



INTERNATIONAL TELECOMMUNICATION UNION

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

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

The Plenary Assembly of CCITT which meets every four years, establishes the topics for study and approves Recommendations prepared by its Study Groups. The approval of Recommendations by the members of CCITT between Plenary Assemblies is covered by the procedure laid down in CCITT Resolution No. 2 (Melbourne, 1988).

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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Recommendation Q.784

ISUP BASIC CALL TEST SPECIFICATION

1 Introduction

This Recommendation contains a detailed set of tests for the Signalling System No. 7 integrated services digital network User Part (ISUP). These 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.

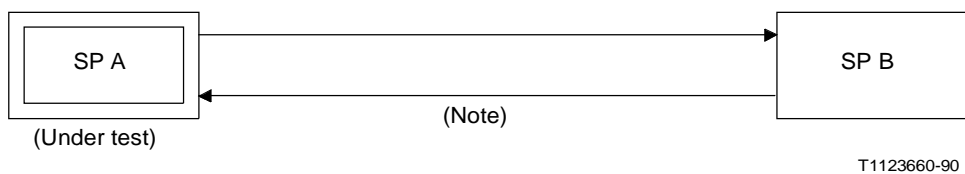
5 Test environment

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

- 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

4 Unsuccessful call setup

- * 4.1 Validate a set of known causes for release

5 Abnormal situation during a call

- 5.1 Inability to release in response to a REL after ANM
- 5.2 Timers
 - 5.2.1 T7: waiting for ACM or CON
 - * 5.2.2 T9: waiting for an answer message
 - 5.2.3 T1 and T5: failure to receive a RLC
 - 5.2.4 T6: waiting for RES (Network) message
 - 5.2.5 T8: waiting for COT message if applicable
 - 5.2.6 T12 and T13: failure to receive a BLA
 - 5.2.7 T14 and T15: failure to receive a UBA
 - 5.2.8 T16 and T17: failure to receive a RLC
 - 5.2.9 T18 and T19: failure to receive a CGBA
 - 5.2.10 T20 and T21: failure to receive a CGUA
 - 5.2.11 T22 and T23: failure to receive a GRA
- 5.3 Reset of circuits during a call
 - * 5.3.1 Of an outgoing circuit
 - * 5.3.2 Of an incoming circuit

6 Special call setup

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

7 Bearer services

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

8 Congestion control and user flow control

Further study.

ISUP Basic Call Test Specification

TEST NUMBER: 1.1		
REFERENCE:		
TITLE: Circuit supervision		
SUBTITLE: Non-allocated circuits		
PURPOSE: To verify that on receipt of a CIC relating to a circuit which does not exist, SP A will discard the message and alert the maintenance system		
PRE-TEST CONDITIONS: Arrange the data in signalling point B such that the CIC identifies a circuit that does not exist between SP A and SP B		
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
<p>EXPECTED MESSAGE SEQUENCE:</p> <div style="display: flex; justify-content: space-between; align-items: center; padding: 10px;"> <div style="text-align: center;"> <p>SP A</p> </div> <div style="text-align: center;"> <p><-----</p> </div> <div style="text-align: center;"> <p>SP B</p> <p>IAM</p> </div> </div>		
	TEST DESCRIPTION	
1	Arrange for SP B to send an initial address message. Record the message sequence using a signal monitor.	
2	CHECK A: WAS THE MESSAGE SEQUENCE AS SHOWN ABOVE? . . .	
3	CHECK B: WAS THE INDICATION GIVEN TO THE MAINTENANCE SYSTEM? . . .	

ISUP Basic Call Test Specification

TEST NUMBER: 1.2.1											
REFERENCE: Q.764 Section 2.10.3.1 a), b)											
TITLE: Reset of circuits											
SUBTITLE: RSC received on an idle circuit											
PURPOSE: To verify that on receipt of a reset circuit message SP A will respond by sending a release complete message											
PRE-TEST CONDITIONS: The circuit is idle											
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP									
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; text-align: center;">SP A</td> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;">SP B</td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td></td> </tr> <tr> <td style="text-align: center;">RLC</td> <td style="text-align: center;">-----></td> <td style="text-align: center;">RSC</td> </tr> </table>			SP A		SP B		<-----		RLC	----->	RSC
SP A		SP B									
	<-----										
RLC	----->	RSC									
	TEST DESCRIPTION										
1	Arrange for SP B to send a reset-circuit message. Record the message sequence using a signal monitor.										
2	CHECK A: IS THE CIRCUIT IDLE? . . .										
3	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .										

ISUP Basic Call Test Specification

TEST NUMBER: 1.2.2											
REFERENCE: Q.764 Section 2.10.3.1											
TITLE: Reset of circuits											
SUBTITLE: RSC sent on an idle circuit											
PURPOSE: To verify that SP A is able to generate reset-circuit message											
PRE-TEST CONDITIONS: The circuit is idle											
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP									
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; text-align: center;">SP A</td> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;">SP B</td> </tr> <tr> <td style="text-align: center;">RSC</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td style="text-align: center;">RLC</td> </tr> </table>			SP A		SP B	RSC	----->			<-----	RLC
SP A		SP B									
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 THE MESSAGE SEQUENCE AS ABOVE? . . .										

ISUP Basic Call Test Specification

TEST NUMBER: 1.2.3																							
REFERENCE: Q.764 Section 2.10.3.1 c)																							
TITLE: Reset of circuits																							
SUBTITLE: RSC received on a locally blocked circuit																							
PURPOSE: To verify that on receipt of a reset circuit message while in its locally blocked state, SP A will respond by sending blocking and release complete messages																							
PRE-TEST CONDITIONS: The circuit is idle																							
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP																					
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">SP A</td> <td style="width: 33%;"></td> <td style="width: 33%;">SP B</td> </tr> <tr> <td>BLO</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td>BLA</td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td>RSC</td> </tr> <tr> <td>BLO</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td>RLC (Note)</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td>BLA (Note)</td> </tr> </table>			SP A		SP B	BLO	----->			<-----	BLA		<-----	RSC	BLO	----->		RLC (Note)	----->			<-----	BLA (Note)
SP A		SP B																					
BLO	----->																						
	<-----	BLA																					
	<-----	RSC																					
BLO	----->																						
RLC (Note)	----->																						
	<-----	BLA (Note)																					
	TEST DESCRIPTION																						
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? . . .																						
	<i>Note</i> – The message sequence for RLC and BLA may occur in reverse sequence.																						

ISUP Basic Call Test Specification

TEST NUMBER: 1.2.4																	
REFERENCE: Q.764 Section 2.10.3.1 d)																	
TITLE: Reset of circuits																	
SUBTITLE: RSC received on a remotely blocked circuit																	
PURPOSE: To verify that SP A is able to react to a reset-circuit message for a remotely blocked circuit																	
PRE-TEST CONDITIONS: The circuit is idle																	
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP															
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; text-align: center;">SP A</td> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;">SP B</td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td></td> </tr> <tr> <td style="text-align: center;">BLA</td> <td style="text-align: center;">-----></td> <td style="text-align: center;">BLO</td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td></td> </tr> <tr> <td style="text-align: center;">RLC</td> <td style="text-align: center;">-----></td> <td style="text-align: center;">RSC</td> </tr> </table>			SP A		SP B		<-----		BLA	----->	BLO		<-----		RLC	----->	RSC
SP A		SP B															
	<-----																
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? . . .																

ISUP Basic Call Test Specification

TEST NUMBER: 1.2.5											
REFERENCE: Q.764 Section 2.10.3.2											
TITLE: Reset of circuits											
SUBTITLE: Circuit group reset received											
PURPOSE: To verify that on receipt of one circuit group reset message SP A will respond by sending a circuit group reset acknowledge message											
PRE-TEST CONDITIONS: All circuits are idle											
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP									
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; text-align: center;">SP A</td> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;">SP B</td> </tr> <tr> <td></td> <td style="text-align: center;">←-----</td> <td></td> </tr> <tr> <td style="text-align: center;">GRA</td> <td style="text-align: center;">-----→</td> <td style="text-align: center;">GRS</td> </tr> </table>			SP A		SP B		←-----		GRA	-----→	GRS
SP A		SP B									
	←-----										
GRA	-----→	GRS									
	TEST DESCRIPTION										
1	Arrange for SP B to send a circuit group reset message. Record the message sequence using a signal monitor.										
2	CHECK A; ARE THE CIRCUITS IDLE? . . .										
3	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .										
4	CHECK C: ARE THE STATUS BITS IN GRA SET CORRECTLY?										
5	CHECK D: IF RANGE=0, GRS IS DISCARDED AND GRA IS NOT SENT.										
6	CHECK E: IF RANGE>31, GRS IS DISCARDED AND GRA IS NOT SENT.										

ISUP Basic Call Test Specification

TEST NUMBER: 1.2.6											
REFERENCE: Q.764 Section 2.10.3.2											
TITLE: Reset of circuits											
SUBTITLE: Circuit group reset sent											
PURPOSE: To verify that SP A is able to generate a circuit group reset message											
PRE-TEST CONDITIONS: All circuits are idle											
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP									
<p>EXPECTED MESSAGE SEQUENCE:</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; text-align: center;">SP A</td> <td style="width: 40%;"></td> <td style="width: 30%; text-align: center;">SP B</td> </tr> <tr> <td style="text-align: center;">GRS</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td style="text-align: center;">GRA</td> </tr> </table>			SP A		SP B	GRS	----->			<-----	GRA
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 THE MESSAGE SEQUENCE AS ABOVE? . . .										

ISUP Basic Call Test Specification

TEST NUMBER: 1.2.7																							
REFERENCE: Q.764 Section 2.10.3.2 d)																							
TITLE: Reset of circuits																							
SUBTITLE: Circuit group reset received on remotely blocked circuits																							
PURPOSE: To verify that SP A is able to react to a circuit group reset message correctly for remotely blocked circuits																							
PRE-TEST CONDITIONS: All circuits are idle																							
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP																					
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; text-align: center;">SP A</td> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;">SP B</td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td style="text-align: center;">BLO (CIC=x)</td> </tr> <tr> <td style="text-align: center;">BLA</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td style="text-align: center;">BLO (CIC=y)</td> </tr> <tr> <td style="text-align: center;">BLA</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td style="text-align: center;">GRS (including CIC=x,y)</td> </tr> <tr> <td style="text-align: center;">GRA</td> <td style="text-align: center;">-----></td> <td></td> </tr> </table>			SP A		SP B		<-----	BLO (CIC=x)	BLA	----->			<-----	BLO (CIC=y)	BLA	----->			<-----	GRS (including CIC=x,y)	GRA	----->	
SP A		SP B																					
	<-----	BLO (CIC=x)																					
BLA	----->																						
	<-----	BLO (CIC=y)																					
BLA	----->																						
	<-----	GRS (including CIC=x,y)																					
GRA	----->																						
	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? . . .																						

ISUP Basic Call Test Specification

TEST NUMBER: 1.3.1.1																	
REFERENCE: Q.764 Section 2.9.2																	
TITLE: Circuit group blocking/unblocking																	
SUBTITLE: CGB and CGU received																	
PURPOSE: To verify that the circuit group blocking feature can be correctly initiated																	
PRE-TEST CONDITIONS: All circuits are idle																	
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP															
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">SP A</td> <td style="width: 40%;"></td> <td style="width: 30%;">SP B</td> </tr> <tr> <td></td> <td align="center"><-----</td> <td>CGB</td> </tr> <tr> <td>CGBA</td> <td align="center">-----></td> <td></td> </tr> <tr> <td></td> <td align="center"><-----</td> <td>CGU</td> </tr> <tr> <td>CGUA</td> <td align="center">-----></td> <td></td> </tr> </table>			SP A		SP B		<-----	CGB	CGBA	----->			<-----	CGU	CGUA	----->	
SP A		SP B															
	<-----	CGB															
CGBA	----->																
	<-----	CGU															
CGUA	----->																
	TEST DESCRIPTION																
1	<p>Arrange for SP B to send a circuit group blocking message with the circuit group supervision message type indicator set to "maintenance oriented". Record the message sequence using a signal monitor.</p>																
2	<p>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.</p>																
3	<p>Arrange for SP B to send one circuit group unblocking message with circuit group supervision message type set to "maintenance oriented".</p>																
4	<p>CHECK B: VERIFY THAT A CALL CAN BE ORIGINATED FROM EITHER SP ON THE CIRCUITS INDICATED BY THE RANGE FIELD.</p>																
5	<p>CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .</p>																
6	<p>CHECK D: If RANGE=0, CGB is discarded and CGBA is not sent.</p>																
7	<p>CHECK E: If RANGE>31, CGB is discarded and CGBA is not sent.</p>																
8	<p>Repeat steps 1-7 with the circuit group supervision message type indicator set to "hardware failure oriented".</p> <p><i>Note – A CPC="test call" should not be used in CHECK A and CHECK B.</i></p>																

ISUP Basic Call Test Specification

TEST NUMBER: 1.3.1.2											
REFERENCE: Q.764 Section 2.9.2											
TITLE: Circuit group blocking/unblocking											
SUBTITLE: CGB and CGU sent											
PURPOSE: To verify that SP A is able to generate one circuit group blocking message and one circuit group unblocking message											
PRE-TEST CONDITIONS: All circuits are idle											
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP									
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; text-align: center;">SP A</td> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;">SP B</td> </tr> <tr> <td style="text-align: center;">CGB</td> <td style="text-align: center;">-----> <-----</td> <td style="text-align: center;">CGBA</td> </tr> <tr> <td style="text-align: center;">CGU</td> <td style="text-align: center;">-----> <-----</td> <td style="text-align: center;">CGUA</td> </tr> </table>			SP A		SP B	CGB	-----> <-----	CGBA	CGU	-----> <-----	CGUA
SP A		SP B									
CGB	-----> <-----	CGBA									
CGU	-----> <-----	CGUA									
	TEST DESCRIPTION										
1	Arrange for SP A to send a circuit group blocking message with the circuit group supervision message type indicator set to "maintenance oriented". Record the message sequence using a signal monitor.										
2	Arrange for SP A to send a circuit group unblocking message with the circuit group supervision message type indicator set to "maintenance oriented".										
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". <i>Note</i> – A CPC="test call" should not be used in CHECK A.										

ISUP Basic Call Test Specification

TEST NUMBER: 1.3.2.1																	
REFERENCE: Q.764 Section 2.9.2																	
TITLE: Circuit blocking/unblocking																	
SUBTITLE: BLO received																	
PURPOSE: To verify that the blocking/unblocking procedure can be correctly initiated																	
PRE-TEST CONDITIONS: The circuit is idle																	
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP															
<p>EXPECTED MESSAGE SEQUENCE:</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; text-align: center;">SP A</td> <td style="width: 40%;"></td> <td style="width: 30%; text-align: center;">SP B</td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td style="text-align: center;">BLO</td> </tr> <tr> <td style="text-align: center;">BLA</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td style="text-align: center;">UBL</td> </tr> <tr> <td style="text-align: center;">UBA</td> <td style="text-align: center;">-----></td> <td></td> </tr> </table>			SP A		SP B		<-----	BLO	BLA	----->			<-----	UBL	UBA	----->	
SP A		SP B															
	<-----	BLO															
BLA	----->																
	<-----	UBL															
UBA	----->																
	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 unblocking message.																
4	CHECK B: VERIFY THAT A CALL CAN BE ORIGINATED FROM EITHER SP ON THIS CIRCUIT.																
5	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .																
	<i>Note – A CPC="test call" should not be used in CHECK A and CHECK B.</i>																

ISUP Basic Call Test Specification

TEST NUMBER: 1.3.2.2																	
REFERENCE: Q.764 Section 2.9.2																	
TITLE: Circuit blocking/unblocking																	
SUBTITLE: BLO sent																	
PURPOSE: To verify that SP A is able to generate blocking messages																	
PRE-TEST CONDITIONS: The circuit is idle																	
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP															
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">SP A</td> <td style="width: 40%;"></td> <td style="width: 30%;">SP B</td> </tr> <tr> <td>BLO</td> <td align="center">-----></td> <td></td> </tr> <tr> <td></td> <td align="center"><-----</td> <td>BLA</td> </tr> <tr> <td>UBL</td> <td align="center">-----></td> <td></td> </tr> <tr> <td></td> <td align="center"><-----</td> <td>UBA</td> </tr> </table>			SP A		SP B	BLO	----->			<-----	BLA	UBL	----->			<-----	UBA
SP A		SP B															
BLO	----->																
	<-----	BLA															
UBL	----->																
	<-----	UBA															
	TEST DESCRIPTION																
1	Arrange for SP A to send a blocking message. Record the message sequence using a signal monitor.																
2	Arrange for SP A to send an unblocking message.																
3	CHECK A: VERIFY THAT A CALL CAN BE ORIGINATED FROM EITHER SP ON THIS CIRCUIT.																
4	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .																
	<i>Note</i> – A CPC=“test call” should not be used in CHECK A.																

ISUP Basic Call Test Specification

TEST NUMBER: 1.3.2.3					
REFERENCE: Q.764 Section 2.9.2					
TITLE: Circuit blocking/unblocking					
SUBTITLE: Blocking from both ends; removal of blocking from one end					
PURPOSE: To verify that the blocking/unblocking procedure can be correctly initiated					
PRE-TEST CONDITIONS: The circuit is idle					
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> SP A BLO BLA UBL UBA </td> <td style="width: 33%; text-align: center; vertical-align: middle;"> -----> <----- <----- -----> -----> <----- <----- -----> </td> <td style="width: 33%; vertical-align: top;"> SP B BLA BLO UBA UBL </td> </tr> </table>			SP A BLO BLA UBL UBA	-----> <----- <----- -----> -----> <----- <----- ----->	SP B BLA BLO UBA UBL
SP A BLO BLA UBL UBA	-----> <----- <----- -----> -----> <----- <----- ----->	SP B BLA BLO UBA UBL			
	TEST DESCRIPTION				
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 an unblocking message.				
3	CHECK A: VERIFY THAT A CALL CANNOT BE ORIGINATED ON THIS CIRCUIT BY EITHER SP.				
4	Arrange for SP A to send an unblocking message.				
5	CHECK B: VERIFY THAT A CALL CANNOT BE ORIGINATED BY SP A.				
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? . . . <i>Note – A CPC=“test call” should not be used in CHECKS A, B, and C.</i>				

ISUP Basic Call Test Specification

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																											
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">SP A</td> <td style="width: 33%;"></td> <td style="width: 33%;">SP B</td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td></td> </tr> <tr> <td>BLA</td> <td style="text-align: center;">-----></td> <td>BLO</td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td></td> </tr> <tr> <td>ACM</td> <td style="text-align: center;">-----></td> <td>IAM</td> </tr> <tr> <td>ANM</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td>Connectivity</td> <td style="text-align: center;">-----</td> <td>Connectivity</td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td></td> </tr> <tr> <td>RLC</td> <td style="text-align: center;">-----></td> <td>REL</td> </tr> </table>			SP A		SP B		<-----		BLA	----->	BLO		<-----		ACM	----->	IAM	ANM	----->		Connectivity	-----	Connectivity		<-----		RLC	----->	REL
SP A		SP B																											
	<-----																												
BLA	----->	BLO																											
	<-----																												
ACM	----->	IAM																											
ANM	----->																												
Connectivity	-----	Connectivity																											
	<-----																												
RLC	----->	REL																											
	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? . . .																												
	<i>Note</i> – A CPC=“test call” should not be used in CHECK A.																												

ISUP Basic Call Test Specification

TEST NUMBER: 1.4.1					
REFERENCE: Q.764 Section 2.1.8					
TITLE: Continuity check test call					
SUBTITLE: CCR received: successful					
PURPOSE: To verify that the continuity test call procedure can be correctly performed					
PRE-TEST CONDITIONS: The circuit is idle					
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;">SP A</td> <td style="width: 33%; text-align: center; vertical-align: middle;"> <----- ----- ----- <----- -----> </td> <td style="width: 33%; vertical-align: top;"> SP B CCR Check tone REL </td> </tr> </table>			SP A	<----- ----- ----- <----- ----->	SP B CCR Check tone REL
SP A	<----- ----- ----- <----- ----->	SP B CCR Check tone 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? . . .				

ISUP Basic Call Test Specification

TEST NUMBER: 1.4.2																				
REFERENCE: Q.764 Section 2.1.8																				
TITLE: Continuity check test call																				
SUBTITLE: CCR sent: successful																				
PURPOSE: To verify that the continuity test call procedure can be correctly performed																				
PRE-TEST CONDITIONS: The circuit is idle																				
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP																		
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">SP A</td> <td style="width: 40%;"></td> <td style="width: 30%;">SP B</td> </tr> <tr> <td>CCR</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td>Check tone</td> <td style="text-align: center;">----- </td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">-----</td> <td></td> </tr> <tr> <td>REL</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td>RLC</td> </tr> </table>			SP A		SP B	CCR	----->		Check tone	-----			-----		REL	----->			<-----	RLC
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 THE MESSAGE SEQUENCE AS ABOVE? . . .																			

ISUP Basic Call Test Specification

TEST NUMBER: 1.4.3					
REFERENCE: Q.764 Section 2.1.8					
TITLE: Continuity check test call					
SUBTITLE: CCR received: unsuccessful					
PURPOSE: To verify that the messages associated with continuity check procedure can be correctly received					
PRE-TEST CONDITIONS: Ensure that no backward check tone is detected within the specified time out					
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 35%; vertical-align: top; padding: 10px;"> <p>SP A</p> <p style="text-align: center;"><-----</p> <p style="text-align: center;">└-----</p> <p style="text-align: center;">-----</p> <p style="text-align: center;"><-----</p> <p style="text-align: center;"><-----</p> <p style="text-align: center;">└-----</p> <p style="text-align: center;">-----</p> <p style="text-align: center;"><-----</p> <p style="text-align: center;"><-----</p> </td> <td style="width: 25%; vertical-align: middle; text-align: center; padding: 10px;"> <p>1-3 mins.</p> </td> <td style="width: 40%; vertical-align: top; padding: 10px;"> <p>SP B</p> <p>CCR</p> <p>Check tone</p> <p> T24</p> <p>– COT (failed)</p> <p> </p> <p> T26</p> <p> </p> <p>– CCR</p> <p>Check tone</p> <p> T24</p> <p>– COT (failed) and</p> <p> alert</p> <p> the maintenance</p> <p> system</p> <p> </p> <p> T26</p> <p> </p> <p>CCR</p> </td> </tr> </table>			<p>SP A</p> <p style="text-align: center;"><-----</p> <p style="text-align: center;">└-----</p> <p style="text-align: center;">-----</p> <p style="text-align: center;"><-----</p> <p style="text-align: center;"><-----</p> <p style="text-align: center;">└-----</p> <p style="text-align: center;">-----</p> <p style="text-align: center;"><-----</p> <p style="text-align: center;"><-----</p>	<p>1-3 mins.</p>	<p>SP B</p> <p>CCR</p> <p>Check tone</p> <p> T24</p> <p>– COT (failed)</p> <p> </p> <p> T26</p> <p> </p> <p>– CCR</p> <p>Check tone</p> <p> T24</p> <p>– COT (failed) and</p> <p> alert</p> <p> the maintenance</p> <p> system</p> <p> </p> <p> T26</p> <p> </p> <p>CCR</p>
<p>SP A</p> <p style="text-align: center;"><-----</p> <p style="text-align: center;">└-----</p> <p style="text-align: center;">-----</p> <p style="text-align: center;"><-----</p> <p style="text-align: center;"><-----</p> <p style="text-align: center;">└-----</p> <p style="text-align: center;">-----</p> <p style="text-align: center;"><-----</p> <p style="text-align: center;"><-----</p>	<p>1-3 mins.</p>	<p>SP B</p> <p>CCR</p> <p>Check tone</p> <p> T24</p> <p>– COT (failed)</p> <p> </p> <p> T26</p> <p> </p> <p>– CCR</p> <p>Check tone</p> <p> T24</p> <p>– COT (failed) and</p> <p> alert</p> <p> the maintenance</p> <p> system</p> <p> </p> <p> T26</p> <p> </p> <p>CCR</p>			
	TEST DESCRIPTION				
1	Initiate the continuity test call procedure at SP B. 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 MAINTENANCE SYSTEM ALERTED ON FAILURE OF THE SECOND CONTINUITY CHECK? . . .				
4	CHECK C: WAS THE CHECK REPEATED AT INTERVALS OF 1 TO 3 MINUTES? . . .				
5	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .				

ISUP Basic Call Test Specification

TEST NUMBER: 1.4.4																																															
REFERENCE: Q.764 Section 2.1.8																																															
TITLE: Continuity check test call																																															
SUBTITLE: CCR sent: unsuccessful																																															
PURPOSE: To verify that the continuity check procedure can be correctly invoked																																															
PRE-TEST CONDITIONS: Ensure that no backward check tone is detected within the specified time out																																															
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP																																													
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%; text-align: left;">SP A</td> <td style="width: 30%;"></td> <td style="width: 30%; text-align: right;">SP B</td> </tr> <tr> <td>CCR</td> <td></td> <td style="text-align: right;">-----></td> </tr> <tr> <td>Check tone</td> <td style="text-align: center;">-</td> <td style="text-align: right;">----- </td> </tr> <tr> <td></td> <td style="text-align: center;">T24 </td> <td style="text-align: right;">-----</td> </tr> <tr> <td>COT (failed)</td> <td style="text-align: center;">-</td> <td style="text-align: right;">-----></td> </tr> <tr> <td></td> <td style="text-align: center;">T26 1-3 mins.</td> <td></td> </tr> <tr> <td>CCR</td> <td style="text-align: center;">-</td> <td style="text-align: right;">-----></td> </tr> <tr> <td>Check tone</td> <td style="text-align: center;">-</td> <td style="text-align: right;">----- </td> </tr> <tr> <td></td> <td style="text-align: center;">T24 </td> <td style="text-align: right;">-----</td> </tr> <tr> <td>COT (failed)</td> <td style="text-align: center;">- and alert</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> maintenance</td> <td style="text-align: right;">-----></td> </tr> <tr> <td></td> <td style="text-align: center;"> system</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">T26 </td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td>CCR</td> <td style="text-align: center;">-</td> <td style="text-align: right;">-----></td> </tr> </table>			SP A		SP B	CCR		----->	Check tone	-	-----		T24	-----	COT (failed)	-	----->		T26 1-3 mins.		CCR	-	----->	Check tone	-	-----		T24	-----	COT (failed)	- and alert			maintenance	----->		system			T26					CCR	-	----->
SP A		SP B																																													
CCR		----->																																													
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	system																																														
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CCR	-	----->																																													
	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? . . .																																														

ISUP Basic Call Test Specification

TEST NUMBER: 1.4.5																															
REFERENCE: Q.764 Section 2.1.8																															
TITLE: Continuity check test call																															
SUBTITLE: CCR received: unsuccessful; verify T27 timer																															
PURPOSE: To verify that the continuity check procedure can be correctly received																															
<p>PRE-TEST CONDITIONS:</p> <p>a) Continuity check is required.</p> <p>b) Ensure that no backward check tone is detected within the specified time out.</p> <p>c) The data in SP B is arranged such that a second CCR is not generated.</p>																															
CONFIGURATION: 1	TYPE OF TEST: VAT																														
TYPE OF SP: SP																															
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%; text-align: center;">SP A</td> <td style="width: 40%;"></td> <td style="width: 30%; text-align: center;">SP B</td> </tr> <tr> <td></td> <td style="text-align: center;">←-----</td> <td style="text-align: right;">IAM</td> </tr> <tr> <td></td> <td style="text-align: center;"> -----</td> <td style="text-align: right;">Check tone</td> </tr> <tr> <td></td> <td style="text-align: center;">-----</td> <td></td> </tr> <tr> <td style="text-align: center;">-</td> <td style="text-align: center;">←-----</td> <td style="text-align: right;">COT (failed)</td> </tr> <tr> <td style="text-align: center;"> </td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">T27 4 mins.</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;"> </td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">RSC -</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">←-----</td> <td style="text-align: right;">RLC</td> </tr> </table>		SP A		SP B		←-----	IAM		-----	Check tone		-----		-	←-----	COT (failed)				T27 4 mins.						RSC -	----->			←-----	RLC
SP A		SP B																													
	←-----	IAM																													
	-----	Check tone																													

-	←-----	COT (failed)																													
T27 4 mins.																															
RSC -	----->																														
	←-----	RLC																													
	TEST DESCRIPTION																														
1	Make a call from SP B to SP A. Record the message sequence using a signal monitor.																														
2	CHECK A: IS T27 INITIATED AT SP A TO WAIT FOR CCR?																														
3	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .																														

ISUP Basic Call Test Specification

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:		
a) 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
RLC	<----- ----->	
b)	<-----	RLC
c)	<----- ----->	XXX (Note 1)
RSC	<-----	RLC
d)	<-----	YYY
	TEST 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? . . .	
6	CHECK D: WAS THE MESSAGE SEQUENCE AS IN b) ABOVE? . . .	
7	Arrange for SP B to send an unreasonable message XXX.	
8	CHECK E: IS THE CIRCUIT IDLE? . . .	
9	CHECK F: WAS THE MESSAGE SEQUENCE AS IN c) ABOVE? . . .	
10	Arrange for SP B to send an unreasonable message YYY.	
11	CHECK G: WAS YYY DISCARDED AS IN d) ABOVE? . . .	
	<i>Note 1</i> – Not all the unreasonable messages will cause an RSC message to be sent.	
	<i>Note 2</i> – This test covers only some of the ambiguous messages which could be received.	

ISUP Basic Call Test Specification

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.		
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP
EXPECTED MESSAGE SEQUENCE:		
SP A a) IAM Connectivity REL	-----> <----- <----- <----- -----> <-----	SP B ACM XXX (Note) ANM Connectivity RLC
b) RSC	<----- <----- -----> <-----	IAM YYY (Note) 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 CONNECTION ESTABLISHED?	
3	CHECK B: WAS THE MESSAGE SEQUENCE AS IN a) ABOVE? . . .	
4	Make a call from SP B to SP A. Arrange for SP B to send an unreasonable message YYY immediately after sending the initial address message.	
5	CHECK C: IS THE CIRCUIT IDLE? . . .	
6	CHECK D: WAS THE MESSAGE SEQUENCE AS IN b) ABOVE? . . .	
<i>Note</i> – Messages other than the call control messages will be used for XXX and YYY.		

ISUP Basic Call Test Specification

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:		
a) Arrange the data in signalling point B such that an unexpected RLC and other unreasonable messages may be initiated. b) The circuit should be idle and unblocked.		
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP
EXPECTED MESSAGE SEQUENCE:		
SP A		SP B
a)		
IAM	----->	
	<-----	ACM
	<-----	ANM
Connectivity	-----	Connectivity
	<-----	RLC
REL	----->	
	<-----	RLC
b)		
IAM	----->	
	<-----	ACM
	<-----	ANM
Connectivity	-----	Connectivity
	<-----	XXX (Note)
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: IS THE CONNECTION ESTABLISHED?	
3	Arrange for SP B to send a release complete message.	
4	CHECK B: IS THE CIRCUIT IDLE? . . .	
5	Make a call from SP A to SP B.	
6	CHECK C: IS THE CONNECTION ESTABLISHED?	
7	Arrange for SP B to send an unreasonable message XXX.	
8	CHECK D: IS THE CONNECTION STILL ESTABLISHED?	
9	CHECK E: WAS THE MESSAGE SEQUENCE AS IN b) ABOVE? . . .	
	<i>Note</i> – Messages other than REL, RLC, RSC and SUS will be used for XXX.	

ISUP Basic Call Test Specification

TEST NUMBER: 2.1.1		
REFERENCE: Q.764 Section 2.1		
TITLE: Both way circuit selection		
SUBTITLE: IAM sent by controlling SP		
PURPOSE: To verify that signalling point A can initiate an outgoing call on a circuit capable of bothway operation when the controlling SP is A		
PRE-TEST CONDITIONS:		
<ul style="list-style-type: none"> a) Called termination is free. b) Circuit selected is capable of bothway operation. c) SP A is the controlling signalling point. 		
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECTED MESSAGE SEQUENCE:		
SP A IAM Connectivity REL	-----> <----- ----- <----- ----- -----> <-----	SP B 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?	

ISUP Basic Call Test Specification

TEST NUMBER: 2.1.2		
REFERENCE: Q.764 Section 2.1		
TITLE: Both way circuit selection		
SUBTITLE: IAM sent by non-controlling SP		
PURPOSE: To verify that signalling point A can initiate an outgoing call on a circuit capable of bothway operation when the non-controlling SP is A		
PRE-TEST CONDITIONS:		
<ul style="list-style-type: none"> a) Called termination is free. b) Circuit selected is capable of bothway operation. c) SP A is the non-controlling signalling point. 		
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECTED MESSAGE SEQUENCE:		
SP A IAM Connectivity RLC	-----> <----- ----- <----- ----- <----- ----->	SP B ACM Ringing tone ANM Connectivity REL
	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?	

ISUP Basic Call Test Specification

TEST NUMBER: 2.2.1		
REFERENCE: Q.764 Sections 2.1.1, 2.1.4, 2.1.7, 2.3		
TITLE: Called address sending		
SUBTITLE: "en bloc" operation		
PURPOSE: To verify that a call can be successfully established (all digits included in the IAM)		
PRE-TEST CONDITIONS:		
a) Called termination is free.		
b) The exchange data is arranged such that all digits are included in the IAM.		
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECTED MESSAGE SEQUENCE:		
SP A IAM Connectivity REL	-----> <----- ----- <----- ----- -----> <-----	SP B 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	For validation testing repeat this test in the reverse direction.	

ISUP Basic Call Test Specification

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 IAM SAM Connectivity REL	-----> -----> <----- ----- <----- ----- -----> <-----	SP B 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	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. <i>Note</i> – 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					
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> SP A IAM Connectivity REL </td> <td style="width: 33%; vertical-align: middle; text-align: center;"> -----> <----- ----- <----- ----- -----> <----- </td> <td style="width: 33%; vertical-align: top;"> SP B ACM Ringing tone ANM Connectivity RLC </td> </tr> </table>			SP A IAM Connectivity REL	-----> <----- ----- <----- ----- -----> <-----	SP B ACM Ringing tone ANM Connectivity RLC
SP A IAM Connectivity REL	-----> <----- ----- <----- ----- -----> <-----	SP B ACM Ringing tone ANM Connectivity RLC			
	TEST DESCRIPTION				
1	Make a call from SP A to SP B. Record the message sequence using a signal monitor.				
2	CHECK A: CAN RINGING TONE BE HEARD? . . .				
3	The called party should answer the call.				
4	CHECK B: IS THE CONNECTION ESTABLISHED? . . .				
5	The calling party should clear the call.				
6	CHECK C: IS THE CIRCUIT IDLE? . . .				
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .				
8	Repeat steps 1-7 with the following combinations of backward call indicators in the address complete message: <ul style="list-style-type: none"> - Called party status indicator="subscriber free", or, "no indication". - ISDN access indicator="ISDN" or "NON ISDN". 				
9	Repeat this test in the reverse direction.				

ISUP Basic Call Test Specification

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			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> SP A IAM Connectivity REL </td> <td style="width: 33%; text-align: center; vertical-align: middle;"> -----> <----- <----- ----- <----- ----- -----> <----- </td> <td style="width: 33%; vertical-align: top;"> SP B ACM CPG Ringing tone ANM Connectivity RLC </td> </tr> </table>			SP A IAM Connectivity REL	-----> <----- <----- ----- <----- ----- -----> <-----	SP B ACM CPG Ringing tone ANM Connectivity RLC
SP A IAM Connectivity REL	-----> <----- <----- ----- <----- ----- -----> <-----	SP B ACM CPG 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 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.				

ISUP Basic Call Test Specification

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																		
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; text-align: center;">SP A</td> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;">SP B</td> </tr> <tr> <td style="text-align: center;">IAM</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td style="text-align: center;">CON</td> </tr> <tr> <td style="text-align: center;">Connectivity</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">Connectivity</td> </tr> <tr> <td style="text-align: center;">REL</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td style="text-align: center;">RLC</td> </tr> </table>			SP A		SP B	IAM	----->			<-----	CON	Connectivity	-----	Connectivity	REL	----->			<-----	RLC
SP A		SP B																		
IAM	----->																			
	<-----	CON																		
Connectivity	-----	Connectivity																		
REL	----->																			
	<-----	RLC																		
	TEST DESCRIPTION																			
1	Make a call from SP A to SP B. Record the message sequence using a signal monitor.																			
2	The called party should answer the call.																			
3	CHECK A: IS THE CONNECTION ESTABLISHED? . . .																			
4	The calling party should answer the call.																			
5	CHECK B: IS THE CIRCUIT IDLE? . . .																			
6	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .																			
7	Repeat steps 1-6 with the following combinations of backward call indicators in the connect message:																			
	<ul style="list-style-type: none"> - Called party status indicators = "subscriber free" or, "no indication". - ISDN access indicators = "ISDN" or "NON ISDN". 																			
8	Repeat this test in the reverse direction.																			

ISUP Basic Call Test Specification

TEST NUMBER: 2.3.4		
REFERENCE: Q.764 Section 2.1		
TITLE: Successful Call setup		
SUBTITLE: Call switched via a satellite		
PURPOSE: To verify the satellite indicator in the initial address message is correctly set		
PRE-TEST CONDITIONS:		
a) Called termination is free. b) The signalling point data is arranged such that the call is switched via a satellite connection or has a satellite connection already included in the path		
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
EXPECTED MESSAGE SEQUENCE:		
SP A IAM Connectivity REL	-----> <----- ----- <----- ----- -----> <-----	SP B 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	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.	

ISUP Basic Call Test Specification

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:		
a) 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 IAM Connectivity REL	-----> <----- ----- <----- ----- -----> <-----	SP B ACM Ringing tone ANM Connectivity 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.	
2	CHECK A: IS THE ECHO CONTROL DEVICE INDICATOR BIT "E" (OUTGOING HALF ECHO DEVICE INCLUDED) IN NATURE OF CONNECTION INDICATORS IN THE IAM SET TO "1"? . . .	
3	CHECK B: IS THE ECHO CONTROL DEVICE INDICATOR BIT "N" (INCOMING HALF ECHO DEVICE INCLUDED) IN THE BACKWARD CALL INDICATORS IN THE ACM SET TO "1"? . . .	
4	CHECK C: CAN RINGING TONE BE HEARD? . . .	
5	The called party should answer the call.	
6	CHECK D: IS THE CONNECTION ESTABLISHED? . . .	
7	CHECK E: ARE THE ECHO DEVICES OPERATING CORRECTLY? . . .	
8	The calling party should clear the call.	
9	CHECK F: IS THE CIRCUIT IDLE? . . .	
10	CHECK G: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .	
11	For validation testing repeat this test in the reverse direction.	

ISUP Basic Call Test Specification

TEST NUMBER: 2.3.6					
REFERENCE: Q.764 Section 2.9.2.1					
TITLE: Successful Call setup					
SUBTITLE: Blocking and unblocking during a call (initiated)					
PURPOSE: To verify that the circuit blocking and unblocking procedure can be correctly initiated during a call					
PRE-TEST CONDITIONS: Called termination is free					
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> SP A IAM Connectivity BLO REL UBL </td> <td style="width: 33%; vertical-align: top; text-align: center;"> -----> <----- ----- <----- ----- -----> <----- -----> <----- -----> <----- </td> <td style="width: 33%; vertical-align: top;"> SP B ACM Ringing tone ANM Connectivity BLA RLC UBA </td> </tr> </table>			SP A IAM Connectivity BLO REL UBL	-----> <----- ----- <----- ----- -----> <----- -----> <----- -----> <-----	SP B ACM Ringing tone ANM Connectivity BLA RLC UBA
SP A IAM Connectivity BLO REL UBL	-----> <----- ----- <----- ----- -----> <----- -----> <----- -----> <-----	SP B ACM Ringing tone ANM Connectivity BLA RLC UBA			
	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	SP A should initiate circuit 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 THIS CIRCUIT BY SP B.				
9	SP A should send an unblocking 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.				

ISUP Basic Call Test Specification

TEST NUMBER: 2.3.7					
REFERENCE: Q.764 Section 2.9.2.1					
TITLE: Successful Call setup					
SUBTITLE: Blocking and unblocking during a call (received)					
PURPOSE: To verify that the circuit blocking and unblocking procedure can be correctly received during a call					
PRE-TEST CONDITIONS: Called termination is free					
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> SP A IAM Connectivity BLA REL UBA </td> <td style="width: 33%; vertical-align: top; text-align: center;"> -----> <----- ----- <----- ----- <----- -----> -----> <----- <----- -----> </td> <td style="width: 33%; vertical-align: top;"> SP B ACM Ringing tone ANM Connectivity BLO RLC UBL </td> </tr> </table>			SP A IAM Connectivity BLA REL UBA	-----> <----- ----- <----- ----- <----- -----> -----> <----- <----- ----->	SP B ACM Ringing tone ANM Connectivity BLO RLC UBL
SP A IAM Connectivity BLA REL UBA	-----> <----- ----- <----- ----- <----- -----> -----> <----- <----- ----->	SP B ACM Ringing tone ANM Connectivity BLO RLC UBL			
	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	SP B should initiate circuit 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 THIS CIRCUIT BY SP A? . . .				
9	SP B should send an unblocking 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.				

ISUP Basic Call Test Specification

TEST NUMBER: 3.1														
REFERENCE: Q.764 Section 2.3														
TITLE: Normal call release														
SUBTITLE: Calling party clears before any backward messages														
PURPOSE: To verify that the calling party can successfully release a call prior to receipt of any backward message														
PRE-TEST CONDITIONS: The circuit is idle														
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP												
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">SP A</td> <td style="width: 40%;"></td> <td style="width: 30%;">SP B</td> </tr> <tr> <td>IAM</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td>REL</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td>RLC</td> </tr> </table>			SP A		SP B	IAM	----->		REL	----->			<-----	RLC
SP A		SP B												
IAM	----->													
REL	----->													
	<-----	RLC												
	TEST DESCRIPTION													
1	Make a call from SP A to SP B. Record the message sequence using a signal monitor.													
2	The calling party should clear the call prior to receipt of any backward messages.													
3	CHECK A: IS THE CIRCUIT IDLE? . . .													
4	CHECK B: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .													
5	Repeat this test in the reverse direction.													

ISUP Basic Call Test Specification

TEST NUMBER: 3.2																				
REFERENCE: Q.764 Section 2.3																				
TITLE: Normal call release																				
SUBTITLE: Calling party clears before answer																				
PURPOSE: To verify that the calling party can successfully release a call prior to receipt of answer																				
PRE-TEST CONDITIONS: Called termination is free																				
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP																		
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; text-align: center;">SP A</td> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;">SP B</td> </tr> <tr> <td style="text-align: center;">IAM</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td style="text-align: center;">ACM</td> </tr> <tr> <td></td> <td style="text-align: center;">-----</td> <td style="text-align: center;">Ringing tone</td> </tr> <tr> <td style="text-align: center;">REL</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td style="text-align: center;">RLC</td> </tr> </table>			SP A		SP B	IAM	----->			<-----	ACM		-----	Ringing tone	REL	----->			<-----	RLC
SP A		SP B																		
IAM	----->																			
	<-----	ACM																		
	-----	Ringing tone																		
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.																			

ISUP Basic Call Test Specification

TEST NUMBER: 3.3																										
REFERENCE: Q.764 Section 2.3																										
TITLE: Normal call release																										
SUBTITLE: Calling party clears after answer																										
PURPOSE: To verify that the calling party can successfully release a call after answer																										
PRE-TEST CONDITIONS: Called termination is free																										
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP																								
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; text-align: center;">SP A</td> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;">SP B</td> </tr> <tr> <td style="text-align: center;">IAM</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td style="text-align: center;">ACM</td> </tr> <tr> <td></td> <td style="text-align: center;">-----</td> <td style="text-align: center;">Ringing tone</td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td style="text-align: center;">ANM</td> </tr> <tr> <td style="text-align: center;">Connectivity</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">Connectivity</td> </tr> <tr> <td style="text-align: center;">REL</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td style="text-align: center;">RLC</td> </tr> </table>			SP A		SP B	IAM	----->			<-----	ACM		-----	Ringing tone		<-----	ANM	Connectivity	-----	Connectivity	REL	----->			<-----	RLC
SP A		SP B																								
IAM	----->																									
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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.																									
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.																									

ISUP Basic Call Test Specification

TEST NUMBER: 3.4																										
REFERENCE: Q.764 Section 2.3																										
TITLE: Normal call release																										
SUBTITLE: Called party clears after answer																										
PURPOSE: To verify that a call be successfully released in the backward direction																										
PRE-TEST CONDITIONS: Called termination is free																										
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP																								
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; text-align: center;">SP A</td> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;">SP B</td> </tr> <tr> <td style="text-align: center;">IAM</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td style="text-align: center;">ACM</td> </tr> <tr> <td></td> <td style="text-align: center;">-----</td> <td style="text-align: center;">Ringing tone</td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td style="text-align: center;">ANM</td> </tr> <tr> <td style="text-align: center;">Connectivity</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">Connectivity</td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td style="text-align: center;">REL</td> </tr> <tr> <td style="text-align: center;">RLC</td> <td style="text-align: center;">-----></td> <td></td> </tr> </table>			SP A		SP B	IAM	----->			<-----	ACM		-----	Ringing tone		<-----	ANM	Connectivity	-----	Connectivity		<-----	REL	RLC	----->	
SP A		SP B																								
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Connectivity	-----	Connectivity																								
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	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 called 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.																									

ISUP Basic Call Test Specification

TEST NUMBER: 3.5					
REFERENCE: Q.764 Section 2.5.1.3					
TITLE: Normal call release					
SUBTITLE: Suspend initiated by the network					
PURPOSE: To verify that a called subscriber can successfully clear and reanswer a call					
PRE-TEST CONDITIONS: Called termination is free					
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <p>SP A</p> <p>IAM</p> <p>-----></p> <p><-----</p> <p>-----</p> <p><-----</p> <p>Connectivity</p> <p>-----</p> <p><-----</p> <p><-----</p> <p>Connectivity</p> <p>-----</p> <p>REL</p> <p>-----></p> <p><-----</p> </td> <td style="width: 33%; border: none; text-align: center; vertical-align: top;"> <p>-----></p> <p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p><-----</p> <p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p><-----</p> </td> <td style="width: 33%; vertical-align: top;"> <p>SP B</p> <p>ACM</p> <p>Ringing tone</p> <p>ANM</p> <p>Connectivity</p> <p>SUS (network) (Note)</p> <p>RES (network) (Note)</p> <p>Connectivity</p> <p>RLC</p> </td> </tr> </table>			<p>SP A</p> <p>IAM</p> <p>-----></p> <p><-----</p> <p>-----</p> <p><-----</p> <p>Connectivity</p> <p>-----</p> <p><-----</p> <p><-----</p> <p>Connectivity</p> <p>-----</p> <p>REL</p> <p>-----></p> <p><-----</p>	<p>-----></p> <p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p><-----</p> <p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p><-----</p>	<p>SP B</p> <p>ACM</p> <p>Ringing tone</p> <p>ANM</p> <p>Connectivity</p> <p>SUS (network) (Note)</p> <p>RES (network) (Note)</p> <p>Connectivity</p> <p>RLC</p>
<p>SP A</p> <p>IAM</p> <p>-----></p> <p><-----</p> <p>-----</p> <p><-----</p> <p>Connectivity</p> <p>-----</p> <p><-----</p> <p><-----</p> <p>Connectivity</p> <p>-----</p> <p>REL</p> <p>-----></p> <p><-----</p>	<p>-----></p> <p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p><-----</p> <p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p><-----</p>	<p>SP B</p> <p>ACM</p> <p>Ringing tone</p> <p>ANM</p> <p>Connectivity</p> <p>SUS (network) (Note)</p> <p>RES (network) (Note)</p> <p>Connectivity</p> <p>RLC</p>			
	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 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.				
	<i>Note</i> – In order to generate these messages, an ISDN-PSTN interworking arrangement may be needed.				

ISUP Basic Call Test Specification

TEST NUMBER: 3.6					
REFERENCE: Q.764 Section 2.5.1.1, 2.5.2.1					
TITLE: Normal call release					
SUBTITLE: Suspend and resume initiated by a calling party					
PURPOSE: To verify that the calling subscriber can successfully suspend and resume a call					
PRE-TEST CONDITIONS: Called termination is free					
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> SP A IAM Connectivity SUS (User initiated) RES (User initiated) Connectivity REL </td> <td style="width: 33%; vertical-align: top; text-align: center;"> -----> <----- ----- <----- ----- -----> -----> ----- -----> -----> -----> <----- </td> <td style="width: 33%; vertical-align: top;"> SP B ACM Ringing tone ANM Connectivity Connectivity RLC </td> </tr> </table>			SP A IAM Connectivity SUS (User initiated) RES (User initiated) Connectivity REL	-----> <----- ----- <----- ----- -----> -----> ----- -----> -----> -----> <-----	SP B ACM Ringing tone ANM Connectivity Connectivity RLC
SP A IAM Connectivity SUS (User initiated) RES (User initiated) Connectivity REL	-----> <----- ----- <----- ----- -----> -----> ----- -----> -----> -----> <-----	SP B ACM Ringing tone ANM Connectivity 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 suspend the call.				
6	The calling 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	CHECK E: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .				
11	Repeat this test in the reverse direction.				
	<i>Note</i> – An end-to-end ISDN arrangement is needed for this test.				

ISUP Basic Call Test Specification

TEST NUMBER: 3.7					
REFERENCE: Q.764 Section 2.5.1.2, 2.5.2.2					
TITLE: Normal call release					
SUBTITLE: Suspend and resume initiated by a called party					
PURPOSE: To verify that the called subscriber can successfully suspend and resume a call					
PRE-TEST CONDITIONS: Called termination is free					
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> SP A IAM Connectivity Connectivity REL </td> <td style="width: 33%; vertical-align: top; text-align: center;"> -----> <----- ----- <----- ----- <----- <----- ----- -----> <----- </td> <td style="width: 33%; vertical-align: top;"> SP B ACM Ringing tone ANM Connectivity SUS (User initiated) RES (User initiated) Connectivity RLC </td> </tr> </table>			SP A IAM Connectivity Connectivity REL	-----> <----- ----- <----- ----- <----- <----- ----- -----> <-----	SP B ACM Ringing tone ANM Connectivity SUS (User initiated) RES (User initiated) Connectivity RLC
SP A IAM Connectivity Connectivity REL	-----> <----- ----- <----- ----- <----- <----- ----- -----> <-----	SP B ACM Ringing tone ANM Connectivity SUS (User initiated) RES (User initiated) 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 called party should 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	CHECK E: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .				
11	Repeat this test in the reverse direction.				
	<i>Note</i> – An end-to-end ISDN arrangement is needed for this test.				

ISUP Basic Call Test Specification

TEST NUMBER: 3.8																													
REFERENCE: Q.764 Section 2.3.1 e)																													
TITLE: Normal call release																													
SUBTITLE: Collision of REL messages																													
PURPOSE: To verify that a release message may be received at an exchange from a succeeding or preceding exchange after the release of the switch path is initiated																													
PRE-TEST CONDITIONS: Called termination is free																													
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP																											
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; text-align: center;">SP A</td> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;">SP B</td> </tr> <tr> <td>IAM</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td>ACM</td> </tr> <tr> <td></td> <td style="text-align: center;">-----</td> <td>Ringing tone</td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td>ANM</td> </tr> <tr> <td>Connectivity</td> <td style="text-align: center;">-----</td> <td>Connectivity</td> </tr> <tr> <td>REL</td> <td style="text-align: center;">-----><-----</td> <td>REL</td> </tr> <tr> <td>RLC (Note)</td> <td style="text-align: center;">-----></td> <td>RLC (Note)</td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td></td> </tr> </table>			SP A		SP B	IAM	----->			<-----	ACM		-----	Ringing tone		<-----	ANM	Connectivity	-----	Connectivity	REL	-----><-----	REL	RLC (Note)	----->	RLC (Note)		<-----	
SP A		SP B																											
IAM	----->																												
	<-----	ACM																											
	-----	Ringing tone																											
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Connectivity	-----	Connectivity																											
REL	-----><-----	REL																											
RLC (Note)	----->	RLC (Note)																											
	<-----																												
	TEST DESCRIPTION																												
1	Make a call from SP A to SP B. Record the message sequence using a signal monitor.																												
2	CHECK A: IS RINGING TONE HEARD? . . .																												
3	The called party should 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 THE MESSAGE SEQUENCE AS ABOVE? . . .																												
	<i>Note</i> – The RLC messages may occur in the reverse sequence.																												

ISUP Basic Call Test Specification

TEST NUMBER: 4.1					
REFERENCE: Q.764 Section 2.2					
TITLE: Unsuccessful call setup					
SUBTITLE: Validate a set of known causes for release					
PURPOSE: To verify that the call will be immediately released by the outgoing signalling point if a release message with a given cause is received and the correct indication is given to the calling party					
PRE-TEST CONDITIONS: Arrange the data in signalling point B such that a release message with a given cause is returned to the request					
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%; vertical-align: top;"> <p>SP A</p> <p>a)</p> <p>IAM</p> <p>-----></p> <p><-----</p> <p>RLC</p> <p>-----></p> <p>b)</p> <p>IAM</p> <p>-----></p> <p><-----</p> <p><-----</p> <p>RLC</p> <p>-----></p> </td> <td style="width: 40%; border: none; text-align: center;"> <p><-----</p> <p><-----</p> <p><-----</p> </td> <td style="width: 30%; vertical-align: top;"> <p>SP B</p> <p>REL (cause = xxx)</p> <p>ACM</p> <p>REL (cause = xxx)</p> </td> </tr> </table>			<p>SP A</p> <p>a)</p> <p>IAM</p> <p>-----></p> <p><-----</p> <p>RLC</p> <p>-----></p> <p>b)</p> <p>IAM</p> <p>-----></p> <p><-----</p> <p><-----</p> <p>RLC</p> <p>-----></p>	<p><-----</p> <p><-----</p> <p><-----</p>	<p>SP B</p> <p>REL (cause = xxx)</p> <p>ACM</p> <p>REL (cause = xxx)</p>
<p>SP A</p> <p>a)</p> <p>IAM</p> <p>-----></p> <p><-----</p> <p>RLC</p> <p>-----></p> <p>b)</p> <p>IAM</p> <p>-----></p> <p><-----</p> <p><-----</p> <p>RLC</p> <p>-----></p>	<p><-----</p> <p><-----</p> <p><-----</p>	<p>SP B</p> <p>REL (cause = xxx)</p> <p>ACM</p> <p>REL (cause = xxx)</p>			
	TEST DESCRIPTION				
<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p>	<p>Attempt to make a call from SP A to SP B. Record the message sequence using a signal monitor.</p> <p>CHECK A: IS THE APPROPRIATE TONE OR ANNOUNCEMENT RETURNED TO THE CALLING PARTY? . . .</p> <p>CHECK B: IS THE CIRCUIT IDLE? . . .</p> <p>CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .</p> <p>Not all the cause values are required to be tested.</p> <p>The suggested causes are: unallocated number, no circuit available, and switching equipment congestion.</p> <p><i>Note</i> – 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.</p>				

ISUP Basic Call Test Specification

TEST NUMBER: 5.1					
REFERENCE: Q.764 Section 2.10.8.1					
TITLE: Abnormal situation during a call					
SUBTITLE: Inability to release in response to a REL after ANM					
PURPOSE: To verify that if the signalling point is unable to return a circuit to the idle condition in response to a release message, the circuit will be blocked					
PRE-TEST CONDITIONS: Arrange the data in signalling point A such that it is unable to return the circuit to the idle condition in response to a release message					
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 35%; vertical-align: top;"> SP A ACM Ringing tone ANM Connectivity BLO and alert the maintenance system RLC </td> <td style="width: 20%; text-align: center; vertical-align: middle;"> <----- -----> -----> -----> ----- <----- -----> -----> </td> <td style="width: 45%; vertical-align: top; text-align: right;"> SP B IAM Connectivity REL BLA </td> </tr> </table>			SP A ACM Ringing tone ANM Connectivity BLO and alert the maintenance system RLC	<----- -----> -----> -----> ----- <----- -----> ----->	SP B IAM Connectivity REL BLA
SP A ACM Ringing tone ANM Connectivity BLO and alert the maintenance system RLC	<----- -----> -----> -----> ----- <----- -----> ----->	SP B IAM Connectivity REL BLA			
	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 calling party should answer the call.				
4	CHECK B: IS THE CONNECTION ESTABLISHED? . . .				
5	The calling party should release the call.				
6	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .				
7	Repeat this test in the reverse direction.				

ISUP Basic Call Test Specification

TEST NUMBER: 5.2.1		
REFERENCE: Q.764 Section 2.10.8.3		
TITLE: Timers		
SUBTITLE: T7: waiting for ACM or CON		
PURPOSE: To check that at the expiration of T7 the circuit will be released		
PRE-TEST CONDITIONS: Arrange the data in signalling point B such that an address complete message is not returned to the call request		
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP
<p>EXPECTED MESSAGE SEQUENCE:</p> <pre style="margin-left: 40px;"> SP A SP B IAM - -----> T7 20-30 secs. REL - -----> <----- RLC </pre>		
	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? . . .	
3	CHECK B: IS THE CIRCUIT IDLE? . . .	
4	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .	

ISUP Basic Call Test Specification

TEST NUMBER: 5.2.2																										
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																								
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">SP A</td> <td style="width: 40%;"></td> <td style="width: 30%;">SP B</td> </tr> <tr> <td>IAM</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td style="text-align: center;">-</td> <td style="text-align: center;"><-----</td> <td>ACM</td> </tr> <tr> <td style="text-align: center;"> </td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">T9 </td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;"> </td> <td></td> <td></td> </tr> <tr> <td>REL</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td style="text-align: center;">-</td> <td style="text-align: center;"><-----</td> <td>RLC</td> </tr> </table>			SP A		SP B	IAM	----->		-	<-----	ACM				T9						REL	----->		-	<-----	RLC
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? . . .																									
6	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .																									
	<i>Note</i> – The timer needs only be run at the outgoing international exchange or national controlling exchange.																									

ISUP Basic Call Test Specification

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																																																									
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">SP A</td> <td style="width: 40%;"></td> <td style="width: 30%;">SP B</td> </tr> <tr> <td></td> <td style="text-align: center;">←-----</td> <td>IAM</td> </tr> <tr> <td>ACM</td> <td style="text-align: center;">-----→</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">-----</td> <td>Ringing tone</td> </tr> <tr> <td>ANM</td> <td style="text-align: center;">-----→</td> <td></td> </tr> <tr> <td>Connectivity</td> <td style="text-align: center;">-----</td> <td>Connectivity</td> </tr> <tr> <td>REL</td> <td style="text-align: center;">-----→</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td style="padding-left: 20px;">T1</td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td style="padding-left: 20px;">4-15 secs.</td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td>REL</td> <td style="text-align: center;">-- </td> <td style="text-align: center;">-----→</td> </tr> <tr> <td></td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> T5</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> 1 min.</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td>RSC</td> <td style="text-align: center;">--</td> <td style="text-align: center;">-----→</td> </tr> <tr> <td>Alert the maintenance system</td> <td></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">←-----</td> <td>RLC</td> </tr> </table>			SP A		SP B		←-----	IAM	ACM	-----→			-----	Ringing tone	ANM	-----→		Connectivity	-----	Connectivity	REL	-----→					T1			4-15 secs.						REL	--	-----→					T5			1 min.					RSC	--	-----→	Alert the maintenance system				←-----	RLC
SP A		SP B																																																									
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1	Make a call from SP B to SP A. Record the message sequence using a signal monitor.																																																										
2	The called party at SP A should clear the call.																																																										
3	CHECK A: WAS A RELEASE MESSAGE SENT BETWEEN 4-15 SECONDS AFTER SENDING OF THE INITIAL RELEASE MESSAGE? . . .																																																										
4	CHECK B: WAS A RESET CIRCUIT MESSAGE SENT AT 1 MINUTE AFTER SENDING OF THE INITIAL RELEASE MESSAGE? . . .																																																										
5	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .																																																										
	<i>Note</i> – T1 is repeated and REL is retransmitted during T5 interval.																																																										

ISUP Basic Call Test Specification

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			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> SP A IAM Connectivity -- T6 REL -- </td> <td style="width: 33%; vertical-align: top; text-align: center;"> -----> <----- ----- <----- ----- <----- -----> <----- </td> <td style="width: 33%; vertical-align: top;"> SP B ACM Ringing tone ANM Connectivity SUS (Network) RLC </td> </tr> </table>			SP A IAM Connectivity -- T6 REL --	-----> <----- ----- <----- ----- <----- -----> <-----	SP B ACM Ringing tone ANM Connectivity SUS (Network) RLC
SP A IAM Connectivity -- T6 REL --	-----> <----- ----- <----- ----- <----- -----> <-----	SP B ACM Ringing tone ANM Connectivity SUS (Network) 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	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? . . .				
	<i>Note – T6 timer needs only to be run at the international or national controlling exchange.</i>				

ISUP Basic Call Test Specification

TEST NUMBER: 5.2.5																							
REFERENCE: Q.764 Section 2.10.8.3																							
TITLE: Timers																							
SUBTITLE: T8: waiting for COT message if applicable																							
PURPOSE: To verify that when the IAM indicates that the continuity check: <ul style="list-style-type: none"> – 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: <ol style="list-style-type: none"> a) 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. 																							
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP																					
EXPECTED MESSAGE SEQUENCE: <div style="text-align: center; margin-top: 10px;"> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">SP A</td> <td style="width: 40%;"></td> <td style="width: 30%;">SP B</td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td>IAM</td> </tr> <tr> <td></td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> T8 10-15 secs.</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td>REL</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td>RLC</td> </tr> </table> </div>			SP A		SP B		<-----	IAM					T8 10-15 secs.					REL	----->			<-----	RLC
SP A		SP B																					
	<-----	IAM																					
	T8 10-15 secs.																						
REL	----->																						
	<-----	RLC																					
	TEST DESCRIPTION																						
1	Attempt to make a call from SP B to SP A. Record the message sequence using a signal monitor.																						
2	CHECK A: WAS THE RELEASE MESSAGE SENT WITHIN 10 TO 15 SECONDS? . . .																						
3	CHECK B: IS THE CIRCUIT IDLE? . . .																						
4	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .																						

ISUP Basic Call Test Specification

TEST NUMBER: 5.2.6	
REFERENCE: Q.764 Section 2.10.4	
TITLE: Timers	
SUBTITLE: T12 and T13: failure to receive a BLA	
PURPOSE: To verify that appropriate actions take place at the expiration of timers T12 and T13	
PRE-TEST CONDITIONS:	
<ul style="list-style-type: none"> a) Circuit is idle. b) Arrange the data in signalling point B such that a blocking acknowledgement message is not returned in response to a blocking message. 	
CONFIGURATION: 1	TYPE OF TEST: VAT
TYPE OF SP: SP	
<p>EXPECTED MESSAGE SEQUENCE:</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> <p>SP A</p> <p>BLO - - - -</p> <p style="margin-left: 40px;"> </p> <p style="margin-left: 20px;">T12 </p> <p style="margin-left: 20px;">4-15 secs. </p> <p style="margin-left: 40px;"> </p> <p>BLO - -</p> <p style="margin-left: 40px;"> </p> <p style="margin-left: 40px;"> T13</p> <p style="margin-left: 40px;"> 1 min.</p> <p style="margin-left: 40px;"> </p> <p>BLO - -</p> <p style="margin-left: 40px;"> </p> <p style="margin-left: 40px;">Alert the maintenance system</p> <p style="margin-left: 40px;"> </p> <p style="margin-left: 40px;"> T13</p> <p style="margin-left: 40px;"> 1 min.</p> <p style="margin-left: 40px;"> </p> <p>BLO - -</p> </div> <div style="width: 45%; text-align: right;"> <p>SP B</p> <p>-----></p> <p>-----></p> <p>-----></p> <p>-----></p> <p>-----></p> <p>-----></p> </div> </div>	
TEST DESCRIPTION	
1	Send a blocking message from SP A to SP B. Record the message sequence using a signal monitor.
2	CHECK A: WAS A BLOCKING MESSAGE SENT BETWEEN 4-15 SECONDS AFTER SENDING OF THE INITIAL BLOCKING MESSAGE? . . .
3	CHECK B: WAS A BLOCKING MESSAGE SENT AT 1 MINUTE AFTER SENDING OF THE INITIAL BLOCKING MESSAGE? . . .
4	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . . <i>Note – T12 is repeated and BLO is retransmitted during the first T13 interval.</i>

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:																																																														
a) Circuit is idle. b) Arrange the data in signalling point B such that an unblocking acknowledgement message is not returned in response to an unblocking message.																																																														
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP																																																												
EXPECTED MESSAGE SEQUENCE: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">SP A</td> <td style="width: 40%;"></td> <td style="width: 30%;">SP B</td> </tr> <tr> <td>BLO</td> <td>-----></td> <td></td> </tr> <tr> <td></td> <td><-----</td> <td>BLA</td> </tr> <tr> <td>UBL</td> <td>-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td style="padding-left: 20px;">T14</td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td style="padding-left: 20px;">4-15 secs.</td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td>UBL</td> <td>-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> T15</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> 1 min.</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td>UBL</td> <td>-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td>Alert the maintenance system</td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> T15</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> 1 min.</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td>UBL</td> <td>-----></td> <td></td> </tr> </table>			SP A		SP B	BLO	----->			<-----	BLA	UBL	----->					T14			4-15 secs.						UBL	----->						T15			1 min.					UBL	----->					Alert the maintenance system				T15			1 min.					UBL	----->	
SP A		SP B																																																												
BLO	----->																																																													
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	T15																																																													
	1 min.																																																													
UBL	----->																																																													
	TEST DESCRIPTION																																																													
1	Send a blocking and unblocking message from SP A to SP B. Record the message sequence using a signal monitor.																																																													
2	CHECK A: WAS AN UNBLOCKING MESSAGE SENT BETWEEN 4-15 SECONDS AFTER SENDING OF THE INITIAL UNBLOCKING MESSAGE? . . .																																																													
3	CHECK B: WAS AN UNBLOCKING MESSAGE SENT AT 1 MINUTE AFTER SENDING OF THE INITIAL UNBLOCKING MESSAGE? . . .																																																													
4	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .																																																													
	<i>Note – T14 is repeated and UBL is retransmitted during the first T15 interval.</i>																																																													

ISUP Basic Call Test Specification

TEST NUMBER: 5.2.8														
REFERENCE: Q.764 Section 2.10.3.1														
TITLE: Timers														
SUBTITLE: T16 and T17: failure to receive a RLC														
PURPOSE: To verify that appropriate actions take place at the expiration of timers T16 and T17														
PRE-TEST CONDITIONS:														
a) Circuit is idle. b) Arrange the data in signalling point B such that a release complete message is not returned in response to a reset circuit message.														
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP												
EXPECTED MESSAGE SEQUENCE:														
<table style="width: 100%; border: none;"> <tr> <td style="width: 30%; text-align: left;">SP A</td> <td style="width: 40%;"></td> <td style="width: 30%; text-align: right;">SP B</td> </tr> <tr> <td>RSC</td> <td style="text-align: center;"> ----- T16 4-15 secs. RSC -- </td> <td style="text-align: center;"> -----> -----> -----> -----> </td> </tr> <tr> <td></td> <td style="text-align: center;"> T17 1 min. RSC -- </td> <td></td> </tr> <tr> <td>Alert the maintenance system</td> <td style="text-align: center;"> T17 1 min. RSC - </td> <td></td> </tr> </table>			SP A		SP B	RSC	----- T16 4-15 secs. RSC --	-----> -----> -----> ----->		 T17 1 min. RSC --		Alert the maintenance system	 T17 1 min. RSC -	
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? . . .													
<i>Note – T16 is repeated and RSC is retransmitted during the first T17 interval.</i>														

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:					
a) 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: <table style="width: 100%; border: none; margin-top: 10px;"> <tr> <td style="width: 30%; vertical-align: top;"> SP A CGB - - - - T18 4-15 secs. CGB - - T19 1 min. CGB - - Alert the maintenance system T19 1 min. CGB - </td> <td style="width: 30%; vertical-align: top; text-align: center;"> SP B -----> -----> -----> -----> -----> </td> <td style="width: 40%;"></td> </tr> </table>			SP A CGB - - - - T18 4-15 secs. CGB - - T19 1 min. CGB - - Alert the maintenance system T19 1 min. CGB -	SP B -----> -----> -----> -----> ----->	
SP A CGB - - - - T18 4-15 secs. CGB - - T19 1 min. CGB - - Alert the maintenance system T19 1 min. CGB -	SP B -----> -----> -----> -----> ----->				
	TEST DESCRIPTION				
1	Send a circuit group blocking message from SP A to SP B. Record the message sequence using a signal monitor.				
2	CHECK A: WAS A CIRCUIT GROUP BLOCKING MESSAGE SENT BETWEEN 4-15 SECONDS AFTER SENDING OF THE INITIAL CIRCUIT GROUP BLOCKING MESSAGE? . . .				
3	CHECK B: WAS A CIRCUIT GROUP BLOCKING MESSAGE SENT AT 1 MINUTE AFTER SENDING OF THE INITIAL CIRCUIT GROUP BLOCKING MESSAGE? . . .				
4	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .				
<i>Note</i> – T18 is repeated and CGB is retransmitted during the first T19 interval.					

ISUP Basic Call Test Specification

TEST NUMBER: 5.2.10																																																					
REFERENCE: Q.764 Section 2.10.4																																																					
TITLE: Timers																																																					
SUBTITLE: T20 and T21: failure to receive a CGUA																																																					
PURPOSE: To verify that appropriate actions take place at the expiration of timers T20 and T21																																																					
PRE-TEST CONDITIONS:																																																					
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.																																																					
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP																																																			
EXPECTED MESSAGE SEQUENCE: <table style="width: 100%; border: none; margin-top: 10px;"> <tr> <td style="width: 30%;">SP A</td> <td style="width: 40%;"></td> <td style="width: 30%;">SP B</td> </tr> <tr> <td>CGB</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td>CGBA</td> </tr> <tr> <td>CGU</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">T20</td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td style="padding-left: 20px;">4-15 secs.</td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td>CGU</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">T21</td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td style="padding-left: 20px;">1 min.</td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td>CGU</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">Alert the maintenance</td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td style="padding-left: 20px;">system</td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td style="padding-left: 20px;">T21</td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td style="padding-left: 20px;">1 min.</td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td>CGU</td> <td style="text-align: center;">-----></td> <td></td> </tr> </table>			SP A		SP B	CGB	----->			<-----	CGBA	CGU	----->		T20			4-15 secs.						CGU	----->		T21			1 min.			CGU	----->		Alert the maintenance			system						T21			1 min.			CGU	----->	
SP A		SP B																																																			
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T21																																																					
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CGU	----->																																																				
	TEST DESCRIPTION																																																				
1	Send a circuit group blocking and unblocking message from SP A to SP B. Record the message sequence using a signal monitor.																																																				
2	CHECK A: WAS A CIRCUIT GROUP UNBLOCKING MESSAGE SENT BETWEEN 4-15 SECONDS AFTER SENDING OF THE INITIAL CIRCUIT GROUP UNBLOCKING MESSAGE? . . .																																																				
3	CHECK B: WAS A CIRCUIT GROUP UNBLOCKING MESSAGE SENT AT 1 MINUTE AFTER SENDING OF THE INITIAL CIRCUIT GROUP UNBLOCKING MESSAGE? . . .																																																				
4	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .																																																				
	<i>Note</i> – T20 is repeated and CGU is retransmitted during the first T21 interval.																																																				

ISUP Basic Call Test Specification

TEST NUMBER: 5.2.11																									
REFERENCE: Q.764 Section 2.10.4																									
TITLE: Timers																									
SUBTITLE: T22 and T23: failure to receive a GRA																									
PURPOSE: To verify that appropriate actions take place at the expiration of timers T22 and T23																									
PRE-TEST CONDITIONS:																									
<ul style="list-style-type: none"> a) Circuit is idle. b) Arrange the data in signalling point B such that a circuit group reset acknowledgement message is not returned in response to a circuit group reset message. 																									
CONFIGURATION: 1	TYPE OF TEST: VAT																								
TYPE OF SP: SP																									
EXPECTED MESSAGE SEQUENCE:																									
<table style="width: 100%; border: none;"> <tr> <td style="width: 20%; text-align: left;">SP A</td> <td style="width: 60%;"></td> <td style="width: 20%; text-align: right;">SP B</td> </tr> <tr> <td>GRS</td> <td style="text-align: center;"> <div style="display: flex; justify-content: space-between;"> ---- -----> </div> </td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> <div style="display: flex; justify-content: center; align-items: center;"> <div style="text-align: center; margin-right: 5px;"> T22 4-15 secs. </div> <div style="border-left: 1px solid black; height: 40px; margin: 0 5px;"></div> <div style="border-left: 1px solid black; height: 40px; margin: 0 5px;"></div> </div> </td> <td></td> </tr> <tr> <td>GRS</td> <td style="text-align: center;"> <div style="display: flex; justify-content: space-between;"> --- -----> </div> </td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> <div style="display: flex; justify-content: center; align-items: center;"> <div style="text-align: center; margin-right: 5px;"> T23 1 min. </div> <div style="border-left: 1px solid black; height: 40px; margin: 0 5px;"></div> </div> </td> <td></td> </tr> <tr> <td>GRS</td> <td style="text-align: center;"> <div style="display: flex; justify-content: space-between;"> --- -----> </div> </td> <td></td> </tr> <tr> <td>Alert the maintenance system</td> <td style="text-align: center;"> <div style="display: flex; justify-content: center; align-items: center;"> <div style="text-align: center; margin-right: 5px;"> T23 1 min. </div> <div style="border-left: 1px solid black; height: 40px; margin: 0 5px;"></div> </div> </td> <td></td> </tr> <tr> <td>GRS</td> <td style="text-align: center;"> <div style="display: flex; justify-content: space-between;"> - -----> </div> </td> <td></td> </tr> </table>		SP A		SP B	GRS	<div style="display: flex; justify-content: space-between;"> ---- -----> </div>			<div style="display: flex; justify-content: center; align-items: center;"> <div style="text-align: center; margin-right: 5px;"> T22 4-15 secs. </div> <div style="border-left: 1px solid black; height: 40px; margin: 0 5px;"></div> <div style="border-left: 1px solid black; height: 40px; margin: 0 5px;"></div> </div>		GRS	<div style="display: flex; justify-content: space-between;"> --- -----> </div>			<div style="display: flex; justify-content: center; align-items: center;"> <div style="text-align: center; margin-right: 5px;"> T23 1 min. </div> <div style="border-left: 1px solid black; height: 40px; margin: 0 5px;"></div> </div>		GRS	<div style="display: flex; justify-content: space-between;"> --- -----> </div>		Alert the maintenance system	<div style="display: flex; justify-content: center; align-items: center;"> <div style="text-align: center; margin-right: 5px;"> T23 1 min. </div> <div style="border-left: 1px solid black; height: 40px; margin: 0 5px;"></div> </div>		GRS	<div style="display: flex; justify-content: space-between;"> - -----> </div>	
SP A		SP B																							
GRS	<div style="display: flex; justify-content: space-between;"> ---- -----> </div>																								
	<div style="display: flex; justify-content: center; align-items: center;"> <div style="text-align: center; margin-right: 5px;"> T22 4-15 secs. </div> <div style="border-left: 1px solid black; height: 40px; margin: 0 5px;"></div> <div style="border-left: 1px solid black; height: 40px; margin: 0 5px;"></div> </div>																								
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GRS	<div style="display: flex; justify-content: space-between;"> --- -----> </div>																								
Alert the maintenance system	<div style="display: flex; justify-content: center; align-items: center;"> <div style="text-align: center; margin-right: 5px;"> T23 1 min. </div> <div style="border-left: 1px solid black; height: 40px; margin: 0 5px;"></div> </div>																								
GRS	<div style="display: flex; justify-content: space-between;"> - -----> </div>																								
	TEST DESCRIPTION																								
1	Send a circuit group reset message from SP A to SP B. Record the message sequence using a signal monitor.																								
2	CHECK A: WAS A CIRCUIT GROUP RESET MESSAGE SENT BETWEEN 4-15 SECONDS AFTER SENDING OF THE INITIAL CIRCUIT GROUP RESET MESSAGE? . . .																								
3	CHECK B: WAS A CIRCUIT GROUP RESET MESSAGE SENT AT 1 MINUTE AFTER SENDING OF THE INITIAL CIRCUIT GROUP RESET MESSAGE? . . .																								
4	CHECK C: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .																								
	<i>Note</i> – T22 is repeated and GRS is retransmitted during the first T23 interval.																								

ISUP Basic Call Test Specification

TEST NUMBER: 5.3.1					
REFERENCE: Q.764 Section 2.10.3.1 a)					
TITLE: Reset of circuits during a call					
SUBTITLE: Of an outgoing circuit					
PURPOSE: To verify that on receipt of a reset message the call is immediately released - outgoing call					
PRE-TEST CONDITIONS: Called termination is free					
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> SP A IAM Connectivity RLC </td> <td style="width: 33%; text-align: center; vertical-align: middle;"> -----> <----- ----- <----- ----- <----- -----> </td> <td style="width: 33%; vertical-align: top;"> SP B ACM Ringing tone ANM Connectivity RSC </td> </tr> </table>			SP A IAM Connectivity RLC	-----> <----- ----- <----- ----- <----- ----->	SP B ACM Ringing tone ANM Connectivity RSC
SP A IAM Connectivity RLC	-----> <----- ----- <----- ----- <----- ----->	SP B ACM Ringing tone ANM Connectivity 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? . . .				

ISUP Basic Call Test Specification

TEST NUMBER: 5.3.2																										
REFERENCE: Q.764 Section 2.10.3.1 a)																										
TITLE: Reset of circuits during a call																										
SUBTITLE: Of an incoming circuit																										
PURPOSE: To verify that on receipt of a reset message the call is immediately released - incoming call																										
PRE-TEST CONDITIONS: Called termination is free																										
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP																								
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">SP A</td> <td style="width: 33%;"></td> <td style="width: 33%;">SP B</td> </tr> <tr> <td></td> <td style="text-align: center;">←-----</td> <td style="text-align: right;">IAM</td> </tr> <tr> <td>ACM</td> <td style="text-align: center;">-----→</td> <td></td> </tr> <tr> <td>Ringing tone</td> <td style="text-align: center;">-----</td> <td></td> </tr> <tr> <td>ANM</td> <td style="text-align: center;">-----→</td> <td></td> </tr> <tr> <td>Connectivity</td> <td style="text-align: center;">-----</td> <td style="text-align: right;">Connectivity</td> </tr> <tr> <td></td> <td style="text-align: center;">←-----</td> <td style="text-align: right;">RSC</td> </tr> <tr> <td>RLC</td> <td style="text-align: center;">-----→</td> <td></td> </tr> </table>			SP A		SP B		←-----	IAM	ACM	-----→		Ringing tone	-----		ANM	-----→		Connectivity	-----	Connectivity		←-----	RSC	RLC	-----→	
SP A		SP B																								
	←-----	IAM																								
ACM	-----→																									
Ringing tone	-----																									
ANM	-----→																									
Connectivity	-----	Connectivity																								
	←-----	RSC																								
RLC	-----→																									
	TEST DESCRIPTION																									
1	Make a call from SP B to SP A. Record the message sequence using a signal monitor.																									
2	CHECK A: 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? . . .																									

ISUP Basic Call Test Specification

TEST NUMBER: 6.1.1					
REFERENCE: Q.764 Section 2.1.8					
TITLE: Continuity check call					
SUBTITLE: Continuity check required					
PURPOSE: To verify that a call can be set up on a circuit requiring a continuity check					
PRE-TEST CONDITIONS: Arrange the data in signalling point A such that a continuity check is required on this circuit					
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <p>SP A</p> <p>IAM -----></p> <p>Check tone -----></p> <p>COT (successful) -----></p> <p>Connectivity -----></p> <p>REL -----></p> </td> <td style="width: 33%; vertical-align: top; text-align: center;"> <p>-----></p> <p>-----></p> <p>-----></p> <p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p>-----></p> <p><-----</p> </td> <td style="width: 33%; vertical-align: top;"> <p>SP B</p> <p>ACM</p> <p>Ringing tone</p> <p>ANM</p> <p>Connectivity</p> <p>RLC</p> </td> </tr> </table>			<p>SP A</p> <p>IAM -----></p> <p>Check tone -----></p> <p>COT (successful) -----></p> <p>Connectivity -----></p> <p>REL -----></p>	<p>-----></p> <p>-----></p> <p>-----></p> <p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p>-----></p> <p><-----</p>	<p>SP B</p> <p>ACM</p> <p>Ringing tone</p> <p>ANM</p> <p>Connectivity</p> <p>RLC</p>
<p>SP A</p> <p>IAM -----></p> <p>Check tone -----></p> <p>COT (successful) -----></p> <p>Connectivity -----></p> <p>REL -----></p>	<p>-----></p> <p>-----></p> <p>-----></p> <p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p>-----></p> <p><-----</p>	<p>SP B</p> <p>ACM</p> <p>Ringing tone</p> <p>ANM</p> <p>Connectivity</p> <p>RLC</p>			
	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 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 this test in the reverse direction.				

ISUP Basic Call Test Specification

TEST NUMBER: 6.1.2		
REFERENCE: Q.764 Section 2.1.8		
TITLE: Continuity check call		
SUBTITLE: COT applied on a previous circuit		
PURPOSE: To verify that if a continuity check is being performed on a previous circuit, a backward message is delayed until receipt of the COT message		
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		
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP
<p>EXPECTED MESSAGE SEQUENCE:</p> <pre style="font-family: monospace; margin: 0;"> SP A SP B <----- delay while check performed on previous circuit <----- ACM COT (successful) Ringing tone -----> ANM -----> Connectivity -----> Connectivity RLC <----- -----> REL </pre>		
	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 should clear the call.	
7	CHECK C: IS THE CIRCUIT IDLE? . . .	
8	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .	

ISUP Basic Call Test Specification

TEST NUMBER: 6.1.3																	
REFERENCE: Q.764 Section 2.3																	
TITLE: Continuity check call																	
SUBTITLE: Calling party clears during a COT																	
PURPOSE: To verify that the calling 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.																	
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP															
EXPECTED MESSAGE SEQUENCE: <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">SP A</td> <td style="width: 33%;"></td> <td style="width: 33%;">SP B</td> </tr> <tr> <td>IAM</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td>Check tone</td> <td style="text-align: center;">-----</td> <td></td> </tr> <tr> <td>REL</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td>RLC</td> </tr> </table>			SP A		SP B	IAM	----->		Check tone	-----		REL	----->			<-----	RLC
SP A		SP B															
IAM	----->																
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.																

ISUP Basic Call Test Specification

TEST NUMBER: 6.1.4					
REFERENCE: Q.764 Section 2.1.8					
TITLE: Continuity check call					
SUBTITLE: Delay of through connect					
PURPOSE: To verify that the switching through of the speech path is delayed until the residual check-tone has propagated through the return of the speech path					
PRE-TEST CONDITIONS:					
a) The called termination is free. b) Arrange the data in signalling point A such that a continuity check is applied on this circuit.					
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP			
EXPECTED MESSAGE SEQUENCE: <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> SP A IAM Check tone COT (successful) Connectivity REL </td> <td style="width: 33%; vertical-align: top; text-align: center;"> -----> ----- -----> <----- ----- <----- ----- -----> <----- </td> <td style="width: 33%; vertical-align: top;"> SP B ACM Ringing tone ANM Connectivity RLC </td> </tr> </table>			SP A IAM Check tone COT (successful) Connectivity REL	-----> ----- -----> <----- ----- <----- ----- -----> <-----	SP B ACM Ringing tone ANM Connectivity RLC
SP A IAM Check tone COT (successful) Connectivity REL	-----> ----- -----> <----- ----- <----- ----- -----> <-----	SP B 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: WAS THE CONTINUITY CHECK TONE HEARD BY EITHER CALLED OR CALLING PARTY? . . .				
3	CHECK B: CAN RINGING TONE BE HEARD? . . .				
4	The called party should answer the call.				
5	CHECK C: IS THE CONNECTION ESTABLISHED? . . .				
6	The calling party should clear the call.				
7	CHECK D: IS THE CIRCUIT IDLE? . . .				
8	CHECK E: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .				
9	For validation testing repeat this test in the reverse direction.				

ISUP Basic Call Test Specification

TEST NUMBER: 6.1.5																																																																	
REFERENCE: Q.764 Section 2.1.8																																																																	
TITLE: Continuity check call																																																																	
SUBTITLE: COT unsuccessful																																																																	
PURPOSE: To verify that a repeat attempt of the continuity check is made on the failed circuit																																																																	
PRE-TEST CONDITIONS: a) Arrange data in SP A such that a COT is applied on this circuit. b) Ensure that no backward tone is detected within the specified time out																																																																	
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP																																																															
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;"></td> <td style="width: 30%;"></td> <td style="width: 30%; text-align: right;">SP B</td> </tr> <tr> <td>SP A</td> <td></td> <td></td> </tr> <tr> <td>IAM</td> <td></td> <td style="text-align: right;">-----></td> </tr> <tr> <td>Check tone</td> <td style="text-align: center;">-</td> <td style="text-align: right;">-----></td> </tr> <tr> <td></td> <td style="text-align: center;">T24 </td> <td style="text-align: right;">-----></td> </tr> <tr> <td>COT (failed)</td> <td style="text-align: center;">- (Note)</td> <td style="text-align: right;">-----></td> </tr> <tr> <td></td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">T25 1-10 secs.</td> <td></td> </tr> <tr> <td>CCR</td> <td style="text-align: center;">-</td> <td style="text-align: right;">-----></td> </tr> <tr> <td>(on the failed circuit)</td> <td></td> <td></td> </tr> <tr> <td>Check tone</td> <td style="text-align: center;">-</td> <td style="text-align: right;">-----></td> </tr> <tr> <td></td> <td style="text-align: center;">T24 </td> <td style="text-align: right;">-----></td> </tr> <tr> <td>COT (failed)</td> <td style="text-align: center;">- and alert the</td> <td style="text-align: right;">-----></td> </tr> <tr> <td></td> <td style="text-align: center;"> maintenance</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> system</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"> </td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">T26 1-3 mins.</td> <td></td> </tr> <tr> <td>CCR</td> <td style="text-align: center;">-</td> <td style="text-align: right;">-----></td> </tr> <tr> <td>Check tone</td> <td style="text-align: center;">-</td> <td style="text-align: right;">-----></td> </tr> <tr> <td></td> <td style="text-align: center;">T24 </td> <td style="text-align: right;">-----></td> </tr> <tr> <td>COT (failed)</td> <td style="text-align: center;">-</td> <td style="text-align: right;">-----></td> </tr> </table>					SP B	SP A			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)	-	----->
		SP B																																																															
SP A																																																																	
IAM		----->																																																															
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COT (failed)	-	----->																																																															
	TEST DESCRIPTION																																																																
1	Make a call from SP A to SP B. 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? . . .																																																																
4	CHECK C: WAS THE CHECK REPEATED AT INTERVALS OF 1-3 MINUTES? . . .																																																																
5	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .																																																																
	<i>Note</i> – The call should be re-attempted.																																																																

ISUP Basic Call Test Specification

TEST NUMBER: 6.2.1					
REFERENCE: Q.764 Section 2.9.1 i)					
TITLE: Automatic repeat attempt					
SUBTITLE: Dual seizure for non-controlling SP					
PURPOSE: To verify that an automatic repeat attempt will be made on detection of a dual seizure					
PRE-TEST CONDITIONS: Arrange the signalling point data such that SP B is the controlling exchange for cic = x					
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> SP A IAM (cic = x) ACM (cic = x) Ringing tone ANM (cic = x) Connectivity IAM (cic = y) Connectivity REL (cic = y) RLC (cic = x) </td> <td style="width: 33%; vertical-align: top; text-align: center;"> -----><----- -----> ----- -----> ----- -----> <----- ----- <----- ----- -----> <----- <----- -----> </td> <td style="width: 33%; vertical-align: top;"> SP B IAM (cic = x) Connectivity ACM (cic = y) Ringing tone ANM (cic = y) Connectivity RLC (cic = y) REL (cic = x) </td> </tr> </table>			SP A IAM (cic = x) ACM (cic = x) Ringing tone ANM (cic = x) Connectivity IAM (cic = y) Connectivity REL (cic = y) RLC (cic = x)	-----><----- -----> ----- -----> ----- -----> <----- ----- <----- ----- -----> <----- <----- ----->	SP B IAM (cic = x) Connectivity ACM (cic = y) Ringing tone ANM (cic = y) Connectivity RLC (cic = y) REL (cic = x)
SP A IAM (cic = x) ACM (cic = x) Ringing tone ANM (cic = x) Connectivity IAM (cic = y) Connectivity REL (cic = y) RLC (cic = x)	-----><----- -----> ----- -----> ----- -----> <----- ----- <----- ----- -----> <----- <----- ----->	SP B IAM (cic = x) Connectivity ACM (cic = y) Ringing tone ANM (cic = y) Connectivity RLC (cic = y) REL (cic = x)			
	TEST DESCRIPTION				
1	Simultaneously transmit an IAM (containing the same value of cic) from each end of the link for a both way circuit. Record the message sequence using a signal monitor.				
2	CHECK A: CAN RINGING TONE BE HEARD ON THE CALL ORIGINATED FROM SP B? . . .				
3	The called party at SP A should answer the call.				
4	CHECK B: IS THE CONNECTION ESTABLISHED? . . .				
5	CHECK C: WAS A REPEAT ATTEMPT MADE BY SP A, WITH A DIFFERENT VALUE OF CIC IN THE IAM? . . .				
6	CHECK D: CAN RINGING TONE BE HEARD ON THE CALL ORIGINATED FROM SP A? . . .				
7	The called party at SP B should answer the call.				
8	CHECK E: IS THE CONNECTION STILL ESTABLISHED? . . .				
9	Clear both calls down.				
10	CHECK F: ARE THE CIRCUITS IDLE? . . .				
11	CHECK G: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .				
	<i>Note</i> – The message sequence may not be as shown above.				

ISUP Basic Call Test Specification

TEST NUMBER: 6.2.2					
REFERENCE: Q.764 Section 2.9.1 ii)					
TITLE: Automatic repeat attempt					
SUBTITLE: Blocking of a circuit					
PURPOSE: To verify that an automatic repeat attempt will be made on receipt of the blocking message after sending of an initial address message and before any backward messages have been received					
PRE-TEST CONDITIONS: Arrange the data in signalling point B such that a blocking message is returned in response to the initial address message of the first call request.					
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <p>SP A</p> <p>IAM (cic = x)</p> <p>BLA (cic = x)</p> <p>REL (cic = x)</p> <p>IAM (cic = y)</p> <p>Connectivity</p> <p>REL (cic = y)</p> </td> <td style="width: 33%; vertical-align: top; text-align: center;"> <p>-----></p> <p><-----</p> <p>-----></p> <p>-----></p> <p><-----</p> <p>-----></p> <p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p>-----></p> <p><-----</p> </td> <td style="width: 33%; vertical-align: top;"> <p style="text-align: right;">SP B</p> <p>BLO (cic = x)</p> <p>RLC(cic = x)</p> <p>ACM (cic = y)</p> <p>Ringing tone</p> <p>ANM (cic = y)</p> <p>Connectivity</p> <p>RLC (cic = y)</p> </td> </tr> </table>			<p>SP A</p> <p>IAM (cic = x)</p> <p>BLA (cic = x)</p> <p>REL (cic = x)</p> <p>IAM (cic = y)</p> <p>Connectivity</p> <p>REL (cic = y)</p>	<p>-----></p> <p><-----</p> <p>-----></p> <p>-----></p> <p><-----</p> <p>-----></p> <p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p>-----></p> <p><-----</p>	<p style="text-align: right;">SP B</p> <p>BLO (cic = x)</p> <p>RLC(cic = x)</p> <p>ACM (cic = y)</p> <p>Ringing tone</p> <p>ANM (cic = y)</p> <p>Connectivity</p> <p>RLC (cic = y)</p>
<p>SP A</p> <p>IAM (cic = x)</p> <p>BLA (cic = x)</p> <p>REL (cic = x)</p> <p>IAM (cic = y)</p> <p>Connectivity</p> <p>REL (cic = y)</p>	<p>-----></p> <p><-----</p> <p>-----></p> <p>-----></p> <p><-----</p> <p>-----></p> <p><-----</p> <p>-----</p> <p><-----</p> <p>-----</p> <p>-----></p> <p><-----</p>	<p style="text-align: right;">SP B</p> <p>BLO (cic = x)</p> <p>RLC(cic = x)</p> <p>ACM (cic = y)</p> <p>Ringing tone</p> <p>ANM (cic = y)</p> <p>Connectivity</p> <p>RLC (cic = y)</p>			
	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 (CIC = y) IDLE? . . .				
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .				
	<i>Note</i> – The message sequence may not be as shown above.				

ISUP Basic Call Test Specification

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.		
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP
EXPECTED MESSAGE SEQUENCE:		
SP A IAM (cic = x) RLC (cic = x) IAM (cic = y) Connectivity REL (cic = y)	-----> <----- -----> -----> <----- ----- <----- ----- -----> <-----	SP B RSC (cic = x) ACM (cic = y) Ringing tone ANM (cic = y) Connectivity 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</i> – The message sequence may not be as shown above.	

ISUP Basic Call Test Specification

TEST NUMBER: 6.2.4		
REFERENCE: Q.764 Section 2.9.1 iv)		
TITLE: Automatic repeat attempt		
SUBTITLE: Continuity check failure		
PURPOSE: To verify that an automatic repeat attempt will be made on continuity check failure		
PRE-TEST CONDITIONS: Arrange the data in signalling point B such that check tone is not returned within the specified limits to the first call request		
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP
<p>EXPECTED MESSAGE SEQUENCE:</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>SP A</p> <p>IAM (cic = x) -----></p> <p>Check tone ----- </p> <p style="margin-left: 100px;">----- </p> <p>COT (failed) (cic = x) -----></p> <p>A repeat of the continuity check of the failed circuit will be made within 1-10 secs. See Q.764 § 2.1.8.</p> <p>IAM (cic = y) -----></p> <p>Check tone ----- </p> <p style="margin-left: 100px;">----- </p> <p>COT (successful) (cic = y) -----></p> <p style="margin-left: 100px;"><-----</p> <p style="margin-left: 100px;">-----</p> <p style="margin-left: 100px;"><-----</p> <p>Connectivity -----</p> <p>REL (cic = y) -----></p> <p style="margin-left: 100px;"><-----</p> </div> <div style="width: 45%; text-align: right;"> <p>SP B</p> <p>ACM (cic = y)</p> <p>Ringing tone</p> <p>ANM(cic = y)</p> <p>Connectivity</p> <p>RLC (cic = y)</p> </div> </div>		
	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? . . .	
	<i>Note</i> – The message sequence may not be as shown above.	

ISUP Basic Call Test Specification

TEST NUMBER: 6.2.5		
REFERENCE: Q.764 Section 2.9.1 v), 2.10.5.1 d)		
TITLE: Automatic repeat attempt		
SUBTITLE: Reception of unreasonable signalling information		
PURPOSE: To verify that an automatic repeat attempt will be made on receipt of unreasonable signalling information after sending the initial address message and before one of the backward signals has been received		
PRE-TEST CONDITIONS:		
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.		
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP
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)
	-----	Ringling tone
	<-----	ANM (cic = y)
Connectivity	-----	Connectivity
REL (cic = y)	----->	
	<-----	RLC (cic = y)
	TEST DESCRIPTION	
1	Make a call from SP A to SP B. Record the message sequence using a signal monitor.	
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. <i>Note 2</i> – The message sequence may not be as shown above.	

ISUP Basic Call Test Specification

TEST NUMBER: 6.3.1					
REFERENCE: Q.764 Section 2.10.1.4					
TITLE: Dual seizure					
SUBTITLE: Dual seizure for controlling SP					
PURPOSE: To verify that on detection of dual seizure, the call initiated by the controlling signalling point is completed and the non-controlling signalling point is backed off					
PRE-TEST CONDITIONS: Arrange the signalling point data such that SP A is the controlling signalling point					
CONFIGURATION: 1	TYPE OF TEST: VAT; CPT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> SP A IAM Connectivity REL </td> <td style="width: 33%; text-align: center; vertical-align: middle;"> -----><----- <----- ----- <----- ----- -----> <----- </td> <td style="width: 33%; vertical-align: top;"> SP B IAM (Note) ACM Ringing tone ANM Connectivity RLC </td> </tr> </table>			SP A IAM Connectivity REL	-----><----- <----- ----- <----- ----- -----> <-----	SP B IAM (Note) ACM Ringing tone ANM Connectivity RLC
SP A IAM Connectivity REL	-----><----- <----- ----- <----- ----- -----> <-----	SP B IAM (Note) ACM Ringing tone ANM Connectivity 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 RINGING TONE BE HEARD ON THE CALL ORIGINATED 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				

ISUP Basic Call Test Specification

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:		
<ul style="list-style-type: none"> a) FOT message is generated at SP A. b) A controlling operator is at SP A. c) 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 IAM Connectivity (controlling operator) FOT Connectivity (controlling operator) REL	-----> <----- <----- ----- -----> ----- -----> <-----	SP B ACM ANM Connectivity (subscriber) Connectivity (assistant operator) (Note 2) RLC
	TEST DESCRIPTION	
1 2 3 4 5 6 7	Make a call from controlling operator at SP A to SP B. Record the message sequence using a signal monitor. The called party should answer the call. CHECK A: IS THE CONNECTION ESTABLISHED BETWEEN A CONTROLLING OPERATOR AND A SUBSCRIBER? . . . CHECK B: IS FOT MESSAGE SENT BY SP A? . . . CHECK C: IS THE CONNECTION ESTABLISHED BETWEEN CONTROLLING AND ASSISTANT OPERATORS? . . . (Note 2) CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE? . . . <i>Note 1</i> – FOT may be sent 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).	

ISUP Basic Call Test Specification

TEST NUMBER: 6.4.2		
REFERENCE: Q.764 Section 2.1.12		
TITLE: Semi-automatic operation		
SUBTITLE: FOT received following a call to a subscriber		
PURPOSE: To verify that the FOT is correctly received		
PRE-TEST CONDITIONS: a) FOT message is generated at SP B. b) Arrange the data so that a controlling operator is at SP B. c) An assistant operator is at SP A.		
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP
EXPECTED MESSAGE SEQUENCE:		
SP A		SP B
	<-----	IAM
ACM	----->	
ANM	----->	
Connectivity (subscriber)	-----	Connectivity (controlling operator)
	<-----	FOT
Connectivity (assistant operator) (Note 2)	-----	Connectivity (controlling operator)
	<-----	REL
RLC	----->	
	TEST DESCRIPTION	
1	Make a call from controlling operator at SP B to SP A.	
2	Record the message sequence using a signal monitor.	
3	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? . . .	
	<i>Note 1</i> – 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).	

ISUP Basic Call Test Specification

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:		
a) FOT message is generated at SP A. b) A controlling operator is at SP A. c) Arrange the data so that an incoming operator is at SP B.		
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP
EXPECTED MESSAGE SEQUENCE:		
SP A IAM Connectivity (controlling operator) Connectivity (controlling operator) FOT Connectivity (controlling operator) REL	-----> <----- <----- ----- ----- -----> ----- -----> <-----	SP B ACM ANM Connectivity (incoming operator) ↓ Connectivity (subscriber) Connectivity (incoming operator) (Nota 2) 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? . . .	
5	CHECK B: IS FOT MESSAGE SENT BY SP A? . . .	
6	CHECK C: IS THE CONNECTION RE-ESTABLISHED BETWEEN CONTROLLING AND INCOMING OPERATORS? . . . (Note 2)	
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .	
	<i>Note 1</i> – FOT may be sent 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).	

ISUP Basic Call Test Specification

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:		
<ul style="list-style-type: none"> a) FOT message is generated at SP B. b) A controlling operator is at SP B. c) Arrange the data so that an incoming operator is at SP A. 		
CONFIGURATION: 1	TYPE OF TEST: VAT	TYPE OF SP: SP
EXPECTED MESSAGE SEQUENCE:		
SP A ACM ANM Connectivity (incoming operator) ↓ Connectivity (subscriber) Connectivity (incoming operator) (Note 2) RLC	<----- -----> -----> ----- ----- ----- ----- ----->	SP B IAM Connectivity (controlling operator) Connectivity (controlling operator) FOT Connectivity (controlling operator) REL
	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? . . .	
6	CHECK C: IS THE CONNECTION RE-ESTABLISHED BETWEEN CONTROLLING AND INCOMING OPERATORS? . . . (Note 2)	
7	CHECK D: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .	
	<i>Note 1</i> – 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).	

ISUP Basic Call Test Specification

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					
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> SP A IAM (TMR, USI) Data REL </td> <td style="width: 33%; vertical-align: middle; text-align: center;"> -----> <----- <----- ----- -----> <----- </td> <td style="width: 33%; vertical-align: top;"> SP B ACM ANM Data RLC </td> </tr> </table>			SP A IAM (TMR, USI) Data REL	-----> <----- <----- ----- -----> <-----	SP B ACM ANM Data RLC
SP A IAM (TMR, USI) Data REL	-----> <----- <----- ----- -----> <-----	SP B ACM ANM Data 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"? . . .				
3	CHECK B: DOES THE USI IF INCLUDED HAVE APPROPRIATE INFORMATION? . . . FOR EXAMPLE, USI HAS TWO OCTETS FOR 64 kbit/s AND AT LEAST FOUR OCTETS FOR ANY SUBRATE.				
4	CHECK C: IS THE "ECHO CONTROL DEVICE INDICATOR" IN NATURE OF CONNECTION INDICATORS PARAMETER SET TO "NOT INCLUDED"? . . .				
5	CHECK D: IS THE ECHO CONTROL DEVICE DISABLED OR IS A NON-ECHO CONTROLLED CIRCUIT SELECTED? . . .				
6	The called party should answer the call.				
7	CHECK E: IS IT POSSIBLE TO PASS DATA BETWEEN SP A AND SP B? . . .				
8	The calling party should clear the call.				
9	CHECK F: IS THE CIRCUIT IDLE? . . . FOR CIRCUITS EQUIPPED WITH ECHO CONTROL, IS THE ECHO CONTROL DEVICE RE-ENABLED? . . .				
10	CHECK G: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .				
11	Repeat this test for any subrate calls.				
12	Repeat this test in the reverse direction.				
	<i>Note</i> – To check the contents of USI parameter is optional.				

ISUP Basic Call Test Specification

TEST NUMBER: 7.1.2														
REFERENCE: Q.764 Section 2.2														
TITLE: 64 kbit/s unrestricted														
SUBTITLE: Unsuccessful call setup														
PURPOSE: To verify that the call will be immediately released by the outgoing signalling point if a release message with a given cause is received and, for circuits equipped with echo control, the echo control device is enabled														
PRE-TEST CONDITIONS: Arrange the data in signalling point B such that a release message with a given cause is returned to the request														
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP												
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">SP A</td> <td style="width: 33%;"></td> <td style="width: 33%; text-align: right;">SP B</td> </tr> <tr> <td>IAM</td> <td style="text-align: center;">-----></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;"><-----</td> <td style="text-align: right;">REL (cause = xxx)</td> </tr> <tr> <td>RLC</td> <td style="text-align: center;">-----></td> <td></td> </tr> </table>			SP A		SP B	IAM	----->			<-----	REL (cause = xxx)	RLC	----->	
SP A		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 NUMBER: 7.1.3					
REFERENCE: Q.764 Section 2.9.1 i)					
TITLE: 64 kbit/s unrestricted					
SUBTITLE: Dual seizure					
PURPOSE: To verify that an automatic repeat attempt will be made on detection of a dual seizure					
PRE-TEST CONDITIONS: Arrange the signalling point data such that SP B is the controlling exchange for cic = x					
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> SP A IAM (cic = x) ACM (cic = x) ANM(cic = x) Data IAM (cic = y) Data REL (cic = y) RLC(cic = x) </td> <td style="width: 33%; vertical-align: top; text-align: center;"> -----><----- -----> -----> ----- -----> <----- <----- ----- -----> <----- <----- -----> </td> <td style="width: 33%; vertical-align: top;"> SP B IAM (cic = x) Data ACM (cic = y) ANM (cic = y) Data RLC (cic = y) REL (cic = x) </td> </tr> </table>			SP A IAM (cic = x) ACM (cic = x) ANM(cic = x) Data IAM (cic = y) Data REL (cic = y) RLC(cic = x)	-----><----- -----> -----> ----- -----> <----- <----- ----- -----> <----- <----- ----->	SP B IAM (cic = x) Data ACM (cic = y) ANM (cic = y) Data RLC (cic = y) REL (cic = x)
SP A IAM (cic = x) ACM (cic = x) ANM(cic = x) Data IAM (cic = y) Data REL (cic = y) RLC(cic = x)	-----><----- -----> -----> ----- -----> <----- <----- ----- -----> <----- <----- ----->	SP B IAM (cic = x) Data ACM (cic = y) ANM (cic = y) Data RLC (cic = y) REL (cic = x)			
	TEST DESCRIPTION				
1	Simultaneously transmit an IAM (containing the same value of cic) from each end of the link for a both way circuit. Both IAMs have appropriate indicators set for TMR and USI. Record the message sequence using a signal monitor.				
2	CHECK A: IS THE 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	CHECK D: IS THE ECHO CONTROL DEVICE DISABLED FOR CIC=y? . . .				
7	The called party at SP B should answer the call.				
8	CHECK E: IS IT STILL POSSIBLE TO PASS DATA BETWEEN SP A AND SP B? . . .				
9	Clear both calls down.				
10	CHECK F: ARE THE CIRCUITS IDLE? . . .				
11	CHECK G: WAS THE MESSAGE SEQUENCE AS ABOVE? . . .				
	<i>Note</i> – The message sequence may not be as shown above.				

ISUP Basic Call Test Specification

TEST NUMBER: 7.2.1					
REFERENCE: Q.764 Section 2.1					
TITLE: 3.1 kHz audio					
SUBTITLE: Successful call setup					
PURPOSE: To verify that a 3.1 kHz audio call can be successfully completed using appropriate transmission medium requirement and user service information parameters					
PRE-TEST CONDITIONS: Called termination is free					
CONFIGURATION: 1	TYPE OF TEST: VAT and CPT	TYPE OF SP: SP			
<p>EXPECTED MESSAGE SEQUENCE:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> SP A IAM (TMR, USI) Data/Speech REL </td> <td style="width: 33%; vertical-align: middle; text-align: center;"> -----> <----- <----- ----- -----> <----- </td> <td style="width: 33%; vertical-align: top;"> SP B ACM ANM Data/Speech RLC </td> </tr> </table>			SP A IAM (TMR, USI) Data/Speech REL	-----> <----- <----- ----- -----> <-----	SP B ACM ANM Data/Speech RLC
SP A IAM (TMR, USI) Data/Speech REL	-----> <----- <----- ----- -----> <-----	SP B ACM ANM Data/Speech 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 contents of the USI parameter is optional.				