



Technical Specifications for the Telecommunications Terminal Equipment for ISDN Subscribers

National Communications Commission
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Technical Specifications for the Telecommunications Terminal Equipment for ISDN Subscribers

1. Source of law
The Specifications are promulgated pursuant to Paragraph 1, Article 44 of the Telecommunications Management Act.
2. Scope of application
 - 2.1 The telecommunications terminal equipment for ISDN subscribers mentioned in the Specifications refers to the following types of telecommunications terminal equipment for subscribers used in an integrated services digital network (ISDN):
 - 2.1.1 ISDN digital telephone set;
 - 2.1.2 ISDN personal computer adaptor;
 - 2.1.3 ISDN G4 facsimile machine;
 - 2.1.4 ISDN video telephone set;
 - 2.1.5 ISDN terminal adaptor, ISDN terminal adaptor module;
 - 2.1.6 ISDN PABX;
 - 2.1.7 Other telecommunications terminal equipment for ISDN subscribers.
 - 2.2 The Layer 1, 2 and 3 OSI protocols for the subscriber telecommunications terminal equipment are tested for the Specifications. However, the Specification does not apply to high-level OSI protocols.
 - 2.3 ISDN switch and 110/119 centralized telecommunications terminal equipment interfacing protocols are optional items for the telecommunications terminal equipment for ISDN subscribers.
3. Each of the following shall be provided in the (client test preparation information (CTPI) for application for test report to test body:
 - 3.1 System Conformance Statement (SCS);
 - 3.2 Protocol Implementation Conformance Statement (PICS);
 - 3.3 Protocol Implementation eXtra Information for Testing (PIXIT).
4. Inspection items and acceptance criteria
 - 4.1 Basic rate interface: Table 1 provides the inspection items and acceptance criteria for telecommunications terminal equipment for ISDN subscribers sold by a supplier and Table 2 provides those for the private use of subscribers.
 - 4.2 Primary rate interface (including T1 【1.544Mbit/s】 and E1 【2.048Mbit/s】 interfaces): Tables 3 and 4 provide the inspection items and acceptance criteria for telecommunications terminal equipment for ISDN subscribers sold by a supplier and Tables 5 and 6 provide those for the private use of subscribers.
 - 4.3 In case that the applicant applies for the inspection of either the basic rate interface or primary rate interface, only the said interface is inspected.
 - 4.4 Table 1 provides the inspection items and acceptance criteria for ISDN switch and 110/119 centralized telecommunications terminal equipment interfacing protocols (these inspection items apply to basic rate interface and primary rate interface for sale by supplier and use by subscribers), and Appendix 1 provides the communication interface data formats and test specifications. 【This inspection is optional.】
 - 4.5 The test items for basic rate interface are provided in Appendix 2; the test items for primary rate interface (T1【1.544Mbit/s】 and E1【2.048Mbit/s】 interface) are provided in Appendices 3 and 4.
 - 4.6 In case that the telecommunications terminal equipment for ISDN subscribers of basic



rate interface is equipped with audio function (i.e. speech or 3.1KHz audio bearer capability), the switching between μ -law and A-law codecs shall be tested and the method of switching shall be described in the user's manual.

- 4.7 In case that the primary rate interface (T1 interface 【1.544Mbit/s】) of equipment has been approved by the competent authority in an inspection, and that the equipment supports T1 interface (1.544Mbit/s) and E1 interface (2.048Mbit/s) simultaneously, the conformance test is performed only on the physical layer, provided that the hardware is identical.
- 4.8 For the interface criteria for inspection items, the requirements of Layer 1, 2 and 3 protocols for ITU-T ISDN basic rate interface or primary rate interface shall be followed. However, for Layer 2 and 3 for the basic rate interface or primary rate interface, the conformance statement or an approval certification document issued by a foreign country may be provided instead.
- 4.9 Electromagnetic compatibility requirements
CNS 13438 shall be met.
- 4.10 Electric safety requirements
CNS 14336-1 shall be met.



Table 1

Basic Rate Interface — Inspection for Telecommunications Terminal
Equipment for ISDN Subscribers Sold by Supplier

Inspection items		Acceptance criteria
Physical layer conformance test		
1	Basic interconnection test	PH/BS_IC
2	Functional characteristics test	PH/FN_CH
3	Electric characteristics test	PH/ET_CH
4	Power feed test	PH/PW_FD
Data link layer conformance test		
5	Terminal point identifier management procedure test	LAPD/MGMT
6	Multi-frame operation test	LAPD/MFO
7	System parameter test	LAPD/SYSTEM
Network layer conformance test		
8	Status U0 test	ISDN3/U0
9	Status U1 test	ISDN3/U1
10	Status U3 test	ISDN3/U3
11	Status U4 test	ISDN3/U4
12	Status U8 test	ISDN3/U8
13	Status U10 test	ISDN3/U10
14	Status U11 test	ISDN3/U11
15	Status U19 test	ISDN3/U19



Table 2

Basic Rate Interface — Inspection for Telecommunications Terminal
Equipment for the Private Use of ISDN Subscribers

Inspection items		Acceptance criteria
1	Physical layer power feed test	PH/PW_FD
2	Basic call connection test	Basic Call Connection



Table 3

Primary Rate Interface — Inspection for Telecommunications Terminal
Equipment for ISDN Subscribers Sold by Supplier
(T1 interface 【1.544Mbit/s】)

Inspection items		Acceptance criteria
Physical layer conformance test		
1	Functional characteristics test	PH/FN_CH
2	Electric characteristics test	PH/ET_CH
Data link layer conformance test		
3	Multi-frame operation test	LAPD/MFO
4	System parameter test	LAPD/SYSTEM
Network layer conformance test		
5	Status U0 test	ISDN3/U0
6	Status U1 test	ISDN3/U1
7	Status U3 test	ISDN3/U3
8	Status U4 test	ISDN3/U4
9	Status U8 test	ISDN3/U8
10	Status U10 test	ISDN3/U10
11	Status U11 test	ISDN3/U11
12	Status U19 test	ISDN3/U19



Table 4

Primary Rate Interface — Inspection for Telecommunications Terminal
Equipment for ISDN Subscribers Sold by Supplier
(E1 interface 【2.048Mbit/s】)

Inspection items		Acceptance criteria
Physical layer conformance test		
1	Functional characteristics test	PH/FN_CH
2	Electric characteristics test	PH/ET_CH
Data link layer conformance test		
3	Multi-frame operation test	LAPD/MFO
4	System parameter test	LAPD/SYSTEM
Network layer conformance test		
5	Status U0 test	ISDN3/U0
6	Status U1 test	ISDN3/U1
7	Status U3 test	ISDN3/U3
8	Status U4 test	ISDN3/U4
9	Status U8 test	ISDN3/U8
10	Status U10 test	ISDN3/U10
11	Status U11 test	ISDN3/U11
12	Status U19 test	ISDN3/U19



Table 5

Primary Rate Interface — Inspection for Telecommunications Terminal
Equipment for the Private Use of ISDN Subscribers
(T1 interface 【1.544Mbit/s】)

Inspection items		Acceptance criteria
1	Basic call connection test	Basic Call Connection



Table 6

Primary Rate Interface — Inspection for Telecommunications Terminal
Equipment for the Private Use of ISDN Subscribers
(E1 interface 【2.048Mbit/s】)

Inspection items		Acceptance criteria
1	Basic call connection test	Basic Call Connection



Table 7

Inspection of ISDN Switch and 110/119 Centralized Telecommunications
Terminal Equipment Interfacing Protocols

ANI/ALI interfacing conformance test		
Inspection items		Acceptance criteria
1	UI_ID=1 transmission test	ANI_ALI/UI_1
2	UI_ID=1 retransmission test	ANI_ALI/UI_2
3	UI_ID=2 transmission test	ANI_ALI/UI_3

Appendix 1

I. Data formats for 110/119 network communication interface

Two data formats are defined as follows for 110/119 network communication interface UI messages:

(1). ISDN switch to 110/119 centralized ISDN CPE

UI_ID	ANI	Call_Class	User_ID	ALI
1 byte Char	10 bytes Char Array	1 byte Char (S: land line telephone, P: public telephone, M: mobile telephone, R: Pager)	100 bytes Char Array	100 bytes Char Array

Note: 1. Fields of insufficient data length are filled with '\0' char.

2. Chinese texts are coded using BIG 5.

All ALI data contain 211 bytes and are transmitted in two parts via UI message; the first transmission contains 112 bytes (including UI_ID=1, ANI, Call-Class and User_ID) and the second contains 101 bytes (including UI_ID=2 and ALI).

(2). 110/119 centralized ISDN CPE to ISDN switch

UI_ID	ALI_ACK
1 byte	1 byte

Note: ALI_Ack = 1 OK; =0 Failed



II. ANI/ALI Certification test specifications for ISDN switch and 110/119 centralized telecommunications terminal equipment interfacing protocols

(I). Scope

The test specifications contain a test group of three test cases, all of which apply to the testing of BRI/PRI interface.

The implementation under test (IUT) shall be accepted in the ISDN BRA/PRA interface conformance test first.

(II). Contents

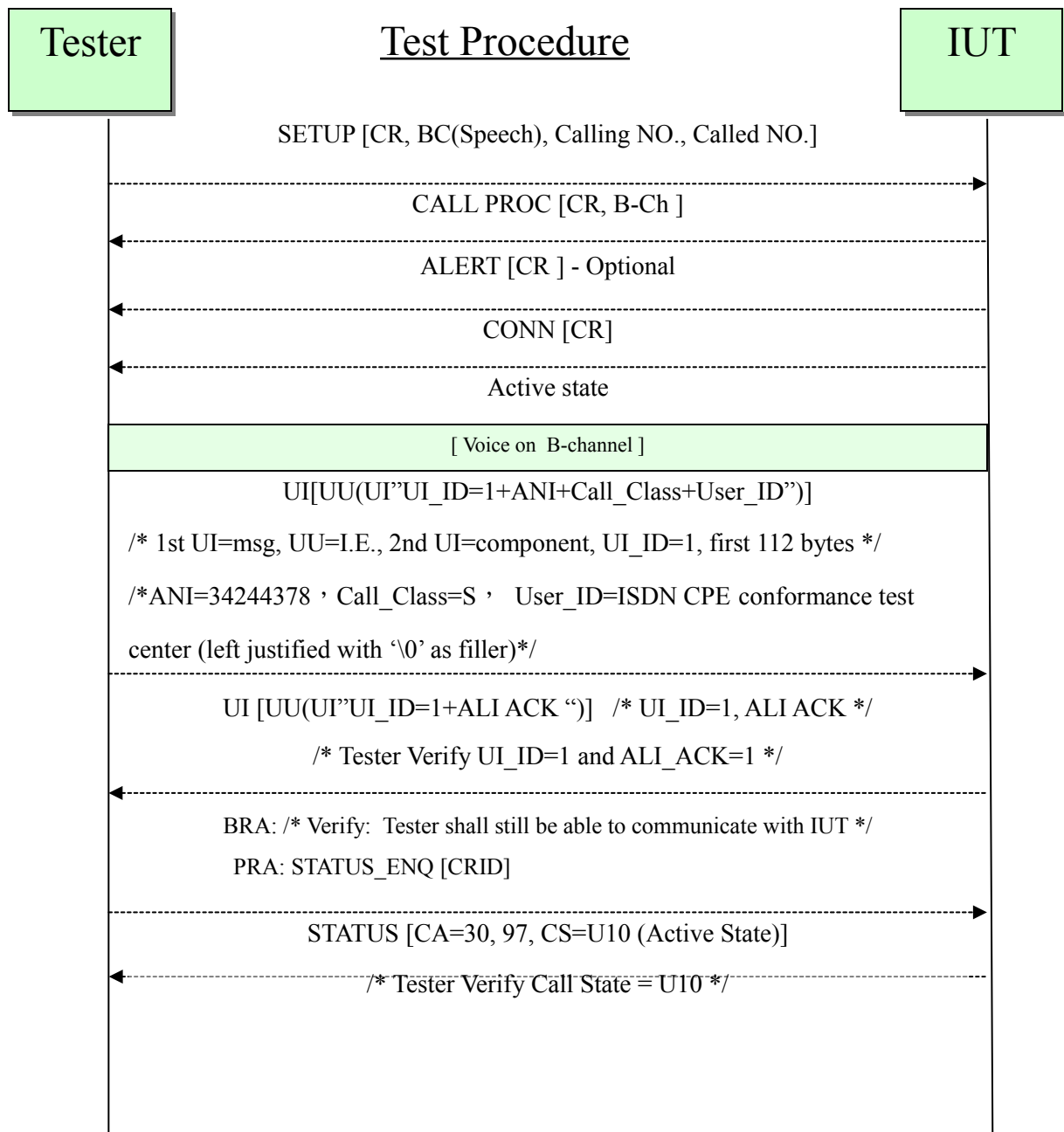
As follows:



Test Group: ANI/ALI

Test Id: UI_1

Test Purpose: Ensure that on receipt of a UI(UI_ID=1) message the IUT responds with UI(ACK UI_ID=1) and remains in U10 state

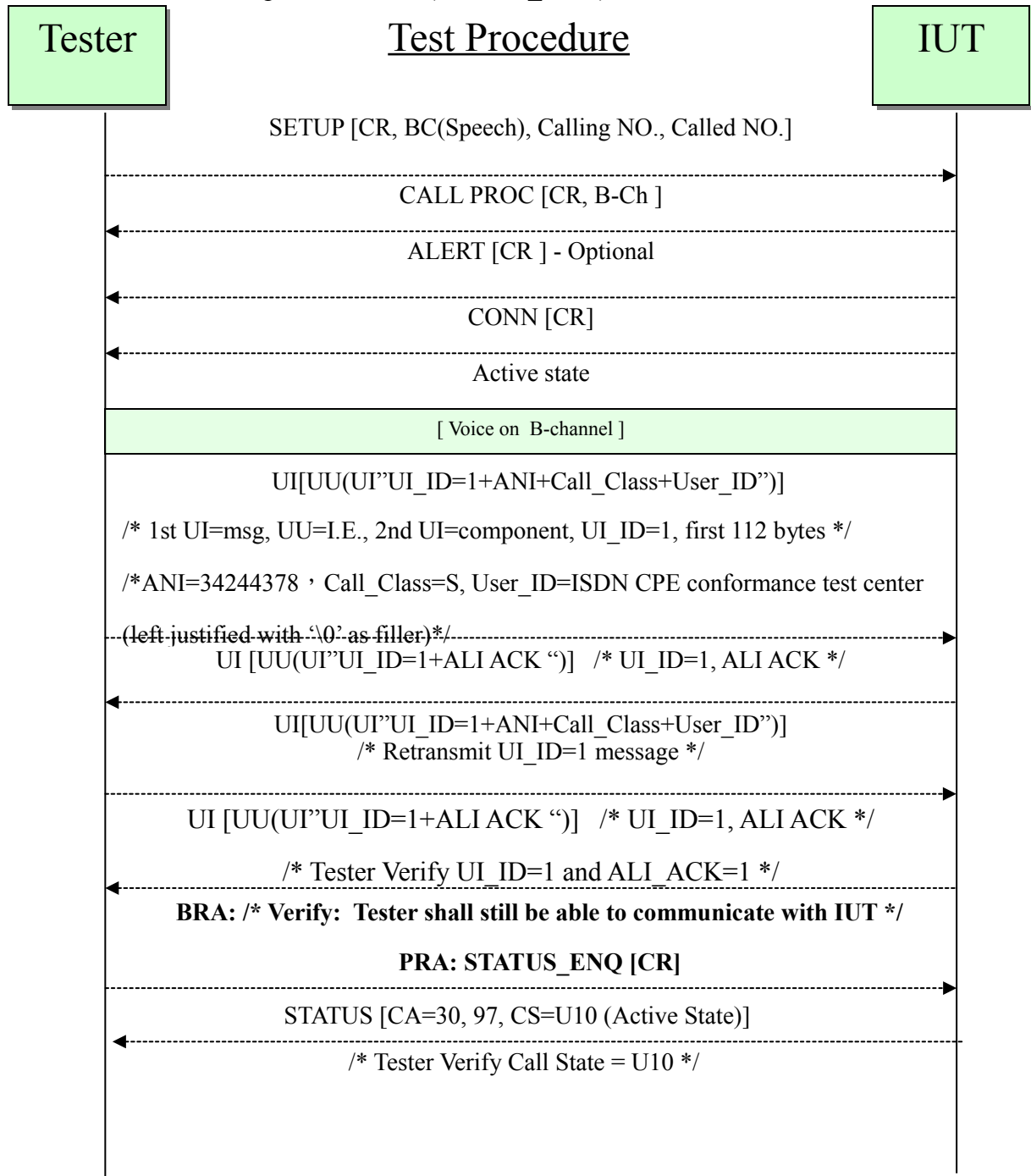




Test Group: ANI/ALI

Test Id: UI_2

Test Purpose: Ensure that on receipt of a retransmitted UI(UI_ID=1) message the IUT responds with UI (ACK UI_ID=1) and remains in U10 state

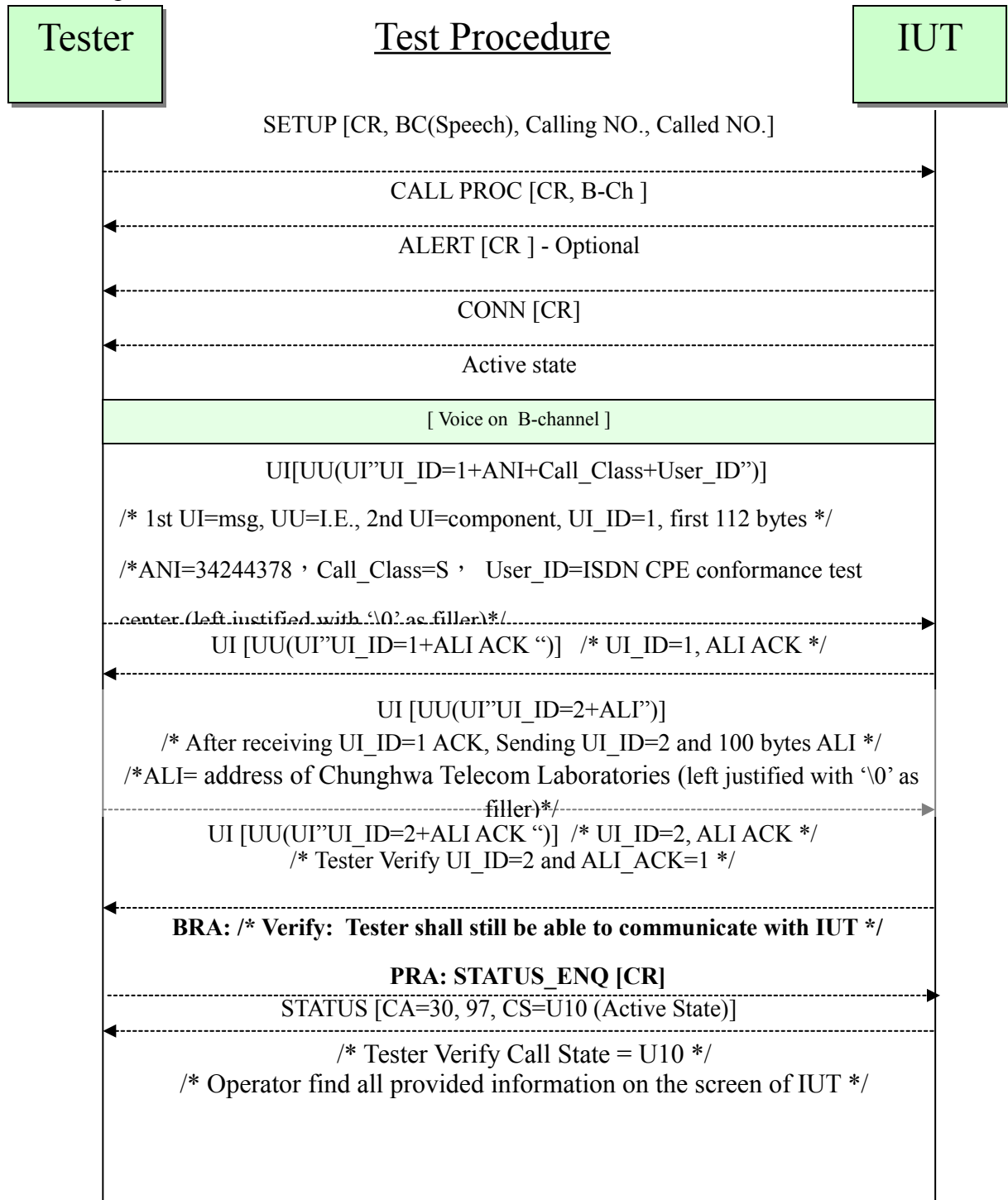




Test Group: ANI/ALI

Test Id: UI_3

Test Purpose: Ensure that on receipt of a UI(UI_ID=2) message the IUT responds with UI(ACK UI_ID=2), remains in U10 state and Displays all the provided information



Appendix 2

Test Items for Basic Rate Interface

1. Layer 1 Conformance Test

Test Suite: CHT-96-BA-L1 Verdicts Assigned

PASS: 06

FAIL: 0

INCONC:0

Selected Cases: 06

Test Identifier	ITU-T REC. I.430	Verdict
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Test Group: Basic Interconnection Test

3.	Basic Interconnection Test	--(note)	PASS
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Test Group: Binary Organization of Frame

4.1.1	TEST A	5.4.2.1	PASS
4.1.2	TEST B	6.2.2	PASS

Test Group: Electrical Characteristics Test

6.8.2	Receiver Sensitivity	8.6.2.1	PASS
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Test Group: Power Feeding

7.1.1.1	NORMAL POWER PROVISION--TEST A	9.3.1.1	PASS
7.1.2.1	RESTRICTED POWER PROVISION--TEST A	9.3.2.1	PASS

Note: '--' indicates no corresponding chapter.



2. Layer 2 Conformance Test

Test Suite: CHT-96-BA-L2 Verdicts Assigned

PASS:63

FAIL: 0

INCONC:0

Selected Cases: 63

Test Identifier	ITU-T REC.	Q.921	Verdict
Test Group: DM70_V State 7.0 Valid Frms			
DM70_V01 ID-Assigned : Ai Duplicated	5.3.2		PASS
DM70_V02 ID-Assigned : Ai Non Matching	5.3.2		PASS
DM70_V05 ID-Chk-Request : Ai Match	5.3.3.1		PASS
DM70_V06 ID-Chk-Request : Ai=127	5.3.3.1		PASS
DM70_V11 ID-Remove : Ai=127	5.3.4		PASS
DM70_V12 ID-Remove : Ai Match	5.3.4		PASS
DM70_V13 UA/F=1	5.8.7		PASS
DM70_V14 UA/F=0	5.8.7		PASS
Test Group: DM80_V State 8.0 Valid Frms			
DM80_V01 ID-Assigned : Ai Duplicated	5.3.2		PASS
DM80_V02 ID-Assigned : Ai Non Matching	5.3.2		PASS
DM80_V05 ID-Chk-Request : Ai Match	5.3.3.1		PASS
DM80_V06 ID-Chk-Request : Ai=127	5.3.3.1		PASS
DM80_V11 ID-Remove : Ai=127	5.3.4		PASS
DM80_V12 ID-Remove : Ai Match	5.3.4		PASS
DM80_V13 UA/F=1	5.8.7		PASS
DM80_V14 UA/F=0	5.8.7		PASS
Test Group: DS70_V State 7.0 Valid Frms			
DS70_V01 Window Rotation	5.9.5		PASS
Test Group: DL70_V State 7.0 Valid Frms			
DL70_V08 SABME/P=1	5.5.2		PASS
DL70_V10 SABME/P=0	5.5.2		PASS
DL70_V12 DISC/P=1	5.5.3.2		PASS
DL70_V13 DISC/P=0	5.5.3.2		PASS
DL70_V14 DM/F=0	5.7.1		PASS



DL70_V16 DM/F=1	5.8.7	PASS
DL70_V17 FRMR : Reject RR	5.7.1	PASS
DL70_V20 RR/P=1 : N(R)=V(S)	5.6.5	PASS
DL70_V21 RR/P=0 : N(R)=V(S)	5.6.5	PASS
DL70_V23 RR/F=0 : N(R)=V(S)	5.6.5	PASS
DL70_V30 REJ/P=1 : N(R)=V(S)	5.6.4	PASS
DL70_V31 REJ/P=0 : N(R)=V(S)	5.6.4	PASS
DL70_V32 REJ/F=0 : N(R)=V(S)	5.8.7	PASS
DL70_V36 RNR/P=1 : N(R)=V(S)	5.6.5	PASS
DL70_V37 RNR/P=0 : N(R)=V(S)	5.6.5	PASS
DL70_V39 RNR/F=0 : N(R)=V(S)	5.6.5	PASS
DL70_V44 I/P=1 : N(S)=V(R), N(R)=V(S)	5.6.2.1	PASS
DL70_V45 I/P=0 : N(S)=V(R), N(R)=V(S)	5.6.2.2	PASS
DL70_V46 I/P=1 : N(S) <> V(R), N(R)=V(S)	5.8.1	PASS
DL70_V47 I/P=0 : N(S) <> V(R), N(R)=V(S)	5.8.1	PASS
DL70_V57 T203 Timeout	5.10.3.3	PASS
Test Group: DL80_V State 8.0 Valid Frms		
DL80_V08 SABME/P=1	5.5.2	PASS
DL80_V10 SABME/P=0	5.5.2	PASS
DL80_V12 DISC/P=1	5.5.3.2	PASS
DL80_V13 DISC/P=0	5.5.3.2	PASS
DL80_V14 DM/F=1	5.7.1	PASS
DL80_V15 DM/F=0	5.7.1	PASS
DL80_V17 FRMR : Reject RR	5.7.1	PASS
DL80_V20 RR/P=1 : V(A) <= N(R) <= V(S)	5.6.5	PASS
DL80_V21 RR/P=0 : V(A) <= N(R) <= V(S)	5.6.5	PASS
DL80_V22 RR/F=1 : V(A) <= N(R) <= V(S)	5.6.5	PASS
DL80_V23 RR/F=0 : V(A) <= N(R) <= V(S)	5.6.5	PASS
DL80_V24 REJ/P=1 : V(A) <= N(R) <= V(S)	5.6.4	PASS
DL80_V25 REJ/P=0 : V(A) <= N(R) <= V(S)	5.6.4	PASS
DL80_V26 REJ/F=1 : V(A) <= N(R) <= V(S)	5.6.4	PASS
DL80_V27 REJ/F=0 : V(A) <= N(R) <= V(S)	5.6.4	PASS
DL80_V28 RNR/P=1 : V(A) <= N(R) <= V(S)	5.6.5	PASS
DL80_V29 RNR/P=0 : V(A) <= N(R) <= V(S)	5.6.5	PASS
DL80_V30 RNR/F=1 : V(A) <= N(R) <= V(S)	5.6.5	PASS
DL80_V31 RNR/F=0 : V(A) <= N(R) <= V(S)	5.6.5	PASS
DL80_V32 I/P=1 : N(S)=V(R), N(R)=V(S)	5.6.2.1	PASS
DL80_V33 I/P=0 : N(S)=V(R), N(R)=V(S)	5.6.2.2	PASS



DL80_V34 I/P=1 : N(S)<>V(R), N(R)=V(S)	5.8.1	PASS
DL80_V35 I/P=0 : N(S)<>V(R), N(R)=V(S)	5.8.1	PASS
DL80_V44 T200 Timeout, RC=N200	5.6.7	PASS
DL80_V46 T200 Timeout, RC<N200, V(A)=V(S)	5.6.7	PASS

3. Layer 3 Conformance Test Summary Report

Test Suite: CHT-96-BA-L3

Verdicts Assigned

PASS: 57

FAIL: 0

INCONC: 0

Selected Cases: 57

Test Identifier

ITU-T REC. Q.931 Verdict

Test Group: Basic Interconnection Tests

1. Incoming Call (#21003)	5.3.3	PASS
2. Outgoing Call (#11105)	5.3.4	PASS
3. Outgoing Call (#11106) (A law call)	5.3.4	PASS
4. Outgoing Call (#11107) (U law call)	5.3.4	PASS

Test Group: U0 TESTS

#10001: [RC2(1,16), NO_MSG]	5.8.3	PASS
#10002: [RL3(1,16), RC_81]	5.8.3.2b)	PASS
#10005: [SU3(BC,CD#,LLC,HLC), AL+CN+CP]	5.2.4	PASS
#10006: [SU2(SCI,BC,CD#,LLC,HLC), AL+CN+CP]	5.2.5	PASS
#10007: [SU6(BC,LLC,HLC), AL+CN+CP]	5.2.6	PASS
#10008: [SU4(IBC,LLC,HLC), RC_88+NO_MSG]	5.2.2	PASS
#20002: [<IUT!SETUP>, SU]	5.1.3	PASS

Test Group: U1 TESTS

#10101: [CP2, NO_MSG, U3]	5.1.5.1	PASS
#10102: [RC2(1,16), NO_MSG, U0]	5.8.4	PASS
#10103: [RL3(1,16), RC]	5.3.2	PASS
#10106: [SQ2, ST]	5.8.10	PASS

Test Group: U3 TESTS

#10301: [AL2, NO_MSG, U4]	5.1.7	PASS
#10302: [CN2, ST(97,8,101)+SQ+CA+NO_MSG]	5.1.8	PASS



#10303: [DI2(1,16), RL]	5.3.4	PASS
#10304: [IN2(1), NO_MSG]	5.2.4	PASS
#10305: [PG2, NO_MSG]	5.1.6	PASS
#10306: [RC2(1,16), NO_MSG, U0]	5.8.4	PASS
#10307: [RL3(1,16), RC]	5.3.4	PASS
#10308: [SQ2, ST]	5.8.10	PASS
#20301: [<IUT!DISC>, DI_16]	5.3.3	PASS
Test Group: U4 TESTS		
#10401: [CN2, CA+NO_MSG]	5.1.8	PASS
#10402: [DI2(1,16), RL]	5.3.4	PASS
#10403: [IN2(1), NO_MSG]	5.2.4	PASS
#10404: [PG2, NO_MSG ST]	5.1.6	PASS
#10405: [RC2(1,16), NO_MSG, U0]	5.8.4	PASS
#10406: [RL3(1,16), RC]	5.8.4	PASS
#10407: [SQ2, ST]	5.8.10	PASS
#20401: [<IUT!DISC>, DI_16]	5.3.3	PASS
Test Group: U8 TESTS		
#10801: [CA2, NO_MSG, U10]	5.2.7	PASS
#10802: [DI2(0,16), RL]	5.3.4	PASS
#10803: [IN2(0), NO_MSG]	5.2.4	PASS
#10804: [RC2(0,16), NO_MSG, U0]	5.8.4	PASS
#10805: [RL3(0,16), RC]	5.3.2	PASS
#10806: [SQ2, ST]	5.8.10	PASS
#20801: [T313(4S) TIMEOUT, DI]	5.2.8	PASS
Test Group: U10 TESTS		
#11001: [DI2(0,16), RL]	5.3.4	PASS
#11002: [IN2(0), NO_MSG]	5.2.4	PASS
#11003: [NO2(0), NO_MSG]	5.9	PASS
#11004: [RC2(0,16), NO_MSG, U0]	5.8.4	PASS
#11005: [RL3(0,16), RC]	5.8.4	PASS
#11006: [SQ2, ST]	5.8.10	PASS
#21003: [<IUT!DISC>, DI_16]	5.3.3	PASS
Test Group: U11 TESTS		
#11101: [DI2(1,16), RL]	5.3.5	PASS
#11102: [IN2(1), NO_MSG]	5.2.4	PASS
#11103: [NO2(1), NO_MSG ST]	5.9	PASS
#11104: [RC2(1,16), NO_MSG, U0]	5.8.4	PASS



#11105: [RL3(1,16), RC]	5.3.4	PASS
#21101: *[T305(30S) TIMEOUT, RL]	5.3.3	PASS
Test Group: U19 TESTS		
#11902: [IN2(0), NO_MSG ST]	5	PASS
#11903: [RC2(0,16), NO_MSG, U0]	5.3.4	PASS
#11904: [RL3(0,16), NO_MSG, U0]	5.3.5	PASS
#11905: [SQ2, ST]	5.8.10	PASS
#21901: *[T308(4S) TIMEOUT, RL]	5.3.3	PASS



Appendix 3

Test Items for Primary Rate Interface (T1 interface 【1.544Mbit/s】)

1.Layer 1 Conformance Test System Summary Report

Test Suite: CHT-96-PA-L1

Verdicts Assigned

PASS: 5

FAIL: 0

INCONC: 0

Selected Cases: 5

Test Identifier

ITU-T REC. I.431

Verdict

Test Group: Electrical/Functional
characteristic test

1. Line code

4.1.3

PASS

2. Pulse shape

4.1.4.2

PASS

3. Interframe time fill

4.6.2

PASS

4. Bit rate

4.1.1

PASS

5. Jitter

4.5.1

PASS



2.Layer 2 Conformance Test System Summary Report

Test Suite: CHT-96-PA-L2 Verdicts Assigned
PASS: 74
FAIL: 0
INCONC: 0

Selected Cases: 74

Test Identifier	ITU-T REC. Q.921	Verdict
Test Group: DS70_V State 7.0 Valid Frms		
DS70_V01 Window Rotation	5.9.5	PASS
Test Group: DL40_V State 4.0 Valid Frms		
DL40_V04 SABME/P=1	5.5.1.2	PASS
DL40_V06 SABME/P=0	5.5.1.2	PASS
DL40_V08 DISC/P=1	5.5.4	PASS
DL40_V09 DISC/P=0	5.5.4	PASS
DL40_V10 DM/F=1	5.5.4	PASS
DL40_V11 DM/F=0	5.5.4	PASS
Test Group: DL70_V State 7.0 Valid Frms		
DL70_V03 I Frame in Queue : Window Open	5.6.1	PASS
DL70_V08 SABME/P=1	5.5.2	PASS
DL70_V10 SABME/P=0	5.5.2	PASS
DL70_V12 DISC/P=1	5.5.3.2	PASS
DL70_V13 DISC/P=0	5.5.3.2	PASS
DL70_V14 DM/F=0	5.7.1	PASS
DL70_V16 DM/F=1	5.8.7	PASS
DL70_V17 FRMR : Reject RR	5.7.1	PASS
DL70_V20 RR/P=1 : N(R)=V(S)	5.6.5	PASS
DL70_V21 RR/P=0 : N(R)=V(S)	5.6.5	PASS
DL70_V23 RR/F=0 : N(R)=V(S)	5.6.5	PASS
DL70_V27 RR/P=1 : V(A)=N(R)<V(S)	5.6.5	PASS
DL70_V28 RR/P=0 : V(A)=N(R)<V(S)	5.6.5	PASS
DL70_V29 RR/F=0 : V(A)=N(R)<V(S)	5.6.5	PASS
DL70_V30 REJ/P=1 : N(R)=V(S)	5.6.4	PASS
DL70_V31 REJ/P=0 : N(R)=V(S)	5.6.4	PASS



DL70_V32 REJ/F=0 : N(R)=V(S)	5.8.7	PASS
DL70_V33 REJ/P=1 : V(A)<=N(R)<V(S)	5.6.4	PASS
DL70_V34 REJ/P=0 : V(A)<=N(R)<V(S)	5.6.4	PASS
DL70_V35 REJ/F=0 : V(A)<=N(R)<V(S)	5.8.7	PASS
DL70_V36 RNR/P=1 : N(R)=V(S)	5.6.5	PASS
DL70_V37 RNR/P=0 : N(R)=V(S)	5.6.5	PASS
DL70_V39 RNR/F=0 : N(R)=V(S)	5.6.5	PASS
DL70_V40 RNR/P=1 : V(A)<=N(R)<V(S)	5.6.5	PASS
DL70_V41 RNR/P=0 : V(A)<=N(R)<V(S)	5.6.5	PASS
DL70_V43 RNR/F=0 : V(A)<=N(R)<V(S)	5.6.5	PASS
DL70_V44 I/P=1 : N(S)=V(R), N(R)=V(S)	5.6.2.1	PASS
DL70_V45 I/P=0 : N(S)=V(R), N(R)=V(S)	5.6.2.2	PASS
DL70_V46 I/P=1 : N(S)<>V(R), N(R)=V(S)	5.8.1	PASS
DL70_V47 I/P=0 : N(S)<>V(R), N(R)=V(S)	5.8.1	PASS
DL70_V52 I/P=1 : N(S)=V(R), V(A)=N(R)<V(S)	5.6.2.1	PASS
DL70_V53 I/P=0 : N(S)=V(R), V(A)=N(R)<V(S)	5.6.2.2	PASS
DL70_V54 I/P=1 : N(S)<>V(R), V(A)=N(R)<V(S)	5.8.1	PASS
DL70_V55 I/P=0 : N(S)<>V(R), V(A)=N(R)<V(S)	5.8.1	PASS
DL70_V56 T200 Timeout, RC<N200	5.6.7	PASS
DL70_V57 T203 Timeout	5.10.3.3	PASS

Test Group: DL80_V State 8.0 Valid Frms

DL80_V03 I Frame in Queue : Window Open	5.6.1	PASS
DL80_V08 SABME/P=1	5.5.2	PASS
DL80_V10 SABME/P=0	5.5.2	PASS
DL80_V12 DISC/P=1	5.5.3.2	PASS
DL80_V13 DISC/P=0	5.5.3.2	PASS
DL80_V14 DM/F=1	5.7.1	PASS
DL80_V15 DM/F=0	5.7.1	PASS
DL80_V17 FRMR : Reject RR	5.7.1	PASS
DL80_V20 RR/P=1 : V(A)<=N(R)<=V(S)	5.6.5	PASS
DL80_V21 RR/P=0 : V(A)<=N(R)<=V(S)	5.6.5	PASS
DL80_V22 RR/F=1 : V(A)<=N(R)<=V(S)	5.6.5	PASS
DL80_V23 RR/F=0 : V(A)<=N(R)<=V(S)	5.6.5	PASS
DL80_V24 REJ/P=1 : V(A)<=N(R)<=V(S)	5.6.4	PASS
DL80_V25 REJ/P=0 : V(A)<=N(R)<=V(S)	5.6.4	PASS
DL80_V26 REJ/F=1 : V(A)<=N(R)<=V(S)	5.6.4	PASS
DL80_V27 REJ/F=0 : V(A)<=N(R)<=V(S)	5.6.4	PASS



DL80_V28	RNR/P=1 : $V(A) \leq N(R) \leq V(S)$	5.6.5	PASS
DL80_V29	RNR/P=0 : $V(A) \leq N(R) \leq V(S)$	5.6.5	PASS
DL80_V30	RNR/F=1 : $V(A) \leq N(R) \leq V(S)$	5.6.5	PASS
DL80_V31	RNR/F=0 : $V(A) \leq N(R) \leq V(S)$	5.6.5	PASS
DL80_V32	I/P=1 : $N(S)=V(R), N(R)=V(S)$	5.6.2.1	PASS
DL80_V33	I/P=0 : $N(S)=V(R), N(R)=V(S)$	5.6.2.2	PASS
DL80_V34	I/P=1 : $N(S) \diamond V(R), N(R)=V(S)$	5.8.1	PASS
DL80_V35	I/P=0 : $N(S) \diamond V(R), N(R)=V(S)$	5.8.1	PASS
DL80_V40	I/P=1 : $N(S)=V(R), V(A)=N(R) < V(S)$	5.6.2.1	PASS
DL80_V41	I/P=0 : $N(S)=V(R), V(A)=N(R) < V(S)$	5.6.2.2	PASS
DL80_V42	I/P=1 : $N(S) \diamond V(R), V(A)=N(R) < V(S)$	5.8.1	PASS
DL80_V43	I/P=0 : $N(S) \diamond V(R), V(A)=N(R) < V(S)$	5.8.1	PASS
DL80_V44	T200 Timeout, $RC=N200$	5.6.7	PASS
DL80_V45	T200 Timeout, $RC < N200, V(A) < V(S)$	5.6.7	PASS
DL80_V46	T200 Timeout, $RC < N200, V(A)=V(S)$	5.6.7	PASS



3.Layer 3 Conformance Test System Summary Report

Test Suite: CHT-96-PA-L3 Verdicts Assigned
PASS: 55
FAIL: 0
INCONC: 0

Selected Cases: 55

Test Identifier ITU-T REC. Q.931 Verdict

Test Group: Basic Interconnection Tests

1. Incoming Call (#21003)	5.3.3	PASS
2. Outgoing Call (#11105)	5.3.4	PASS

Test Group: U0 TESTS

#10001: [RC2(1,16), NO_MSG]	5.8.3	PASS
#10002: [RL3(1,16), RC_81]	5.8.3.2B)	PASS
#10005: [SU3(BC,CD#,LLC,HLC), AL+CN+CP]	5.2.4	PASS
#10006: [SU2(SCI,BC,CD#,LLC,HLC), AL+CN+CP]	5.2.5	PASS
#10007: [SU6(BC,LLC,HLC), AL+CN+CP]	5.2.6	PASS
#10008: [SU4(IBC,AP,LLC,HLC), RC_88+NO_MSG]	5.2.2	PASS
#20002: [<IUT!SETUP>, SU]	5.1.3	PASS

Test Group: U1 TESTS

#10101: [CP2, NO_MSG, U3]	5.1.5.1	PASS
#10102: [RC2(1,16), NO_MSG, U0]	5.8.4	PASS
#10103: [RL3(1,16), RC]	5.3.2	PASS
#10106: [SQ2, ST]	5.8.10	PASS

Test Group: U3 TESTS

#10301: [AL2, NO_MSG, U4]	5.1.7	PASS
#10302: [CN2, ST(97,8,101)+SQ+CA+NO_MSG]	5.1.8	PASS
#10303: [DI2(1,16), RL]	5.3.4	PASS
#10304: [IN2(1), NO_MSG]	5.2.4	PASS
#10305: [PG2, NO_MSG]	5.1.6	PASS
#10306: [RC2(1,16), NO_MSG, U0]	5.8.4	PASS
#10307: [RL3(1,16), RC]	5.3.4	PASS
#10308: [SQ2, ST]	5.8.10	PASS
#20301: [<IUT!DISC>, DI_16]	5.3.3	PASS



Test Group: U4 TESTS

#10401: [CN2, CA+NO_MSG]	5.1.8	PASS
#10402: [DI2(1,16), RL]	5.3.4	PASS
#10403: [IN2(1), NO_MSG]	5.2.4	PASS
#10404: [PG2, NO_MSG ST]	5.1.6	PASS
#10405: [RC2(1,16), NO_MSG, U0]	5.8.4	PASS
#10406: [RL3(1,16), RC]	5.8.4	PASS
#10407: [SQ2, ST]	5.8.10	PASS
#20401: [<IUT!DISC>, DI_16]	5.3.3	PASS

Test Group: U8 TESTS

#10801: [CA2, NO_MSG, U10]	5.2.7	PASS
#10802: [DI2(0,16), RL]	5.3.4	PASS
#10803: [IN2(0), NO_MSG]	5.2.4	PASS
#10804: [RC2(0,16), NO_MSG, U0]	5.8.4	PASS
#10805: [RL3(0,16), RC]	5.3.2	PASS
#10806: [SQ2, ST]	5.8.10	PASS
#20801: [T313(4S) TIMEOUT, DI]	5.2.8	PASS

Test Group: U10 TESTS

#11001: [DI2(0,16), RL]	5.3.4	PASS
#11002: [IN2(0), NO_MSG]	5.2.4	PASS
#11003: [NO2(0), NO_MSG]	5.9	PASS
#11004: [RC2(0,16), NO_MSG, U0]	5.8.4	PASS
#11005: [RL3(0,16), RC]	5.8.4	PASS
#11006: [SQ2, ST]	5.8.10	PASS
#21003: [<IUT!DISC>, DI_16]	5.3.3	PASS

Test Group: U11 TESTS

#11101: [DI2(1,16), RL]	5.3.5	PASS
#11102: [IN2(1), NO_MSG]	5.2.4	PASS
#11103: [NO2(1), NO_MSG ST]	5.9	PASS
#11104: [RC2(1,16), NO_MSG, U0]	5.8.4	PASS
#11105: [RL3(1,16), RC]	5.3.4	PASS
#21101: *[T305(30S) TIMEOUT, RL]	5.3.3	PASS

Test Group: U19 TESTS

#11902: [IN2(0), NO_MSG ST]	5	PASS
#11903: [RC2(0,16), NO_MSG, U0]	5.3.4	PASS
#11904: [RL3(0,16), NO_MSG, U0]	5.3.5	PASS
#11905: [SQ2, ST]	5.8.10	PASS
#21901: *[T308(4S) TIMEOUT, RL]	5.3.3	PASS

Appendix 4

Test Items for Primary Rate Interface (E1 interface 【2.048Mbit/s】)

1.Layer 1 Conformance Test

Test Suite:	CHT-98-PA-L1	Verdicts Assigned
PASS:	5	
FAIL:	0	
INCONC:	0	

Selected Cases: 5

Test Identifier	ITU-T REC. I.431	Verdict
Test Group: Electrical/Functional characteristic test		
1. Bit rate	5.3	PASS
2. Line code	5.1	PASS
3. Pulse shape (1)	5.1	PASS
4. Pulse shape (2)	5.1	PASS
5. Idle channel code	5.2.4.2	PASS



2.Layer 2 Conformance Test System Summary Report

Test Suite: CHT-96-PA-L2 Verdicts Assigned
PASS: 74
FAIL: 0
INCONC: 0

Selected Cases: 74

Test Identifier	ITU-T REC. Q.921	Verdict
Test Group: DS70_V State 7.0 Valid Frms		
DS70_V01 Window Rotation	5.9.5	PASS
Test Group: DL40_V State 4.0 Valid Frms		
DL40_V04 SABME/P=1	5.5.1.2	PASS
DL40_V06 SABME/P=0	5.5.1.2	PASS
DL40_V08 DISC/P=1	5.5.4	PASS
DL40_V09 DISC/P=0	5.5.4	PASS
DL40_V10 DM/F=1	5.5.4	PASS
DL40_V11 DM/F=0	5.5.4	PASS
Test Group: DL70_V State 7.0 Valid Frms		
DL70_V03 I Frame in Queue : Window Open	5.6.1	PASS
DL70_V08 SABME/P=1	5.5.2	PASS
DL70_V10 SABME/P=0	5.5.2	PASS
DL70_V12 DISC/P=1	5.5.3.2	PASS
DL70_V13 DISC/P=0	5.5.3.2	PASS
DL70_V14 DM/F=0	5.7.1	PASS
DL70_V16 DM/F=1	5.8.7	PASS
DL70_V17 FRMR : Reject RR	5.7.1	PASS
DL70_V20 RR/P=1 : N(R)=V(S)	5.6.5	PASS
DL70_V21 RR/P=0 : N(R)=V(S)	5.6.5	PASS
DL70_V23 RR/F=0 : N(R)=V(S)	5.6.5	PASS
DL70_V27 RR/P=1 : V(A)=N(R)<V(S)	5.6.5	PASS
DL70_V28 RR/P=0 : V(A)=N(R)<V(S)	5.6.5	PASS
DL70_V29 RR/F=0 : V(A)=N(R)<V(S)	5.6.5	PASS
DL70_V30 REJ/P=1 : N(R)=V(S)	5.6.4	PASS
DL70_V31 REJ/P=0 : N(R)=V(S)	5.6.4	PASS
DL70_V32 REJ/F=0 : N(R)=V(S)	5.8.7	PASS



DL70_V33 REJ/P=1 : $V(A) \leq N(R) < V(S)$	5.6.4	PASS
DL70_V34 REJ/P=0 : $V(A) \leq N(R) < V(S)$	5.6.4	PASS
DL70_V35 REJ/F=0 : $V(A) \leq N(R) < V(S)$	5.8.7	PASS
DL70_V36 RNR/P=1 : $N(R) = V(S)$	5.6.5	PASS
DL70_V37 RNR/P=0 : $N(R) = V(S)$	5.6.5	PASS
DL70_V39 RNR/F=0 : $N(R) = V(S)$	5.6.5	PASS
DL70_V40 RNR/P=1 : $V(A) \leq N(R) < V(S)$	5.6.5	PASS
DL70_V41 RNR/P=0 : $V(A) \leq N(R) < V(S)$	5.6.5	PASS
DL70_V43 RNR/F=0 : $V(A) \leq N(R) < V(S)$	5.6.5	PASS
DL70_V44 I/P=1 : $N(S) = V(R), N(R) = V(S)$	5.6.2.1	PASS
DL70_V45 I/P=0 : $N(S) = V(R), N(R) = V(S)$	5.6.2.2	PASS
DL70_V46 I/P=1 : $N(S) \diamond V(R), N(R) = V(S)$	5.8.1	PASS
DL70_V47 I/P=0 : $N(S) \diamond V(R), N(R) = V(S)$	5.8.1	PASS
DL70_V52 I/P=1 : $N(S) = V(R), V(A) = N(R) < V(S)$	5.6.2.1	PASS
DL70_V53 I/P=0 : $N(S) = V(R), V(A) = N(R) < V(S)$	5.6.2.2	PASS
DL70_V54 I/P=1 : $N(S) \diamond V(R), V(A) = N(R) < V(S)$	5.8.1	PASS
DL70_V55 I/P=0 : $N(S) \diamond V(R), V(A) = N(R) < V(S)$	5.8.1	PASS
DL70_V56 T200 Timeout, $RC < N200$	5.6.7	PASS
DL70_V57 T203 Timeout	5.10.3.3	PASS

Test Group: DL80_V State 8.0 Valid Frms

DL80_V03 I Frame in Queue : Window Open	5.6.1	PASS
DL80_V08 SABME/P=1	5.5.2	PASS
DL80_V10 SABME/P=0	5.5.2	PASS
DL80_V12 DISC/P=1	5.5.3.2	PASS
DL80_V13 DISC/P=0	5.5.3.2	PASS
DL80_V14 DM/F=1	5.7.1	PASS
DL80_V15 DM/F=0	5.7.1	PASS
DL80_V17 FRMR : Reject RR	5.7.1	PASS
DL80_V20 RR/P=1 : $V(A) \leq N(R) \leq V(S)$	5.6.5	PASS
DL80_V21 RR/P=0 : $V(A) \leq N(R) \leq V(S)$	5.6.5	PASS
DL80_V22 RR/F=1 : $V(A) \leq N(R) \leq V(S)$	5.6.5	PASS
DL80_V23 RR/F=0 : $V(A) \leq N(R) \leq V(S)$	5.6.5	PASS
DL80_V24 REJ/P=1 : $V(A) \leq N(R) \leq V(S)$	5.6.4	PASS
DL80_V25 REJ/P=0 : $V(A) \leq N(R) \leq V(S)$	5.6.4	PASS
DL80_V26 REJ/F=1 : $V(A) \leq N(R) \leq V(S)$	5.6.4	PASS
DL80_V27 REJ/F=0 : $V(A) \leq N(R) \leq V(S)$	5.6.4	PASS
DL80_V28 RNR/P=1 : $V(A) \leq N(R) \leq V(S)$	5.6.5	PASS
DL80_V29 RNR/P=0 : $V(A) \leq N(R) \leq V(S)$	5.6.5	PASS



DL80_V30	RNR/F=1 : $V(A) \leq N(R) \leq V(S)$	5.6.5	PASS
DL80_V31	RNR/F=0 : $V(A) \leq N(R) \leq V(S)$	5.6.5	PASS
DL80_V32	I/P=1 : $N(S)=V(R)$, $N(R)=V(S)$	5.6.2.1	PASS
DL80_V33	I/P=0 : $N(S)=V(R)$, $N(R)=V(S)$	5.6.2.2	PASS
DL80_V34	I/P=1 : $N(S) \diamond V(R)$, $N(R)=V(S)$	5.8.1	PASS
DL80_V35	I/P=0 : $N(S) \diamond V(R)$, $N(R)=V(S)$	5.8.1	PASS
DL80_V40	I/P=1 : $N(S)=V(R)$, $V(A)=N(R) < V(S)$	5.6.2.1	PASS
DL80_V41	I/P=0 : $N(S)=V(R)$, $V(A)=N(R) < V(S)$	5.6.2.2	PASS
DL80_V42	I/P=1 : $N(S) \diamond V(R)$, $V(A)=N(R) < V(S)$	5.8.1	PASS
DL80_V43	I/P=0 : $N(S) \diamond V(R)$, $V(A)=N(R) < V(S)$	5.8.1	PASS
DL80_V44	T200 Timeout, $RC=N200$	5.6.7	PASS
DL80_V45	T200 Timeout, $RC < N200$, $V(A) < V(S)$	5.6.7	PASS
DL80_V46	T200 Timeout, $RC < N200$, $V(A)=V(S)$	5.6.7	PASS



3.Layer 3 Conformance Test

Test Suite: CHT-96-PA-L3 Verdicts Assigned
PASS: 55
FAIL: 0
INCONC: 0

Selected Cases: 55

Test Identifier ITU-T REC. Q.931 Verdict

Test Group: Basic Interconnection Tests

1. Incoming Call (#21003)	5.3.3	PASS
2. Outgoing Call (#11105)	5.3.4	PASS

Test Group: U0 TESTS

#10001: [RC2(1,16), NO_MSG]	5.8.3	PASS
#10002: [RL3(1,16), RC_81]	5.8.3.2B)	PASS
#10005: [SU3(BC,CD#,LLC,HLC), AL+CN+CP]	5.2.4	PASS
#10006: [SU2(SCI,BC,CD#,LLC,HLC), AL+CN+CP]	5.2.5	PASS
#10007: [SU6(BC,LLC,HLC), AL+CN+CP]	5.2.6	PASS
#10008: [SU4(IBC,LLC,HLC), RC_88+NO_MSG]	5.2.2	PASS
#20002: [<IUT!SETUP>, SU]	5.1.3	PASS

Test Group: U1 TESTS

#10101: [CP2, NO_MSG, U3]	5.1.5.1	PASS
#10102: [RC2(1,16), NO_MSG, U0]	5.8.4	PASS
#10103: [RL3(1,16), RC]	5.3.2	PASS
#10106: [SQ2, ST]	5.8.10	PASS

Test Group: U3 TESTS

#10301: [AL2, NO_MSG, U4]	5.1.7	PASS
#10302: [CN2, ST(97,8,101)+SQ+CA+NO_MSG]	5.1.8	PASS
#10303: [DI2(1,16), RL]	5.3.4	PASS
#10304: [IN2(1), NO_MSG]	5.2.4	PASS
#10305: [PG2, NO_MSG]	5.1.6	PASS
#10306: [RC2(1,16), NO_MSG, U0]	5.8.4	PASS
#10307: [RL3(1,16), RC]	5.3.4	PASS
#10308: [SQ2, ST]	5.8.10	PASS
#20301: [<IUT!DISC>, DI_16]	5.3.3	PASS



Test Group: U4 TESTS

#10401: [CN2, CA+NO_MSG]	5.1.8	PASS
#10402: [DI2(1,16), RL]	5.3.4	PASS
#10403: [IN2(1), NO_MSG]	5.2.4	PASS
#10404: [PG2, NO_MSG ST]	5.1.6	PASS
#10405: [RC2(1,16), NO_MSG, U0]	5.8.4	PASS
#10406: [RL3(1,16), RC]	5.8.4	PASS
#10407: [SQ2, ST]	5.8.10	PASS
#20401: [<IUT!DISC>, DI_16]	5.3.3	PASS

Test Group: U8 TESTS

#10801: [CA2, NO_MSG, U10]	5.2.7	PASS
#10802: [DI2(0,16), RL]	5.3.4	PASS
#10803: [IN2(0), NO_MSG]	5.2.4	PASS
#10804: [RC2(0,16), NO_MSG, U0]	5.8.4	PASS
#10805: [RL3(0,16), RC]	5.3.2	PASS
#10806: [SQ2, ST]	5.8.10	PASS
#20801: [T313(4S) TIMEOUT, DI]	5.2.8	PASS

Test Group: U10 TESTS

#11001: [DI2(0,16), RL]	5.3.4	PASS
#11002: [IN2(0), NO_MSG]	5.2.4	PASS
#11003: [NO2(0), NO_MSG]	5.9	PASS
#11004: [RC2(0,16), NO_MSG, U0]	5.8.4	PASS
#11005: [RL3(0,16), RC]	5.8.4	PASS
#11006: [SQ2, ST]	5.8.10	PASS
#21003: [<IUT!DISC>, DI_16]	5.3.3	PASS

Test Group: U11 TESTS

#11101: [DI2(1,16), RL]	5.3.5	PASS
#11102: [IN2(1), NO_MSG]	5.2.4	PASS
#11103: [NO2(1), NO_MSG ST]	5.9	PASS
#11104: [RC2(1,16), NO_MSG, U0]	5.8.4	PASS
#11105: [RL3(1,16), RC]	5.3.4	PASS
#21101: *[T305(30S) TIMEOUT, RL]	5.3.3	PASS

Test Group: U19 TESTS

#11902: [IN2(0), NO_MSG ST]	5	PASS
#11903: [RC2(0,16), NO_MSG, U0]	5.3.4	PASS
#11904: [RL3(0,16), NO_MSG, U0]	5.3.5	PASS
#11905: [SQ2, ST]	5.8.10	PASS
#21901: *[T308(4S) TIMEOUT, RL]	5.3.3	PASS