CCITT

Q.784

THE INTERNATIONAL TELEGRAPH AND TELEPHONE CONSULTATIVE COMMITTEE

SPECIFICATIONS
OF SIGNALLING SYSTEM No. 7

ISUP BASIC CALL TEST SPECIFICATION

Recommendation Q.784



Geneva, 1991

FOREWORD

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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.

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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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.

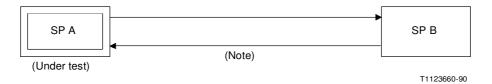
5 Test environment

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

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 3.6 Suspend and resume initiated by a calling party 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

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Of an incoming circuit

5.3.2

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				
REFERE	ENCE:			
TITLE:	Circuit supervision			
SUBTIT	LE: Non-allocated circ	euits		
PURPOS	SE: To verify that on realert the maintenar	eccipt of a CIC relating to a circuit which does not ace system	exist, SP A will discard the message and	
PRE-TE		range the data in signalling point B such that the C 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	
EXPECT	TED MESSAGE SEQUE	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 TH	IE INDICATION GIVEN TO THE MAINTENANC	CE SYSTEM?	

TEST NUMBER: 1.2.1			
REFERE	NCE: Q.764 Section 2	.10.3.1 a), b)	
TITLE:	Reset of circuits		
SUBTIT	LE: RSC received on a	n idle circuit	
PURPOS	SE: To verify that on re	ceipt of a reset circuit message SP A will respond	by sending a release complete message
PRE-TES	ST CONDITIONS: Th	e circuit is idle	
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP
EXPECT	ED MESSAGE SEQUE	NCE:	
S	SP A		SP B
•		<>	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			
REFERE	NCE: Q.764 Section 2	.10.3.1	
TITLE:	Reset of circuits		
SUBTITI	LE: RSC sent on an id	e circuit	
PURPOS	E: To verify that SP A	is able to generate reset-circuit message	
PRE-TES	ST CONDITIONS: Th	e circuit is idle	
CONI	CONFIGURATION: 1 TYPE OF TEST: VAT TYPE OF SP: SP		
EXPECT	ED MESSAGE SEQUE	NCE:	
S	P A		SP B
R	RSC	> <	RLC
	TEST DESCRIPTION		
1	Arrange for SP A 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 TH	E MESSAGE SEQUENCE AS ABOVE?	

TEST NUMBER: 1.2.3			
REFERE	NCE: Q.764 Section 2.10.3	.1 c)	
TITLE:	Reset of circuits		
SUBTIT	LE: RSC received on a loca	lly blocked circuit	
PURPOS		ot of a reset circuit message while in its lo lease complete messages	cally blocked state, SP A will respond by
PRE-TES	ST CONDITIONS: The circ	cuit is idle	
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP
EXPECT	ED MESSAGE SEQUENCE	:	
S	SP A		SP B
E	BLO	>	
		<	BLA
_		<	RSC
	BLO	>	
ŀ	RLC (Note)	> <	BLA (Note)
	TEST DESCRIPTION		
1	Arrange for SP A to send a	blocking message	
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 NUMBER: 1.2.4			
REFERE	ENCE: Q.764 Section 2	.10.3.1 d)	
TITLE:	Reset of circuits		
SUBTIT	LE: RSC received on a	remotely blocked circuit	
PURPOS	SE: To verify that SP A	is able to react to a reset-circuit message for a re-	notely blocked circuit
PRE-TE	ST CONDITIONS: The	e circuit is idle	
CON	CONFIGURATION: 1 TYPE OF TEST: VAT TYPE OF SP: SP		
EXPECT	TED MESSAGE SEQUE	NCE:	
SP A SP B		SP B	
F	BLA	<>	BLO
RLC		<>	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 NUMBER: 1.2.5			
REFERE	NCE: Q.764 Section 2	10.3.2	
TITLE: 1	Reset of circuits		
SUBTITL	E: Circuit group reset	received	
PURPOSI	E: To verify that on re reset acknowledge	ceipt of one circuit group reset message SP A will message	respond by sending a circuit group
PRE-TES	T CONDITIONS: All	circuits are idle	
CONF	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP
EXPECTI	ED MESSAGE SEQUE	NCE:	
SP A SP B		SP B	
< GRS GRA>		GRS	
UKA			
1			
	TEST DESCRIPTION		
1		nd a circuit group reset message. quence 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 RANG	E=0, GRS IS DISCARDED AND GRA IS NOT SI	ENT.
6	CHECK E: IF RANG	E>31, GRS IS DISCARDED AND GRA IS NOT S	SENT.

TEST NUMBER: 1.2.6				
REFERE	ENCE: Q.764 Section 2	.10.3.2		
TITLE:	Reset of circuits			
SUBTIT	LE: Circuit group rese	t sent		
PURPOS	SE: To verify that SP A	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	
EXPECT	ED MESSAGE SEQUE	NCE:		
S	SP A SP B			
(GRS		GRA	
	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 TH	E MESSAGE SEQUENCE AS ABOVE?		

1501 Basic Can Test opermention				
TEST N	UMBER: 1.2.7			
REFERE	ENCE: Q.764 Section 2	.10.3.2 d)		
TITLE:	Reset of circuits			
SUBTIT	LE: Circuit group rese	t received on remotely blocked circuits		
PURPOS	SE: To verify that SP A	s is able to react to a circuit group reset message	e correctly for remotely blocked circuits	
PRE-TE	ST CONDITIONS: All	circuits are idle		
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP	
EXPECT	TED MESSAGE SEQUE	NCE:		
S	SP A		SP B	
BLA		<>	BLO (CIC=x)	
I	BLA	<>	BLO (CIC=y)	
GRA		<>	GRS (including CIC=x,y)	
	TEST DESCRIPTION			
1	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 CIRCUITS IDLE?			
3	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE?			

		1501 Basic Call Test Specification	
TEST N	UMBER: 1.3.1.1		
REFERE	ENCE: Q.764 Section 2	9.2	
TITLE:	Circuit group blocking	/unblocking	
SUBTIT	LE: CGB and CGU rec	eived	
PURPOS	SE: To verify that the c	ircuit group blocking feature can be correctly initiat	ted
PRE-TES	ST CONDITIONS: All	circuits are idle	
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECT	TED MESSAGE SEQUE	NCE:	
S	SP A		SP B
(CGBA	<>	CGB
(CGUA	<>	CGU
	TEST DESCRIPTION		
1	indicator set to "maint	end a circuit group blocking message with the circui enance oriented". equence using a signal monitor.	t group supervision message type
2	CHECK A: VERIFY THAT A CALL CANNOT BE ORIGINATED FROM SP A ON THE CIRCUITS INDICATED BY THE RANGE AND STATUS PARAMETER IN THE CGB MESSAGE.		
3	Arrange for SP B to s to "maintenance orien	end one circuit group unblocking message with circ ted".	uit group supervision message type set
4		THAT A CALL CAN BE ORIGINATED FROM EI' TED BY THE RANGE FIELD.	THER SP ON THE CIRCUITS
5	CHECK C: WAS TH	E MESSAGE SEQUENCE AS ABOVE?	
6	CHECK D: If RANG	E=0, CGB is discarded and CGBA is not sent.	
7	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	r set to "hardware failure oriented".
	Note – A CPC="test ca	all" should not be used in CHECK A and CHECK B	

TEST NUMBER: 1.3.1.2			
REFERE	NCE: Q.764 Section 2	.9.2	
TITLE:	Circuit group blocking.	/unblocking	
SUBTIT	LE: CGB and CGU ser	nt	
PURPOS	E: To verify that SP A message	A is able to generate one circuit group blocking me	essage and one circuit group unblocking
PRE-TES	ST CONDITIONS: All	circuits are idle	
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECT	ED MESSAGE SEQUE	NCE:	
S	P A		SP B
C	CGB	>	CCDA
		<	CGBA
C	CGU	> <	CCIIA
		<	CGUA
	TEST DESCRIPTION		
1		end a circuit group blocking message with the circ	uit group supervision message type
	indicator set to "maint Record the message se	enance oriented". equence using a signal monitor.	
2	Amongo for CD A to or	and a singuite arrows make a king a massacra with the a	:
2	indicator set to "maint	and a circuit group unblocking message with the cenance oriented".	ircuit group supervision message type
3	CHECK A: VERIFY THAT A CALL CAN BE ORIGINATED FROM EITHER SP ON THE CIRCUITS		
	INDICATED BY THE RANGE FIELD.		
4	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE?		
5	Repeat steps 1-4 with the circuit group supervision message type indicator set to "hardware failure oriented".		
	Note – A CPC="test ca	all" should not be used in CHECK A.	

TEST NUMBER: 1.3.2.1			
ENCE: Q.764 Section 2	.9.2		
Circuit blocking/unblocking	cking		
LE: BLO received			
SE: To verify that the b	locking/unblocking procedure can be correctly in	nitiated	
ST CONDITIONS: The	e circuit is idle		
FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
ΓED MESSAGE SEQUE	NCE:		
SP A SP B			
DI A	<	BLO	
DLA	<	UBL	
UBA	>		
TEST DESCRIPTION			
Arrange for SP B to send a blocking message. Record the message sequence using a signal monitor.			
CHECK A: VERIFY THAT A CALL CANNOT BE ORIGINATED FROM SP A ON THIS CIRCUIT.			
Arrange for SP B to send an unblocking message.			
CHECK B: VERIFY THAT A CALL CAN BE ORIGINATED FROM EITHER SP ON THIS CIRCUIT.			
CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE?			
Note – A CPC="test ca	all" should not be used in CHECK A and CHECK	В.	
	Circuit blocking/unblock LE: BLO received SE: To verify that the best conditions: The figuration: 1 FIGURATION: 1 FIED MESSAGE SEQUE SP A BLA JBA TEST DESCRIPTION Arrange for SP B to se Record the message se CHECK A: VERIFY Arrange for SP B to se CHECK B: VERIFY CHECK C: WAS TH	Circuit blocking/unblocking LE: BLO received SE: To verify that the blocking/unblocking procedure can be correctly in ST CONDITIONS: The circuit is idle FIGURATION: 1 TYPE OF TEST: VAT and CPT TED MESSAGE SEQUENCE: SP A SLA JBA TEST DESCRIPTION Arrange for SP B to send a blocking message. Record the message sequence using a signal monitor. CHECK A: VERIFY THAT A CALL CANNOT BE ORIGINATED FRA Arrange for SP B to send an unblocking message. CHECK B: VERIFY THAT A CALL CAN BE ORIGINATED FROM	

TEST NUMBER: 1.3.2.2			
REFERE	ENCE: Q.764 Section 2	9.2	
TITLE:	Circuit blocking/unblo	cking	
SUBTIT	LE: BLO sent		
PURPOS	SE: To verify that SP A	A is able to generate blocking messages	
PRE-TES	ST CONDITIONS: Th	e circuit is idle	
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECT	ED MESSAGE SEQUE	NCE:	
SP A SP B		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 ca	all" should not be used in CHECK A.	

		1501 Basic Can Test Specification	
TEST N	TUMBER: 1.3.2.3		
REFERI	ENCE: Q.764 Section 2.9	.2	
TITLE:	Circuit blocking/unblock	ing	
SUBTIT	TLE: Blocking from both	ends; removal of blocking from one end	
PURPO	SE: To verify that the blo	cking/unblocking procedure can be correctly init	iated
PRE-TE	ST CONDITIONS: The	circuit is idle	
CON	IFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPEC	TED MESSAGE SEQUEN	CE:	
;	SP A		SP B
]	BLO		BLA
,	DI A	<>	BLO
	BLA UBL	>	
		<	UBA UBL
1	UBA	>	
	TEST DESCRIPTION		
1	Arrange for SP A to send Record the message sequences	d a blocking message. uence using a signal monitor.	
2	Arrange for SP B to sen	d an unblocking message.	
3	CHECK A: VERIFY T	HAT A CALL CANNOT BE ORIGINATED ON T	THIS CIRCUIT BY EITHER SP.
4	Arrange for SP A to send	d an unblocking message.	
5	CHECK B: VERIFY TH	AT A CALL CANNOT BE ORIGINATED BY SE	PA.
6	Arrange for SP B to send an unblocking message.		
7	CHECK C: VERIFY THAT A CALL CAN BE ORIGINATED ON THIS CIRCUIT BY EITHER SP.		
8	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?		
	Note – A CPC="test call	" should not be used in CHECKs A, B, and C.	

TEST NUMBER: 1.3.2.4 REFERENCE: Q.764 Section 2.9.2.3 xiv) TITLE: Circuit blocking/unblocking SUBTITLE: IAM received on a remotely blocked circuit PURPOSE: To verify that an IAM will unblock a remotely blocked circuit PRE-TEST CONDITIONS: The circuit is idle CONFIGURATION: 1 TYPE OF TEST: VAT and CPT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B BLO BLA						
SUBTITLE: Circuit blocking/anblocking SUBTITLE: IAM received on a remotely blocked circuit PURPOSE: To verify that an IAM will unblock a remotely blocked circuit PRE-TEST CONDITIONS: The circuit is idle CONFIGURATION: 1 TYPE OF TEST: VAT and CPT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B BLA	TEST N	UMBER: 1.3.2.4				
SUBTITLE: IAM received on a remotely blocked circuit PURPOSE: To verify that an IAM will unblock a remotely blocked circuit PRE-TEST CONDITIONS: The circuit is idle CONFIGURATION: 1 TYPE OF TEST: VAT and CPT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B BLO ACM	REFERE	ENCE: Q.764 Section 2	2.9.2.3 xiv)			
PURPOSE: To verify that an IAM will unblock a remotely blocked circuit PRE-TEST CONDITIONS: The circuit is idle CONFIGURATION: 1 TYPE OF TEST: VAT and CPT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B BLO BLA	TITLE:	Circuit blocking/unblo	cking			
PRE-TEST CONDITIONS: The circuit is idle CONFIGURATION: 1 TYPE OF TEST: VAT and CPT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B BLO BLA	SUBTIT	LE: IAM received on	a remotely blocked circuit			
EXPECTED MESSAGE SEQUENCE: SP A SP B BLO BLA	PURPOS	SE: To verify that an L	AM will unblock a remotely blocked circuit			
EXPECTED MESSAGE SEQUENCE: SP A SP B C	PRE-TE	ST CONDITIONS: Th	e circuit is idle			
SP A SP B SP B	CON	IFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP		
BLO BLA BLO BLO BLO BLO BLO BLO	EXPECT	ΓED MESSAGE SEQUE	ENCE:			
BLA	S	SP A		SP B		
ACM ANM Connectivity	BLA			BLO		
Connectivity Connectivity REL RLC TEST DESCRIPTION 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?	A	ACM		IAM		
TEST DESCRIPTION 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?				Connectivity		
Arrange for SP B to send a blocking message. Record the message sequence using a signal monitor. CHECK A: VERIFY THAT A CALL CANNOT BE ORIGINATED FROM SP A ON THIS CIRCUIT. Arrange for SP B to send an initial address message (non-test call). CHECK B: VERIFY THAT THE CALL IS PROCESSED NORMALLY AT SP A AND THE BLOCKING STATUS FOR THIS CIRCUIT IS REMOVED AT SP A. CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE?	F	RLC	•	REL		
Record the message sequence using a signal monitor. CHECK A: VERIFY THAT A CALL CANNOT BE ORIGINATED FROM SP A ON THIS CIRCUIT. Arrange for SP B to send an initial address message (non-test call). CHECK B: VERIFY THAT THE CALL IS PROCESSED NORMALLY AT SP A AND THE BLOCKING STATUS FOR THIS CIRCUIT IS REMOVED AT SP A. CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE?		TEST DESCRIPTION	T			
Arrange for SP B to send an initial address message (non-test call). CHECK B: VERIFY THAT THE CALL IS PROCESSED NORMALLY AT SP A AND THE BLOCKING STATUS FOR THIS CIRCUIT IS REMOVED AT SP A. CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE?	1					
CHECK B: VERIFY THAT THE CALL IS PROCESSED NORMALLY AT SP A AND THE BLOCKING STATUS FOR THIS CIRCUIT IS REMOVED AT SP A. CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE?	2	CHECK A: VERIFY THAT A CALL CANNOT BE ORIGINATED FROM SP A ON THIS CIRCUIT.				
STATUS FOR THIS CIRCUIT IS REMOVED AT SP A. 5 CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE?	3	Arrange for SP B to send an initial address message (non-test call).				
	4					
Note – A CPC="test call" should not be used in CHECK A.	5	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE?				

TEST NUMBER: 1.4.1				
REFERE	ENCE: Q.764 Section 2	.1.8		
TITLE:	Continuity check test c	all		
SUBTIT	LE: CCR received: suc	cessful		
PURPOS	SE: To verify that the c	ontinuity test call procedure can be correctly perfo	ormed	
PRE-TE	ST CONDITIONS: The	e circuit is idle		
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPECT	TED MESSAGE SEQUE	NCE:		
S	SP A		SP B	
		<	CCR	
		 	Check tone	
RLC		<>	REL	
	TEST DESCRIPTION			
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				
REFERE	NCE: Q.764 Section 2	.1.8		
TITLE:	Continuity check test c	all		
SUBTIT	LE: CCR sent: success	ful		
PURPOS	SE: To verify that the c	ontinuity test call procedure can be correctly perfo	ormed	
PRE-TE	ST CONDITIONS: Th	e circuit is idle		
CON	ONFIGURATION: 1 TYPE OF TEST: VAT and CPT TYPE OF SP: SP			
EXPECT	ED MESSAGE SEQUE	NCE:		
S	SP A		SP B	
CCR		>		
Check tone				
REL		> <	RLC	
	TEST DESCRIPTION			
1	Initiate the continuity test call procedure at SP A. Record the message sequence using a signal monitor.			
2	CHECK A: IS THE CIRCUIT IDLE?			
3	CHECK B: WAS TH	E MESSAGE SEQUENCE AS ABOVE?		

1501 Busic cum rest operation			
TEST N	UMBER: 1.4.3		
REFERE	ENCE: Q.764 Section 2	.1.8	
TITLE:	Continuity check test c	all	
SUBTIT	LE: CCR received: uns	successful	
PURPOS	SE: To verify that the n	nessages associated with continuity check proceed	dure can be correctly received
PRE-TES	ST CONDITIONS: En	sure that no backward check tone is detected wit	thin the specified time out
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP
EXPECT	TED MESSAGE SEQUE	NCE:	
S	SP A		SP B
		<	CCR
			Check tone T24
		<	- COT (failed)
alert the mainter system 			Check tone T24 - COT (failed) and alert the maintenance
		<	 CCR
	TEST DESCRIPTION		
1		test call procedure at SP B. equence using a signal monitor.	
2	CHECK A: WAS TH	E SECOND CONTINUITY CHECK INITIATEI	O WITHIN 1-3 MINUTES
3		HE MAINTENANCE SYSTEM ALERTED UITY CHECK?	ON FAILURE OF THE SECOND
4	CHECK C: WAS TH	E CHECK REPEATED AT INTERVALS OF 1	ΓΟ 3 MINUTES?
5	CHECK D: WAS TH	E MESSAGE SEQUENCE AS ABOVE?	

TEST N	TEST NUMBER: 1.4.4				
REFERE	ENCE: Q.764 Section	2.1.8			
TITLE:	Continuity check tes	t call			
SUBTIT	LE: CCR sent: unsu	ccessful			
PURPOS	SE: To verify that the	e continuity check procedure can be correctly invoke	d		
PRE-TE	ST CONDITIONS:	Ensure that no backward check tone is detected within	n the specified time out		
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP		
EXPECT	TED MESSAGE SEQ	JENCE:			
SF	SP A SP B				
Ct CC Ct	CR neck tone T24 OT (failed) T26 CR neck tone T24 OT (failed)	1-3 mins			
maintenance					
	TEST DESCRIPTION				
1	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?				
4	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE?				

TEST N	TEST NUMBER: 1.4.5				
REFERE	ENCE: Q.764 Section 2.	1.8			
TITLE:	Continuity check test ca	ıll			
SUBTIT	LE: CCR received: uns	uccessful; verify T27 timer			
PURPOS	SE: To verify that the co	ontinuity check procedure can be correctly	received		
a) (b) H		red. check tone is detected within the specified ged such that a second CCR is not generate			
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP		
EXPECT	TED MESSAGE SEQUE	NCE:			
SF	P A		SP B		
		< 	IAM Check tone		
	- I	<	COT (failed)		
	T27 4 mins.				
F	RSC –	> <	RLC		
	TEST DESCRIPTION				
1	Make a call from SP B Record the message se	to SP A. quence using a signal monitor.			
2	CHECK A: IS T27 IN	ITIATED AT SP A TO WAIT FOR CCR?			
3	CHECK B: WAS THI	E MESSAGE SEQUENCE AS ABOVE?			

TEST NUMBER: 1.5.1 REFERENCE: Q.764 Section 2.10.5.1 a), b), d) TITLE: Receipt of unreasonable signalling information messages SUBTITLE: Receipt of unexpected messages PURPOSE: To verify that the action taken by a signalling point upon receipt of unexpected messages is as stated in Q.764 Section 2.10.5.1 PRE-TEST CONDITIONS: Arrange the data in signalling point B such that REL, RLC and other unreasonable messages may be initiated. b) The circuit should be idle and unblocked. CONFIGURATION: 1 TYPE OF TEST: VAT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B a) REL RLCb) <----RLC XXX (Note 1) c) RSC RLC d) <-----YYYTEST DESCRIPTION 1 Arrange for SP B to send a release message. 2 CHECK A: IS THE CIRCUIT IDLE? . . . 3 CHECK B: WAS THE MESSAGE SEQUENCE AS IN a) ABOVE? . . . 4 Arrange for SP B to send a release complete message. 5 CHECK C: IS THE CIRCUIT IDLE? . . . CHECK D: WAS THE MESSAGE SEQUENCE AS IN b) ABOVE? . . . 6 7 Arrange for SPB 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 SPB to send an unreasonable message YYY.

CHECK G: WAS YYY DISCARDED AS IN d) ABOVE? . . .

Note 1 – Not all the unresonable messages will cause an RSC message to be sent. Note 2 – This test covers only some of the ambiguous messages which could be received.

11

TEST NUMBER: 1.5.2

REFERENCE: Q.764 Section 2.10.5.1 d)

TITLE: Receipt of unreasonable signalling information messages

SUBTITLE: Receipt of unexpected messages during call setup

PURPOSE:

- a) To verify that the action taken by a signalling point upon receipt of unexpected messages is as stated in Q.764 Section 2.10.5.1.
- b) The circuit should be idle and unblocked.

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.

The circuit should be falle and unblocked.						
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP			
EXPECT	EXPECTED MESSAGE SEQUENCE:					
5	SP A		SP B			
a	a)					
I	IAM	>				
		<	ACM			
		<	XXX (Note)			
		<	ANM			
(Connectivity		Connectivity			
I	REL	>				
		<	RLC			
ŀ	p)					
		<	IAM			
		<	YYY (Note)			
I	RSC	>				
		<	RLC			
	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 CON	NECTION ESTABLISHED?				
3	CHECK B: WAS THE M	IESSAGE 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 THE M	IESSAGE SEQUENCE AS IN b) ABOVE? .				
	Note – Messages other than the call control messages will be used for XXX and YYY.					

TEST NUMBER: 1.5.3

REFERENCE: Q.764 Section 2.10.5.1 c), d)

TITLE: Receipt of unreasonable signalling information messages

SUBTITLE: Receipt of unexpected messages during a call

PURPOSE: To verify that the action taken by a signalling point upon receipt of unexpected messages is as stated in Q.764 Section 2.10.5.1

PRE-TEST CONDITIONS:

- 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.

b) The circuit should be idle and unblocked.						
COI	NFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP			
EXPEC	EXPECTED MESSAGE SEQUENCE:					
	SP A		SP B			
	a)					
	IAM	>				
		<	ACM			
		<	ANM			
	Connectivity		Connectivity			
		<	RLC			
	REL	>	77.0			
		<	RLC			
	b)					
	IAM	>				
		<	ACM			
		<	ANM			
	Connectivity		Connectivity			
	Connectivity		XXX (Note) Connectivity			
	Connectivity	<	REL			
	RLC	>	KLL			
	1					
	TEST DESCRIPTION					
1	Make a call from SP A t	o SP B.				
	Record the message seq	uence using a signal monitor.				
2	CHECK A: IS THE CO	ONNECTION ESTABLISHED?				
3	Arrange for SP B to sen	d a release complete message.				
4	CHECK B: IS THE CI					
5	Make a call from SP A t	Make a call from SP A to SP B.				
6	CHECK C: IS THE CONNECTION ESTABLISHED?					
7	Arrange for SP B to sen	Arrange for SP B to send an unreasonable message XXX.				
8	CHECK D: IS THE CO	CHECK D: IS THE CONNECTION STILL ESTABLISHED?				
9	CHECK E: WAS THE	MESSAGE SEQUENCE AS IN b) ABOVE?				
	Note - Messages other t	han REL, RLC, RSC and SUS will be used for XX	XX.			
	I.					

1501 Basic Can Test Specification					
TEST N	UMBER: 2.1.1				
REFERI	ENCE: Q.764 Section 2.1				
TITLE:	Both way circuit selection				
SUBTIT	LE: IAM sent by controlli	ng SP			
PURPOS	SE: To verify that signalling the controlling SP is A	ng point A can initiate an outgoing call on a c	ircuit capable of bothway operation when		
a) (b) (d)	b) Circuit selected is capable of bothway operation.				
CON	IFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP		
EXPECT	TED MESSAGE SEQUENC	E:			
5	SP A		SP B		
IAM			Ringing tone ANM Connectivity		
	TEST DESCRIPTION				
1	Make a call from SP A to SP B. Record the message sequence using a signal monitor.				
2	CHECK A: CAN RING	NG 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 CIR	CHECK C: IS THE CIRCUIT IDLE?			
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?				

TEST N	TEST NUMBER: 2.1.2				
REFERE	NCE: Q.764 Section 2.	I			
TITLE:	Both way circuit selection	on			
SUBTIT	LE: IAM sent by non-co	ontrolling SP			
PURPOS	E: To verify that signal the non-controlling	ling point A can initiate an outgoing call on a cir SP is A	rcuit capable of bothway operation when		
a) (Circuit selected is capable of bothway operation.				
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP		
EXPECT	ED MESSAGE SEQUEN	VCE:			
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 sec	to SP B. Juence 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?				

TEST N	UMBER: 2.2.1					
REFERE	ENCE: Q.764 Sections	2.1.1, 2.1.4, 2.1.7, 2.3				
TITLE:	Called address sending					
SUBTIT	LE: "en bloc" operatio	n				
PURPOS	SE: To verify that a cal	l can be successfully established (all digits included	d in the IAM)			
a) (
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP			
EXPECT	TED MESSAGE SEQUE	NCE:				
S	SP A		SP B			
I	AM	> <	ACM			
			Ringing tone			
(Connectivity	<	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 RIN	NGING TONE BE HEARD?				
3	The called party should answer the call.					
4	CHECK B: IS THE CONNECTION ESTABLISHED?					
5	The calling party shou	ald clear the call.				
6	CHECK C: IS THE CIRCUIT IDLE?					
7	CHECK D: WAS TH	E MESSAGE SEQUENCE AS ABOVE?				
8	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						
SUBTITLE: Overlap operation (with SAM)						
PURPOSE: To verify that signalling point A can initiate a call using an IAM followed 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						
CONFIGURATION: 1		TYPE OF TEST: VAT and CPT	TYPE OF SP: SP			
EXPECTED MESSAGE SEQUENCE:						
SP A			SP B			
IAM SAM		>				
Connectivity REL		< 	ACM Ringing tone ANM Connectivity RLC			
		<u> </u>	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	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.

ISUP Basic Call Test Specification													
TEST NUMBER: 2.3.1													
REFERENCE: Q.764 Sections 2.1.4.1, 2.1.7													
TITLE: Successful Call setup SUBTITLE: Ordinary call (with various indications in ACM) PURPOSE: To verify that a call can be successfully completed using various indications in address complete messages													
							PRE-TEST CONDITIONS: Called termination is free						
							CON	NFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP			
EXPEC	TED MESSAGE SEQUE	NCE:											
SP A			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:												
	 Called party status indicator="subscriber free", or, "no indication". ISDN access indicator="ISDN" or "NON ISDN". 												
9	Repeat this test in the r	everse direction.											

TEST NUMBER: 2.3.2 REFERENCE: Q.764 Sections 2.1.5 TITLE: Successful Call setup SUBTITLE: Ordinary call (with ACM, CPG, and ANM) PURPOSE: To verify that a call can be successfully completed using address complete message, call progress message and answer message 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 <----ACM <----CPG Ringing tone <----ANM 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 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. CHECK C: IS THE CIRCUIT IDLE? . . . 6 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						
SUBTITLE: Ordinary call (with various indications in CON)						
PURPOSE: To verify that a call can be successfully completed using various indications in the connect message						
PRE-TEST CONDITIONS: Called termination is free. A connect message is returned instead of an answer message from SP B						
CONFIGURATION: 1		TYPE OF TEST: VAT and CPT	TYPE OF SP: SP			
EXPECTED MESSAGE SEQUENCE:						
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:					
	 Called party status indicators = "subscriber free" or, "no indication". ISDN access indicators = "ISDN" or "NON ISDN". 					
8	Repeat this test in the reverse direction.					

TEST NUMBER: 2.3.4					
REFERE	NCE: Q.764 Section 2	.1			
TITLE:	Successful Call setup				
SUBTITI	LE: Call switched via a	satellite			
PURPOS	E: To verify the satelli	te indicator in the initial address message is corre	ectly set		
a) Cb) T					
CONI	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP		
EXPECT	ED MESSAGE SEQUE	NCE:			
S	P A		SP B		
L	AM		ACM Ringing tone ANM		
	Connectivity EL		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: CAN RIN	IGING TONE BE HEARD?			
3	The called party should	d answer the call.			
4	CHECK B: IS THE C	CONNECTION ESTABLISHED?			
5	The calling party should clear the call.				
6	CHECK C: IS THE CIRCUIT IDLE?				
7	CHECK D: WAS TH	E 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 NUMBER: 2.3.5 REFERENCE: Q.764 Section 2.8 TITLE: Successful Call setup SUBTITLE: Echo control procedure for call set up PURPOSE: To verify that a call can be successfully established with the inclusion of echo control devices PRE-TEST CONDITIONS: Called termination is free. b) 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. CONFIGURATION: 1 TYPE OF TEST: VAT and CPT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B IAM ACM Ringing tone ANM Connectivity Connectivity REL RLC 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. CHECK A: IS THE ECHO CONTROL DEVICE INDICATOR BIT "E" (OUTGOING HALF ECHO DEVICE 2 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"? . . . CHECK C: CAN RINGING TONE BE HEARD? . . . 4 5 The called party should answer the call. 6 CHECK D: IS THE CONNECTION ESTABLISHED? . . . CHECK E: ARE THE ECHO DEVICES OPERATING CORRECTLY? . . . 7 8 The calling party should clear the call. 9 CHECK F: IS THE CIRCUIT IDLE? . . . 10 CHECK G: WAS THE MESSAGE SEQUENCE AS ABOVE? . . . For validation testing repeat this test in the reverse direction. 11

1SUP Basic Call Test Specification					
TEST N	UMBER: 2.3.6				
REFERI	ENCE: Q.764 Section 2	2.9.2.1			
TITLE:	Successful Call setup				
SUBTIT	LE: Blocking and unb	locking during a call (initiated)			
PURPOSE: To verify that the circuit blocking and unblocking procedure can be correctly initiated during a call					
PRE-TE	ST CONDITIONS: Ca	lled termination is free			
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP		
EXPEC	ΓED MESSAGE SEQUE	ENCE:			
5	SP A		SP B		
]	IAM	>			
		<	ACM		
			Ringing tone		
		<	ANM		
	Connectivity		Connectivity		
j	BLO	>	DIA		
1	REL	<>	BLA		
	KLL	<	RLC		
1	UBL	` >	REC		
		<	UBA		
	TEST DESCRIPTION				
1	Make a call from SP A Record the message so	A to SP B. equence using a signal monitor.			
2	CHECK A: CAN RI	NGING TONE BE HEARD?			
3	The called party should	ld answer the call.			
4	CHECK B: IS THE	CONNECTION ESTABLISHED?			
5	SP A should initiate c	ircuit blocking relating to the circuit used for this c	call.		
6	CHECK C: IS THE C	CONNECTION STILL ESTABLISHED?			
7	The calling party shou	ald clear the call.			
8	CHECK D: VERIFY	THAT A CALL CANNOT BE ORIGINATED ON	THIS CIRCUIT BY SP B.		
9	SP A should send an u	inblocking signal.			
10	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.				

18UP Basic Call Test Specification			
TEST N	UMBER: 2.3.7		
REFERE	ENCE: Q.764 Section	2.9.2.1	
TITLE:	Successful Call setup		
SUBTIT	LE: Blocking and unb	clocking during a call (received)	
PURPOS	SE: To verify that the	circuit blocking and unblocking procedure can be	correctly received during a call
PRE-TE	ST CONDITIONS: Ca	alled termination is free	
CON	IFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECT	ΓED MESSAGE SEQUI	ENCE:	
5	SP A		SP B
I	IAM	>	
·		<	ACM
			Ringing tone
(Connectivity	<	ANM Connectivity
`	connectivity	<	BLO
I	BLA	>	
I	REL	>	
		<	RLC UBL
ı	UBA	>	OBL
	T	· · · · · · · · · · · · · · · · · · ·	
	TEST DESCRIPTION	I	
1	Make a call from SP A	A to SP B. equence using a signal monitor.	
2	CHECK A: CAN RI	NGING TONE BE HEARD?	
3	The called party shou	ld answer the call.	
4		CONNECTION ESTABLISHED?	
5		ircuit blocking relating to the circuit used for this	call.
6	CHECK C: IS THE	CONNECTION STILL ESTABLISHED?	
7	The calling party should clear the call.		
8	CHECK D: VERIFY	THAT A CALL CANNOT BE ORIGINATED ON	N THIS CIRCUIT BY SP A?
9	SP B should send an		
10			GINATED FROM EITHER SP.
11	CHECK E: VERIFY THAT A CALL CAN BE SUCCESSFULLY ORIGINATED FROM EITHER SP. CHECK F: WAS THE MESSAGE SEQUENCE AS ABOVE?		
12	Repeat this test in the reverse direction.		

TEST NUMBER: 3.1				
REFERE	ENCE: Q.764 Section 2	2.3		
TITLE:	Normal call release			
SUBTIT	LE: Calling party clea	rs before any backward messages		
PURPOS	SE: To verify that the o	calling party can successfully release a call prior to	receipt of any backward message	
PRE-TE	ST CONDITIONS: Th	ne circuit is idle		
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPECT	TED MESSAGE SEQUE	ENCE:		
SP A SP B		SP B		
I	AM	>		
F	REL	>		
		<	RLC	
	TEST DESCRIPTION			
1	Make a call from SP A to SP B.			
2	Record the message sequence using a signal monitor. The calling party should clear the call prior to receipt of any backward messages.			
3	The calling party should clear the call prior to receipt of any backward messages. CHECK A: IS THE CIRCUIT IDLE?			
4		IE MESSAGE SEQUENCE AS ABOVE?		
5	Repeat this test in the			

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 rec	ceipt of answer		
PRE-TE	ST CONDITIONS: Ca	lled termination is free			
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP		
EXPECT	TED MESSAGE SEQUE	ENCE:			
S	SP A		SP B		
I	AM	>			
		<	ACM		
			Ringing tone		
F	REL	>			
		<	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 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 N	TEST NUMBER: 3.3				
REFERE	REFERENCE: Q.764 Section 2.3				
TITLE:	Normal call release				
SUBTIT	LE: Calling party clear	rs after answer			
PURPOS	SE: To verify that the c	alling party can successfully release a call after answer			
PRE-TES	ST CONDITIONS: Ca	lled termination is free			
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP		
EXPECT	ED MESSAGE SEQUE	ENCE:			
S	SP A		SP B		
I	AM	>			
		<	ACM		
			Ringing tone		
		<	ANM		
(Connectivity		Connectivity		
F	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 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: IS THE CIRCUIT IDLE?				
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?				
8	For validation testing this test should be repeated in the reverse direction.				

		iser base can rest specification			
TEST N	TEST NUMBER: 3.4				
REFERE	REFERENCE: Q.764 Section 2.3				
TITLE:	Normal call release				
SUBTIT	LE: Called party clears	after answer			
PURPOS	SE: To verify that a call	be successfully released in the backward direction	n		
PRE-TE	PRE-TEST CONDITIONS: Called termination is free				
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP		
EXPEC	ΓED MESSAGE SEQUEN	NCE:			
	SP A		SP B		
1	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 CONNECTION ESTABLISHED?				
5	The called party should clear the call.				
6	CHECK C: IS THE C	IRCUIT IDLE?			
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?				
8	For validation testing this test should be repeated in the reverse direction.				

ISUP Basic Call Test Specification					
TEST N	UMBER: 3.5				
REFERE	REFERENCE: Q.764 Section 2.5.1.3				
TITLE:	Normal call release				
SUBTIT	LE: Suspend initiated	by the network			
PURPOS	SE: To verify that a cal	led subscriber can successfully clear and reanswer	r a 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 SEQUE	ENCE:			
S	SP A		SP B		
1	IAM	>			
	2 11 1	<	ACM		
			Ringing tone		
		<	ANM		
(Connectivity		Connectivity		
		< <	SUS (network) (Note) RES (network) (Note)		
(Connectivity		Connectivity		
I	REL	>			
		<	RLC		
	TEST DESCRIPTION				
1	Make a call from SP A Record the message so	A to SP B. equence using a signal monitor.			
2		NGING TONE BE HEARD?			
3	The called party shou	ld answer the call.			
4	CHECK B: IS THE C	CONNECTION ESTABLISHED?			
5	The called party should clear the call.				
6	The called party should reanswer the call.				
7	CHECK C: IS THE CONNECTION STILL ESTABLISHED?				
8	The calling party should clear the call.				
9	CHECK D: IS THE CIRCUIT IDLE?				
10	CHECK E: WAS THE MESSAGE SEQUENCE AS ABOVE?				
11	For validation testing this test should be repeated in the reverse direction.				
	Note – In order to generate these messages, an ISDN-PSTN interworking arrangement may be needed.				

		1301 Basic Can Test Specification				
TEST N	UMBER: 3.6					
REFERI	EFERENCE: Q.764 Section 2.5.1.1, 2.5.2.1					
TITLE:	Normal call release					
SUBTIT	LE: Suspend and resume in	nitiated by a calling party				
PURPO	SE: To verify that the callir	ng subscriber can successfully suspend and res	sume a call			
PRE-TE	ST CONDITIONS: Called	termination is free				
CON	IFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP			
EXPEC	ΓED MESSAGE SEQUENCI					
:	SP A		SP B			
1	IAM	>				
		<	ACM			
			Ringing tone			
		<	ANM			
(Connectivity		Connectivity			
;	SUS (User initiated)	>				
]	RES (User initiated)	>				
•	Connectivity		Connectivity			
]	REL	>				
		<	RLC			
	TEST DESCRIPTION					
1	Make a call from SP A to S	SP B. nce using a signal monitor.				
2		NG TONE BE HEARD?				
3	The called party should a					
4		NECTION ESTABLISHED?				
5	The calling party should s	uspend the call.				
6	The calling party should re	esume the call.				
7	CHECK C: IS THE CONNECTION STILL ESTABLISHED?					
8	The calling party should c	lear the call.				
9	CHECK D: IS THE CIRC	CUIT IDLE?				
10	CHECK E: WAS THE M	ESSAGE SEQUENCE AS ABOVE?				
11	Repeat this test in the reve	rse direction.				
	Note – An end-to-end ISD	N arrangement is needed for this test.				

1501 Basic Can 115t Specification						
TEST N	IUMBER: 3.7					
REFER	REFERENCE: Q.764 Section 2.5.1.2, 2.5.2.2					
TITLE:	Normal call release					
SUBTIT	ΓLE: Suspend and resur	me initiated by a called party				
PURPO	SE: To verify that the c	called subscriber can successfully suspend and resu	ume a call			
PRE-TE	EST CONDITIONS: Ca	alled termination is free				
CON	NFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP			
EXPEC	TED MESSAGE SEQUE	ENCE:				
	SP A		SP B			
	IAM	>				
		<	ACM			
			Ringing tone			
		<	ANM			
	Connectivity		Connectivity			
		<	SUS (User initiated)			
	a ett	<	RES (User initiated)			
1	Connectivity		Connectivity			
	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		NGING TONE BE HEARD?				
3	The called party shou	ıld answer the call.				
4	CHECK B: IS THE	CONNECTION ESTABLISHED?				
5	The called party shou	ld suspend the call.				
6	The called party should resume the call.					
7	CHECK C: IS THE CONNECTION STILL ESTABLISHED?					
8	The calling party should clear the call.					
9	CHECK D: IS THE	CIRCUIT IDLE?				
10	†	IE MESSAGE SEQUENCE AS ABOVE?				
11	1	Repeat this test in the reverse direction.				
		ISDN arrangement is needed for this test.				
	1	<u>~</u>				

		ISUP Basic Call Test Specification	
TEST N	IUMBER: 3.8		
REFER	ENCE: Q.764 Section 2	2.3.1 e)	
TITLE:	Normal call release		
SUBTI	ΓLE: Collision of REL	nessages	
PURPO		ease message may be received at an exchange from the switch path is initiated	n a succeeding or preceding exchange
PRE-TE	EST CONDITIONS: Ca	lled termination is free	
CON	NFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPEC	TED MESSAGE SEQUE	NCE:	
	SP A		SP B
	IAM		ACM Ringing tone ANM Connectivity
	REL RLC (Note)	>< > <	REL RLC (Note)
	TEST DESCRIPTION		
1	Make a call from SP A Record the message so	A to SP B. equence using a signal monitor.	
2	CHECK A: IS RING	ING TONE HEARD?	
3	The called party shou	ld answer the call.	
4	CHECK B: IS THE	CONNECTION ESTABLISHED?	
5	The calling and called	parties should clear the call at the same time.	
6	CHECK C: IS THE	CIRCUIT IDLE?	
7	CHECK D: WAS TH	IE MESSAGE SEQUENCE AS ABOVE?	
	Note – The RLC mess	ages may occur in the reverse sequence.	

ISOP Basic Can Test Specification				
TEST N	UMBER: 4.1			
REFERE	ENCE: Q.764 Section 2.	2		
TITLE:	Unsuccessful call setup			
SUBTIT	LE: Validate a set of kn	own causes for release		
PURPOS		Ill will be immediately released by the outgoing given and the correct indication is given to the ca		
PRE-TE		ange the data in signalling point B such that a rned to the request	a release message with a given cause is	
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPECT	TED MESSAGE SEQUE	NCE:		
S	SP A		SP B	
a	ı)			
I	AM	>	DEL (
F	RLC	<	REL (cause = xxx)	
		,		
	o) AM	>		
1	AW	<	ACM	
		<	REL (cause = xxx)	
F	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: IS THE APPROPRIATE TONE OR ANNOUNCEMENT RETURNED TO THE CALLING PARTY?			
3	CHECK B: IS THE CIRCUIT IDLE?			
4		E MESSAGE SEQUENCE AS ABOVE?		
5		s are required to be tested.		
		re: unallocated number, no circuit available, and	1 switching equipment congestion.	
	Note – It may not be possible to confirm that the appropriate tone is returned to the calling party. In this case it must be verified that the signalling point under test transmits the signal received.			

	1		
TEST NUMBER: 5.1			
REFERENCE: Q.764 Section	2.10.8.1		
TITLE: Abnormal situation du	uring a call		
SUBTITLE: Inability to release	se in response to a REL after ANM		
	he signalling point is unable to return a circuit to ait will be blocked	the idle condition in response to a release	
	rrange the data in signalling point A such that it ondition in response to a release message	is unable to return the circuit to the idle	
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP	
EXPECTED MESSAGE SEQU	ENCE:		
SP A		SP B	
	<	IAM	
ACM	>		
Ringing tone			
ANM	>		
Connectivity		Connectivity	
	<	REL	
BLO and alert the	>		
maintenance system			
	<	BLA	
RLC	>	BEA	
	<u> </u>		
TEST DESCRIPTION	N		
	Make a call from SP B to SP A. Record the message sequence using a signal monitor.		
	CHECK A: CAN RINGING TONE BE HEARD		
	The calling party should answer the call.		
	CHECK B: IS THE CONNECTION ESTABLISHED?		
	The calling party should release the call.		
	HE MESSAGE SEQUENCE AS ABOVE?		
7 Repeat this test in the	Repeat this test in the reverse direction.		

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 CONFIGURATION: 1 TYPE OF TEST: VAT 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 4 CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .

TEST NUMBER: 5.2.2 REFERENCE: Q.764 Section 2.10.8.3 a) TITLE: Timers SUBTITLE: T9: waiting for an answer message PURPOSE: To verify that if an answer message is not received within T9 after receiving an address complete message the connection is released by the outgoing signalling point PRE-TEST CONDITIONS; The called party should not answer the call CONFIGURATION: 1 TYPE OF TEST: VAT and CPT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B IAM <----ACM T9 | 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: CAN RINGING TONE BE HEARD? . . . 3 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? . . . CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE? . . . 6 *Note* – The timer needs only be run at the outgoing international exchange or national controlling exchange.

TEST NUMBER: 5.2.3 REFERENCE: Q.764 Sections 2.2 and 2.10.6 TITLE: Timers SUBTITLE: T1 and T5: failure to receive a RLC PURPOSE: To verify that appropriate actions take place at the expiration of timers T1 and T5 PRE-TEST CONDITIONS: Arrange the data in signalling point B such that a release complete message is not returned in response to a release message CONFIGURATION: 1 TYPE OF TEST: VAT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B IAM ACM Ringing tone ANM Connectivity Connectivity REL T1 4-15 secs. | T5 | 1 min. **RSC** Alert the maintenance system RLC TEST DESCRIPTION 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. CHECK A: WAS A RELEASE MESSAGE SENT BETWEEN 4-15 SECONDS AFTER SENDING OF THE 3 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 THE MESSAGE SEQUENCE AS ABOVE? . . . Note - T1 is repeated and REL is retransmitted during T5 interval.

TEST NUMBER: 5.2.4 REFERENCE: Q.764 Sections 2.5.1.3, 2.5.2.3, and 2.5.3 TITLE: Timers SUBTITLE: T6: waiting for RES (Network) message PURPOSE: To verify that the call is released at the expiration of timer T6 PRE-TEST CONDITIONS: Arrange the data in signalling point B such that it is unable to return a resume message (called party will not re-answer) CONFIGURATION: 1 TYPE OF TEST: VAT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B IAM ACM <----_____ Ringing tone ANM Connectivity Connectivity SUS (Network) | T6 REL RLC 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. CHECK B: IS THE CONNECTION ESTABLISHED? . . . 4 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 CIRCUIT IDLE? . . . 8 CHECK E: WAS THE MESSAGE SEQUENCE AS ABOVE? . . . *Note* – T6 timer needs only to be run at the international or national controlling exchange.

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 point.

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
- b) it does not send a continuity message.

CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP		
EXPECT	EXPECTED MESSAGE SEQUENCE:				
SP A	A		SP B		
	 I	<	IAM		
	T8 10	-15 secs.			
REL		>	DI C		
		<	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?				

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: Circuit is idle. 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: SP A SP B BLO T12 4-15 secs. BLO | T13 | 1 min. BLO Alert the maintenance system | T13 | 1 min. - 1 BLO 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? . . .

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

Note - T12 is repeated and BLO is retransmitted during the first T13 interval.

4

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. Arrange the data in signalling point B such that an unblocking acknowledgement message is not returned in b) 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 Send a blocking and unblocking message from SP A to SP B. 1 Record the message sequence using a signal monitor. 2 CHECK A: WAS AN UNBLOCKING MESSAGE SENT BETWEEN 4-15 SECONDS AFTER SENDING OF 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? . . .

Note - T14 is repeated and UBL is retransmitted during the first T15 interval.

4

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. Arrange the data in signalling point B such that a release complete message is not returned in response to a reset circuit message. CONFIGURATION: 1 TYPE OF TEST: VAT 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. 2 CHECK A: WAS A RESET CIRCUIT MESSAGE SENT BETWEEN 4-15 SECONDS AFTER SENDING OF THE INITIAL RESET CIRCUIT MESSAGE? . . . 3 CHECK B: WAS A RESET CIRCUIT MESSAGE SENT AT 1 MINUTE AFTER SENDING OF THE INITIAL RESET CIRCUIT MESSAGE? . . . 4 CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .

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

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. 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 1 1 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. CHECK A: WAS A CIRCUIT GROUP BLOCKING MESSAGE SENT BETWEEN 4-15 SECONDS AFTER 2 SENDING OF THE INITIAL CIRCUIT GROUP BLOCKING MESSAGE? . . .

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? . . .

Note - T18 is repeated and CGB is retransmitted during the first T19 interval.

3

4

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:

- a) Circuit is idle.
- 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.

CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP
EXPECT	TED MESSAGE SEQUE	ENCE:	
SP A	A		SP B
CGE	3	>	
		<	CGBA
CGU		>	
	T20		
	4-15 secs.		
CCI	1		
CGU		>	
	•	min.	
CGL		>	
CGC	, I		
Aler	t the maintenance		
syst	em		
	T2	21	
	1	min.	
	I		
CGU	J	>	
			.
	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	2 CHECK A: WAS A CIRCUIT GROUP UNBLOCKING MESSAGE SENT BETWEEN 4-15 SECONDS AFTE		
	SENDING OF THE INITIAL CIRCUIT GROUP UNBLOCKING MESSAGE?		
3	3 CHECK B: WAS A CIRCUIT GROUP UNBLOCKING MESSAGE SENT AT 1 MINUTE AFTER SENDIN		SENT AT 1 MINUTE AFTER SENDING
	OF THE	INITIAL CIRCUIT GROUP UNBLOCKING M	IESSAGE?
4	CHECK C: WAS TH	IE MESSAGE SEQUENCE AS ABOVE?	
	Note - T20 is repeated	d and CGU is retransmitted during the first T21	interval.
L			

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: a) Circuit is idle. 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 T22 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? . . .

Note – T22 is repeated and GRS is retransmitted during the first T23 interval.

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

4

TEST NUMBER: 5.3.1			
REFERE	NCE: Q.764 Section 2	2.10.3.1 a)	
TITLE:	Reset of circuits during	g a call	
SUBTIT	LE: Of an outgoing cir	rcuit	
PURPOS	E: To verify that on re	eccipt of a reset message the call is immediately rel	leased - outgoing call
PRE-TES	ST CONDITIONS: Ca	lled termination is free	
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECT	ED MESSAGE SEQUE	ENCE:	
SP A	A		SP B
IAM		> <	ACM
			Ringing tone ANM
Conr	nectivity	· 	Connectivity
< RSC RLC>		RSC	
	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	Arrange for SP B to send a reset-circuit message.		
6	CHECK C: IS THE CIRCUIT IDLE?		
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?		

TEST NUMBER: 5.3.2			
REFERE	ENCE: Q.764 Section 2	.10.3.1 a)	
TITLE:	Reset of circuits during	a call	
SUBTIT	LE: Of an incoming cir	rcuit	
PURPOS	SE: To verify that on re	ceipt of a reset message the call is immediately re	eleased - 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	TED MESSAGE SEQUE	NCE:	
SP A	A		SP B
ANN	ing tone Inectivity	<	IAM Connectivity RSC
	TEST DESCRIPTION		
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 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?	

		1501 Basic Can Test Specification	
TEST N	UMBER: 6.1.1		
REFERE	ENCE: Q.764 Section 2.	1.8	
TITLE:	Continuity check call		
SUBTIT	LE: Continuity check re	quired	
PURPOS	SE: To verify that a call	can be set up on a circuit requiring a continuity	check
PRE-TE	ST CONDITIONS: Arra	ange the data in signalling point A such that a co	ntinuity check is required on this circuit
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECT	TED MESSAGE SEQUEN	NCE:	
SP A	A		SP B
IAM	[>	
Chec	ck tone		
СОТ	C (successful)	>	A GN f
		<	ACM
		 <	Ringing tone ANM
Com	nectivity		Connectivity
REL		>	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 set to '01'. Record the message sequence using a signal monitor.		
2	CHECK A: CAN RIN	GING 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	E MESSAGE SEQUENCE AS ABOVE?	
8	Repeat this test in the reverse direction.		

		•	
TEST N	UMBER: 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 licates that a continuity check has been performed	
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECT	TED MESSAGE SEQUE	NCE:	
SP A	A		SP B
		<	IAM
		delay while check performed on previous circuit	
		1	
		<	COT (successful)
ACM		>	
Ring ANN	ring tone	>	
	nectivity		Connectivity
0011		<	REL
RLC		>	
	TEST DESCRIPTION		
1	Make a call from SP B to SP A with the continuity check indicator bits in the Nature of Connection indicators in the IAM set to '10'. Record the message sequence using a signal monitor.		
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 shou	ıld clear the call.	
7	CHECK C: IS THE	CIRCUIT IDLE?	
8	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?		

TEST NUMBER: 6.1.3				
REFERE	REFERENCE: Q.764 Section 2.3			
TITLE:	Continuity check call			
SUBTIT	LE: Calling party clear	rs during a COT		
PURPOS	SE: To verify that the c	alling party can successfully clear the call during	the 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.				
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP	
EXPECT	TED MESSAGE SEQUE	NCE:		
SP A	A		SP B	
IAM	IAM>			
Chec	Check tone			
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 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 NUMBER: 6.1.4				
REFERE	REFERENCE: Q.764 Section 2.1.8			
TITLE:	Continuity check call			
SUBTIT	LE: Delay of through	connect		
PURPOS		e switching through of the speech path is dela n the return of the speech path	ayed until the residual check-tone has	
a) 7	ST CONDITIONS: The called termination is Arrange the data in sign	s free. alling point A such that a continuity check is appli	ed on this circuit.	
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP	
EXPECT	TED MESSAGE SEQUE	ENCE:		
SP A		> 	SP B	
СОТ	(successful)		ACM Ringing tone	
Connectivity REL		< > <	ANM Connectivity RLC	
	TEST DESCRIPTION			
1	Make a call from SP A Record the message so	A to SP B. equence using a signal monitor.		
2	CHECK A: WAS THE PARTY?	IE CONTINUITY CHECK TONE HEARD BY EIT	THER CALLED OR CALLING	
3	CHECK B: CAN RII	NGING TONE BE HEARD?		
4	The called party shou	ld 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	IE MESSAGE SEQUENCE AS ABOVE?		
9	For validation testing repeat this test in the reverse direction.			

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. Ensure that no backward tone is detected within the specified time out b) 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? . . . 3 CHECK B: WAS THE MAINTENANCE SYSTEM ALERTED ON FAILURE OF THE SECOND 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.

		ISUP Basic Call Test Specification	
TEST NU	JMBER: 6.2.1		
REFERE	NCE: Q.764 Section 2.9	9.1 i)	
TITLE:	Automatic repeat attemp	ıt	
SUBTIT	LE: Dual seizure for nor	n-controlling SP	
PURPOS	E: To verify that an aut	omatic repeat attempt will be made on detection	of a dual seizure
PRE-TES	ST CONDITIONS: Arra	ange the signalling point data such that SP B is	he controlling exchange for cic = x
CON	FIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECT	ED MESSAGE SEQUEN	ICE:	
ACM	(cic = x) I (cic = x) ing tone	><> 	SP B IAM ($cic = x$)
Conr	$ \begin{array}{l} \text{M (cic} = x) \\ \text{nectivity} \\ \text{(cic} = y) \end{array} $		Connectivity $ACM (cic = y)$
Connectivity REL (cic = y)		<> <	Ringing tone ANM (cic = y) Connectivity RLC (cic = y)
RLC	(cic = x)	<>	REL (cic = x)
	TEST DESCRIPTION		
1	circuit.	t an IAM (containing the same value of cic) fro	m each end of the link for a both way
2	CHECK A: CAN RING	GING TONE BE HEARD ON THE CALL ORIG	GINATED FROM SP B?
3	The called party at SP A	A should answer the call.	
4	CHECK B: IS THE CO	ONNECTION 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.		
10	CHECK F: ARE THE	CIRCUITS IDLE?	
11	CHECK G: WAS THE	MESSAGE SEQUENCE AS ABOVE?	
	Note – The message sec	quence may not be as shown above.	

		ISUP Basic Call Test Specification	ı
TEST N	UMBER: 6.2.2		
REFERI	ENCE: Q.764 Section 2	.9.1 ii)	
TITLE:	Automatic repeat attem	pt	
SUBTIT	TLE: Blocking of a circ	uit	
PURPO		ntomatic repeat attempt will be made on receipt nessage and before any backward messages have	
PRE-TE		range the data in signalling point B such that a b initial address message of the first call request.	
CON	NFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP
EXPEC	TED MESSAGE SEQUE	NCE:	
SP .	A		SP B
IAM	$\int (cic = x)$	> <	BLO ($cic = x$)
	A (cic = x) $L (cic = x)$	>	. ,
IAM	$1(\operatorname{cic} = \mathbf{y})$	<>	RLC(cic = x)
		<	ACM (cic = y)
ļ		 <	Ringing tone ANM (cic = y)
Con	nectivity		Connectivity
	$\angle (cic = y)$	>	,
	-	<	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 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: IS THE CIRCUIT (CIC = y) IDLE?		
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?		
	<i>Note</i> – The message se	equence may not be as shown above.	

TEST NUMBER: 6.2.3

REFERENCE: Q.764 Section 2.9.1 iii)

TITLE: Automatic repeat attempt

SUBTITLE: Circuit reset

PURPOSE: To verify that an automatic repeat attempt will be made on receipt of the circuit reset after sending of an initial address message and before a backward message has been received

PRE-TEST CONDITIONS:

- a) Arrange the data signalling point B such that a circuit reset signal is sent in response to the initial address message of the first call request.
- b) The called termination should be free.

CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP		
EXPEC	EXPECTED MESSAGE SEQUENCE:				
SP A			SP B		
IAM	I(cic = x)	>			
		<	RSC ($cic = x$)		
RLC	C(cic = x)	>			
IAM	I(cic = y)	>			
		<	ACM (cic = y)		
			Ringing tone		
		<	ANM ($cic = y$)		
ł	nectivity		Connectivity		
REL	L(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.				
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: ARE THE CIRCUITS IDLE?				
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?				
	Note – The message sequence may not be as shown above.				

		•	
TEST NUMBER: 6.2.4			
REFERENCE: Q.764 Section 2.9.1 iv)			
TITLE:	Automatic repeat atten	ıpt	
SUBTIT	LE: Continuity check	failure	
PURPOS	SE: To verify that an a	utomatic repeat attempt will be made on continuity	check failure
PRE-TES		range the data in signalling point B such that ecified limits to the first call request	check tone is not returned within the
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP
EXPECT	TED MESSAGE SEQUE	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	ck tone		
СОТ	(successful) (cic = y)	>	
		<	ACM (cic = y)
			Ringing tone
		<	ANM(cic = y)
Con	nectivity		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.		
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?		
	Note - The message sequence may not be as shown above		

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:

- a) 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.
- b) The called termination should be free.

-,					
CON	FIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP		
EXPECT	EXPECTED MESSAGE SEQUENCE:				
SP A			SP B		
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)		>	PLG (:)		
		<	RLC ($cic = y$)		
	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: ARE THE CIRCUITS IDLE?				
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE?				
	<i>Note 1</i> – 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.				

ISUP Basic Call Test Specification			
TEST NUMBER: 6.3.1			
REFERI	ENCE: Q.764 Section 2	2.10.1.4	
TITLE:	Dual seizure		
SUBTIT	TLE: Dual seizure for c	ontrolling SP	
PURPO		letection of dual seizure, the call initiated by th	e controlling signalling point is completed
PRE-TE	EST CONDITIONS: A	range the signalling point data such that SP A is	the controlling signalling point
CON	IFIGURATION: 1	TYPE OF TEST: VAT; CPT	TYPE OF SP: SP
EXPEC	TED MESSAGE SEQUE	ENCE:	
SP .	A		SP B
IAM	1	>< <	IAM (Note) ACM Ringing tone
Con	nectivity	<	ANM Connectivity
REL	-	> <	RLC
	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 RI	NGING TONE BE HEARD ON THE CALL ORI	GINATED FROM SP A?
3	The called party at SP B should answer the call.		
4	CHECK B: IS THE 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.		
	<i>Note</i> – The call initiated by SP B should be re-attempted, see test number 6.2.1		

TEST NUMBER: 6.4.1 REFERENCE: Q.764 Section 2.1.12 TITLE: Semi-automatic operation SUBTITLE: FOT sent following a call to a subscriber PURPOSE: To verify that the FOT is correctly sent PRE-TEST CONDITIONS: FOT message is generated at SP A. b) A controlling operator is at SP A. Arrange the data so that an assistant operator is at SP B. CONFIGURATION: 1 TYPE OF TEST: VAT TYPE OF SP: SP EXPECTED MESSAGE SEQUENCE: SP A SP B IAM ACM ANM Connectivity Connectivity (controlling operator) (subscriber) FOT Connectivity Connectivity (controlling operator) (assistant operator) (Note 2) REL RLC TEST DESCRIPTION 1 Make a call from controlling operator at SP A to SP B. 2 Record the message sequence 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 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).

ISUP Basic Call Test Specification				
TEST N	NUMBER: 6.4.2			
REFERENCE: Q.764 Section 2.1.12				
TITLE:	Semi-automatic operation			
SUBTI	ΓLE: FOT received following	a call to a subscriber		
SCDIII	TEE. 101 received following	, a can to a subscriber		
PURPO	SE: To verify that the FOT is	s correctly received		
PRE-TE	EST CONDITIONS:			
	FOT message is generated at S			
	Arrange the data so that a con An assistant operator is at SP			
()	All assistant operator is at SF	A.	Ī	
CON	NFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP	
EXPEC	TED MESSAGE SEQUENCE	:		
SP	A		SP B	
		<	IAM	
ACI AN		> >		
	nnectivity		Connectivity	
(sub	oscriber)	<	(controlling operator) FOT	
Con	nnectivity		Connectivity	
(ass	sistant operator) (Note 2)	<	(controlling operator)	
RLO	C	>	REL	
	TEST DESCRIPTION			
1		g apparator at CD D to CD A		
2	Make a call from controlling operator at SP B to SP A.			
3	Record the message sequence using a signal monitor.			
	The called party at should 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 received between ACM and REL.			
	<i>Note 2</i> – 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 NUMBER: 6.4.3 REFERENCE: Q.764 Section 2.1.12 TITLE: Semi-automatic operation SUBTITLE: FOT sent following a call via codes 11 and 12 PURPOSE: To verify that a FOT is correctly sent PRE-TEST CONDITIONS: FOT message is generated at SP A. b) A controlling operator is at SP A. Arrange the data so that an incoming operator is at SP B. CONFIGURATION: 1 TYPE OF TEST: VAT TYPE OF SP: SP EXPECTED MESSAGE SEOUENCE: SP A SP B IAM ACM ANM Connectivity Connectivity (controlling operator) (incoming operator) \downarrow Connectivity Connectivity (controlling operator) (subscriber) FOT Connectivity Connectivity (controlling operator) (incoming operator) (Nota 2) REL RLC TEST DESCRIPTION 1 Make a call from controlling operator at SP A to an incoming operator at SP B via codes 11 and 12. 2 Record the message sequence and parameters using a signal monitor. 3 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? . . . CHECK B: IS FOT MESSAGE SENT BY SP A? . . . 5 CHECK C: IS THE CONNECTION RE-ESTABLISHED BETWEEN CONTROLLING AND INCOMING 6 OPERATORS? . . . (Note 2) 7 CHECK D: WAS THE MESSAGE 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 NUMBER: 6.4.4 REFERENCE: Q.764 Section 2.1.12 TITLE: Semi-automatic operation SUBTITLE: FOT received following a call via codes 11 and 12 PURPOSE: To verify that a FOT is correctly received PRE-TEST CONDITIONS: FOT message is generated at SP B. b) A controlling operator is at SP B. Arrange the data so that an incoming operator is at SP A. CONFIGURATION: 1 TYPE OF TEST: VAT TYPE OF SP: SP EXPECTED MESSAGE SEOUENCE: SP A SP B IAM ACM ANM Connectivity Connectivity (controlling operator) (incoming operator) \downarrow Connectivity Connectivity (subscriber) (controlling operator) FOT Connectivity Connectivity (incoming operator) (Note 2) (controlling operator) REL RLC TEST DESCRIPTION 1 Make a call from controlling operator at SP B to an incoming operator at SP A via codes 11 and 12. 2 Record the message sequence using a signal monitor. 3 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 CHECK B: IS FOT MESSAGE RECEIVED CORRECTLY BY SP A? . . . CHECK C: IS THE CONNECTION RE-ESTABLISHED BETWEEN CONTROLLING AND INCOMING 6 OPERATORS? . . . (Note 2) 7 CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE? . . . Note 1 - FOT may be 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 NUMBER: 7.1.1 REFERENCE: Q.764 Section 2.1 TITLE: 64 kbit/s unrestricted SUBTITLE: Successful call setup PURPOSE: To verify that a 64 kbit/s call can be successfully completed using appropriate transmission medium requirement and user service information parameters PRE-TEST CONDITIONS: Called termination is free		
TITLE: 64 kbit/s unrestricted SUBTITLE: Successful call setup PURPOSE: To verify that a 64 kbit/s call can be successfully completed using appropriate transmission medium requirement and user service information parameters		
SUBTITLE: Successful call setup PURPOSE: To verify that a 64 kbit/s call can be successfully completed using appropriate transmission medium requirement and user service information parameters		
PURPOSE: To verify that a 64 kbit/s call can be successfully completed using appropriate transmission medium requirement and user service information parameters		
requirement and user service information parameters		
PRE-TEST CONDITIONS: Called termination is free		
The TEST CONDITIONS. Cannot termination is nee		
CONFIGURATION: 1 TYPE OF TEST: VAT and CPT TYPE OF SP: SP		
EXPECTED MESSAGE SEQUENCE:		
SP A SP B		
IAM (TMR, USI)>		
< ACM		
< ANM		
Data ————— Data		
REL>		
< RLC		
TEST DESCRIPTION		
1 Make a 64 kbit/s call from SP A to SP B.		
2 CHECK A: IS THE TMR SET TO "64 kbit/s UNRESTRICTED"?		
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?		
The called party should answer the call.		
CHECK E: IS IT POSSIBLE TO PASS DATA BETWEEN SP A AND SP B?		
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?		
Repeat this test for any subrate calls.		
Repeat this test in the reverse direction.		
Note – To check the contents of USI parameter is optional.		

1561 Busic Can Test Specification			
TEST N	UMBER: 7.1.2		
REFERENCE: Q.764 Section 2.2			
TITLE:	64 kbit/s unrestricted		
SUBTIT	TLE: Unsuccessful call se	etup	
PURPO		Il will be immediately released by the outgoing ived and, for circuits equipped with echo contr	
PRE-TE		inge the data in signalling point B such that med to the request	a release message with a given cause is
CONFIGURATION: 1		TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECTED MESSAGE SEQUENCE:			
SP A SP B			SP B
IAM>			
		<	REL (cause = xxx)
RLC		>	
	TEST DESCRIPTION		
1	Attempt to make a 64 kbit/s call from SP A to SP B. Record the message sequence using a signal monitor.		
2	CHECK A: IS THE APPROPRIATE CAUSE RETURNED TO THE 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.		

		ISUP Basic Call Test Specification	
TEST N	NUMBER: 7.1.3		
REFER	ENCE: Q.764 Section 2.9	1 i)	
TITLE:	64 kbit/s unrestricted		
SUBTI	TLE: Dual seizure		
PURPO	OSE: To verify that an auto	matic repeat attempt will be made on detection	of a dual seizure
PRE-TE	EST CONDITIONS: Arrai	nge the signalling point data such that SP B is th	e controlling exchange for cic = x
CON	NFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPEC	TED MESSAGE SEQUEN	CE:	
SP	A		SP B
	M (cic = x)	><	IAM (cic = x)
	M (cic = x)	>	, ,
	M(cic = x)	>	
Dat	a		Data
IAN	M (cic = y)	>	
	÷ ·	<	ACM (cic = y)
		<	ANM ($cic = y$)
Dat	a		Data
REI	L (cic = y)	>	
		<	RLC ($cic = y$)
		<	REL(cic = x)
RLO	C(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 ECHO CONTROL DEVICE DISABLED FOR CIC=x?		
3	The called party at SP A should answer the call.		
4	CHECK B: IS IT POSSIBLE TO PASS DATA BETWEEN SP A AND SP B?		
5	CHECK C: WAS A REPEAT ATTEMPT MADE BY SP A, WITH A DIFFERENT VALUE OF CIC IN THE IAM?		
6		HO 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		
11	CHECK G: WAS THE	MESSAGE SEQUENCE AS ABOVE?	
	<i>Note</i> – The message seq	uence may not be as shown above.	

TEST NUMBER: 7.2.1				
1ESI N	UMBER. 7.2.1			
REFERE	ENCE: Q.764 Section 2	1		
TITLE:	3.1 kHz audio			
SUBTIT	LE: Successful call set	ир		
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-TE	ST CONDITIONS: Ca	lled termination is free		
CONFIGURATION: 1 TYPE OF TEST: VAT and CPT		TYPE OF SP: SP		
EXPECT	TED MESSAGE SEQUE	ENCE:		
SP A	A		SP B	
IAM	(TMR, USI)	>		
		<	ACM	
Data	/Speech	<	ANM Data/Speech	
REL	•	>	Data/speccii	
TCL		<	RLC	
	TEST DESCRIPTION			
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 c	ontents of the USI parameter is optional.		