1	Send a blocking message from SP A to SP B. Record the message sequence using a signal monitor.
2	CHECK A: WAS A BLOCKING MESSAGE SENT BETWEEN 4-15 SECONDS AFTER SENDING OF THE INITIAL BLOCKING MESSAGE?
3	CHECK B: WAS A BLOCKING MESSAGE SENT AT 1 MINUTE AFTER SENDING OF THE INITIAL BLOCKING MESSAGE?
4	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE?
	Note – T12 is repeated and BLO is retransmitted during the first T13 interval.

#### **ISUP Basic Call Test Specification**

TEST NUMBER: 5.2.7 REFERENCE: Q.764 Section 2.10.4 TITLE: Timers SUBTITLE: T14 and T15: failure to receive a UBA PURPOSE: To verify that appropriate actions take place at the expiration of timers T14 and T15 PRE-TEST CONDITIONS: Circuit is idle. a) b) Arrange the data in signalling point B such that an unblocking acknowledgement message is not returned in response to an unblocking message. CONFIGURATION: 1 TYPE OF TEST: VAT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B **BLO** BLA **UBL** T14 4-15 secs. UBL | T15 | 1 min. **UBL** Alert the maintenance system | T15 | 1 min. UBL TEST DESCRIPTION 1 Send a blocking and unblocking message from SP A to SP B. Record the message sequence using a signal monitor. CHECK A: WAS AN UNBLOCKING MESSAGE SENT BETWEEN 4-15 SECONDS AFTER SENDING OF 2 THE INITIAL UNBLOCKING MESSAGE? . . . CHECK B: WAS AN UNBLOCKING MESSAGE SENT AT 1 MINUTE AFTER SENDING OF THE INITIAL 3 UNBLOCKING MESSAGE? . . . CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . . 4 Note – T14 is repeated and UBL is retransmitted during the first T15 interval.

#### **ISUP Basic Call Test Specification**

TEST NUMBER: 5.2.8 REFERENCE: Q.764 Section 2.10.3.1 TITLE: Timers SUBTITLE: T16 and T17: failure to receive a RLC PURPOSE: To verify that appropriate actions take place at the expiration of timers T16 and T17 PRE-TEST CONDITIONS: Circuit is idle. b) Arrange the data in signalling point B such that a release complete message is not returned in response to a reset circuit message. TYPE OF TEST: VAT CONFIGURATION: 1 TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B RSC T16 | | 4-15 secs. | | **RSC** | T17 | 1 min. **RSC** Alert the maintenance system | T17 | 1 min. **RSC** TEST DESCRIPTION 1 Send a reset circuit message from SP A to SP B. Record the message sequence using a signal monitor. CHECK A: WAS A RESET CIRCUIT MESSAGE SENT BETWEEN 4-15 SECONDS AFTER SENDING OF 2 THE INITIAL RESET CIRCUIT MESSAGE? . . . CHECK B: WAS A RESET CIRCUIT MESSAGE SENT AT 1 MINUTE AFTER SENDING OF THE INITIAL 3 RESET CIRCUIT MESSAGE? . . .

CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .

*Note* – T16 is repeated and RSC is retransmitted during the first T17 interval.

4

#### **ISUP Basic Call Test Specification**

TEST NUMBER: 5.2.9 REFERENCE: Q.764 Section 2.10.4 TITLE: Timers SUBTITLE: T18 and T19: failure to receive a CGBA PURPOSE: To verify that appropriate actions take place at the expiration of timers T18 and T19 PRE-TEST CONDITIONS: Circuit is idle. a) b) Arrange the data in signalling point B such that a circuit group blocking acknowledgement message is not returned in response to a circuit group blocking message. CONFIGURATION: 1 TYPE OF TEST: VAT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B **CGB** T18 4-15 secs. CGB | T19 | 1 min. **CGB** Alert the maintenance | system | T19 | 1 min. **CGB** TEST DESCRIPTION 1 Send a circuit group blocking message from SP A to SP B. Record the message sequence using a signal monitor. 2 CHECK A: WAS A CIRCUIT GROUP BLOCKING MESSAGE SENT BETWEEN 4-15 SECONDS AFTER SENDING OF THE INITIAL CIRCUIT GROUP BLOCKING MESSAGE? . . . 3 CHECK B: WAS A CIRCUIT GROUP BLOCKING MESSAGE SENT AT 1 MINUTE AFTER SENDING OF THE INITIAL CIRCUIT GROUP BLOCKING MESSAGE? . . . CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . . 4 Note – T18 is repeated and CGB is retransmitted during the first T19 interval.

#### **ISUP Basic Call Test Specification**

TEST NUMBER: 5.2.10 REFERENCE: Q.764 Section 2.10.4 TITLE: Timers SUBTITLE: T20 and T21: failure to receive a CGUA PURPOSE: To verify that appropriate actions take place at the expiration of timers T20 and T21 PRE-TEST CONDITIONS: Circuit is idle. a) b) Arrange the data in signalling point B such that a circuit group unblocking acknowledgement message is not returned in response to a circuit group unblocking message. CONFIGURATION: 1 TYPE OF TEST: VAT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B **CGB CGBA CGU** T20 4-15 secs. **CGU** | T21 | 1 min. **CGU** Alert the maintenance system | T21 | 1 min. CGU **TEST DESCRIPTION** 1 Send a circuit group blocking and unblocking message from SP A to SP B. Record the message sequence using a signal monitor. 2 CHECK A: WAS A CIRCUIT GROUP UNBLOCKING MESSAGE SENT BETWEEN 4-15 SECONDS AFTER SENDING OF THE INITIAL CIRCUIT GROUP UNBLOCKING MESSAGE? . . . 3 CHECK B: WAS A CIRCUIT GROUP UNBLOCKING MESSAGE SENT AT 1 MINUTE AFTER SENDING OF THE INITIAL CIRCUIT GROUP UNBLOCKING MESSAGE? . . . CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . . 4 Note – T20 is repeated and CGU is retransmitted during the first T21 interval.

#### **ISUP Basic Call Test Specification**

TEST NUMBER: 5.2.11 REFERENCE: Q.764 Section 2.10.4 TITLE: Timers SUBTITLE: T22 and T23: failure to receive a GRA PURPOSE: To verify that appropriate actions take place at the expiration of timers T22 and T23 PRE-TEST CONDITIONS: Circuit is idle. a) b) Arrange the data in signalling point B such that a circuit group reset acknowledgement message is not returned in response to a circuit group reset message. CONFIGURATION: 1 TYPE OF TEST: VAT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B GRS 4-15 secs. **GRS** T23 | 1 min. **GRS** Alert the maintenance system | T23 | 1 min. GRS TEST DESCRIPTION 1 Send a circuit group reset message from SP A to SP B. Record the message sequence using a signal monitor. 2 CHECK A: WAS A CIRCUIT GROUP RESET MESSAGE SENT BETWEEN 4-15 SECONDS AFTER SENDING OF THE INITIAL CIRCUIT GROUP RESET MESSAGE? . . . 3 CHECK B: WAS A CIRCUIT GROUP RESET MESSAGE SENT AT 1 MINUTE AFTER SENDING OF THE INITIAL CIRCUIT GROUP RESET MESSAGE? . . . 4 CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . . Note – T22 is repeated and GRS is retransmitted during the first T23 interval.

TEST NUMBER: 5.3.1				
REFERI	REFERENCE: Q.764 Section 2.10.3.1 a)			
TITLE:	Reset of circuits during	a call		
SUBTIT	LE: Of an outgoing cir	cuit		
PURPOS	SE: To verify that on re	ceipt of a reset message the call is immediately rele	eased - outgoing call	
PRE-TE	ST CONDITIONS: Ca	lled termination is free		
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPECT	ΓED MESSAGE SEQU	ENCE:		
SP A	A		SP B	
IAM		> <	ACM	
		<	Ringing tone ANM	
	nectivity	<	Connectivity RSC	
RLC		>		
	TEST DESCRIPTION	I		
1	Make a call from SP A to SP B. Record the message sequence using a signal monitor.			
2	CHECK A: CAN RII	NGING TONE BE HEARD?		
3	The called party should answer the call.			
4	CHECK B: IS THE CONNECTION ESTABLISHED?			
5	Arrange for SP B to send a reset-circuit message.			
6	CHECK C: IS THE CIRCUIT IDLE?			
7	CHECK D: WAS TH	IE MESSAGE SEQUENCE AS ABOVE?		

TEST NUMBER: 5.3.2				
REFERI	REFERENCE: Q.764 Section 2.10.3.1 a)			
TITLE:	Reset of circuits during	a call		
SUBTIT	LE: Of an incoming ci	rcuit		
PURPOS	SE: To verify that on re	ceipt of a reset message the call is immediately re	leased - incoming call	
PRE-TE	ST CONDITIONS: Ca	lled termination is free		
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPECT	ΓED MESSAGE SEQU	ENCE:		
SP A	A		SP B	
ACM		<	IAM  Connectivity RSC	
	TEST DESCRIPTION			
1	Make a call from SP E Record the message se	to SP A. equence using a signal monitor.		
2	CHECK A: CAN RINGING TONE BE HEARD?			
3	The called party should answer the call.			
4	CHECK B: IS THE CONNECTION ESTABLISHED?			
5	Arrange for SP B to send a reset-circuit message.			
6	CHECK C: IS THE CIRCUIT IDLE?			
7	CHECK D: WAS TH	E MESSAGE SEQUENCE AS ABOVE?		

TEST NUMBER: 6.1.1				
REFERI	REFERENCE: Q.764 Section 2.1.8			
TITLE:	TITLE: Continuity check call			
SUBTIT	LE: Continuity check re	equired		
PURPOS	SE: To verify that a call	can be set up on a circuit requiring a continuity che	eck	
PRE-TE	ST CONDITIONS: Arr	ange the data in signalling point A such that a conti	nuity check is required on this circuit	
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPEC	ΓED MESSAGE SEQUE	ENCE:		
SP A	A		SP B	
IAM Chec	ck tone			
	(successful)			
201	(successiui)	<	ACM	
		<	Ringing tone ANM	
Con: REL	nectivity		Connectivity	
KEE		<	RLC	
	TEST DESCRIPTION			
1	Make a call from SP A to SP B with the continuity check indicator bits "DC" in the Nature of Connection			
	indicators in the IAM s Record the message sec	et to '01'. quence using a signal monitor.		
2		IGING TONE BE HEARD?		
3	The called party should answer the call.			
4	CHECK B: IS THE CONNECTION ESTABLISHED?			
5	The calling party should clear the call.			
6	CHECK C: IS THE CIRCUIT IDLE?			
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?			
8	Repeat this test in the reverse direction.			

TEST N	TEST NUMBER: 6.1.2			
REFERE	ENCE: Q.764 Section 2	2.1.8		
TITLE:	Continuity check call			
SUBTIT	LE: COT applied on a	previous circuit		
PURPOS	SE: To verify that if a until receipt of the	continuity check is being performed on a previous COT message	s circuit, a backward message is delayed	
PRE-TE		range the data in signalling point B such that the sign at a continuity check has been performed on a previous		
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPECT	ΓED MESSAGE SEQUI	ENCE:		
SP A	A		SP B	
		<	IAM	
		delay while check performed on previous circuit		
ANN	ting tone  Anectivity	\ <	COT (successful)  Connectivity REL	
	TEST DESCRIPTION			
1	the IAM set to '10'.	B to SP A with the continuity check indicator bits in equence using a signal monitor.	the Nature of Connection indicators in	
2	Arrange for signalling point B to send a COT message.			
3	CHECK A: CAN RINGING TONE BE HEARD?			
4	The called party should answer the call.			
5	CHECK B: IS THE CONNECTION ESTABLISHED?			
6	The calling party should clear the call.			
7	CHECK C: IS THE C	CIRCUIT IDLE?		
8	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?			

TEST NUMBER: 6.1.3				
REFERI	REFERENCE: Q.764 Section 2.3			
TITLE:	Continuity check call			
SUBTIT	LE: Calling party clear	s during a COT		
PURPOS	SE: To verify that the c	alling party can successfully clear the call during the	he continuity check phase	
PRE-TEST CONDITIONS:  a) Arrange the data in signalling point A such that a continuity check is applied on this call.  b) Calling party will release the call within 2 seconds.			ed on this call.	
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP	
EXPEC	ΓED MESSAGE SEQUI	ENCE:		
SP A	A		SP B	
IAM		>		
Chec	ck tone			
REL	REL			
	TEST DESCRIPTION			
1	Make a call from SP A to SP B. Record the message sequence using a signal monitor.			
2	The calling party should clear the call during the continuity check phase.			
3	CHECK A: IS THE CIRCUIT IDLE?			
4	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE?			
5	For validation testing	repeat this test in the reverse direction.		

TEST N	TEST NUMBER: 6.1.4			
REFERI	REFERENCE: Q.764 Section 2.1.8			
TITLE:	Continuity check call			
SUBTIT	LE: Delay of through c	onnect		
PURPO	SE: To verify that the s through the return of	witching through of the speech path is delayed unt f the speech path	il the residual check-tone has propagated	
PRE-TEST CONDITIONS:  a) The called termination is free.  b) Arrange the data in signalling point A such that a continuity check is applied on this circuit.				
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPECT	ΓED MESSAGE SEQUE	ENCE:		
SP A	A		SP B	
IAM Chec	ck tone			
СОТ	(successful)		ACM	
Connectivity REL		<	Ringing tone ANM Connectivity RLC	
	TEST DESCRIPTION			
1	Make a call from SP A Record the message se	to SP B. quence using a signal monitor.		
2	CHECK A: WAS TH PARTY?	E CONTINUITY CHECK TONE HEARD BY EIT	THER CALLED OR CALLING	
3	CHECK B: CAN RINGING TONE BE HEARD?			
4	The called party should answer the call.			
5	CHECK C: IS THE CONNECTION ESTABLISHED?			
6	The calling party should clear the call.			
7	CHECK D: IS THE CIRCUIT IDLE?			
8	CHECK E: WAS TH	E MESSAGE SEQUENCE AS ABOVE?		
9	For validation testing repeat this test in the reverse direction.			

#### **ISUP Basic Call Test Specification**

TEST NUMBER: 6.1.5 REFERENCE: Q.764 Section 2.1.8 TITLE: Continuity check call SUBTITLE: COT unsuccessful PURPOSE: To verify that a repeat attempt of the continuity check is made on the failed circuit PRE-TEST CONDITIONS: Arrange data in SP A such that a COT is applied on this circuit. b) Ensure that no backward tone is detected within the specified time out CONFIGURATION: 1 TYPE OF TEST: VAT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B IAM Check tone T24 | COT (failed) - (Note) T25 | 1-10 secs. **CCR** (on the failed circuit) Check tone T24 | COT (failed) and alert the maintenance system T26 | 1-3 mins. **CCR** Check tone T24 | COT (failed) TEST DESCRIPTION Make a call from SP A to SP B. 1 Record the message sequence using a signal monitor. 2 CHECK A: WAS THE CONTINUITY CHECK INITIATED WITHIN 1-10 SECONDS? . . . CHECK B: WAS THE MAINTENANCE SYSTEM ALERTED ON FAILURE OF THE SECOND 3 CONTINUITY CHECK? . . . CHECK C: WAS THE CHECK REPEATED AT INTERVALS OF 1-3 MINUTES? . . . 4 5 CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE? . . . Note - The call should be re-attempted.

TEST NU	MBER: 6.2.1				
DEFEDEN	DENGE 0.7744 C 2013				
KEFEKEI	NCE: Q.764 Section 2.	9.1 1)			
TITLE: A	Automatic repeat attem	pt			
SUBTITL	E: Dual seizure for no	n-controlling SP			
PURPOSI	E: To verify that an au	tomatic repeat attempt will be made on detection	of a dual seizure		
PRE-TES	T CONDITIONS: Arr	ange the signalling point data such that SP B is th	e controlling exchange for cic = x		
CONF	IGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP		
EXPECTI	ED MESSAGE SEQUE	ENCE:			
SP A			SP B		
	(cic = x)	> <	IAM (cic = x)		
	(cic = x)	>	, ,		
	ng tone				
	(cic = x)	>			
	ectivity		Connectivity		
IAM (	(cic = y)		ACM (cic = y)		
			Ringing tone		
		<	ANM ( $cic = y$ )		
Conne	ectivity		Connectivity		
REL (	(cic = y)				
		<	RLC ( $cic = y$ )		
DI C	(-:)	<	REL (cic = x)		
RLC (	(cic = x)				
	TEST DESCRIPTION				
1	Simultaneously transm	it an IAM (containing the same value of cic) from	each end of the link for a both way		
	circuit.				
	_	quence using a signal monitor.			
	CHECK A: CAN RINGING TONE BE HEARD ON THE CALL ORIGINATED FROM SP B?				
3	The called party at SP A should answer the call.				
4	CHECK B: IS THE CONNECTION ESTABLISHED?				
5	CHECK C: WAS A REPEAT ATTEMPT MADE BY SP A, WITH A DIFFERENT VALUE OF CIC IN THE IAM?				
6	CHECK D: CAN RINGING TONE BE HEARD ON THE CALL ORIGINATED FROM SP A?				
7	The called party at SP B should answer the call.				
8	CHECK E: IS THE CONNECTION STILL ESTABLISHED?				
9	Clear both calls down.				
	CHECK F: ARE THE CIRCUITS IDLE?				
	CHECK F: ARE THE CIRCUITS IDLE?  CHECK G: WAS THE MESSAGE SEQUENCE AS ABOVE?				
		quence may not be as shown above.			
	ivoie – The message se	quence may not be as shown above.			

TEST N	TEST NUMBER: 6.2.2					
REFERE	REFERENCE: Q.764 Section 2.9.1 ii)					
TITLE:	Automatic repeat attem	ppt				
SUBTIT	LE: Blocking of a circ	uit				
PURPOS		atomatic repeat attempt will be made on receipt of tage and before any backward messages have been				
PRE-TE		range the data in signalling point B such that a bloc initial address message of the first call request.	cking message is returned in response to			
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP			
EXPECT	ΓED MESSAGE SEQUI	ENCE:				
SP A	A		SP B			
IAM	(cic = x)	> <	BLO ( $cic = x$ )			
	(cic = x) $(cic = x)$					
IAM	(cic = y)	<	RLC(cic = x)			
		<	ACM (cic = y) Ringing tone			
		<	ANM (cic = y)			
Con	nectivity	· 	Connectivity			
	(cic = y)	>	·			
		<	RLC ( $cic = y$ )			
	TEST DESCRIPTION					
1	Make a call from SP A Record the message se	to SP B. equence using a signal monitor.				
2	CHECK A: CAN RI	NGING TONE BE HEARD?				
3	The called party should answer the call.					
4	CHECK B: IS THE CONNECTION ESTABLISHED?					
5	The calling party should clear the call.					
6	CHECK C: IS THE CIRCUIT (CIC = y) IDLE?					
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?					
	Note – The message sequence may not be as shown above.					

TEST N	T NUMBER: 6.2.3				
REFERE	ENCE: Q.764 Section 2	.9.1 iii)			
TITLE:	Automatic repeat attem	pt			
SUBTIT	LE: Circuit reset				
PURPOS		tomatic repeat attempt will be made on receipt of d before a backward message has been received	the circuit reset after sending of an initial		
a) A	ST CONDITIONS:  Arrange the data signalli he first call request.  The called termination sl	ng point B such that a circuit reset signal is sent in nould be free.	n response to the initial address message of		
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP		
EXPECT	TED MESSAGE SEQUI	ENCE:			
SP A	A		SP B		
IAM ( $cic = x$ ) RLC ( $cic = x$ )			RSC ( $cic = x$ )		
IAM (cic = y)  Connectivity REL (cic = y)			ACM (cic = y) Ringing tone ANM (cic = y) Connectivity  RLC (cic = y)		
	TEST DESCRIPTION	ſ			
1	Make a call from SP A Record the message se	to SP B. quence using a signal monitor.			
2	CHECK A: CAN RIN	NGING TONE BE HEARD?			
3	The called party should answer the call.				
4	CHECK B: IS THE CONNECTION ESTABLISHED?				
5	The calling party should clear the call.				
6	CHECK C: ARE THE CIRCUITS IDLE?				
7	CHECK D: WAS TH	E MESSAGE SEQUENCE AS ABOVE?			
	Note – The message sequence may not be as shown above.				

TEST N	TEST NUMBER: 6.2.4				
REFERE	REFERENCE: Q.764 Section 2.9.1 iv)				
TITLE:	Automatic repeat attem	npt			
SUBTIT	LE: Continuity check	failure			
PURPOS	SE: To verify that an au	atomatic repeat attempt will be made on continuity	check failure		
PRE-TE		range the data in signalling point B such that chechits to the first call request	k tone is not returned within the specified		
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP		
EXPECT	TED MESSAGE SEQU	ENCE:			
SP A			SP B		
IAM	(cic = x)	>			
Chec	ck tone				
СОТ	(failed) ( $cic = x$ )				
A repeat	of the continuity check	of the failed circuit will be made within 1-10 secs.	See Q.764 § 2.1.8.		
	(cic = y)	>			
Chec	ek tone				
СОТ	(successful) (cic = y)	>			
		<	ACM (cic = y) Ringing tone		
		<	ANM(cic = y)		
Con	nectivity		Connectivity		
REL	(cic = y)	>	•		
		<	RLC (cic = y)		
	TEST DESCRIPTION	I			
1	Make a call from SP A to SP B.				
2	Record the message sequence using a signal monitor.  CHECK A: CAN RINGING TONE BE HEARD?				
2 3	The called party should answer the call.				
4	CHECK B: IS THE CONNECTION ESTABLISHED?				
5	The calling party should clear the call.				
6	CHECK C: IS THE CIRCUIT IDLE?				
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?				
	Note – The message se	equence may not be as shown above.			

#### **ISUP Basic Call Test Specification**

TEST NUMBER: 6.2.5 REFERENCE: Q.764 Section 2.9.1 v), 2.10.5.1 d) TITLE: Automatic repeat attempt SUBTITLE: Reception of unreasonable signalling information PURPOSE: To verify that an automatic repeat attempt will be made on receipt of unreasonable signalling information after sending the initial address message and before one of the backward signals has been received PRE-TEST CONDITIONS: Arrange the data in signalling point B such that unreasonable signalling information (see Note 1 below) is returned in response to the initial address message of the first call request. The called termination should be free. CONFIGURATION: 1 TYPE OF TEST: VAT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP B SP A IAM (cic = x)see Note 1 below (cic = x) RSC (cic = x)RLC (cic = x) IAM (cic = y)ACM(cic = y)Ringing tone ANM (cic = y) Connectivity Connectivity REL (cic = y)RLC (cic = y)TEST DESCRIPTION 1 Make a call from SP A to SP B. Record the message sequence using a signal monitor. CHECK A: CAN RINGING TONE BE HEARD? . . . 2 3 The called party should answer the call. 4 CHECK B: IS THE CONNECTION ESTABLISHED? . . . 5 The calling party should clear the call. CHECK C: ARE THE CIRCUITS IDLE? . . . 6 7 CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE? . . . Note 1 - This may be any message that if received at this point would be either ambiguous or inappropriate. For example, SUS or RES messages. Note 2 – The message sequence may not be as shown above.

TEST NU	TEST NUMBER: 6.3.1				
REFERE	REFERENCE: Q.764 Section 2.10.1.4				
TITLE:	Dual seizure				
SUBTITI	LE: Dual seizure for co	ontrolling SP			
PURPOS		etection of dual seizure, the call initiated by the consignalling point is backed off	ntrolling signalling point is completed and		
PRE-TES	ST CONDITIONS: An	range the signalling point data such that SP A is the	e controlling signalling point		
CONF	FIGURATION: 1	TYPE OF TEST: VAT; CPT	TYPE OF SP: SP		
EXPECT	ED MESSAGE SEQUI	ENCE:			
SP A	<u>.</u>		SP B		
IAM		> <	IAM (Note) ACM Ringing tone ANM		
Conn REL	ectivity		Connectivity		
	TEST DESCRIPTION				
1	Simultaneously transmit an IAM (containing the same value of cic) from each end of the link for a both way circuit.  Record the message sequence using a signal monitor.				
2	CHECK A: CAN RIN	NGING TONE BE HEARD ON THE CALL ORIC	SINATED FROM SP A?		
3	The called party at SP	B should answer the call.			
4	CHECK B: IS THE C	CONNECTION ESTABLISHED?			
5	The calling party at SP A should clear the call.				
6	CHECK C: IS THE CIRCUIT IDLE?				
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?				
8	Repeat this test in the reverse direction.				
	Note – The call initiate	d by SP B should be re-attempted, see test number	6.2.1		

TEST N	ST NUMBER: 6.4.1					
REFERI	ENCE: Q.764 Section 2.	1.12				
TITLE:	Semi-automatic operation	n				
SUBTIT	LE: FOT sent following	a call to a subscriber				
PURPOS	SE: To verify that the FC	OT is correctly sent				
a) I b) A	E-TEST CONDITIONS:  FOT message is generated at SP A.  A controlling operator is at SP A.  Arrange the data so that an assistant operator is at SP B.					
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP			
EXPECT	ΓED MESSAGE SEQUE	NCE:				
SP A		>	SP B			
Connectivity (controlling operator) FOT Connectivity (controlling operator) REL		<	ACM ANM Connectivity (subscriber)  Connectivity (assistant operator) (Note 2)  RLC			
	TEST DESCRIPTION					
1	Make a call from contro	olling operator at SP A to SP B.				
2	Record the message seq	uence using a signal monitor.				
3	The called party should	answer the call.				
4	CHECK A: IS THE CONNECTION ESTABLISHED BETWEEN A CONTROLLING OPERATOR AND A SUBSCRIBER?					
5	CHECK B: IS FOT MESSAGE SENT BY SP A?					
6	CHECK C: IS THE CONNECTION ESTABLISHED BETWEEN CONTROLLING AND ASSISTANT OPERATORS? (Note 2)					
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?					
	Note 1 – FOT may be so	ent between ACM and REL.				
	Note 2 – The support of the FOT message in the international interface does not impose that the related functions are implemented in each gateway (e.g., language assistance).					

TEST N	NUMBER: 6.4.2				
REFERI	ERENCE: Q.764 Section 2.1.12				
TITLE:	Semi-automatic operati	on			
SUBTIT	LE: FOT received follo	owing a call to a subscriber			
PURPOS	SE: To verify that the F	OT is correctly received			
a) I b) A	ST CONDITIONS: FOT message is generate Arrange the data so that a An assistant operator is a	controlling operator is at SP B.			
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP		
EXPECT	ΓED MESSAGE SEQUE	ENCE:			
SP A	A		SP B		
(subs		<	IAM  Connectivity (controlling operator)  FOT Connectivity (controlling operator)  REL		
RLC			REL		
	TEST DESCRIPTION				
1	Make a call from contr	olling operator at SP B to SP A.			
2	Record the message se	quence using a signal monitor.			
3	The called party at sho	uld answer the call.			
4	CHECK A: IS THE CONNECTION ESTABLISHED BETWEEN A CONTROLLING OPERATOR AND A SUBSCRIBER?				
5	CHECK B: IS THE FOT MESSAGE RECEIVED BY SP A?				
6	CHECK C: IS THE CONNECTION ESTABLISHED BETWEEN CONTROLLING AND ASSISTANT OPERATORS? (Note 2)				
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?				
	Note 1 – FOT may be i	received between ACM and REL.			
	Note 2 – The support of the FOT message in the international interface does not impose that the related functions are implemented in each gateway (e.g., language assistance).				

TEST N	TEST NUMBER: 6.4.3					
REFERI	REFERENCE: Q.764 Section 2.1.12					
TITLE:	Semi-automatic operation					
SUBTIT	LE: FOT sent following a	call via codes 11 and 12				
PURPOS	SE: To verify that a FOT is	correctly sent				
a) I b) A	RE-TEST CONDITIONS:  FOT message is generated at SP A.  A controlling operator is at SP A.  Arrange the data so that an incoming operator is at SP B.					
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP			
EXPEC	ΓED MESSAGE SEQUENC	Е:				
SP A	-	>	SP B			
<						
Connectivity          Connectivity           (controlling operator)         (subscriber)           FOT          Connectivity           Connectivity          Connectivity           (controlling operator)         (incoming operator) (Notes the property of the property			(subscriber)			
REL	•		RLC			
	TEST DESCRIPTION					
1 2 3	Make a call from controlling operator at SP A to an incoming operator at SP B via codes 11 and 12.  Record the message sequence and parameters using a signal monitor.  The incoming operator should answer the call and make a call to a called user. The called user should answer the call.					
4	CHECK A: IS THE CONNECTION ESTABLISHED BETWEEN A CONTROLLING OPERATOR AND A SUBSCRIBER?					
5 6	CHECK C: IS THE CON	SAGE SENT BY SP A?  NECTION RE-ESTABLISHED BETWEEN S? (Note 2)	CONTROLLING AND INCOMING			
7		IESSAGE SEQUENCE AS ABOVE?				
	Note 1 – FOT may be sent between ACM and REL.  Note 2 – The support of the FOT message in the international interface does not impose that the related functions are implemented in each gateway (e.g., language assistance).					

TEST NU	ST NUMBER: 6.4.4					
REFERE	FERENCE: Q.764 Section 2.1.12					
TITLE: S	Semi-automatic operation					
SUBTITL	E: FOT received following a call via codes 11 and 12					
PURPOSI	E: To verify that a FOT is correctly received					
a) FO	b) A controlling operator is at SP B.					
CONF	IGURATION: 1 TYPE OF TEST: VAT	TYPE OF SP: SP				
EXPECTI	ED MESSAGE SEQUENCE:					
SP A		SP B				
(incon Conne (subsc		Connectivity (controlling operator)  Connectivity (controlling operator)  FOT Connectivity (controlling operator)  REL				
	TEST DESCRIPTION					
2 3 4 5 6	<ul> <li>Make a call from controlling operator at SP B to an incoming operator at SP A via codes 11 and 12.</li> <li>Record the message sequence using a signal monitor.</li> <li>The incoming operator should answer the call and make a call to a called user. The called user should answer the call.</li> <li>CHECK A: IS THE CONNECTION ESTABLISHED BETWEEN A CONTROLLING OPERATOR AND A SUBSCRIBER?</li> <li>CHECK B: IS FOT MESSAGE RECEIVED CORRECTLY BY SP A?</li> <li>CHECK C: IS THE CONNECTION RE-ESTABLISHED BETWEEN CONTROLLING AND INCOMING OPERATORS? (Note 2)</li> <li>CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?</li> <li>Note 1 – FOT may be received between ACM and REL.</li> <li>Note 2 – The support of the FOT message in the international interface does not impose that the related functions</li> </ul>					
	are implemented in each gateway (e.g., language assistance).	-				

TEST N	ST NUMBER: 7.1.1					
REFERE	RENCE: Q.764 Section 2.1					
TITLE:	64 kbit/s unre	estricted				
SUBTIT	LE: Success	ful call set	up			
PURPOS		•	64 kbit/s call can be successfully er service information parameters	completed using	appropriate transmission medium	
PRE-TE	ST CONDITI	ONS: Ca	lled termination is free			
CON	FIGURATIO	N: 1	TYPE OF TEST: VAT and C	СРТ	TYPE OF SP: SP	
EXPECT	TED MESSAC	GE SEQUI	ENCE:	·		
SP A	A				SP B	
Data	IAM (TMR, USI)					
	TEST DESC	CRIPTION	I			
1	Make a 64 k	bit/s call f	from SP A to SP B.			
2	CHECK A:	IS THE 7	ΓMR SET TO "64 kbit/s UNRESTRIC	TED"?		
3	CHECK B: DOES THE USI IF INCLUDED HAVE APPROPRIATE INFORMATION? FOR EXAMPLE, USI HAS TWO OCTETS FOR 64 kbit/s AND AT LEAST FOUR OCTETS FOR ANY SUBRATE.					
4	CHECK C: IS THE "ECHO CONTROL DEVICE INDICATOR" IN NATURE OF CONNECTION INDICATORS PARAMETER SET TO "NOT INCLUDED"?					
5	CHECK D: IS THE ECHO CONTROL DEVICE DISABLED OR IS A NON-ECHO CONTROLLED CIRCUIT SELECTED?					
6	The called party should answer the call.					
7	CHECK E: IS IT POSSIBLE TO PASS DATA BETWEEN SP A AND SP B?					
8	The calling party should clear the call.					
9	CHECK F: IS THE CIRCUIT IDLE? FOR CIRCUITS EQUIPPED WITH ECHO CONTROL, IS THE ECHO CONTROL DEVICE RE-ENABLED?					
10	CHECK G: WAS THE MESSAGE SEQUENCE AS ABOVE?					
11	Repeat this t	Repeat this test for any subrate calls.				
12	Repeat this t	Repeat this test in the reverse direction.				
	Note – To check the contents of USI parameter is optional.					

TEST N	TEST NUMBER: 7.1.2				
REFERI	ENCE: Q.764 Section 2	2			
TITLE:	64 kbit/s unrestricted				
SUBTIT	LE: Unsuccessful call	setup			
PURPO		all will be immediately released by the outgoing s ved and, for circuits equipped with echo control, t			
PRE-TE	PRE-TEST CONDITIONS: Arrange the data in signalling point B such that a release message with a given cause is returned to the request				
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP		
EXPEC	ΓED MESSAGE SEQU	ENCE:			
SP A	A		SP B		
IAM	I	<del>- &gt;</del>			
		<	REL (cause = $xxx$ )		
RLC					
	TEST DESCRIPTION	ſ			
1		kbit/s call from SP A to SP B. equence using a signal monitor.			
2	CHECK A: IS THE	APPROPRIATE CAUSE RETURNED TO THE C	CALLING PARTY?		
3	CHECK B: IS THE CIRCUIT IDLE? FOR CIRCUITS EQUIPPED WITH ECHO CONTROL, IS THE ECHO CONTROL DEVICE RE-ENABLED?				
4	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE?				
5	Repeat steps 1-4 with "xxx" set to various causes which are based on bilateral agreements. The suggested causes are: unallocated number, no circuit available, bearer capability not authorized, bearer capability not presently available, and bearer capability not implemented.				

		1501 Basic Can Test Specification			
TEST N	EST NUMBER: 7.1.3				
REFERI	ENCE: Q.764 Section 2	.9.1 i)			
TITLE:	64 kbit/s unrestricted				
SUBTIT	TLE: Dual seizure				
PURPO	SE: To verify that an au	tomatic repeat attempt will be made on detection	of a dual seizure		
PRE-TE	ST CONDITIONS: Ar	range the signalling point data such that SP B is th	e controlling exchange for cic = x		
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP		
EXPEC	TED MESSAGE SEQUI	ENCE:			
	f(cic = x)	> <	SP B $IAM (cic = x)$		
ANN Data	M (cic = x) M(cic = x)  1 (cic = y)		Data		
Data		<	ACM (cic = y) ANM (cic = y) Data		
	cic = y)		RLC ( $cic = y$ )		
RLC	C(cic = x)	<	REL (cic = x)		
	TEST DESCRIPTION				
1	Simultaneously transmit an IAM (containing the same value of cic) from each end of the link for a both way circuit. Both IAMs have appropriate indicators set for TMR and USI.  Record the message sequence using a signal monitor.				
2	CHECK A: IS THE I	ECHO CONTROL DEVICE DISABLED FOR CI	C=x?		
3	The called party at SP	A should answer the call.			
4	CHECK B: IS IT PO	SSIBLE TO PASS DATA BETWEEN SP A AND	O SP B?		
5	CHECK C: WAS A REPEAT ATTEMPT MADE BY SP A, WITH A DIFFERENT VALUE OF CIC IN THE IAM?				
6	CHECK D: IS THE ECHO CONTROL DEVICE DISABLED FOR CIC=y?				
7	The called party at SP B should answer the call.				
8	CHECK E: IS IT STILL POSSIBLE TO PASS DATA BETWEEN SP A AND SP B?				
9	Clear both calls down.				
10	CHECK F: ARE THE CIRCUITS IDLE?				
11		E MESSAGE SEQUENCE AS ABOVE?			
	<i>Note</i> – The message se	quence may not be as shown above.			

TEST NUMBER: 7.2.1			
REFERENCE: Q.764 Section 2.1			
TITLE: 3.1 kHz audio			
SUBTITLE: Successful call setup			
PURPOSE: To verify that a 3.1 kHz audio call can be successfully completed using appropriate transmission medium requirement and user service information parameters			
PRE-TEST CONDITIONS: Called termination is free			
CONFIGURATION: 1		TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECTED MESSAGE SEQUENCE:			
SP A			SP B
IAM (TMR, USI)  Data/Speech REL			ACM ANM Data/Speech RLC
	TEST DESCRIPTION	I	
1	Make a 3.1 kHz audio call from SP A to SP B. Record the message sequence using a signal monitor.		
2	CHECK A: IS THE TMR SET TO "3.1 kHz AUDIO"?		
3	CHECK B: DOES THE USI IF INCLUDED HAVE APPROPRIATE INFORMATION? FOR EXAMPLE, USI HAS TWO OR THREE OCTETS FOR 3.1 kHz AUDIO.		
4	The called party should answer the call.		
5	CHECK C: IS DATA/SPEECH POSSIBLE?		
6	The calling party should clear the call.		
7	CHECK D: IS THE CIRCUIT IDLE?		
8	CHECK E: WAS THE MESSAGE AS ABOVE?		
9	Repeat the test in the reverse direction.		
	<i>Note</i> – To check the contents of the USI parameter is optional.		