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FOR
FIPS PUB 100/FED-STD 1041
VERSION OF
CCITT 1980 RECOMMENDATION X.25.

INTERFACE BETWEEN DATA TERMINAL EQUIPMENT (DTE) AND DATA CIRCUIT-TERMINATING EQUIPMENT (DCE) FOR OPERATION WITH PACKET-SWITCHED DATA COMMUNICATIONS NETWORKS

CATEGORY: CONFORMANCE TESTS

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1986

U.S. DEPARTMENT OF COMMERCE, Malcolm Baldrige, *Secretary*
NATIONAL BUREAU OF STANDARDS, Ernest Ambler, *Director*

Foreword

The Federal Information Processing Standards Publication Series of the National Bureau of Standards is the official publication relating to standards adopted and promulgated under the provisions of Public Law 89-306 (Brooks Act) and under Part 6 of Title 15, Code of Federal Regulations. These legislative and executive mandates have given the Secretary of Commerce important responsibilities for improving the utilization and management of computers and automatic data processing in the Federal Government. To carry out the Secretary's responsibilities, the NBS, through its Institute for Computer Sciences and Technology, provides leadership, technical guidance, and coordination of Government efforts in the development of guidelines and standards in these areas.

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James H. Burrows, *Director*
Institute for Computer Sciences and Technology

Abstract

This document describes a set of verification tests designed by the Institute for Computer Sciences and Technology (ICST) at the National Bureau of Standards (NBS) to evaluate the conformance to the joint Federal Information Processing Standard Publication 100 (FIPS PUB 100)/Federal Standard 1041 (FED-STD 1041) for the interface to an X.25 packet switched network. A fundamental objective of these verification tests is concerned with establishing uniform verification testing and unambiguous evaluation procedures to aid government users in acquiring ADP and telecommunications facilities or services based on the X.25 specifications. These tests are designed for use by vendors and suppliers so as to provide government users with assurance the products they acquire are in conformance with the FIPS PUB 100/FED-STD 1041 specifications and can interwork.

KEY WORDS: data circuit-terminating equipment; data terminal equipment; Federal Information Processing Standards Publication; FIPS PUB 100/FED-STD 1041; interoperability; verification tests; X.25 packet switched networks.

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Processing Standards Publication 122

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Specifications for

Conformance Tests for FIPS PUB 100/FED-STD 1041 Version of CCITT 1980 Recommendation X.25

INTERFACE BETWEEN DATA TERMINAL EQUIPMENT (DTE) AND DATA CIRCUIT TERMINATING EQUIPMENT (DCE) FOR OPERATION WITH PACKET-SWITCHED DATA COMMUNICATIONS NETWORKS

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Announcing the Conformance Tests for

FIPS PUB 100/FED-STD 1041 Version of
CCITT 1980 Recommendation X.25

Interface Between Data Terminal Equipment (DTE)
and Data Circuit-Terminating Equipment (DCE)
for Operation with Packet-Switched Data
Communications Networks

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Name of Document: Conformance Tests for FIPS PUB 100/FED-STD 1041 Version of CCITT 1980 Recommendation X.25, Interface Between Data Terminal Equipment (DTE) and Data Circuit-Terminating Equipment (DCE) for Operation with Packet-Switched Data Communications Networks.

Category of Document: Conformance Tests.

Explanation: This FIPS specifies a standard set of tests to evaluate DTE/DCE conformance to FIPS PUB 100/FED-STD 1041. It is intended to aid users in acquiring telecommunications facilities or services based on the CCITT Recommendation X.25. The conformance tests are designed for use by test evaluators, test suite designers or implementors, or users implementing the CCITT 1980 Recommendation X.25.

Approving Authority: U.S. Department of Commerce, National Bureau of Standards (Institute for Computer Sciences and Technology).

Maintenance Agency: U.S. Department of Commerce, National Bureau of Standards (Institute for Computer Sciences and Technology).

Cross Index:

(a) FIPS PUB 100/FED-STD 1041, Interface Between Data Terminal Equipment (DTE) and Data Circuit-Terminating Equipment (DCE) for Operation with Packet-Switched Data Communications Networks, July 6, 1983.

(b) CCITT Recommendation X.25, Interface Between Data Terminal Equipment (DTE) and Data Circuit-Terminating Equipment (DCE) for Terminals Operating in the Packet Mode on Public Data Networks, 1980.

Applicability: The use of this FIPS is encouraged, but not mandatory.

Implementation: This FIPS should be referenced by Federal agencies having requirements for the use of networks or terminals implementing the CCITT 1980 Recommendation X.25 as specified in FIPS PUB 100/FED-STD 1041.

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Special Information: This FIPS is based upon knowledge obtained by NBS staff members from various departments and agencies of the Federal Government, in addition to input received from other sources both within and outside the Government. The technical contents of this FIPS have been widely distributed to, and adopted and implemented by, Federal agencies and industry.

All comments and recommendations are welcomed and will be considered in any future revisions. These comments should be addressed to:

Director
Institute for Computer Sciences and Technology
ATTN: X.25 Conformance Testing
National Bureau of Standards
Gaithersburg, MD 20899

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Conformance Tests for FIPS PUB 100/FED-STD 1041 Version of CCITT 1980 Recommendation X.25

Abstract: NBS has developed a set of verification tests which can be applied by any organization to determine compliance with Federal Information Processing Standard Publication 100/Federal Standard 1041, the government's standard for interfacing data terminals and computers to public data networks operating in packet mode. A fundamental objective of these verification tests is concerned with establishing uniform verification testing and unambiguous evaluation procedures to aid government users in acquiring ADP and telecommunications facilities or services based on the X.25 specifications. These tests are designed for use by vendors and suppliers so as to provide government users with assurance the products they acquire are in conformance with the FIPS PUB 100/FED-STD 1041 specifications and can interwork.

Index Terms: X.25 verification, X.25 certification, public data network, Recommendation X.25, Federal Information Processing Standard, telecommunications.

1.0 PURPOSE

This document describes a set of verification tests designed by the Institute for Computer Sciences and Technology (ICST) at the National Bureau of Standards (NBS) to evaluate the conformance to the joint Federal Information Processing Standard Publication 100 (FIPS PUB 100)/Federal Standard 1041 (FED-STD 1041) for the interface to an X.25 packet switched network. A fundamental objective of these verification tests is concerned with establishing uniform verification testing and unambiguous evaluation procedures to aid government users in acquiring ADP and telecommunications facilities or services based on the X.25 specifications. These tests are designed for use by vendors and suppliers so as to provide government users with assurance the products they acquire are in conformance with the FIPS PUB 100/FED-STD 1041 specifications and can interwork.

2.0 REFERENCES

2.1 Federal Information Processing Standards Publication 100/Federal Standard 1041, July 6, 1983, entitled "Interface Between Data Terminal Equipment (DTE) and Data Circuit-Terminating Equipment (DCE) for Operation with Packet-Switched Data Communications Networks," designated in this manual as the FIPS PUB 100/FED-STD 1041.

2.2 CCITT Recommendation X.25 (1980), entitled "Interface Between Data Terminal Equipment (DTE) and Data Circuit-Terminating Equipment (DCE) for Terminals Operating in the Packet Mode on Public Data Networks," designated in this manual as the CCITT X.25.

3.0 DEFINITIONS

DEVICE UNDER TEST (DUT): The DTE or DCE that interacts with the Verification Test Equipment (VTE) operating under the test procedures specified in this document.

TEST MODULE: A series of test sequences that are selected to test the DUT at a particular state.

TEST PROCEDURE: Test sequences that a DUT is required to perform under both normal and abnormal conditions.

TEST SEQUENCE: A sequence of test steps that constitute the testing of a complete VTE generated input.

TEST STEP: A part of a test sequence.

VERIFICATION: Execution of a series of tests and evaluation of the test results to determine whether an X.25 implementation conforms to the requirements of the FIPS 100.

VERIFICATION PROGRAM: The set of verification tests that is described in this manual.

VERIFICATION TEST EQUIPMENT (VTE): The equipment that is used to perform the verification test procedures designated in this manual as the VTE.

VERIFICATION TESTS: The actual tests that implement the verification program.

4.0 BACKGROUND

The CCITT Recommendation X.25 (1980) specifies a recommended method for any data terminal equipment (DTE) to interface to any data-circuit terminating equipment (DCE). This recommendation represents a consensus among the various public data network and terminal suppliers, and aims to achieve compatibility between DTE and DCE. However, a DTE, claimed to be X.25-compatible, at times, may not be able to communicate with a public data packet switching network. This is because the recommendation contains a large number of options and implementation alternatives, which if exercised in different ways could limit or prevent the interoperability of equipment and services.

On July 6, 1983, the Secretary of Commerce and the Administrator of the General Services Administration jointly approved the adoption of a subset of the CCITT Recommendation X.25 for use by the Federal Government. This is called the Federal Information Processing Standard Publication 100 (FIPS PUB 100)/Federal Standard 1041 (FED-STD 1041), and was developed by the Institute for Computer Sciences and Technology (ICST) of the National Bureau of Standards (NBS), and the National Communications System (NCS). It requires that Federal automated data processing equipment, services, and telecommunication equipment using public packet switched data networks based on CCITT X.25 shall employ the interface and protocol specified in the FIPS PUB 100/FED-STD 1041.

In parallel with the development of FIPS PUB 100/FED-STD 1041, the ICST proceeded to develop and implement a verification methodology to evaluate conformance to the standard interface. Such a verification methodology is expected to be used by Federal agencies who are acquiring automated data processing and telecommunications services based on the X.25 specifications. The objective of this

parallel approach was to be able to ensure a high degree of interoperability among X.25 based facilities and services acquired by the government beginning at the time when FIPS 100 became effective.

The initial version of this verification program document was distributed to selected public and private sector reviewers for comment. The ICST has incorporated the comments and suggestions resulting from that review in preparing this document.

5.0 THEORY OF OPERATION OF THE ICST VERIFICATION PROGRAM

The conformance tests described in this document are based on a state-matrix approach which involves pass-failure checking of all mandatory features of the FIPS PUB 100/FED-STD 1041 specifications. Should the specifications allow two or more alternative features, at least one of the alternatives must be implemented.

This document does not cover the testing of optional features. However, if an implementation does include such features, it should be in the manner as stated by the standard and its inclusion should be declared.

Performance testing is also not covered by this document. The X.25 specification does provide a definition suitable for performance evaluation.

5.1 DESIGN CRITERIA

The verification test equipment (VTE) will operate with the device under test (DUT) and automatically evaluate its implementation of the FIPS PUB 100/FED-STD 1041 specifications by performing a series of test sequences. These test sequences require the DUT to perform under both normal and abnormal conditions and include procedures for testing timing constraints and intentional protocol violations to ensure that the DUT responds in a reasonable and acceptable manner in each case. All of the predefined error conditions that could occur are tested to ensure that the error conditions result in the appropriate message or response.

The link level and the packet level are verified separately. The link level is always tested first since the packet level uses the link level in its tests.

Automated procedures are used to accelerate testing progress, reduce errors, and minimize costs. The commands, responses, test parameters, and test sequences are designed to employ the same terminology as that used in specifications. A post-test analysis is performed to provide step-by-step comparisons between the expected results and actual results. To the extent practical, this analysis is performed automatically so that comparisons are done quickly; discrepancies are noted in the form of exception reports, and tests can be run with steps being repeated without extensive operator intervention.

5.2 TESTING METHODOLOGY

The VTE implements a form of functional testing. The functional testing is used to evaluate whether the interface implementation in the DUT can perform all of the required functions. The test sequences are deduced from the specification while the

implementation in the DUT is treated by the VTE as a black box. The following criteria are used to measure the test coverage:

(1) All required functions defined by the FIPS PUB 100/FED-STD 1041 specifications are executed correctly at least once.

(2) Certain combinations of the defined functions are executed correctly at least once.

(3) The DUT must be able to recover from all incorrect actions on the part of its correspondent.

5.2.1 DETERMINATION OF TEST CASES

State matrices (see Appendices A and B of this document), derived from the CCITT X.25 specification have been used to determine the test sequences. The fundamental idea of these state matrices is to identify conditions or combinations of conditions which are relevant for the correct execution of the implementation. The matrices are arranged in a way that the columns represent the current state of the DUT, and the rows represent all possible valid and invalid incoming packets. The matrix element entries define the action to be performed and the new state to be entered when certain inputs are received in that state. This means, if the VTE knows what state the DUT is in, it can apply a selected set of inputs to the DUT. Based on these inputs, the VTE expects the DUT to change to a certain new state, and generate a certain response. This kind of interaction between the VTE and the DUT defines a series of interface sequences. A series of interface sequences constitutes a verification test sequence.

The VTE can be used to verify a DTE as well as a DCE. There are two similar sets of state matrices, one set for testing the DTE, and another for the DCE. Since the CCITT X.25 is not a symmetrical protocol, different testing sets are needed for the DTE and DCE sides of the interface.

State matrices for the DCE are based on Annex C of the CCITT X.25 specification, with further expansion to meet the requirements of the FIPS PUB 100/FED-STD 1041 specification. The DTE state matrices are not part of the CCITT X.25 and were developed by ICST.

5.2.2 VERIFICATION TEST SEQUENCE PREPARATION

After the determination of appropriate test cases for verification, it is necessary to prepare test sequences representing each of the test cases.

Assisted by the state matrices, requirement specifications, and the state diagrams given in CCITT X.25, verification test sequences are built by using the appropriate X.25 command/response packet interchanges.

Each individual test is generally divided into the following steps:

(1) The DUT is driven to a known starting state by the VTE.

(2) The DUT is then driven by the VTE to the necessary initial state for the selected test sequence.

(3) The VTE provides a prescribed input to the DUT; or if the test must be originated by the DUT, the DUT must send a selected command/response to the VTE.

(4) Verify that the actual response from the DUT compares with the expected response.

In situations where more than one output from the DUT is valid, any one of those outputs is considered acceptable.

If the results obtained disagree with those expected, that particular test is aborted and the incorrect results are automatically documented by the VTE. Testing is continued from the next test sequence until all test sequences in that module are completed.

5.2.3 MODULAR TESTING

A test module is defined to be all of the test sequences that are necessary to test the DUT at a particular state. There is a total of 22 test modules (corresponding to the 22 possible states defined for X.25) for any DUT. Each module is tested automatically. The sequences for each module are queued and applied to the DUT sequentially. For each test sequence (or interface sequence), the output of the DUT is captured by the VTE and evaluated for correctness.

5.2.4 DYNAMIC MODIFICATION

Under operator control, the VTE is able to skip or accept modified test sequences in order to correct or bypass certain test steps without completely aborting a test run. The reasons for this dynamic test modification capability are to provide the following:

(a) To retest specific sequences that previously had problems.

(b) To enable manual inputting of augmented or new test sequences for the identification or evaluation of potential problem areas.

(c) To sort out a subset of tests in order to supplement the testing services that have been provided by some other testing organization.

5.2.5 LOGGING

In addition to the success or failure of each test step, the test log maintained by the VTE records all interface sequences consisting of the individual frames or packets sent or received.

5.2.6 TEST CAPABILITIES

The link and the packet levels are tested separately. The link level is always tested first. While the packet level testing is being performed, all link level functions are handled automatically and are transparent to the packet level testing.

5.2.6.1 LINK LEVEL MANUAL MODE: When operating in the link level manual mode, the VTE will accept commands and responses from the DUT, but will not automatically return the required command and response. The operator can elect to cause the VTE to transmit any valid or invalid frame and observe the reaction of the DUT. The link level manual mode permits the operator to:

(a) set link level system parameters including the baud rate and the values of K, N1, N2, and T1;

(b) generate link level errors; and

(c) generate specific command or response frames.

5.2.6.2 LINK LEVEL AUTOMATIC MODE: When operating in the link level automatic mode, the VTE acts as a fully implemented DTE or DCE automatically performing complete test sequences while still permitting manual inputting between test sequences. The link level automatic mode employs preselected parameter values and interface sequences but the operator may:

(a) set link level system parameters;

(b) generate link level errors; and

(c) generate specific command or response frames.

5.2.6.3 PACKET LEVEL MANUAL MODE: When operating in the packet level manual mode, the VTE accepts command and response packets from the DUT, but will not automatically transmit the required command and response. The operator may elect to have the VTE transmit any valid or invalid packet, and observe the reaction of the DUT. The packet level manual mode permits the operator to:

(a) define packet level system parameters to include the range of logical channel numbers, assigning logical channels for permanent virtual circuits, and the packet level window sizes;

(b) generate specific correctly or incorrectly formatted packets or packet sequences;

(c) send any bit pattern; and

(d) create packet level exception conditions.

5.2.6.4 PACKET LEVEL AUTOMATIC MODE: The VTE acts as a fully implemented DTE or DCE with optional manual inputting capability. The packet level automatic mode employs preselected sequences and parameters while still permitting the operator to:

(a) set packet level system parameters;

(b) allow packets from one or more logical channels to be transmitted or received;

(c) create exception conditions;

(d) send any bit pattern; and

(e) generate specific packets.

5.3 ANOMALIES OF THE TESTING PROCESS

One of the design criteria is that the DUT be treated by the verification system as a black box. This condition eliminates the burden of the DUT equipment supplier to implement software driver in the DUT. For this reason, the testing of the DTE during the DCE defined states (e.g., Restart Indication, Incoming Call, Clear Indication, or Reset Indication) may end up in testing of some other states (e.g., Packet Level Ready, Data Transfer, or Flow Control Ready). Conditions of this type occur if the DTE accepts and processes the incoming packets one at a time. For example, if a test is set up to verify a DCE Restart Request state, the verification system tries to set up the initial condition by transmitting a Restart Indication, immediately followed by an error packet. The verification system is expecting the DTE to discard the error packet, then send a Restart Request in response. However, the DTE responds to the Restart Indication with a Restart Confirmation. As far as the DTE is concerned, the packet level is now in the Packet Level Ready state. The DTE then processes the next packet in sequence--in this case, the error packet which the DTE was intended to process in Restart Indication state. The DTE responds to the error packet as it was in Packet Level Ready state.

Similar situations occur in testing of a DCE. The testing of the DTE defined states (e.g., Restart Request, DTE Waiting, Clear Request, or Reset Request) may end up in actually testing of some other states (e.g., Packet Level Ready, Data Transfer, or Flow Control state).

Another difficulty is that the CCITT X.25 does not require that the DUT send a DISC command. Therefore, the initial condition to test the Link Disconnect state may not be realizable. Testing of this state has to be skipped if this condition occurs.

6.0 TEST PROCEDURES

This section summarizes the verification tests and outlines all of the steps required to execute a complete verification as well as the criteria for the success of each test on a step-by-step basis. It also provides a general functional overview of the VTE test driver software.

The detailed tests are listed respectively in Appendix A and Appendix B for the verification of a DTE and for the verification of a DCE.

Each appendix is further divided into link and packet level testing sections.

When operating with the (DTE) procedures listed in Appendix A, the VTE interacts as an X.25 DCE operating under the procedures specified in FIPS PUB 100/FED-STD 1041. The DTE, in this test configuration, is the device under test (DUT).

When operating with the (DCE) procedures listed in Appendix B, the VTE interacts as an X.25 DTE operating under the procedures specified by FIPS PUB 100/FED-STD 1041. The DCE, in this test configuration, is the device under test (DUT).

The VTE is capable of interacting with the DUT and performing all required tests in either a local or remote configuration. When connected locally, the VTE employs a direct connection to the DUT (e.g., through an RS-232-C connection). For remote testing, the VTE and DUT are connected through modems and transmission facilities appropriate for the user class of service (signalling speed) being tested.

In either the local or remote configuration, the tests performed by the VTE exercise and evaluate the ability of the DUT to properly:

(1) operate under the procedures and electrical constraints of the physical level interface, as specified in FIPS PUB 100/FED-STD 1041 and at the chosen signalling speed(s).

(2) operate under the link level procedures specified in FIPS PUB 100/FED-STD 1041.

(3) operate under the packet-level procedures specified in FIPS PUB 100/FED-STD 1041 in the permanent virtual circuit (PVC) service.

NOTE: This requirement is not applicable to DTE's which do not support permanent virtual circuit service.

(4) operate under the packet-level procedures specified in FIPS PUB 100/FED-STD 1041 in the virtual call (VC) service.

NOTE: This requirement is not applicable to DTE's which do not support virtual call service.

While exercising each of the physical, link, and packet-level procedures permitted to be used by FIPS PUB 100/FED-STD 1041, the ability to operate simultaneously with combinations of one or more PVC and VC logical channels is also tested.

The VTE also initiates packet level, link access procedure B (LAPB), and physical level procedures not permited by FIPS PUB 100/FED-STD 1041 but permitted by CCITT X.25. The DUT should treat those procedures not permitted by FIPS PUB 100/FED-STD 1041 but permitted by CCITT X.25 as error conditions.

The VTE also evaluates the ability of the device under test to perform each of the error procedures specified in FIPS PUB 100/FED-STD 1041.

Each test step results in a summary printout that includes the identification of the DUT, its response to each test step, the acceptability of the response, as well as any appropriate timing information.

7.0 ICST IMPLEMENTATION OF THE FIPS PUB 100/FED-STD 1041 VERIFICATION PROGRAM

Figure 1 shows the configuration of the ICST's implementation of the verification program. The DUT can be connected to the VTE directly or remotely. For remote connection, a separate telecommunication terminal (300/1200 b/s, asynchronous, full duplex) must be available and located in close proximity to the DUT to accept test status and reports from the VTE via a separate data link.

The test procedures have been implemented in a protocol tester DYNAPAC NET/18[1] and used to verify a number of implementations. It has been demonstrated that this automated verification system is able to find a significant number of errors in different implementations. Codes for more than 400 tests, contained in diskettes, were written for the testing of DTE. The contents of these codes are subject to periodic revision, taking into consideration its correctness to the specifications of the FIPS PUB 100/FED-STD 1041.

The Defense Communications Engineering Center of the Defense Communications Agency (DCA) is employing these verification techniques for evaluating equipment conformance to the Defense Data Network. Programming and coding for that system is also completed. DCA's system hardware is based on another protocol tester, the Chameleon from Tekelec, Inc.,[1] and conformance between the DCA and ICST implementations has been determined.

Hewlett Packard[1] and Atlantic Research Corporation[1] have also implemented the FIPS PUB 100/FED-STD 1041 verification program in their protocol testers HP 4955A and Interview COMSTATE II, respectively.

8.0 APPLICATION NOTES

The following notes are applicable to parties interested in using this document for evaluating their equipment conformance to FIPS PUB 100/FED-STD 1041:

(a) Copies of this document, the FIPS PUB 100/FED-STD 1041, and the CCITT X.25 are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. When ordering, refer to the complete title of each document.

(b) The full set of test procedures should be implemented as part of a user's X.25 verification test procedures.

(c) The ICST's DTE verification software can be optionally obtained by directly writing ICST. The software programs are in machine language and are designed to be employed with the following specific configuration of equipment:

- A high speed DYNAPAC NET/18 protocol tester with dual auxiliary floppy drive.
- System disk NET/18 HS LEARN/DEBUG version 2.18 or above.
- Utility disk version 1.6.

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[1]The equipment is identified in this document in order to adequately specify the experimental procedure. Such identification does not imply recommendation or endorsement by the ICST, nor does it imply that the equipment identified is necessarily the best available for the purpose.

While ICST provides this software and instructions for its use, no warranty is to be expected or implied. In addition, ICST does not approve, recommend, or endorse any commercial product. The user assumes the responsibility for the use of this software. Should this software be found defective, the user is responsible for all costs resulting from its malfunction as well as the cost of correcting.

(d) The contents of the test procedures and these software programs are subject to periodic revision, taking into consideration the corrections and completeness of the software for testing the specifications of FIPS PUB 100/FED-STD 1041 and the CCITT X.25. Any suggestions for changes which would make future revisions more useful, are welcome, and should be addressed to the National Bureau of Standards, Institute for Computer Sciences and Technology, Gaithersburg, MD 20899, Attention: X.25 Verification Program.

9.0 EQUIPMENT CLASSIFICATION TERMINOLOGY

This section describes equipment classification terminology whose intent is to allow a precise description of the nature of the conformance to these test procedures. Users should inquire which classification best describes a product.

9.1 STATE MODEL CONFORMANCE

The equipment or services gives a clear indication of pass or failure after each test. State Model Conformance means passing all tests.

Suppliers of this type of equipment shall use the designation "Full State Model Conformance."

9.2 GENERAL INTEROPERABILITY CONFORMANCE

The equipment or services do not pass all tests. However, the capability for interoperability of such equipment or services with any other standard equipment or services may not be compromised or affected by the inability to properly perform certain tests. For example, upon receipt of a reset on a switched virtual call, a DTE may choose to initiate clearing of the call, rather than acknowledging the reset. This condition will not affect the interoperability between DTE's. It will, however, affect the system throughput.

Another example might be that, when a DTE sends or receives a frame reject, it goes into disconnect state and reports this condition to the higher level protocols. Some manufacturers may choose to operate this way to protect the higher level protocol integrity.

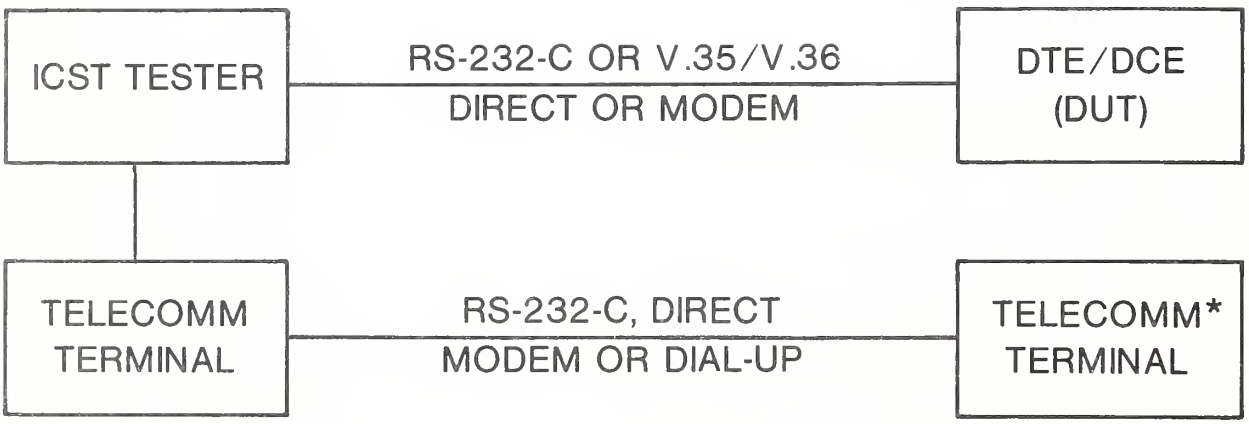
Suppliers of this type of equipment shall use the designation "General Interoperability Conformance" and provide a list of conditions that failed and the reasons why they believe that these conditions will not affect the interoperability between any other fully conforming equipment. Users should request this list and description to ascertain whether the qualifications affect their particular application.

9.3 GROUP INTEROPERABILITY CONFORMANCE

The equipment or services do not pass all tests. However, the interoperability among the same type of equipment or services in a closed user group operating environment is not compromised or affected by the failed tests. For example, in the disconnected mode (not power-down mode), a DTE may not monitor the incoming link level commands unless it is directed by the higher level protocols to do so. This condition occurs in DTE's that need the higher level protocols to initialize the link level activities. Interoperability with the group using the same default conditions will not normally be impaired.

As another example, in some DTE's, the higher level functions do not support expedited data. Therefore, the interrupt packet type will not be supported in this user group environment. However, this type of DTE shall not reject an incoming interrupt packet unless it knows the remote DTE has not implemented the interrupt packet type.

Suppliers of this type of equipment shall list all exceptions and use the designation "Group Interoperability Conformance."



*Only needed for remote testing

Figure 1. Verification Service Configuration

APPENDIX A

DTE LINK AND PACKET LEVEL VERIFICATION TESTS

This appendix establishes the verification tests to be used on an X.25 data terminal equipment (DTE) operating under the procedures specified by FIPS 100. In general, a DTE will pass the verification if it has been tested and no significant deviations have been identified.

There are a total of eight (8) modules for the verification of the link level. For each module, the tests are broken down into categories which evaluate the DTE's ability to respond to:

1) link setup
2) link disconnect
3) information transfer
4) error recovery
5) invalid N(s) and N(r)
6) window overruns
7) invalid length
8) invalid command or response
9) timer

There are a total of 14 modules for the verification of the packet level. Each module generally has the following tests:

1) proper packet procedures
2) packet format
3) invalid packet
4) packet length
5) invalid P(r) and P(s)
6) non-octet aligned data field
7) invalid facility code and value
8) virtual call and permanent virtual circuit
9) timers
10) invalid general format identifier

NOTES

1. The test result will not affect the outcome of the verification.

2. "Local Busy" state has not been included in the link level matrix. This is because the "Local Busy" state cannot be tested.

3. This text is not applicable to DTE's at level 2 frames that are not octet aligned.

4. The test is not applicable to DTE that does not support switched virtual call service.

5. If the diagnostic codes are different from those as given, ICST will determine their correctness as appropriate.

6. The testing of the DCE defined states (e.g., r3, p3, p7, or d3) may result in actually testing of state r1, p4, p1, or d1. This condition occurs if the DTE processes the incoming packets on a one by one basis. For example, if a test is set up to verify a r3 DCE restart request state:

TESTER SENDS		DTE SENDS
RESTART INDICATION	-----)	
ERROR PACKET	-----)	
	(-----	- RESTART CONFIRMATION
	(-----	- CLEAR REQUEST

Once the initialization is completed, the DTE responds to the restart indication with a restart confirmation. As far as the DUT is concerned, the packet level interface is now in the r1 state. The DTE then proceeds to process the next packet in sequence. In this case, the error packet which the DTE was intended to process in r3. The DTE responds to the error packet as prescribed in r1 (p1) state.

If the sequence as described above occurs, the DTE's response will be accepted as a valid response.

TABLES

A1. DTE Link Level State Matrix
A2. DTE Restart Procedure State Matrix
A3. DTE Call Setup and Clearing State Matrix
A4. DTE Data Transfer State Matrix
A5. DTE Timer Values

MODULES

A1. Verification of Link Level Disconnect Phase (DUT=DTE)
A2. Verification of Link Level Link Disconnect (DUT=DTE)
A3. Verification of Link Level Link Setup (DUT=DTE)
A4. Verification of Link Level Frame Reject (DUT=DTE)
A5. Verification of Link Level Information Transfer (DUT=DTE)
A6. Verification of Link Level Remote Busy (DUT=DTE)
A7. Verification of Link Level Reset (DUT=DTE)
A8. Verification of Link Level Send Reject (DUT=DTE)
A9. Verification of Packet Level Restart r1 (DUT=DTE)
A10. Verification of Packet Level Restart Request r2 (DUT=DTE)
A11. Verification of Packet Level Restart Indication r3 (DUT=DTE)
A12. Verification of Packet Level Ready p1 (DUT=DTE)
A13. Verification of Packet Level Call Request p2 (DUT=DTE)
A14. Verification of Packet Level Incoming Call p3 (DUT=DTE)
A15. Verification of Packet Level Data Transfer p4 (DUT=DTE)
A16. Verification of Packet Level Call Collision p5 (DUT=DTE)
A17. Verification of Packet Level Clear Request p6 (DUT=DTE)
A18. Verification of Packet Level Clear Indication p7 (DUT=DTE)
A19. Verification of Packet Level Flow Control Ready d1 (DUT=DTE)
A20. Verification of Packet Level Reset Request d2 (DUT=DTE)
A21. Verification of Packet Level Reset Indication d3 (DUT=DTE)
A22. Multiple Logical Channels Testing (DUT=DTE)

TABLE A1
(See Note 2)

DTE LINK LEVEL STATE MATRIX

				INFORMATION TRANSFER				
	DISCONNECT PHASE (DP)	**LINK DISCONNECT (START T1) (LD)**	**LINK SETUP (START T1) (LSU)**	**FRAME REJECT (MAY START T1) (FR)**	**NORMAL (N)**	**REMOTE BUSY (RB)**	**RESET (R)**	**SEND REJECT (START T1) (SR)**
DISC	DM (DP)	UA (LD)	DM (DP)	UA (DP)	UA (DP)	UA (DP)	DM (DP)	UA (DP)
DISC/P	DM/F (DP)	UA/F (LD)	DM/F (DP)	UA/F (DP)	UA/F (DP)	UA/F (DP)	DM/F (DP)	UA/F (DP)
SABM	UA (N)	DM (LD)	UA (LSU)	UA (N)	UA (N)	UA (N)	UA (R)	UA (N)
SABM/P	UA/F (N)	DM/F (DP)	UA/F (LSU)	UA/F (N)	UA/F (N)	UA/F (N)	UA/F (R)	UA/F (N)
UA	IGNORE (DP)	(DP)	(N)	FRMR/SABM/ DISC* (FR/R/LD)	FRMR/SABM/ DISC (FR/R/LD)	FRMR/SABM/ DISC (FR/R/LD)	(N)	FRMR/SABM/ DISC (FR/R/LD)
FRMR	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	SABM/DISC (R/LD)	SABM/DISC (R/LD)	SABM/DISC (R/LD)	SABM/DISC (R/LD)	SABM/DISC (R/LD)
I	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	I/RR (N)	RR (RB)	IGNORE (R)	RR (N)
I/P	DM/F (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR/F (FR)	RR/F (N)	RR/F (RB)	IGNORE (R)	RR/F (N)

TABLE A1 (continued)

	(DP)	(LD)	(LSU)	(FR)	(N)	(RB)	(R)	(SR)
I/INVALID NR	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	FRMR (FR)	FRMR (FR)	IGNORE (R)	FRMR (FR)
I/INCORRECT NS	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	REJ (SR)	REJ (SR)	IGNORE (R)	IGNORE (SR)
I/INVALID NR & INCORRECT NS	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	FRMR (FR)	FRMR (FR)	IGNORE (R)	FRMR (FR)
I FRAME TOO LONG	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	FRMR (FR)	FRMR (FR)	IGNORE (R)	FRMR (FR)
I FRAME W/O I FIELD	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	I/RR (N)	RR (RB)	IGNORE (R)	RR (N)
RR	IGNORE (DP)	IGNORE (LD)	IGNORE (LSD)	FRMR (FR)	NOTHING RR, I, REJ (N)	(N)	IGNORE (R)	NOTHING (SR)
RR/P	DM/F (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR/F (FR)	RR/F (N)	RR/F (N)	IGNORE (R)	RR/F (SR)
RNR	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	NOTHING RR (RB)	NOTHING RR, REJ (RB)	IGNORE (R)	NOTHING (RB & SR)
RNR/P	DM/F (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR/F (FR)	RR/F, REJ/F (RB)	RR/F, REJ/F (RB)	IGNORE (R)	RR/F (RB & SR)
REJ	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	I (N)	I (N)	IGNORE (R)	I (N)
REJ/P	DM/F (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR/F (FR)	RR/F THEN I (N)	RR/F THEN I (N)	IGNORE (R)	RR/F THEN I (SR)

TABLE A1 (continued)

	(DP)	(LD)	(LSU)	(FR)	(N)	(RB)	(R)	(SR)
UNKNOWN CMD ALL POSSIBLE PERMUTATIONS	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	FRMR (FR)	FRMR (FR)	IGNORE (R)	FRMR (FR)
UNKNOWN RESPONSE ALL POSSIBLE PERMUTATIONS	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR/IGNORE (FR)	FRMR (FR)	FRMR (FR)	IGNORE (R)	FRMR (FR)
UNSOLICITED F	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	IGNORE* (FR)	FRMR/SABM/DISC (FR/R/LD)	FRMR/SABM/DISC (FR/R/LD)	IGNORE (R)	FRMR/SABM/DISC (FR/R/LD)
INCORRECT ADDRX ALL POSSIBLE PERMUTATIONS	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	IGNORE (FR)	IGNORE (N)	IGNORE (RB)	IGNORE (R)	IGNORE (SR)
FCS ERROR	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	IGNORE (FR)	IGNORE (N)	IGNORE (RB)	IGNORE (R)	IGNORE (SR)
NON-I FRAME W/I FIELD (EXCLUDING FRMR)	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	FRMR (FR)	FRMR (FR)	IGNORE (R)	FRMR (FR)
DM	IGNORE/SABM (DP)/(LSU)	NOTHING OR DISC/P RESTART T1 (LD)	NOTHING OR SABM/P RESTART T1 (LSU)	SABM/DISC (R/LD)	SABM/DISC (R/LD)	SABM/DISC (R/LD)	NOTHING OR SABM/P START T1 (R)	SABM/DISC (R/LD)
T1 EXPIRES (LOCAL)	—	DISC/DISC P (START T1) (LD)	SABM/SABM P (START T1) (LSU)	FRMR* OR NOTHING MAY START T1 (FR)	I/RR P (START T1) (N)	—	SABM/SABM P (START T1) (R)	—

TABLE A1 (continued)

	(DP)	(LD)	(LSU)	(FR)	(N)	(RB)	(R)	(SR)
I WITH I FIELD = 7E7E7E7E7E7E7E7E WITH ZERO INSERTION	—	—	—	—	RR/I (N)	—	—	—
DISC TOO LONG	—	—	—	—	FRMR (FR)	—	—	—
DM TOO LONG	—	—	—	—	FRMR (FR)	—	—	—
FRMR TOO LONG	—	—	—	—	FRMR (FR)	—	—	—
I RESPONSE	—	—	—	—	FRMR (FR)	—	—	—

* - See Note 1

TABLE A2
(See Note 5)

STATE MATRIX
DTE RESTART PROCEDURE

PACKET FROM THE DCE WITH ASSIGNED LOGICAL CHANNEL	STATE OF THE INTERFACE AS PERCEIVED BY DTE		
	Packet Level Ready	**DTE Restart Request**	**DCE Restart Indication**
	r1	**r2**	**r3**
Restart Indication	NORMAL (r3)	NORMAL (p1 or d1)	DISCARD (r3)
DCE Restart Confirmation	ERROR (r2), #17	NORMAL (p1 or d1)	ERROR (r2), #19
Data, Interrupt, Call Setup and Clearing, Flow Control Reset	See Table A3 Table A4	DISCARD (r2)	ERROR (r2), #19
Restart Indication or Restart Confirmation with logical channel not 0	See Table A3 Table A4	DISCARD (r2)	ERROR (r2), #41
Packet with packet type shorter than 1 octet*	See Table A3 Table A4	DISCARD (r2)	ERROR (r2), #38, 33
Any unidentifiable packet	See Table A3 Table A4	DISCARD (r2)	ERROR (r2), #33
Restart Indication too long	DISCARD (r1)	ERROR (r2), #39	DISCARD (r3)
Restart Confirmation too long	DISCARD (r1)	ERROR (r2), #39	DISCARD (r3)
Non-octet aligned Restart Indication or Restart Confirmation*	DISCARD (r1)	ERROR (r2), #82	DISCARD (r3)
Diagnostic LCN = 0	NORMAL (r1)	NORMAL (r2)	NORMAL (r3)

TABLE A2 (continued)

	r1	r2	r3
Any pkt, other than Restart Indication, Restart Confirmation, or Diagnostic pkt w/LCN = 0		DISCARD	
Invalid GFI		DISCARD	
Any pkt with an unassigned LCN		DISCARD	

DEFINITION:

NORMAL: The action taken by the DTE follows the procedure as defined in the FIPS X.25.

DISCARD: Discards the received packet and no subsequent action is taken.

ERROR: a) Discard the received packet.
b) Send restart request.

* - See Note 3

TABLE A3
(See Notes 4, 5)

STATE MATRIX
DTE CALL SETUP AND CLEARING

	STATE OF THE INTERFACE AS PERCEIVED BY THE DTE						
	PACKET LEVEL READY r1						
PACKET FROM DCE WITH ASSIGNED LOGICAL CHANNEL	READY p1	DTE CALL REQUEST p2	DCE INCOMING CALL p3	DATA TRANSFER p4	CALL COLLISION p5	DTE CLEAR REQUEST p6	DCE CLEAR INDICATION p7
Incoming Call	NORMAL p3	NORMAL p5	ERROR p6, #22	ERROR p6, #23	ERROR p6, #24	DISCARD p6	ERROR p6, #26
Incoming Call with D=1	NORMAL p3	NORMAL p5	ERROR p6, #22	ERROR p6, #23	ERROR p6, #24	DISCARD p6	ERROR p6, #26
Incoming Call w/fast select no restriction	NORMAL p3	NORMAL p5	ERROR p6, #22	ERROR p6, #23	ERROR p6, #24	DISCARD p6	ERROR p6, #26
Call Connected	ERROR p6, #20	NORMAL p4	ERROR p6, #22	ERROR p6, #23	NORMAL p4	DISCARD p6	ERROR p6, #26
Clear Indication	NORMAL p7	NORMAL p7	NORMAL p7	NORMAL p7	NORMAL p7	NORMAL p1	DISCARD p7
DCE Clear Confirmation	ERROR p6, #20	ERROR p6, #21	ERROR p6, #22	ERROR p6, #23	ERROR p6, #24	NORMAL p1	ERROR p6, #26
Data, Interrupt, Reset, RR, RNR	ERROR p6, #20	ERROR p6, #21	ERROR p6, #22	See Table A4	ERROR p6, #24	DISCARD p6	ERROR p6, #26

TABLE A3 (continued)

	p1	p2	p3	p4	p5	p6	p7
Restart Indication or Restart Confirmation w/LCN not 0	ERROR p6, #41	ERROR p6, #41	ERROR p6, #41	See Table A4	ERROR p6, #41	DISCARD p6	ERROR p6, #41
Packet w/packet type 1 octet*	ERROR p6, #33, 38	ERROR p6, #33, 38	ERROR p6, #33, 38	See Table A4	ERROR p6, #33, 38	DISCARD p6	ERROR p6, #33, 38
Unidentifiable packet	ERROR p6, #33	ERROR p6, #33	ERROR p6, #33	See Table A4	ERROR p6, #33	DISCARD p6	ERROR p6, #33
Incoming Call with duplicate facility code	NORMAL p3	NORMAL p5	ERROR p6, #22	ERROR p6, #23	ERROR p6, #24	DISCARD p6	ERROR p6, #26
Incoming Call packet too long	ERROR p6, #39	ERROR p6, #39,	ERROR p6, #22	ERROR p6, #23	ERROR p6, #24	DISCARD p6	ERROR p6, #26
Call Connected packet too long	ERROR p6, #20	ERROR p6, #39,	ERROR p6, #22	ERROR p6, #23	ERROR p6, #39	DISCARD p6	ERROR p6, #26
Clear Indication too long	ERROR p6, #39	ERROR p6, #39	ERROR p6, #39	ERROR p6, #39	ERROR p6, #39	ERROR p6, #39	DISCARD p7
Incoming Call w/address has a non-BCD digit	ERROR p6, #67, 68	ERROR p6, #67, 68	ERROR p6, #22	ERROR p6, #23	ERROR p6, #24	DISCARD p6	ERROR p6, #26
Incoming Call with facility length greater than 63	ERROR p6, #64, 69	ERROR p6, #64, 69	ERROR p6, #22	ERROR p6, #23	ERROR p6, #24	DISCARD p6	ERROR p6, #26
Incoming Call with facility not = facility length	ERROR p6, #64	ERROR p6, #64	ERROR p6, #22	ERROR p6, #23	ERROR p6, #24	DISCARD p6	ERROR p6, #26
Incoming Call with facility length greater remainder of the packet	ERROR p6, #64	ERROR p6, #64	ERROR p6, #22	ERROR p6, #23	ERROR p6, #24	DISCARD p6	ERROR p6, #26

TABLE A3 (continued)

	p1	p2	p3	p4	p5	p6	p7
Incoming Call with facility code not allowed	ERROR p6, #65	ERROR p6, #65	ERROR p6, #22	ERROR p6, #23	DISCARD p6, #24	DISCARD p6	ERROR p6, #26
Incoming Call with facility value not allowed	ERROR p6, #66	ERROR p6, #66	ERROR p6, #22	ERROR p6, #23	ERROR p6, #24	DISCARD p6	ERROR p6, #26
Non-octet aligned clear indication*	ERROR p6, #82	ERROR p6, #82	ERROR p6, #82	ERROR p6, #82	ERROR p6, #82	ERROR p6, #82	DISCARD p7
Diagnostic				NORMAL			
Packet w/invalid GFI				DISCARD			
Any Packet with unassigned LCN				DISCARD			

DEFINITION:

NORMAL: Procedure as defined in the standard.
DISCARD: The received packet and take no subsequent action.
ERROR: Procedure is defined as follows:

I. Error condition in virtual calls:

1. Discard the received packet.
2. Send Clear Request.

II. Error condition in permanent virtual calls:

1. Discard the received packet.
2. Send Reset Request.

* - See Note 3

TABLE A4
(See Note 5)

STATE MATRIX
DTE DATA TRANSFER (FLOW CONTROL AND RESET)

PACKET FROM THE DCE WITH ASSIGNED LOGICAL CHANNEL	STATE OF THE INTERFACE AS PERCEIVED BY DTE		
	DATA TRANSFER p4		
	Flow Control Ready d1	DTE Reset Request d2	DCE Reset Indication d3
Reset Indication	NORMAL d3	NORMAL d1	DISCARD d3
DCE Reset Confirmation	ERROR d2, #27	NORMAL d1	ERROR d2, #29
Data, Interrupt, Flow Control	NORMAL d1	DISCARD d2	ERROR d2, #29
Restart Indication or Restart Confirmation with LC not 0	ERROR d2, #41	DISCARD d2	ERROR d2, #41
Packet with packet type shorter than 1 octet*	ERROR d2, #33, 38	DISCARD d2	ERROR d2, #33, 38
Any unidentifiable packet	ERROR d2, #33	DISCARD d2	ERROR d2, #33
Invalid Packet Type on Permanent Virtual Circuit	ERROR d2, #35	DISCARD d2	ERROR d2, #35
Reject Packet	ERROR d2, #33	DISCARD d2	ERROR d2, #33
Reset Indication Packet too long	ERROR d2, #39	ERROR d2, #39	DISCARD d3
Reset Confirmation Packet too long	ERROR d2, #27	ERROR d2, #39	ERROR d2, #29
Data, Interrupt, Flow Control Packet too long	ERROR d2, #39	DISCARD d2	ERROR d2, #29

TABLE A4 (continued)

	d1	d2	d3
Data with Invalid P(s)	ERROR d2, #1	DISCARD d2	ERROR d2, #29
Data, Flow Control with Invalid P(r)	ERROR d2, #2	DISCARD d2	ERROR d2, #39
DTE Interrupt before the previous DTE Interrupt has been confirmed	ERROR d2, #44	DISCARD d2	ERROR d2, #29
Data w/data Field not = an integral # of octets*	ERROR d2, #82	DISCARD d2	ERROR d2, #29
Data with D=1	NORMAL d1	DISCARD d2	ERROR d2, #29
Data with P(s) out of sequence, but within the window	ERROR d2, #1	DISCARD d2	ERROR d2, #29
Non-octet aligned reset indication*	ERROR d2, #82	ERROR d2, #82	DISCARD d3
Interrupt Confirmation does not correspond to a yet unconfirmed DTE Interrupt	ERROR d2, #43	DISCARD d2	ERROR d2, #29
Diagnostic LCN = 0		NORMAL	
Packet with invalid GFI		DISCARD	
Any packet with unassigned LCN		DISCARD	

DEFINITION:

NORMAL: Procedure as defined in the standard.

DISCARD: Discard the received packet and no subsequent action is taken.

ERROR: Is defined as follows:

a) Discard the received packet.
b) Send reset request.

* - See Note 3

TABLE A5

DUT TIME-OUTS
(DUT=DTE)

TIMER	DEFAULT VALUE	STARTED WHEN	NORMALLY TERMINATED WHEN	ACTION WHEN THE TIMER EXPIRES
T20	180s	Restart Request (r3)	DTE receives a: * Restart Confirmation or * Restart Indication	Retransmit restart request
T21	200s	Call Request (p3)	DTE receives a: * Call Connected * Incoming Call * Clear Indication or DTE sends a Clear Request	Retransmit clear request
T22	180s	Reset Request (d3)	DTE receives a: * Reset Confirmation or * Reset Indication	Retransmit reset request
T23	180s	Clear Request (p7)	DTE receives a: * Clear Confirmation or * Clear Request	Retransmit the clear request

MODULE A1
VERIFICATION OF LINK LEVEL DISCONNECT PHASE
(DUT=DTE)

EACH TEST MUST BE INITIALIZED BY THE FOLLOWING SEQUENCE

TESTER SENDS		**DUT SENDS**
DISC	——)	
	(——	**- DM or UA**

DISCONNECT PHASE INITIALIZED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
DISC	----)	
	(----	- DM
TEST NO. 2		
DISC/P=1	-----)	
	(-----	- DM/F=1
TEST NO. 3		
SABM	-----)	
	(-----	- UA
TEST NO. 4		
SABM/P=1	-----)	
	(-----	- UA/F=1

TEST NO. 5 (DUT receives frames other than DISC or SABM)

UA	-----)
FRMR	-----)
I	-----)
I/INVALID NR	-----)
I/INVALID NS	-----)
I FRAME TOO LONG	-----)
I W/O I FIELD	
RR	-----)
RNR	-----)
REJECT	-----)
ALL POSSIBLE UNKNOWN COMMANDS	-----)

ALL POSSIBLE UNKNOWN RESPONSES -----)
RR RESPONSE W/F=1 -----)

ALL POSSIBLE INCORRECT ADDRESSES -----)
FRAME W/FCS ERROR -----)
DISC W/I FIELD -----)

- IGNORES ALL THESE FRAMES

DISC -----)
(----- - DM

TEST NO. 6 (The information field of the I-frame can be null)

I/P=1 -----)
(----- - DM/F=1

TEST NO. 7

RR/P=1 -----)
(----- - DM/F=1

TEST NO. 8

RNR/P=1 -----)
(----- - DM/F=1

TEST NO. 9

REJ/P=1 -----)
(----- - DM/F=1

TEST NO. 10

DM -----) - DO NOTHING or
(----- - SABM

MODULE A2
VERIFICATION OF LINK LEVEL LINK DISCONNECT
(DUT=DTE)

SKIP THIS MODULE IF THE INITIAL CONDITION (DUT TO SEND A DISC COMMAND) CANNOT BE REALIZED.

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1 (DISC collision)		
	(-----	- DISC
DISC	-----)	
	(-----	- UA
SABM	-----)	- (verify if it is in link disc state)
	(-----	- DM
TEST NO. 2 (DISC collision)		
	(-----	- DISC
DISC/P=1	-----)	
	(-----	- UA/F=1
SABM	-----)	
	(-----	- DM
TEST NO. 3 (DISC and SABM collision)		
	(-----	- DISC
SABM	-----)	
	(-----	- DM
TEST NO. 4 (DISC and SABM collision)		
	(-----	- DISC
SABM/P=1	-----)	
	(-----	- DM/F=1
TEST NO. 5		
	(-----	- DISC
UA	-----)	- DISC PHASE
DISC	-----)	- (verify if DTE is in disc phase)
	(-----	- DM
TEST NO. 6 (DUT receives frames other than SABM or DISC)		
	(-----	- DISC
FRMR	-----)	
I FRAME	-----)	

I W/P=1	-----)	
I W/INVALID NR	-----)	
I W/INVALID NS	-----)	
I FRAME TOO LONG	-----)	
I W/O I FIELD	-----)	
RR	-----)	
RR W/P=1	-----)	
RNR	-----)	
RNR W/P=1	-----)	
REJ	-----)	
REJ W/P-1		
ALL POSSIBLE	-----)	
UNKNOWN COMMANDS		
ALL POSSIBLE	-----)	
UNKNOWN RESPONSES		
RR W/F=1	-----)	
ALL POSSIBLE	-----)	
INCORRECT ADDRESSES	-----)	
UA WITH FCS ERROR	-----)	
UA WITH I FIELD	-----)	
		- DUT IGNORES ALL THESE FRAMES.
		- DUT MAY RETRANSMIT DISC AFTER T1 EXPIRES.
SAMB	-----)	- (verify if DUT is in link disc state)
	(-----	- DM

TEST NO. 7

	(-----	- DISC
DM	-----)	- IGNORE DM or
	(-----	- reset T1, send DISC/P=1 then restart T1

TEST NO. 8 (Test Timer T1)

	(-----	- DISC
DO NOTHING		- T1 EXPIRES
	(-----	- DISC or DISC/P=1 start T1
		- T1/N2 EXPIRES
		- GO TO DISCONNECT PHASE
	(-----	- SABM or SABM/P (if DUT wishes to set up link), or nothing
DISC	-----)	
	(-----	- DM

MODULE A3
VERIFICATION OF LINK LEVEL LINK SETUP
(DUT=DTE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
DISC	——)	
	(——	**- UA or DM**
DM	——)	
	(——	**- SABM**

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1 (SABM and DISC collision)		
DISC	——-)	
	(——-	- DM
TEST NO. 2 (SABM and DISC collision)		
DISC/P=1	——-)	
	(——-	- DM/F=1
TEST NO. 3 (SABM collision)		
SABM	——-)	
	(——-	- UA
UA	——-)	
TEST NO. 4 (SABM collision)		
SABM/P=1	——-)	
	(——-	- UA/F=1
UA	——-)	- INFORMATION TRANSFER PHASE
TEST NO. 5		
UA	——-)	- INFORMATION TRANSFER PHASE
TEST NO. 6 (DUT receives frames other than SABM or DISC)		
FRMR	——-)	
I	——-)	
I/P=1	——-)	
I/INVALID NR	——-)	
I/INCORRECT NS	——-)	

I FRAME TOO LONG	-----)	
I FRAME W/O I-FIELD	-----)	
RR	-----)	
RR/P=1	-----)	
RNR	-----)	
RNR/P=1	-----)	
REJ	-----)	
REJ/P=1	-----)	
ALL POSSIBLE UNKNOWN COMMANDS	-----)	
ALL POSSIBLE UNKNOWN RESPONSES	-----)	
UA/F=1	-----)	
UA W/ALL POSSIBLE INVALID ADDRESSES	-----)	
UA W/FCS ERROR	-----)	
UA W/I FIELD	-----)	
		- DUT IGNORES ALL THESE FRAMES
		- DUT T1 EXPIRES
	(-----	- SABM or SABM/P=1

TEST NO. 7 (Test Timer T1)

DO NOTHING		
		- DUT T1 EXPIRES
	(-----	- SABM or SABM/P=1
DO NOTHING		
		- DUT T1 EXPIRES N2 TIMES
		- GO TO DISCONNECT PHASE
	(-----	- SABM or SAMB/P (DUT wishes setup link), or NOTHING
DISC	-----)	
	(-----	- DM

TEST NO. 8

DM	-----)	
	(-----	- DO NOTHING or - SABM/P=1
UA/F=1 IF RECEIVED SABM/P=1	-----)	- INFORMATION TRANSFER PHASE

MODULE A4
VERIFICATION OF LINK STATE "FRAME REJECT CONDITION"
(DUT=DTE)

EACH TEST MUST BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
DISC	——)	
	(——	**- UA or DM**
SABM	——)	
	(——	**- UA**
I/INVALID NR	——)	
	(——	**- FRMR**

FRAME REJECT INITIALIZED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
DISC	——)	
	(——	- UA
TEST NO. 2		
DISC/P=1	——)	
	(——	- UA/F=1
TEST NO. 3		
SABM	——)	
	(——	- UA
TEST NO. 4		
SABM/P=1	——)	
	(——	- UA/F=1
TEST NO. 5 (Unsolicited Response)*		
UA	——)	
	(——	- FRMR, SABM, or DISC
SABM IF RECEIVES FRMR; UA OTHERWISE	——)	

TEST NO. 6

```
FRMR        -----)
                 (-----      - SABM or DISC
UA          -----)
```

TEST NO. 7 (The information field of the I-frame can be null)

```
I           -----)
                 (-----      - FRMR
SABM        -----)
                 (-----      - UA
```

TEST NO. 8 (The information field of the I-frame can be null)

```
I/P=1       -----)
                 (-----      - FRMR/F=1
SABM        -----)
                 (-----      - UA
```

TEST NO. 9 (The information field of the I-frame can be null)

```
I/INVALID NR -----)
                 (-----      - FRMR
SABM        -----)
                 (-----      - UA
```

TEST NO. 10 (The information field of the I-frame can be null)

```
I/INCORRECT NS -----)
                 (-----      - FRMR
SABM        -----)
                 (-----      - UA
```

TEST NO. 11 (The I-frame is longer than N1)

```
I FRAME TOO LONG -----)
                 (-----      - FRMR
SABM        -----)
                 (-----      - UA
```

TEST NO. 12

```
I W/O I FIELD -----)
                 (-----      - FRMR
SABM        -----)
                 (-----      - UA
```

TEST NO. 13

```
RR COMMAND          -----)
                    (-----      - FRMR
SABM                -----)
                    (-----      - UA
```

TEST NO. 14

```
RR/P=1              -----)
                    (-----      - FRMR/F=1
SABM                -----)
                    (-----      - UA
```

TEST NO. 15

```
RNR COMMAND         -----)
                    (-----      - FRMR
SABM                -----)
                    (-----      - UA
```

TEST NO. 16

```
RNR/P=1             -----)
                    (-----      - FRMR/F=1
SABM                -----)
                    (-----      - UA
```

TEST NO. 17

```
REJ COMMAND         -----)
                    (-----      - FRMR
SABM                -----)
                    (-----      - UA
```

TEST NO. 18

```
REJ/P=1             -----)
                    (-----      - FRMR/F=1
SABM                -----)
                    (-----      - UA
```

TEST NO. 19

```
ALL UNKNOWN         -----)
COMMANDS; SEND OUT
EVERY DUT T1 SECOND
                    (-----      - FRMR FOR EVERY UNKNOWN
                                  COMMANDS RECEIVED
SABM                -----)
                    (-----      - UA
```

TEST NO. 20

ALL UNKNOWN RESPONSES; OUT EVERY DUT T1 SECOND	-----)	- IGNORE or
	(-----	- FRMR
SABM	-----)	
	(-----	- UA

TEST NO. 21*

RR RESPONSE W/F=1	-----)	- IGNORE
SABM	-----)	
	(-----	- UA

TEST NO. 22

SABM WITH ALL INCORRECT ADDRESS	-----)	
		- IGNORES THESE FRAMES
SABM	-----)	
	(-----	- UA

TEST NO. 23

SABM W/FCS ERROR	-----)	
		- IGNORES THIS FRAME
SABM	-----)	
	(-----	- UA

TEST NO. 24

SABM W/I FIELD	-----)	
	(-----	- FRMR
SABM	-----)	
	(-----	- UA

TEST NO. 25

DM	-----)	
	(-----	- SABM or DISC
UA	-----)	

TEST NO. 26 (Test Timer T1)

DO NOTHING		
		- T1 EXPIRES
	(-----	- FRMR or DO NOTHING

* - See Note 1

MODULE A5
VERIFICATION OF NORMAL LINK INFORMATION TRANSFER STATE
(DUT=DTE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

DISC	——)	
	(——	**- UA or DM**
SABM	——)	
	(——	**- UA**

INITIATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
DISC	----)	
	(----	- UA
TEST NO. 2		
DISC/P=1	-----)	
	(-----	- UA/F=1
TEST NO. 3		
SABM	----)	
	(----	- UA
TEST NO. 4		
SABM/P=1	-----)	
	(-----	- UA/F=1
TEST NO. 5	UNSOLICITED UA RESPONSE	
UA	-----)	
	(-----	- FRMR, SABM, or DISC
SABM IF RECEIVES FRMR: UA OTHERWISE	-----)	
TEST NO. 6		
FRMR	-----)	
	(-----	- SABM or DISC
UA	-----)	

TEST NO. 7 (The information field of the I-frame can be null)

```
I FRAME                  -----)
                         (-----      - RR or I FRAMES
```

TEST NO. 8 (The information field of the I-frame can be null)

```
I W/P=1                  -----)
                         (-----      - RR/F=1
```

TEST NO. 9 (The information field of the I-frame can be null)

```
I W/INVALID NR           -----)
                         (-----      - FRMR
CHECK FRMR FORMAT

SABM                     -----)
                         (-----      - UA
```

TEST NO. 10 (The information field of the I-frame can be null)

```
I W/INCORRECT NS         -----)
                         (-----      - REJ
CHECK REJ FORMAT

I W/CORRECT NS           -----)
                         (-----      - RR
```

TEST NO. 11 (I-frame is longer than N1)

```
I FRAME TOO LONG         -----)
                         (-----      - FRMR
CHECK FRMR FORMAT

SABM                     -----)
                         (-----      - UA
```

TEST NO. 12

```
I FRAME WITHOUT          -----)
I FIELD
                         (-----      - RR OR I
```

TEST NO. 13

```
RR                       -----)
                                     - DO NOTHING or
                         (-----      - RR or REJ or I
```

TEST NO. 14

```
RR/P=1                   -----)
                         (-----      - RR/F=1
```

TEST NO. 15

RNR/P=1	-----)	- REMOTE BUSY
	(-----	- RR/F=1 or REJ/F=1

TEST NO. 15A

RNR	-----)	- DO NOTHING or
	(-----	- RR

TEST NO. 16

	(-----	- DUT sends: 14 I frames (information field has no significance)
REJ	-----)	
	(-----	- I frame
RR	-----)	

TEST NO. 17

	(-----	- DUT sends: more than one I frame (information field has no significance)
REJ/P=1		
	(-----	- RR/F=1
	(-----	- I frames
RR	-----)	

TEST NO. 18

ALL UNKNOWN COMMANDS; OUT EVERY DUT T1 SECOND	-----)	
	(-----	- FRMR FOR EVERY UNKNOWN COMMAND
SABM	-----)	
	(-----	- UA

TEST NO. 19

ALL UNKNOWN RESPONSES; OUT EVERY DUT T1 SECOND	-----)	
	(-----	- FRMR FOR THE 1ST UNKNOWN RESPONSE, THEN SEND FRMR AFTER T1 TIMEOUT OR DO NOTHING
SABM	-----)	
	(-----	- UA

TEST NO. 20 UNSOLICITED F BIT

RR/F=1	-----)	
	(-----	- FRMR, SABM, or DISC
SABM IF RECEIVES FRMR; UA OTHERWISE	-----)	

TEST NO. 21

SABM WITH ALL INVALID ADDRESS	-----)	- IGNORES

TEST NO. 22

SABM W/FCS ERROR	-----)	- IGNORES

TEST NO. 23

SABM W/I FIELD	-----)	
	(-----	- FRMR
SABM	-----)	
	(-----	- UA

TEST NO. 24

DM	-----)	
	(-----	- SABM or DISC
UA	-----)	

TEST NO. 25 (Timer T1)

	(-----	- DUT sends: more than one I frame (information field has no significance)
DO NOTHING		
		- T1 EXPIRES
	(-----	- RR/I P=1
RR/F=1	-----)	

TEST NO. 26 (T1/N2 Time-out)

	(-----	- DUT sends: one or more I frame (information field has no significance)
DO NOTHING		
		- T1 EXPIRES
	(-----	- RR/I P=1
DO NOTHING		
		- T1/N2 EXPIRES
	(-----	- SABM
UA	-----)	

TEST NO. 27 WINDOW ROTATION

MORE THAN 7 I FRAMES	-----)	
	(-----	- RR or I FRAMES

TEST NO. 28 TRANSPARENCY

I WITH I FIELD = 7E7E7E7E7E7E7E7E WITH ZERO INSERTIONS	-----)	
	(-----	- RR or I FRAMES

TEST NO. 29

```
    I RESPONSE      -----)
                    (-----      - FRMR
    SABM            -----)
                    (-----      - UA
```

TEST NO. 30

```
    SABM TOO LONG   -----)
                    (-----      - FRMR
    SABM            -----)
                    (-----      - UA
```

TEST NO. 31

```
    DISC TOO LONG   -----)
                    (-----      - FRMR
    SABM            -----)
                    (-----      - UA
```

TEST NO. 32

```
    DM TOO LONG     -----)
                    (-----      - FRMR
    SABM            -----)
                    (-----      - UA
```

TEST NO. 33

```
    FRMR TOO LONG   -----)
                    (-----      - FRMR
    SABM            -----)
                    (-----      - UA
```

MODULE A6
VERIFICATION OF LINK LEVEL REMOTE BUSY STATE
(DUT=DTE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
DISC	——→	
	←——	**- UA or DM**
SABM	——→	
	←——	**- UA**
RNR	——→	

INITIATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
DISC	-----→	
	←-----	- UA
TEST NO. 2		
DISC/P=1	-----→	
	←-----	- UA/F=1
TEST NO. 3		
SABM	-----→	
	←-----	- UA
TEST NO. 4		
SABM/P=1	-----→	
	←-----	- UA/F=1
TEST NO. 5 UNSOLICITED RESPONSE		
UA	-----→	
	←-----	- FRMR, SABM, or DISC
SABM IF RECEIVES FRMR; UA OTHERWISE	-----→	
TEST NO. 6		
FRMR	-----→	
	←-----	- SABM or DISC
UA	-----→	

TEST NO. 7 (The information field of the I-frame can be null)

I	-----)	
	(-----	- RR

TEST NO. 8 (The information field of the I-frame can be null)

I/P=1	-----)	
	(-----	- RR/F=1

TEST NO. 9 (The information field of the I-frame can be null)

I W/INVALID NR	-----)	
	(-----	- FRMR
SABM	-----)	
	(-----	- UA

TEST NO. 10 (The information field of the I-frame can be null)

I W/INCORRECT NS	-----)	
	(-----	- REJ
I W/CORRECT NS	-----)	
	(-----	- RR

TEST NO. 11

I TOO LONG	-----)	
	(-----	- FRMR
SABM	-----)	
	(-----	- UA

TEST NO. 12

I W/O I FIELD	-----)	
	(-----	- RR

TEST NO. 13

RR	-----)	
	(-----	- DUT sends: 14 or more I frames (information field has no significance)
RNR	-----)	- STOP SENDING I FRAMES
	(-----	- RR, REJ, or nothing

TEST NO. 14

RR/P=1	-----)	
	(-----	- RR/F=1

TEST NO. 15

RNR	-----)	
	(-----	- RR, REJ, OR NOTHING

TEST NO. 16

RNR/P=1	-----)	
	(-----	- RR/F=1 or REJ/F=1

TEST NO. 17

REJ	-----)	
	(-----	- DUT sends: 14 or more I frames (information field can be null)
RNR	-----)	- STOP SENDING I FRAMES
	(-----	- RR, REJ, OR NOTHING

TEST NO. 18

REJ/P=1	-----)	
	(-----	- RR/F=1

TEST NO. 19 (Invalid commands, all possible permutations)

ALL UNKNOWN COMMANDS; OUT EVERY DUT T1 SECOND	-----)	
	(-----	- FRMR FOR EVERY UNKNOWN COMMAND
SABM	-----)	
	(-----	- UA

TEST NO. 20 (Invalid responses, all possible permutations)

ALL UNKNOWN RESPONSES; OUT EVERY DUT T1 SECOND	-----)	
	(-----	- FRMR FOR THE 1ST UNKNOWN RESPONSE, THEN SEND FRMR AFTER T1 TIMEOUT OR DO NOTHING
SABM	-----)	
	(-----	- UA

TEST NO. 21 UNSOLICITED F BIT

RR/F=1	-----)	
	(-----	- FRMR, SABM, or DISC
SABM FOR FRMR; UA OTHERWISE	-----)	

TEST NO. 22

SABM W/ALL POSSIBLE INCORRECT ADDRESSES	-----)	- IGNORES THESE FRAMES
SABM	-----)	
	(-----	- UA

TEST NO. 23

SABM W/FCS ERROR	-----)	- IGNORES THIS FRAME
SABM	-----)	
	(-----	- UA

TEST NO. 24

SABM W/I FIELD	-----)	
	(-----	- FRMR
SABM	-----)	
	(-----	- UA

TEST NO. 25

DM	-----)	
	(-----	- SABM or DISC
	-----)	

MODULE A7
VERIFICATION OF LINK LEVEL RESET STATE
(DUT=DTE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
DISC	——)	
	(——	**- UA or DM**
SABM	——)	
	(——	**- UA**
FRMR	——)	
	(——	**- SABM**

INITIATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1 (SABM and DISC collision)		
DISC	——-)	
	(——-	- DM
TEST NO. 2 (SABM and DISC collision)		
DISC/P=1	——-)	
	(——-	- DM/F=1
TEST NO. 3 (SABM collision)		
SABM	——-)	
	(——-	- UA
UA	——-)	
TEST NO. 4 (SABM collision)		
SABM/P=1	——-)	
	(——-	- UA/F=1
UA	——-)	
TEST NO. 5		
UA	——-)	
I FRAMES	——-)	
	(——	- RR

TEST NO. 6

FRMR	-----)	
	(-----	- SABM or DISC or DM or DO NOTHING
UA	-----)	

TEST NO. 7 (DUT receives frames other than DISC or SABM)

I FRAME	-----)	
I W/P=1	-----)	
I W/INVALID NR	-----)	
I W/INCORRECT NS	-----)	
I FRAME TOO LONG	-----)	
I W/O I FIELD	-----)	
RR	-----)	
RR/P=1	-----)	
RNR	-----)	
RNR/P=1	-----)	
REJ	-----)	
REJ/P-1	-----)	
ALL POSSIBLE UNKNOWN COMMANDS	-----)	
ALL POSSIBLE UNKNOWN RESPONSES	-----)	
UA/F=1	-----)	
UA W/ALL INVALID ADDRESSES	-----)	
UA W/FCS ERROR	-----)	
UA W/I FIELD	-----)	
		- IGNORES ALL THESE FRAMES
		- TI EXPIRES
	(-----	- SABM or SABM/P=1
UA or UA/F=1	-----)	

TEST NO. 8

DM	-----)	
	(-----	- DO NOTHING OR SABM/P
UA/F AS APPROPRIATE	-----)	

TEST NO. 9 (Timer T1 and T1/N2 time-out)

DO NOTHING		
		- T1 EXPIRES
	(-----	- SABM or SABM/P=1
		- T1/N2 EXPIRES
	(-----	- DM

MODULE A8
VERIFICATION OF LINK LEVEL "SEND REJECT" STATE
(DUT=DTE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
DISC	——)	
	(——	**- UA or DM**
SABM	——)	
	(——	**- UA**
I W/INCORRECT NS	——)	
	(——	**- REJ**

INITIATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
DISC	-----)	
	(-----	- UA
TEST NO. 2		
DISC/P=1	-----)	
	(-----	- UA/F=1
TEST NO. 3		
SABM	-----)	
	(-----	- UA
TEST NO. 4		
SABM/P=1	-----)	
	(-----	- UA/F=1
TEST NO. 5 UNSOLICITED RESPONSE		
UA	-----)	
	(-----	- FRMR, SABM, or DISC
SABM FOR FRMR; UA OTHERWISE	-----)	
TEST NO. 6		
FRMR	-----)	
	(-----	- SABM or DISC
UA	-----)	

TEST NO. 7 (The information field of the I-frame can be null)

```
CORRECT I FRAME          ----->)
                         (-----      - RR
```

TEST NO. 8 (The information field of the I-frame can be null)

```
CORRECT I W/P=1          ----->)
                         (-----      - RR/F=1
```

TEST NO. 9 (The information field of the I-frame can be null)

```
I W/INVALID NR           ----->)
                         (-----      - FRMR
SABM                     ----->)
                         (-----      - UA
```

TEST NO. 10 (The information field of the I-frame can be null)

```
I W/INCORRECT NS         ----->)     - IGNORES THIS FRAME
I W/CORRECT NS           ----->)
                         (-----      - RR
```

TEST NO. 11

```
I FRAME TOO LONG         ----->)
                         (-----      - FRMR
SABM                     ----->)
                         (-----      - UA
```

TEST NO. 12

```
CORRECT I FRAME          ----->)
WITHOUT I FIELD
                         (-----      - RR
```

TEST NO. 13

```
RR                       ----->)     - IGNORE
CORRECT I                ----->)
                         (-----      - RR
```

TEST NO. 14

```
RR/P=1                   ----->)
                         (-----      - RR/F=1
CORRECT I FRAME          ----->)
                         (-----      - RR
```

TEST NO. 15

RNR	-----)	- REMOTE BUSY AND SEND REJECT STATES
		- DO NOTHING

TEST NO. 16

RNR/P=1	-----)	
	(-----	- RR/F=1
		- REMOTE BUSY AND SEND REJECT STATE

TEST NO. 17 (Test retransmission of I-frames)

	(-----	- DUT sends: more than one I frame (information field can be null)
REJ	-----)	
	(-----	- I FRAMES
CORRECT I FRAME	-----)	
	(-----	- RR

TEST NO. 18

	(-----	- DUT sends: more than one I frame (information field can be null)
REJ/P=1	-----)	
	(-----	- RR/F=1
	(-----	- I FRAMES
CORRECT I FRAMES	-----)	

TEST NO. 19 (Invalid commands, all possible permutations)

ALL UNKNOWN COMMANDS; OUT EVERY DUT T1 SECOND	-----)	
	(-----	- FRMR FOR EVERY UNKNOWN COMMANDS
SABM	-----)	
	(-----	- UA

TEST NO. 20 (Invalid responses, all possible permutations)

```
ALL UNKNOWN RESPONSES; OUT EVERY DUT T1 SECOND  -----)
                                                (-----   - FRMR FOR THE 1ST UNKNOWN RESPONSE, THEN SEND FRMR AFTER T1 TIMEOUT OR DO NOTHING
SABM                                            -----)
                                                (-----   - UA
```

TEST NO. 21 UNSOLICITED F BIT

```
RR/F=1                                          -----)
                                                (-----   - FRMR, SABM, or DISC
SABM FOR FRMR; UA OTHERWISE                     -----)
```

TEST NO. 22

```
CORRECT I WITH ALL POSSIBLE INVALID ADDRESS     -----)   - IGNORES ALL THESE FRAMES

CORRECT I FRAME                                 -----)
                                                (-----   - RR
```

TEST NO. 23

```
SABM W/I FIELD                                  -----)
                                                (-----   - FRMR
SABM                                            -----)
                                                (-----   - UA
```

TEST NO. 24

```
SABM W/FSC ERROR                                -----)   - IGNORES THIS FRAME

SABM                                            -----)
                                                (-----   - UA
```

TEST NO. 25

```
DM                                              -----)
                                                (-----   - SABM or DISC
UA                                              -----)
```

MODULE A9
(See Note 5)
VERIFICATION OF PACKET LEVEL RESTART STATE r1
(DUT=DTE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART INDICATION	——)	
	(——	**- RESTART CONFIRMATION**

STATE r1 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
RESTART INDICATION	----)	
	(----	- RESTART CONFIRMATION (r1) OR - RESTART REQUEST (r1)
TEST NO. 2		
RESTART CONFIRMATION	-----)	
	(-----	- DISCARD - RESTART REQUEST, #17 (r2)
RESTART CONFIRMATION	-----)	(r1)
TEST NO. 3		
RESTART INDICATION TOO LONG	-----)	- DISCARD (r1)
TEST NO. 4		
RESTART CONFIRMATION	-----)	
	(-----	- RESTART REQUEST, #17 (r2) - START T20
RESTART CONFIRMATION TOO LONG	-----)	- DISCARD
	(-----	- RETRANSMIT RESTART REQUEST AFTER T20 EXPIRES
TEST NO. 5		
DIAGNOSTIC	----)	- ACCEPT DIAGNOSTIC PKT - NO RESPONSE REQUIRED

TEST NO. 6*

RESTART INDICATION NON-OCTET ALIGNED	-----)	- DISCARD (r1)

TEST NO. 7

DIAGNOSTIC LCN NOT = 0	-----)	- DISCARD

TEST NO. 8 - PACKETS, OTHER THAN RESTART AND DIAGNOSTIC, WITH LOGICAL CHANNEL NUMBER EQUAL 0

INCOMING CALL W/LCN = 0	----)	- DISCARD
CALL CONNECTED W/LCN = 0	-----)	- DISCARD
CLEAR INDICATION W/LCN = 0	-----)	- DISCARD
CLEAR CONFIRMATION W/LCN = 0	-----)	- DISCARD
DATA W/LCN = 0	-----)	- DISCARD
INTERRUPT W/LCN = 0	-----)	- DISCARD
INTERRUPT CONFIRMATION W/LCN = 0	-----)	- DISCARD
RR W/LCN = 0	-----)	- DISCARD
RNR W/LCN = 0	-----)	- DISCARD
RESET INDICATION W/LCN = 0	-----)	- DISCARD
RESET CONFIRMATION W/LCN = 0	-----)	- DISCARD

TEST NO. 9 - PACKETS WITH UNASSIGNED LOGICAL CHANNEL NUMBER

INCOMING CALL W/UNASSIGNED LCN	-----)	- DISCARD
CALL CONNECTED WITH UNASSIGNED LCN	-----)	- DISCARD
CLEAR INDICATION WITH UNASSIGNED LCN	-----)	- DISCARD
CLEAR CONFIRMATION WITH UNASSIGNED LCN	-----)	- DISCARD
DATA W/UNASSIGNED LCN	-----)	- DISCARD
INTERRUPT W/UNASSIGNED LCN	-----)	- DISCARD
INTERRUPT CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
RR W/UNASSIGNED LCN	-----)	- DISCARD
RNR W/UNASSIGNED LCN	-----)	- DISCARD
RESET INDICATION W/UNASSIGNED LCN	-----)	- DISCARD
RESET CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD

TEST NO. 10

RESTART INDICATION WITH ALL POSSIBLE INVALID GFI -----) - DISCARD

* - See Note 3

MODULE A10
(See Note 5)
VERIFICATION OF PACKET LEVEL RESTART REQUEST STATE r2
(DUT=DTE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART INDICATION	——)	
	(——	**- RESTART CONFIRMATION**
RESTART CONFIRMATION	——)	
	(——	**- RESTART REQUEST**

STATE r2 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
RESTART INDICATION	-----)	- (p1)
TEST NO. 2		
RESTART CONFIRMATION	-----)	- (p1)
TEST NO. 3 - PACKET IN WRONG STATE		
CLEAR INDICATION	-----)	- DISCARD
CALL CONNECTED	-----)	- DISCARD
INCOMING CALL	-----)	- DISCARD
DATA	-----)	- DISCARD
INTERRUPT	-----)	- DISCARD
RR	-----)	- DISCARD
RNR	-----)	- DISCARD
REJECT	-----)	- DISCARD
RESET	-----)	- DISCARD
PACKET TOO SHORT	-----)	- DISCARD
UNIDENTIFIABLE PACKET	-----)	- DISCARD
RESTART INDICATION WITH LC NOT = 0	-----)	- DISCARD
DIAGNOSTIC	-----)	- ACCEPT DIAG PKT
TEST NO. 4		
DIAGNOSTIC W/LCN NOT = 0	-----)	- DISCARD
RESTART CONFIRMATION	-----)	- (p1)

TEST NO. 5 - PACKETS, OTHER THAN RESTART AND DIAGNOSTIC, WITH LCN EQUAL 0

INCOMING CALL W/LCN = 0	-----)	- DISCARD
CALL CONNECTED W/LCN = 0	-----)	- DISCARD
CLEAR INDICATION W/LCN = 0	-----)	- DISCARD
CLEAR CONFIRMATION W/LCN = 0	-----)	- DISCARD
DATA W/LCN = 0	-----)	- DISCARD
INTERRUPT W/LCN = 0	-----)	- DISCARD
INTERRUPT CONFIRMATION W/LCN = 0	-----)	- DISCARD
RR W/LCN = 0	-----)	- DISCARD
RNR W/LCN = 0	-----)	- DISCARD
RESET INDICATION W/LCN = 0	-----)	- DISCARD
RESET CONFIRMATION W/LCN = 0	-----)	- DISCARD
RESTART CONFIRMATION	-----)	- (p1)

TEST NO. 6 - PACKETS WITH UNASSIGNED LCN

INCOMING CALL W/UNASSIGNED LCN	----)	- DISCARD
CALL CONNECTED WITH UNASSIGNED LCN	-----)	- DISCARD
CLEAR INDICATION WITH UNASSIGNED LCN	-----)	- DISCARD
CLEAR CONFIRMATION WITH UNASSIGNED LCN	----)	- DISCARD
DATA W/UNASSIGNED LCN	-----)	- DISCARD
INTERRUPT W/UNASSIGNED LCN	-----)	- DISCARD
INTERRUPT CONFIRMATION W/UNASSIGNED LCN	----)	- DISCARD
RR W/UNASSIGNED LCN	-----)	- DISCARD
RNR W/UNASSIGNED LCN	-----)	- DISCARD
RESET INDICATION W/UNASSIGNED LCN	----)	- DISCARD
RESET CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
RESTART CONFIRMATION	-----)	- (p1)

TEST NO. 7

RESTART INDICATION WITH ALL POSSIBLE INVALID GFI	-----)	- DISCARD
RESTART CONFIRMATION	-----)	- (p1)

TEST NO. 8

RESTART INDICATION TOO LONG	-----)	- DISCARD
	(-----	- RESTART REQUEST, #39 (r2)
RESTART CONFIRMATION	-----)	- (p1)

TEST NO. 9

RESTART CONFIRMATION TOO LONG	-----)	- DISCARD
	(-----	- RESTART REQUEST, #39 (r2)
RESTART CONFIRMATION	-----)	- (p1)

TEST NO. 10

RESTART INDICATION NON-OCTET ALIGNED	-----)	- DISCARD
	(-----	- RESTART REQUEST, #82 (r2)
RESTART CONFIRMATION	-----)	- (p1)

TEST NO. 11

DO NOTHING	-----)	
		- T20 EXPIRES
	(-----	- RESTART REQUEST, #52 (r2)
RESTART CONFIRMATION	-----)	

MODULE A11
(See Notes 5, 6)
VERIFICATION OF PACKET LEVEL RESTART INDICATION r3
(DUT=DTE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART INDICATION	——)	
STATE r3 INITIALIZATION IS COMPLETED		

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
RESTART INDICATION	-----)	- DISCARD (r3)
	(-----	- RESTART CONFIRMATION
TEST NO. 2		
RESTART CONFIRMATION	-----)	
	(-----	- DISCARD
		- RESTART REQUEST, #19 (r2)
RESTART CONFIRMATION	-----)	- (p1)
TEST NO. 3		
CALL CONNECTED	-----)	
	(-----	- DISCARD
		- RESTART REQUEST, #19 (r2)
RESTART CONFIRMATION	-----)	- (p1)
TEST NO. 4		
CLEAR INDICATION	-----)	
	(-----	- DISCARD
		- RESTART REQUEST, #19 (r2)
RESTART CONFIRMATION	-----)	- (p1)
TEST NO. 5		
INCOMING CALL	-----)	
	(-----	- DISCARD
		- RESTART REQUEST, #19 (r2)
RESTART CONFIRMATION	-----)	- (p1)

TEST NO. 6

DATA	-----)	
	(-----	- DISCARD
		- RESTART REQUEST, #19 (r2)
RESTART CONFIRMATION	-----)	- (p1)

TEST NO. 7

INTERRUPT	-----)	
	(-----	- DISCARD
		- RESTART REQUEST, #19 (r2)
RESTART CONFIRMATION	-----)	- (p1)

TEST NO. 8

RR	-----)	
	(-----	- DISCARD
		- RESTART REQUEST, #19 (r2)
RESTART CONFIRMATION	-----)	- (p1)

TEST NO. 9

RNR	-----)	
	(-----	- DISCARD
		- RESTART REQUEST, #19 (r2)
RESTART CONFIRMATION	-----)	- (p1)

TEST NO. 10

REJECT	-----)	
	(-----	- DISCARD
		- RESTART REQUEST, #33 (r2)
RESTART CONFIRMATION	-----)	- (p1)

TEST NO. 11

RESET	-----)	
	(-----	- DISCARD
		- RESTART #19 (r2)
RESTART CONFIRMATION	-----)	- (p1)

TEST NO. 12

DIAGNOSTIC	-----)	- ACCEPT DIAGNOSTIC PKT
	(-----	- RESTART CONFIRMATION

TEST NO. 13*

PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	----)	
	(----	- DISCARD - RESTART REQUEST, #33, 38 (r2)
RESTART CONFIRMATION	----)	- (p1)

TEST NO. 14

ANY UNIDENTIFIABLE PACKET	----)	
	(----	- DISCARD - RESTART REQUEST, #33 (r2)
RESTART CONFIRMATION	----)	- (p1)

TEST NO. 15

RESTART INDICATION WITH LC NOT = 0	----)	
	(----	- DISCARD - RESTART REQUEST, #41 (r2)
RESTART CONFIRMATION	----)	- (p1)

TEST NO. 16

RESTART INDICATION TOO LONG	----)	
	(----	- DISCARD - RESTART CONFIRMATION

TEST NO. 17

RESTART CONFIRMATION TOO LONG	----)	
	(----	- DISCARD - RESTART CONFIRMATION

TEST NO. 18*

RESTART INDICATION NON-OCTET ALIGNED	----)	
	(----	- DISCARD - RESTART CONFIRMATION

TEST NO. 19

INCOMING CALL W/UNASSIGNED LCN	----)	- DISCARD
	(----	- RESTART CONFIRMATION

TEST NO. 20

DIAGNOSTIC W/INVALID GFI	-----)	- DISCARD
	(-----	- RESTART CONFIRMATION

* - See Note 3

MODULE A12
(See Notes 4, 5)
VERIFICATION OF PACKET LEVEL SETUP AND CLEARING STATE p1
(DUT=DTE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART INDICATION	——)	
	(——	**- RESTART CONFIRMATION**

STATE p1 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
INCOMING CALL	——)	
	(——	- CALL ACCEPTED
CLEAR INDICATION	——)	
	(——	- CLEAR CONFIRMATION (p1)
TEST NO. 2		
INCOMING CALL W/D=1	——)	
	(——	- CALL ACCEPTED
CLEAR INDICATION	——)	
	(——	- CLEAR CONFIRMATION (p1)
TEST NO. 3		
INCOMING CALL W/FAST SELECT USER DATA = 128 OCTETS	——)	
	(——	- CLEAR REQUEST WITH USER DATA = UP TO 128 OCTETS OR - CALL ACCEPTED WITH USER DATA = UP TO 128 OCTETS
CLEAR INDICATION	——)	
	(——	- CLEAR CONFIRMATION (p1)
TEST NO. 4		
INCOMING CALL W/FS USER DATA = 130 OCTETS	——)	- DISCARD
	(——	- CLEAR REQUEST, #39 (p6)
CLEAR CONFIRMATION	——)	

TEST NO. 5

CALL CONNECTED	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #20 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 6

CLEAR CONFIRMATION	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #20 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 7

DATA	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #20 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 8

INTERRUPT	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #20 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 9

RR	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #20 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 10

RNR	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #20 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 11

REJECT	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #33 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 12

RESET	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #20 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 13

DIAGNOSTIC	-----)	- ACCEPT DIAGNOSTIC PKT

TEST NO. 14*

PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #33, 38 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 15

ANY UNIDENTIFIABLE PACKET	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #33 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 16

RESTART INDICATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #41 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 17

RESTART CONFIRMATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #41 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 18

CLEAR INDICATION TOO LONG	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #39 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 19

INCOMING CALL WITH DUPLICATED FACILITY CODE	-----)	
	(-----	- CALL ACCEPTED

TEST NO. 20

INCOMING CALL WITH ADDRESS CONTAINS A NON-BCD DIGIT	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #67, 68 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 21

INCOMING CALL WITH FACILITY LENGTH GREATER THAN 63	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #64, 69 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 22

INCOMING CALL WITH FACILITIES NOT = FACILITY LENGTH	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #64 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 23

INCOMING CALL WITH FACILITY LENGTH GREATER THAN REMAINDER OF PACKET	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #64 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 24

INCOMING CALL WITH FACILITY CODE NOT ALLOWED	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #65 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 25

INCOMING CALL WITH FACILITY VALUE NOT ALLOWED	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #66 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 26

INCOMING CALL TOO LONG	-----)	
	(-----	- CLEAR REQUEST, #39 (p6)

TEST NO. 27*

CLEAR INDICATION NON-OCTET ALIGNED	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #82 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

* - See Note 3

MODULE A13
(See Notes 4, 5)
VERIFICATION OF PACKET LEVEL CALL SETUP AND CLEARING STATE p2
(DUT=DTE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART INDICATION	——)	
	(——	**- RESTART CONFIRMATION**
	(——	**- DUT SENDS: CALL REQUEST**

STATE p2 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
INCOMING CALL	——)	- DISCARD (p5)
CALL CONNECTED	——)	- p4
CLEAR INDICATION	——)	
	(——	- CLEAR CONFIRMATION (p1)
TEST NO. 2		
CALL CONNECTED	——)	- (p4)
CLEAR INDICATION	——)	
	(——	- CLEAR CONFIRMATION (p1)
TEST NO. 3		
CLEAR INDICATION	——)	
	(——	- CLEAR CONFIRMATION (p1)
TEST NO. 4		
CLEAR CONFIRMATION	——)	
	(——	- DISCARD
		- CLEAR REQUEST, #21 (p6)
CLEAR CONFIRMATION	——)	- (p1)
TEST NO. 5		
DATA	——)	
	(——	- DISCARD
		- CLEAR REQUEST, #21 (p6)
CLEAR CONFIRMATION	——)	- (p1)

TEST NO. 6

INTERRUPT	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #21 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 7

RR	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #21 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 8

RNR	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #21 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 9

REJECT	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #33 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 10

RESET	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #21 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 11

DIAGNOSTIC	-----)	- ACCEPT DIAGNOSTIC PKT

TEST NO. 12*

PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #33, 38 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 13

ANY UNIDENTIFIABLE PACKET	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #33 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 14

RESTART INDICATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #41 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 15

RESTART CONFIRMATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #41 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 16

CALL CONNECT TOO LONG	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #39 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 17

CLEAR INDICATION TOO LONG	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #39 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 18

DO NOTHING		- T21 TIMEOUTS (200s) - CLEAR REQUEST, #49 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 19

INCOMING CALL WITH DUPLICATED FACILITY CODE	-----)	- (p5)
CALL CONNECTED	-----)	- (p4)

TEST NO. 20

INCOMING CALL WITH ADDRESS CONTAINS A NON-BCD DIGIT	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #67, 68 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 21

INCOMING CALL WITH FACILITY LENGTH GREATER THAN 63	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #64, 69 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 22

INCOMING CALL WITH FACILITIES NOT = FACILITY LENGTH	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #64 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 23

INCOMING CALL WITH FACILITY LENGTH GREATER THAN REMAINDER OF PACKET	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #64 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 24

INCOMING CALL WITH FACILITY CODE NOT ALLOWED	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #65 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 25

INCOMING CALL WITH FACILITY VALUE NOT ALLOWED	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #66 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 26*

CLEAR INDICATION NON-OCTET ALIGNED	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #82 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 27 - PACKETS WITH UNASSIGNED LOGICAL CHANNEL NUMBER

INCOMING CALL W/UNASSIGNED LCN	-----)	- DISCARD
CALL CONNECTED WITH UNASSIGNED LCN	-----)	- DISCARD
CLEAR INDICATION WITH UNASSIGNED LCN	-----)	- DISCARD
CLEAR CONFIRMATION WITH UNASSIGNED LCN	-----)	- DISCARD
DATA W/UNASSIGNED LCN	-----)	- DISCARD
INTERRUPT W/UNASSIGNED LCN	-----)	- DISCARD
INTERRUPT CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
RR W/UNASSIGNED LCN	-----)	- DISCARD
RNR W/UNASSIGNED LCN	-----)	- DISCARD
RESET INDICATION W/UNASSIGNED LCN	-----)	- DISCARD
RESET CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
CALL CONNECTED	-----)	- (p4)
CLEAR INDICATION	-----)	
	(-----	- CLEAR CONFIRMATION

TEST NO. 28

CALL CONNECTED WITH ALL POSSIBLE INVALID GFI	-----)	- DISCARD
CALL CONNECTED	-----)	
CLEAR INDICATION	-----)	
	(-----	- CLEAR CONFIRMATION

* - See Note 3

MODULE A14
(See Notes 4, 5, 6)
VERIFICATION OF PACKET LEVEL CALL SETUP AND CLEARING STATE p3
(DUT=DTE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART INDICATION	——)	
	(——	**- RESTART CONFIRMATION**
INCOMING CALL	——)	

STATE p3 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
CLEAR INDICATION	-----)	
	(-----	- CLEAR CONFIRMATION (p1)
TEST NO. 2		
INCOMING CALL	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #22 (p6)
CLEAR CONFIRMATION	(-----	- (p1)
TEST NO. 3		
CALL CONNECTED	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #22 (p6)
CLEAR CONFIRMATION	(-----	- (p1)
TEST NO. 4		
CLEAR CONFIRMATION	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #22 (p6)
CLEAR CONFIRMATION	-----)	- (p1)
TEST NO. 5		
DATA	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #22 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 6

INTERRUPT	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #22 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 7

RR	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #22 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 8

RNR	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #22 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 9

RESET	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #22 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 10

REJECT	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #33 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 11

DIAGNOSTIC	-----)	- ACCEPT DIAGNOSTIC PKT
	(-----	- CALL ACCEPTED
CLEAR INDICATION	-----)	
	(-----	- CLEAR CONFIRMATION

TEST NO. 12*

PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #33, 38 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 13

ANY UNIDENTIFIABLE PACKET	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #33 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 14

RESTART INDICATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #41 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 15

RESTART CONFIRMATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #41 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 16

CLEAR INDICATION TOO LONG	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #39 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 17

INCOMING CALL WITH DUPLICATED FACILITY CODE	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #22 (p6)
CLEAR CONFIRMATION	-----)	

TEST NO. 18

INCOMING CALL WITH ADDRESS CONTAINS A NON-BCD DIGIT	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #22 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 19

INCOMING CALL WITH FACILITY LENGTH GREATER THAN 63	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #22 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 20

INCOMING CALL WITH FACILITIES NOT = FACILITY LENGTH	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #22 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 21

INCOMING CALL WITH FACILITY LENGTH GREATER THAN REMAINDER OF PACKET	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #22 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 22

INCOMING CALL WITH FACILITY CODE NOT ALLOWED	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #22 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 23

INCOMING CALL WITH FACILITY VALUE NOT ALLOWED	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #22 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 24*

CLEAR INDICATION NON-OCTET ALIGNED	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #82 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 25

CLEAR INDICATION W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- CALL CONNECTED

TEST NO. 26

DIAGNOSTIC W/INVALID GFI	----)	- DISCARD
	(-----	- CALL CONNECTED

* - See Note 3

MODULE A15
(See Notes 4, 5, 6)
VERIFICATION OF PACKET LEVEL CALL SETUP AND CLEARING STATE p4
(DUT=DTE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART INDICATION	——)	
	(——	**- RESTART CONFIRMATION**
INCOMING CALL	——)	
	(——	**- CALL ACCEPTED**

STATE p4 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
CALL CONNECTED	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #23 (p6)
CLEAR CONFIRMATION	-----)	- (p1)
TEST NO. 2		
CLEAR CONFIRMATION	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #23 (p6)
CLEAR CONFIRMATION	-----)	- (p1)
TEST NO. 3		
INCOMING CALL WITH DUPLICATED FACILITY CODE	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #23 (p6)
CLEAR CONFIRMATION	-----)	- (p1)
TEST NO. 4		
INCOMING CALL WITH ADDRESS CONTAINS A NON-BCD DIGIT	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #23 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 5

INCOMING CALL WITH FACILITY LENGTH GREATER THAN 63	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #23 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 6

INCOMING CALL WITH FACILITIES NOT = FACILITY LENGTH	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #23 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 7

INCOMING CALL WITH FACILITY LENGTH GREATER THAN REMAINDER OF PACKET	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #23 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 8

INCOMING CALL WITH FACILITY CODE NOT ALLOWED	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #23 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 9

INCOMING CALL WITH FACILITY VALUE NOT ALLOWED	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #23 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 10*

CLEAR INDICATION NON-OCTET ALIGNED	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #82 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 11 - PACKETS WITH UNASSIGNED LOGICAL CHANNEL NUMBER

INCOMING CALL W/UNASSIGNED LCN	-----)	- DISCARD
CALL CONNECTED WITH UNASSIGNED LCN	-----)	- DISCARD
CLEAR INDICATION WITH UNASSIGNED LCN	-----)	- DISCARD
CLEAR CONFIRMATION WITH UNASSIGNED LCN	-----)	- DISCARD
DATA W/UNASSIGNED LCN	-----)	- DISCARD
INTERRUPT W/UNASSIGNED LCN	-----)	- DISCARD
INTERRUPT CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
RR W/UNASSIGNED LCN	-----)	- DISCARD
RNR W/UNASSIGNED LCN	-----)	- DISCARD
RESET INDICATION W/UNASSIGNED LCN	-----)	- DISCARD
RESET CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD

TEST NO. 12

RESTART INDICATION WITH ALL POSSIBLE INVALID GFI	-----)	- DISCARD

* - See Note 3

MODULE A16
(See Notes 4, 5)
VERIFICATION OF PACKET LEVEL CALL SETUP AND CLEARING STATE p5
(DUT=DTE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART INDICATION	——)	
	(——	**- RESTART CONFIRMATION**
	(——	**- DUT SENDS: CALL REQUEST**
INCOMING CALL	——)	

STATE p5 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
DATA	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #24 (p6)
CLEAR CONFIRMATION	(-----	- (p1)
TEST NO. 2		
INCOMING CALL	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #24 (p6)
CLEAR CONFIRMATION	(-----	- (p1)
TEST NO. 3		
CLEAR CONFIRMATION	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #24 (p6)
CLEAR CONFIRMATION	-----)	- (p1)
TEST NO. 4		
INTERRUPT	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #24 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 5

RR	----)	
	(----	- DISCARD
		- CLEAR REQUEST, #24 (p6)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 6

RNR	----)	
	(----	- DISCARD
		- CLEAR REQUEST, #24 (p6)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 7

REJECT	----)	
	(----	- DISCARD
		- CLEAR REQUEST, #33 (p6)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 8

RESET	----)	
	(----	- DISCARD
		- CLEAR REQUEST, #24 (p6)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 9

DIAGNOSTIC	----)	- ACCEPT DIAGNOSTIC PKT

TEST NO. 10*

PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	----)	
	(----	- DISCARD
		- CLEAR REQUEST, #33, 38 (p6)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 11

ANY UNIDENTIFIABLE PACKET	----)	
	(----	- DISCARD
		- CLEAR REQUEST, #33 (p6)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 12

RESTART INDICATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #41 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 13

RESTART CONFIRMATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #41 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 14

CLEAR INDICATION TOO LONG	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #39 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 15

INCOMING CALL WITH DUPLICATED FACILITY CODE	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #24 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 16

INCOMING CALL WITH ADDRESS CONTAINS A NON-BCD DIGIT	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #24 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 17

INCOMING CALL WITH FACILITY LENGTH GREATER THAN 63	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #24 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 18

INCOMING CALL WITH FACILITIES NOT = FACILITY LENGTH	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #24 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 19

INCOMING CALL WITH FACILITY CODE NOT ALLOWED	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #24 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 20

INCOMING CALL WITH FACILITY VALUE NOT ALLOWED	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #24 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 21

CALL CONNECTED	-----)	- (p4)

TEST NO. 22

CALL CONNECTED TOO LONG	-----)	- DISCARD
	(-----	- CLEAR REQUEST, #39 (p6)
CLEAR CONFIRMATION	-----)	

TEST NO. 23*

CLEAR INDICATION NON-OCTET ALIGNED	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #82 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 24 - PACKETS WITH UNASSIGNED LOGICAL CHANNEL NUMBER

INCOMING CALL W/UNASSIGNED LCN	-----)	- DISCARD
CALL CONNECTED WITH UNASSIGNED LCN	-----)	- DISCARD

CLEAR INDICATION WITH UNASSIGNED LCN	-----)	- DISCARD
CLEAR CONFIRMATION WITH UNASSIGNED LCN	-----)	- DISCARD
DATA W/UNASSIGNED LCN	-----)	- DISCARD
INTERRUPT W/UNASSIGNED LCN	-----)	- DISCARD
INTERRUPT CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
RR W/UNASSIGNED LCN	-----)	- DISCARD
RNR W/UNASSIGNED LCN	-----)	- DISCARD
RESET INDICATION W/UNASSIGNED LCN	-----)	- DISCARD
RESET CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
CALL CONNECTED	-----)	- (p4)

TEST NO. 25

RESTART INDICATION WITH ALL POSSIBLE INVALID GFI	-----)	- DISCARD
CALL CONNECTED	-----)	- (p4)

* - See Note 3

MODULE A17
(See Notes 4, 5)
VERIFICATION OF PACKET LEVEL SETUP AND CLEARING STATE p6
(DUT=DTE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART INDICATION	——)	
	(——	- **RESTART CONFIRMATION**
INCOMING CALL	——)	
	(——	- **CALL ACCEPTED**
CALL CONNECTED	——)	
	(——	- **CLEAR REQUEST**

STATE p6 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1 - PACKET IN WRONG STATE		
INCOMING CALL	-----)	- DISCARD
CALL CONNECTED	-----)	- DISCARD
DATA	-----)	- DISCARD
INTERRUPT	-----)	- DISCARD
RR	-----)	- DISCARD
RNR	-----)	- DISCARD
REJECT	-----)	- DISCARD
RESET	-----)	- DISCARD
DIAGNOSTIC W/LCN = THE INITIALIZED CHANNEL NO.	-----)	- DISCARD
PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	-----)	- DISCARD
ANY UNIDENTIFIABLE PACKET	-----)	- DISCARD
RESTART INDICATION WITH LC NOT = 0	-----)	- DISCARD
RESTART CONFIRMATION WITH LC NOT = 0	-----)	- DISCARD
CLEAR CONFIRMATION	-----)	- (p1)
TEST NO. 2		
DO NOTHING	(-----	- CLEAR REQUEST, #48 (p6) (T23 TIMER - 180's)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 3

CLEAR INDICATION PACKET TOO LONG	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #39 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 4

CLEAR CONFIRMATION TOO LONG	-----)	
	(-----	- CLEAR REQUEST, #39 (p6)

TEST NO. 5

CLEAR CONFIRMATION TOO SHORT	-----)	
	(-----	- CLEAR REQUEST, #38 (p6)

TEST NO. 6

CLEAR INDICATION	-----)	- (p1)

TEST NO. 7 - PACKETS WITH UNASSIGNED LOGICAL CHANNEL NUMBER

INCOMING CALL W/UNASSIGNED LCN	-----)	- DISCARD
CALL CONNECTED WITH UNASSIGNED LCN	-----)	- DISCARD
CLEAR INDICATION WITH UNASSIGNED LCN	-----)	- DISCARD
CLEAR CONFIRMATION WITH UNASSIGNED LCN	-----)	- DISCARD
DATA W/UNASSIGNED LCN	-----)	- DISCARD
INTERRUPT W/UNASSIGNED LCN	-----)	- DISCARD
INTERRUPT CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
RR W/UNASSIGNED LCN	-----)	- DISCARD
RNR W/UNASSIGNED LCN	-----)	- DISCARD
RESET INDICATION W/UNASSIGNED LCN	-----)	- DISCARD
RESET CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 8

RESTART INDICATION WITH ALL POSSIBLE INVALID GFI	-----)	- DISCARD
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 9

CLEAR INDICATION NON-OCTET ALIGNED	---->	- DISCARD
	<-----	- CLEAR REQUEST, #82 (p6)
CLEAR CONFIRMATION	---->	- (p1)

MODULE A18
(See Notes 4, 5, 6)
VERIFICATION OF PACKET LEVEL CALL SETUP AND CLEARING STATE p7
(DUT=DTE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART INDICATION	——)	
	(——	**- RESTART CONFIRMATION**
INCOMING CALL	——)	
	(——	**- CALL ACCEPTED**
CLEAR INDICATION	——)	

STATE p7 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
INCOMING CALL	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #26 (p6)
CLEAR CONFIRMATION	(-----	- (p1)
TEST NO. 2		
CALL CONNECTED	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #26 (p6)
CLEAR CONFIRMATION	(-----	- (p1)
TEST NO. 3		
CLEAR INDICATION	-----)	- DISCARD (p6)
	(-----	- CLEAR CONFIRMATION
TEST NO. 4		
CLEAR CONFIRMATION	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #26 (p6)
CLEAR CONFIRMATION	-----)	- (p1)
TEST NO. 5		
DATA	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #26 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 6

INTERRUPT	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #26 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 7

RR	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #26 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 8

RNR	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #26 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 9

REJECT	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #33 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 10

RESET	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #26 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 11

DIAGNOSTIC	-----)	- ACCEPT DIAGNOSTIC PKT
	(-----	- CLEAR CONFIRMATION

TEST NO. 12*

PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	-----)	
	(-----	- DISCARD
		- CLEAR REQUEST, #33, 38 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 13

ANY UNIDENTIFIABLE PACKET	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #33 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 14

RESTART INDICATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #41 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 15

RESTART CONFIRMATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #41 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 16

INCOMING CALL WITH DUPLICATED FACILITY CODE	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #26 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 17

INCOMING CALL WITH ADDRESS CONTAINS A NON-BCD DIGIT	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #26 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 18

INCOMING CALL WITH FACILITY LENGTH GREATER THAN 63	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #26 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 19

INCOMING CALL WITH FACILITIES NOT = FACILITY LENGTH	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #26 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 20

INCOMING CALL WITH FACILITY LENGTH GREATER THAN REMAINDER OF PACKET	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #26 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 21

INCOMING CALL WITH FACILITY CODE NOT ALLOWED	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #26 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 22

INCOMING CALL WITH FACILITY VALUE NOT ALLOWED	-----)	
	(-----	- DISCARD - CLEAR REQUEST, #26 (p6)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 23

CLEAR INDICATION PACKET TOO LONG	-----)	
	(-----	- DISCARD - CLEAR CONFIRMATION

TEST NO. 24*

CLEAR INDICATION NON-OCTET ALIGNED	-----)	
	(-----	- DISCARD - CLEAR CONFIRMATION

TEST NO. 25

CLEAR INDICATION W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- CLEAR CONFIRMATION

TEST NO. 26

DIAGNOSTIC W/INVALID GFI	-----)	- DISCARD
	(-----	- CLEAR CONFIRMATION

* - See Note 3

MODULE A19
(See Note 5)
VERIFICATION OF PACKET LEVEL DATA TRANSFER AND RESET STATE d1
(DUT=DTE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART INDICATION	——)	
	(——	**- RESTART CONFIRMATION**
INCOMING CALL (NOT NEEDED FOR PVC)	——)	
	(——	**- CALL ACCEPTED (NOT NEEDED FOR PVC)**

STATE d1 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
RESET INDICATION	-----)	
	(-----	- RESET CONFIRMATION (d1)
TEST NO. 2 (THE CONTENTS OF DATA PACKET HAVE NO SIGNIFICANCE)		
DATA WITH D=0	-----)	
	(-----	- RR, RNR, OR DATA
CONTINUOUSLY SENDS 9 CONSECUTIVE DATA PACKETS DUT RESPONDS WITH RR, RNR, OR DATA PACKETS		
TEST NO. 3 (THE CONTENTS OF DATA PACKET HAVE NO SIGNIFICANCE)		
DATA WITH D=1	-----)	
	(-----	- RR, RNR, OR DATA
CONTINUOUSLY SENDS 9 CONSECUTIVE DATA PACKETS DUT RESPONDS WITH RR, RNR, OR DATA PACKETS		
TEST NO. 4		
INTERRUPT	-----)	
	(-----	- INTERRUPT CONFIRMATION
TEST NO. 5		
DIAGNOSTIC	-----)	- ACCEPTED

TEST NO. 6

RESET CONFIRMATION	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #27 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 7*

PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #33 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 8

REJECT	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #33 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 9

ANY UNIDENTIFIABLE PACKET	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #33, 38 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 10

RESTART INDICATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #41 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 11

RESTART CONFIRMATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #41 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 12

DATA PACKET TOO LONG	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #39 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 13

DATA W/INVALID P(S)	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #1 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 14

DATA W/INVALID P(R)	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #2 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 15

RR W/INVALID P(R)	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #2 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 16

DATA W/P(S) OUT OF SEQUENCE BUT WITHIN THE WINDOW	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #1 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 17

INTERRUPT CONFIRMATION	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #43 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 18

INTERRUPT	-----)	
INTERRUPT	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #44 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 19

INTERRUPT	-----)	
INTERRUPT CONFIRMATION	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #43 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 20

DO THIS TEST ON A PERMANENT VIRTUAL CIRCUIT

CALL REQUEST	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #35 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 21

RESET INDICATION TOO LONG	-----)	
	(-----	- RESET REQUEST, #39 (d2)

TEST NO. 22

RESET INDICATION TOO SHORT	-----)	
	(-----	- RESET REQUEST, #38 (d2)

TEST NO. 23*

DATA W/USER DATA NOT = INTEGRAL # OF OCTETS	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #82 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 24*

RESET INDICATION NON-OCTET ALIGNED	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #82 (d2)
RESET CONFIRMATION	-----)	- (d1)

* - See Note 3

MODULE A20
(See Note 5)
VERIFICATION OF PACKET LEVEL DATA TRANSFER AND RESET STATE d2
(DUT=DTE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART INDICATION	——)	
	(——	**- RESTART CONFIRMATION**
INCOMING CALL (NOT NEEDED FOR PVC)	——)	
	(——	**- CALL ACCEPTED (NOT NEEDED FOR PVC)**
DATA W/BAD PR	——)	
	(——	**- RESET REQUEST**

STATE d2 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
RESET INDICATION	-----)	- (d1)
TEST NO. 2		
RESET CONFIRMATION	-----)	- (d1)
TEST NO. 3 - PACKETS IN WRONG STATE		
DATA	-----)	- DISCARD
INTERRUPT	-----)	- DISCARD
RR	-----)	- DISCARD
RNR	-----)	- DISCARD
REJECT	-----)	- DISCARD
DIAGNOSTIC W/LCN = THE INITIALIZED CHANNEL NO.	-----)	- DISCARD
PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	-----)	- DISCARD
ANY UNIDENTIFIABLE PACKET	-----)	- DISCARD
RESTART INDICATION WITH LC NOT = 0	-----)	- DISCARD
RESTART CONFIRMATION WITH LC NOT = 0	-----)	- DISCARD
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 4

DO NOTHING	(-----	- T22 EXPIRES (180's) - RESET REQUEST, #48 (d2) - OR CLEAR REQUEST, #48 (p6)
RESET CONFIRMATION (IF RECEIVED RESET REQUEST)	-----)	- (d1)/(p1)
CLEAR CONFIRMATION (IF RECEIVED CLEAR REQUEST)		

TEST NO. 5

DO THIS TEST ON A PERMANENT VIRTUAL CIRCUIT

CLEAR CONFIRMATION	-----)	- DISCARD
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 6

RESET CONFIRMATION TOO LONG	-----)	
	(-----	- DISCARD - RESET REQUEST, #39 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 7

RESET INDICATION TOO LONG	-----)	
	(-----	- DISCARD - RESET REQUEST, #39 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 8

INCOMING CALL W/UNASSIGNED LCN	-----)	- DISCARD
CALL CONNECTED WITH UNASSIGNED LCN	-----)	- DISCARD
CLEAR INDICATION WITH UNASSIGNED LCN	-----)	- DISCARD
CLEAR CONFIRMATION WITH UNASSIGNED LCN	-----)	- DISCARD
DATA W/UNASSIGNED LCN	-----)	- DISCARD
INTERRUPT W/UNASSIGNED LCN	-----)	- DISCARD
INTERRUPT CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
RR W/UNASSIGNED LCN	-----)	- DISCARD
RNR W/UNASSIGNED LCN	-----)	- DISCARD
RESET INDICATION W/UNASSIGNED LCN	-----)	- DISCARD

RESET CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 9

RESTART INDICATION WITH ALL POSSIBLE INVALID GFI	-----)	- DISCARD
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 10

RESET INDICATION NON-OCTET ALIGNED	----->	- DISCARD
	<-----	- RESET REQUEST, #82 (d2)
RESET CONFIRMATION	----->	- (d1)

MODULE A21
(See Notes 5, 6)
VERIFICATION OF PACKET LEVEL DATA TRANSFER AND RESET STATE d3
(DUT=DTE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART INDICATION	——)	
	(——	**- RESTART CONFIRMATION**
INCOMING CALL	——)	**- (NOT REQUIRED FOR PVC)**
	(——	**- CALL ACCEPTED**
		(NOT REQUIRED FOR PVC)
RESET INDICATION	——)	

STATE d3 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
RESET CONFIRMATION	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #29 (d2)
RESET CONFIRMATION	-----)	- (d1)
TEST NO. 2		
DATA	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #29 (d2)
RESET CONFIRMATION	-----)	- (d1)
TEST NO. 3		
INTERRUPT	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #29 (d2)
RESET CONFIRMATION	-----)	- (d1)
TEST NO. 4		
RR	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #29 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 5

RNR	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #29 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 6

REJECT	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #33 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 7

DIAGNOSTIC	-----)	- ACCEPT DIAGNOSTIC PKT
	(-----	- RESET CONFIRMATION

TEST NO. 8*

PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #33, 38 (d2
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 9

ANY UNIDENTIFIABLE PACKET	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #33, 38 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 10

RESTART INDICATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #41 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 11

RESTART CONFIRMATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD
		- RESET REQUEST, #41 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 12

DO THIS TEST ON A PERMANENT VIRTUAL CIRCUIT

CLEAR INDICATION	----)	
	(----	- DISCARD
		- RESET REQUEST, #35 (d2)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 13*

RESET INDICATION WITH NON-OCTET ALIGNED	-----)	
	(-----	- DISCARD
		- RESET CONFIRMATION

TEST NO. 14

CLEAR INDICATION W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- RESET CONFIRMATION

TEST NO. 15

CLEAR INDICATION W/INVALID GFI	-----)	- DISCARD
	(-----	- RESET CONFIRMATION

* - See Note 3

MODULE A22
MULTIPLE LOGICAL CHANNELS TESTING
(DUT=DTE)

PURPOSE: Test DUT capability of handling simultaneously more than one VC's and more than one PVC's.

Data transfer simultaneously operate on 9 virtual calls and 2 permanent virtual circuits. Packet size = 128 octets. Determine the length it takes to transmit 15 data packets.

APPENDIX B

DCE LINK AND PACKET LEVEL VERIFICATION TESTS

This appendix establishes the verification tests to be used on an X.25 data circuit terminating equipment (DCE) operating under the procedures specified by FIPS 100. In general, a DCE will pass the verification if it has been tested and no significant deviations have been identified.

There are a total of eight (8) modules for the verification of the link level. For each module, the tests are broken down into categories which evaluate the DCE's ability to respond to:

1) link setup
2) link disconnect
3) information transfer
4) error recovery
5) invalid N(s) and N(r)
6) window overruns
7) invalid length
8) invalid command or response
9) timer

There are a total of 14 modules for the verification of the packet level. Each module generally has the following tests:

1) proper packet procedures
2) packet format
3) invalid packet
4) packet length
5) invalid N(s) and N(r)
6) non-octet aligned data field
7) invalid facility code and value
8) virtual call and permanent virtual circuit
9) timers
10) invalid general format identifier

A complete test including all test modules will be executed at the line speed of 9,600 bits per second. Spot checks will be performed at line speeds of 2,400 and 4,800 bits per second.

NOTES

1. The test result will not affect the outcome of the verification.

2. "Local Busy" state has not been included in the link level matrix. This is because the "Local Busy" state cannot be tested.

3. This text is not applicable to DCE's at level 2 frames that are not octet aligned.

4. If the diagnostic codes are different from those as given, ICST will determine their correctness as appropriate.

5. The testing of the DTE defined states (e.g., r2, p2, p6, or d2) may result in actually testing of state r1, p4, p1, or d1. This condition occurs if the DCE processes the incoming packets on a one by one basis. For example, if a test is set up to verify a r2 DTE restart request state:

TESTER SENDS		DCE SENDS
RESTART REQUEST	-----)	
ERROR PACKET	-----)	
	(-----	- RESTART CONFIRMATION
	(-----	- CLEAR INDICATION

Once the initiation is completed, the DCE responds to the restart request with a restart confirmation. As far as the DCE is concerned, the packet level interface is now in the r1 state. The DCE then proceeds to process the next packet in sequence. In this case, the error packet which the DCE was intended to process in r2. The DCE responds to the error packet as prescribed in r1 (p1) state.

If the sequence as described above occurs, the DCE's response will be accepted as a valid response.

TABLES

B1. DCE Link Level State Matrix
B2. DCE Restart Procedure State Matrix
B3. DCE Call Setup and Clearing State Matrix
B4. DCE Data Transfer State Matrix
B5. DCE Timer Values

MODULES

B1. Verification of Link Level Disconnect Phase (DUT=DCE)
B2. Verification of Link Level Link Disconnect (DUT=DCE)
B3. Verification of Link Level Link Setup (DUT=DCE)
B4. Verification of Link Level Frame Reject (DUT=DCE)
B5. Verification of Link Level Information Transfer (DUT=DCE)
B6. Verification of Link Level Remote Busy (DUT=DCE)
B7. Verification of Link Level Reset (DUT=DCE)
B8. Verification of Link Level Send Reject (DUT=DCE)
B9. Verification of Packet Level Restart r1 (DUT=DCE)
B10. Verification of Packet Level Restart Request r2 (DUT=DCE)
B11. Verification of Packet Level Restart Indication r3 (DUT=DCE)
B12. Verification of Packet Level Ready p1 (DUT=DCE)
B13. Verification of Packet Level Call Request p2 (DUT=DCE)
B14. Verification of Packet Level Incoming Call p3 (DUT=DCE)
B15. Verification of Packet Level Data Transfer p4 (DUT=DCE)
B16. Verification of Packet Level Call Collision p5 (DUT=DCE)
B17. Verification of Packet Level Clear Request p6 (DUT=DCE)
B18. Verification of Packet Level Clear Indication p7 (DUT=DCE)
B19. Verification of Packet Level Flow Control Ready d1 (DUT=DCE)
B20. Verification of Packet Level Reset Request d2 (DUT=DCE)
B21. Verification of Packet Level Reset Indication d3 (DUT=DCE)
B22. Multiple Logical Channels Testing (DUT=DCE)

TABLE B1
(See Note 2)

DCE LINK LEVEL STATE MATRIX

				INFORMATION TRANSFER				
	DISCONNECT PHASE (DP)	**LINK DISCONNECT (START T1) (LD)**	**LINK SETUP (START T1) (LSU)**	**FRAME REJECT (MAY START T1) (FR)**	**NORMAL (N)**	**REMOTE BUSY (RB)**	**RESET (R)**	**SEND REJECT (START T1) (SR)**
DISC	DM (DP)	UA (LD)	DM (DP)	UA (DP)	UA (DP)	UA (DP)	DM (DP)	UA (DP)
DISC/P	DM/F (DP)	UA/F (LD)	DM/F (DP)	UA/F (DP)	UA/F (DP)	UA/F (DP)	DM/F (DP)	UA/F (DP)
SABM	UA (N)	DM (DP)	UA (LSU)	UA (N)	UA (N)	UA (N)	UA (N)	UA (N)
SABM/P	UA/F (N)	DM/F (DP)	UA/F (LSU)	UA/F (N)	UA/F (N)	UA/F (N)	UA/F (N)	UA/F (N)
UA	IGNORE (DP)	(DP)	(N)	FRMR/SABM/ DISC* (FR/R/LD)	FRMR/SABM/ DISC (FR/R/LD)	FRMR/SABM/ DISC (FR/R/LD)	(N)	FRMR/SABM/ DISC (FR/R/LD)
FRMR	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	SABM/DISC (R/LD)	SABM/DISC (R/LD)	SABM/DISC (R/LD)	SABM/DISC (R/LD)	SABM/DISC (R/LD)
I	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	I/RR (N)	RR (RR)	IGNORE (R)	RR (N)

TABLE B1 (continued)

	(DP)	(LD)	(LSU)	(FR)	(N)	(RB)	(R)	(SR)
I/P	DM/F (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR/F (FR)	RR/F (N)	RR/F (RB)	IGNORE (R)	RR/F (N)
I/INVALID NR	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	FRMR (FR)	FRMR (FR)	IGNORE (R)	FRMR (FR)
I/INCORRECT NS	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	REJ (SR)	REJ (SR & RB)	IGNORE (R)	IGNORE (SR)
I/INVALID NR & INCORRECT NS	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	FRMR (FR)	FRMR (FR)	IGNORE (R)	FRMR (FR)
I FRAME TOO LONG	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	FRMR (FR)	FRMR (FR)	IGNORE (R)	FRMR (FR)
I FRAME W/O I FIELD	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	I/RR (N)	RR (RB)	IGNORE (R)	RR (N)
RR	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	NOTHING RR, REJ, I (N)	(N)	IGNORE (R)	NOTHING (SR)
RR/P	DM/F (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR/F (FR)	RR/F (N)	RR/F (N)	IGNORE (R)	RR/F (SR)
RNR	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	NOTHING RR (RB)	NOTHING RR, REJ (RB)	IGNORE (R)	NOTHING (SR & RB)
RNR/P	DM/F (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR/F (FR)	RR/F, REJ/F (RB)	RR/F, REJ/F (RB)	IGNORE (R)	RR/F (SR & RB)
REJ	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	I (N)	I (N)	IGNORE (R)	I (N)

TABLE B1 (continued)

	(DP)	(LD)	(LSU)	(FR)	(N)	(RB)	(R)	(SR)
REJ/P	DM/F (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR/F (FR)	RR/F THEN I (N)	RR/F THEN I (N)	IGNORE (R)	RR/F THEN I (SR)
UNKNOWN CMD ALL POSSIBLE PERMUTATIONS	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR/IGNORE (FR)	FRMR (FR)	FRMR (FR)	IGNORE (R)	FRMR (FR)
UNKNOWN RESPONSE ALL POSSIBLE PERMUTATIONS	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	FRMR (FR)	FRMR (FR)	IGNORE (R)	FRMR (FR)
UNSOLICITED F	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	IGNORE* (FR)	FRMR/SABM/ DISC (FR/R/LD)	FRMR/SABM/ DISC (FR/R/LD)	IGNORE (R)	FRMR/SABM/ DISC (FR/R/LD)
INCORRECT ADDRX ALL POSSIBLE PERMUTATIONS	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	IGNORE (FR)	IGNORE (N)	IGNORE (RB)	IGNORE (R)	IGNORE (SR)
FCS ERROR	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	IGNORE (FR)	IGNORE (N)	IGNORE (RB)	IGNORE (R)	IGNORE (SR)
NON-I FRAME W/I FIELD EXCLUDING FRMR	IGNORE (DP)	IGNORE (LD)	IGNORE (LSU)	FRMR (FR)	FRMR (FR)	FRMR (FR)	IGNORE (R)	FRMR (FR)
DM	IGNORE/SABM (DP)/(LSU)	NOTHING OR DISC/P START T1 (LD)	NOTHING OR SABM/P START T1 (LSU)	SABM/DISC (R/LD)	SABM/DISC (R/LD)	SABM/DISC (R/LD)	NOTHING OR SABM/P START T1 (R)	SABM/DISC (R/LD)

TABLE B1 (continued)

	(DP)	(LD)	(LSU)	(FR)	(N)	(RB)	(R)	(SR)
T1 EXPIRES	--	DISC/DISC P (START T1) (LD)	SABM/SABM P (START T1) (LSU)	FRMR* OR NOTHING MAY START T1 (FR)	I/RR P (START T1) (N)	--	SABM/SABM P (START T1) (R)	--
I WITH I FIELD = 7E7E7E7E7E7E7E7E WITH ZERO INSERTION	--	--	--	--	RR/I (N)	--	--	--
DISC TOO LONG	--	--	--	--	FRMR (FR)	--	--	--
DM TOO LONG	--	--	--	--	FRMR (FR)	--	--	--
FRMR TOO LONG	--	--	--	--	FRMR (FR)	--	--	--
I RESPONSE	--	--	--	--	FRMR (FR)	--	--	--

* - See Note 1

TABLE B2
(See Note 4)

STATE MATRIX
DCE RESTART PROCEDURE

PACKET FROM THE DTE WITH ASSIGNED LOGICAL CHANNEL	STATE OF THE INTERFACE AS PERCEIVED BY DCE		
	Packet Level Ready	**DTE Restart Request**	**DCE Restart Indication**
	r1	**r2**	**r3**
Restart Request	NORMAL (r2)	DISCARD (r2)	NORMAL (p1 or d1)
Restart Request with cause field not 0	DISCARD DIAGNOSTIC/ (optional) (r1), #81	DISCARD (r2)	DISCARD DIAGNOSTIC/ (optional) (r3), #81
DTE Restart Confirmation	ERROR (r3), #17	ERROR (r3), #18	NORMAL (p1 or d1)
Data, Interrupt, Call Setup and Clearing, Flow Control Reset, excluding pkt reject	See Table B4	ERROR (r3), #18	DISCARD (r3)
Restart Request or Restart Confirmation with logical channel not 0	See Table B4	ERROR (r3), #41	DISCARD (r3)
Packet with packet type shorter than 1 octet*	See Table B4	ERROR (r3), #38	DISCARD (r3)
Any unidentifiable packet	See Table B4	ERROR (r3), #33	DISCARD (r3)
Restart Request too long	DISCARD DIAGNOSTIC/ (optional) (r1), #39	DISCARD (r2)	ERROR (r3), #39
Restart Confirmation too long	DISCARD DIAGNOSTIC/ (optional) (r1), #39	DISCARD (r2)	ERROR (r3), #39

TABLE B2 (continued)

	r1	r2	r3
Non-octet aligned Restart Request*	DISCARD DIAGNOSTIC/ (optional) (r1), #82	DISCARD (r2)	ERROR (r3), #82
Pkt w/invalid GFI		DISCARD, DIAGNOSTIC, #40	
Any Pkt with an unassigned LCN		DISCARD, DIAGNOSTIC, #36	
Any Pkt other than Restart Request or Confirmation with LCN = 0		DISCARD, DIAGNOSTIC, #36	

DEFINITION:

NORMAL: The action taken by the DCE follows the procedure as defined in the FIPS X.25.

DISCARD: Discards the received packet.

ERROR:
a) Discard the received packet.
b) Send restart indication with cause of local procedure error.
c) For the case of virtual call, send remote DTE a clear indication with cause of remote procedure error.
d) For the case of permanent virtual call, send remote DTE a restart indication with cause of remote procedure error.

* - See Note 3

TABLE B3
(See Note 4)

STATE MATRIX
DCE CALL SETUP AND CLEARING

	STATE OF THE INTERFACE AS PERCEIVED BY THE DCE						
	PACKET LEVEL READY r1						
PACKET FROM DTE WITH ASSIGNED LOGICAL CHANNEL	READY p1	DTE WAITING p2	DCE WAITING p3	DATA TRANSFER p4	CALL COLLISION p5	DTE CLEAR REQUEST p6	DCE CLEAR INDICATION p7
Call Request	NORMAL (p2)	ERROR (p7), #21	NORMAL (p5)	ERROR (p7), #23	ERROR (p7), #24	ERROR (p7), #25	DISCARD (p7)
Call Request with D=1	NORMAL (p2)	ERROR (p7), #21	NORMAL (p5)	ERROR (p7), #23	ERROR (p7), #24	ERROR (p7), #25	DISCARD (p7)
Call Request w/fast select	NORMAL (p2)	ERROR (p7), #21	NORMAL (p5)	ERROR (p7), #23	ERROR (p7), #24	ERROR (p7), #25	DISCARD (p7)
Call Accepted	ERROR (p7), #20	ERROR (p7), #21	NORMAL (p4)	ERROR (p7), #23	ERROR (p7), #24	ERROR (p7), #25	DISCARD (p7)
Clear Request	NORMAL (p6)	NORMAL (p6)	NORMAL (p6)	NORMAL (p6)	NORMAL (p6)	DISCARD (p6)	NORMAL (p1)
DTE Clear Confirmation	ERROR (p7), #20	ERROR (p7), #21	ERROR (p7), #22	ERROR (p7), #23	ERROR (p7), #24	ERROR (p7), #25	NORMAL (p1)

TABLE B3 (continued)

	p1	p2	p3	p4	p5	p6	p7
Data, Interrupt, Reset, RR, RNR	ERROR (p7), #20	ERROR (p7), #21	ERROR (p7), #22	See Table B4	ERROR (p7), #24	ERROR (p7), #25	DISCARD (p7)
Restart Request or Restart Conf. w/LC not 0	ERROR (p7), #41	ERROR (p7), #41	ERROR (p7), #41	See Table B4	ERROR (p7), #41	ERROR (p7), #41	DISCARD (p7)
Packet w/pkt type 1 octet*	ERROR (p7), #38	ERROR (p7), #38	ERROR (p7), #38	See Table B4	ERROR (p7), #38	ERROR (p7), #38	DISCARD (p7)
Unidentifiable packet	ERROR (p7), #33	ERROR (p7), #33	ERROR (p7), #33	See Table B4	ERROR (p7), #33	ERROR (p7), #33	DISCARD (p7)
Call Request with duplicate facility code	ERROR #177 (p7)**	ERROR (p7), #21	ERROR #177 (p7)**	ERROR (p7), #23	ERROR (p7), #24	ERROR (p7), #25	DISCARD (p7)
Call Request with incoming one-way	ERROR (p7), #34	ERROR (p7), #21	ERROR (p7), #34	ERROR (p7), #23	ERROR (p7), #24	ERROR (p7), #25	DISCARD (p7)
Call Request packet too long	ERROR (p7), #39	ERROR (p7), #21	ERROR (p7), #39	ERROR (p7), #23	ERROR (p7), #24	ERROR (p7), #25	DISCARD (p7)
Call Accepted packet too long	ERROR (p7), #20	ERROR (p7), #21	ERROR (p7), #39	ERROR (p7), #23	ERROR (p7), #24	ERROR (p7), #25	DISCARD (p7)
Clear Request with cause field not 0	ERROR (p7), #81	ERROR (p7), #81	ERROR (p7), #81	ERROR (p7), #81	ERROR (p7), #81	ERROR (p7), #81	ERROR (p7), #81
Clear Request packet too long	ERROR (p7), #39	ERROR (p7), #39	ERROR (p7), #39	ERROR (p7), #39	ERROR (p7), #39	DISCARD (p6)	ERROR (p7), #39
Call Request w/addres has a non-BCD digit	ERROR (p7), #67, #68	ERROR (p7), #21	ERROR (p7), #67, #68	ERROR (p7), #23	ERROR (p7), #24	ERROR (p7), #25	DISCARD (p7)

TABLE B3 (continued)

	p1	p2	p3	p4	p5	p6	p7
Call Request with facility length greater than 63	ERROR (p7), #64	ERROR (p7), #21	ERROR (p7), #64	ERROR (p7), #23	ERROR (p7), #24	ERROR (p7), #25	DISCARD (p7)
Call Request with facility not = facility length	ERROR (p7), #64	ERROR (p7), #21	ERROR (p7), #64	ERROR (p7), #23	ERROR (p7), #24	ERROR (p7), #25	DISCARD (p7)
Call Request with facility length greater remainder of the packet	ERROR (p7), #38	ERROR (p7), #21	ERROR (p7), #38	ERROR (p7), #23	ERROR (p7), #24	ERROR (p7), #25	DISCARD (p7)
Call Request with facility code not allowed	ERROR (p7), #65	ERROR (p7), #21	ERROR (p7), #65	ERROR (p7), #23	ERROR (p7), #24	ERROR (p7), #25	DISCARD (p7)
Call Request with facility value not allowed	ERROR (p7), #66	ERROR (p7), #21	ERROR (p7), #66	ERROR (p7), #23	ERROR (p7), #24	ERROR (p7), #25	DISCARD (p7)
Non-octet aligned clear request*	ERROR (p7), #82	ERROR (p7), #82	ERROR (p7), #82	ERROR (p7), #82	ERROR (p7), #82	DISCARD (p6)	ERROR (p7), #82
Non-octet aligned call request*	ERROR (p7), #82	ERROR (p7), #21	ERROR (p7), #82	ERROR (p7), #23	ERROR (p7), #24	ERROR (p7), #25	DISCARD (p7)
DTE Clear Conf too long	ERROR (p7), #20	ERROR (p7), #21	ERROR (p7), #22	ERROR (p7), #23	ERROR (p7), #24	ERROR (p7), #25	ERROR (p7), #39
Pkt w/invalid GFI			Discard, Diagnostic, #40				
Any Pkt with unassigned LCN			Discard, Diagnostic, #36				

DEFINITION:

NORMAL: Procedure as defined in the standard.
DISCARD: Discard the received packet and take no subsequent action.
ERROR: Procedure is defined as follows:

I. Error condition in virtual calls:

1. Discard the received packet.
2. Send Clear Indication with cause of local procedure error
3. Send remote DTE a Clear Indication with cause of remote procedure error.

II. Error condition in permanent virtual circuits:

1. Discard the received packet.
2. Send Reset Indication with cause of local procedure error.
3. Send remote DTE Reset Indication with remote procedure error.

* - See Note 3

TABLE B4
(See Note 4)

STATE MATRIX
DCE DATA TRANSFER (FLOW CONTROL AND RESET)

PACKET FROM THE DTE WITH ASSIGNED LOGICAL CHANNEL	STATE OF THE INTERFACE AS PERCEIVED BY DCE DATA TRANSFER p4		
	Flow Control Ready d1	DTE Reset Request d2	DCE Reset Indication d3
Reset Request	NORMAL (d2)	DISCARD (d2)	NORMAL (d1)
DTE Reset Confirmation	ERROR (d3), #27	ERROR (d3), #28	NORMAL (d1)
Data, Interrupt, Flow Control	NORMAL (d1)	ERROR (d3), #28	DISCARD (d3)
Restart Request or Restart Confirmation with LC not 0	ERROR (d3), #41	ERROR (d3), #41	DISCARD (d3)
Packet with packet type shorter than 1 octet*	ERROR (d3), #27	ERROR (d3), #28	DISCARD (d3)
Any unidentifiable packet	ERROR (d3), #27	ERROR (d3), #28	DISCARD (d3)
Invalid packet type on permanent virtual circuit	ERROR (d3), #35	ERROR (d3), #35	DISCARD (d3)
Reject packet	ERROR (d3), #27	ERROR (d3), #28	DISCARD (d3)
Reset request packet too long	ERROR (d3), #39	DISCARD (d2)	ERROR (d3), #39
Reset Confirmation packet too long	ERROR (d3), #27	ERROR (d3), #28	ERROR (d3), #39
Data, Interrupt, Flow Control packet too long	ERROR (d3), #39	ERROR (d3), #28	DISCARD (d3)

TABLE B4 (continued)

	d1	d2	d3
Data with invalid P(S)	ERROR (d3), #1	ERROR (d3), #28	DISCARD (d3)
Data, Flow Control with invalid P(R)	ERROR (d3), #2	ERROR (d3), #28	DISCARD (d3)
DTE interrupt before the previous DTE interrupt has been confirmed	DISCARD DIAGNOSTIC (d1), #44	ERROR (d3), #28	DISCARD (d3)
DTE interrupt conf. does not correspond to a yet unconfirmed DCE interrupt	ERROR (d3), #43	ERROR (d3), #28	DISCARD (d3)
Data w/data field not = an integral # of octets*	ERROR (d3), #82	ERROR (d3), #28	DISCARD (d3)
Data with D = 1	NORMAL (d1)	ERROR (d3), #28	DISCARD (d3)
Data with P(S) out of sequence, but within the window	ERROR (d3), #1	ERROR (d3), #28	DISCARD (d3)
Non-octet aligned reset request*	ERROR (d3), #82	DISCARD (d2)	ERROR (d3), #82
Pkt with invalid GFI	DISCARD, DIAGNOSTIC, #40		
Any Pkt with unassigned LCN	DISCARD, DIAGNOSTIC, #36		

DEFINITION:

NORMAL: Procedure as defined in the standard.

DISCARD: Discard the received packet and no subsequent action is taken.

ERROR: Procedure is defined as follows:

a) Discard the received packet.
b) Send reset indication with local procedure error
c) Send remote DTE reset indication with remote procedure error

* - See Note 3

TABLE B5

DUT TIMEOUTS
(DUT=DCE)

TIMER	DEFAULT VALUE	STARTED WHEN	NORMALLY TERMINATED WHEN	ACTIONS TAKEN WHEN THE TIMER EXPIRES	
				LOCAL SIDE	REMOTE SIDE
T10	60 s	Restart Indication (r3)	DCE receives a: * Restart Confirmation * Restart Request	Sends Diagnostic or sends restart indication	Sends reset indication with remote procedure error
T11	180 s	Incoming Call (p3)	DCE receives a: * Call Accepted * Clear Request or * Call Request	Sends clear Indication	Sends clear Indication
T12	60 s	Reset Indication (d3)	DCE receives a: * Reset Confirmation or * Reset Request	For virtual calls: Send clear indication For permanent VC: Send diagnostic or Send reset indication	For virtual calls: Send clear indication For permanent VC: Send reset indication
T13	60 s	Clear Indication (p7)	DCE receives a: * Clear Confirmation or * Clear Request	Send diagnostic or Clear Indication	

MODULE B1
VERIFICATION OF LINK LEVEL DISCONNECT PHASE
(DUT=DCE)

EACH TEST MUST BE INITIALIZED BY THE FOLLOWING SEQUENCE

TESTER SENDS		**DUT SENDS**
DISC	——)	
	(——	**- DM or UA**

DISCONNECT PHASE INITIALIZED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
DISC	-----)	
	(-----	- DM
TEST NO. 2		
DISC/P=1	-----)	
	(-----	- DM/F=1
TEST NO. 3		
SABM	-----)	
	(-----	- UA
TEST NO. 4		
SABM/P=1	-----)	
	(-----	- UA/F=1

TEST NO. 5 (DUT receives frames other than DISC or SABM)

UA	-----)
FRMR	-----)
I	-----)
I/INVALID NR	-----)
I/INVALID NS	-----)
I FRAME TOO LONG	-----)
I W/O I FIELD	
RR	-----)
RNR	-----)
REJECT	-----)
ALL POSSIBLE	-----)
UNKNOWN COMMANDS	

ALL POSSIBLE -----)
UNKNOWN RESPONSES
RR RESPONSE W/F=1 -----)
ALL POSSIBLE -----)
INCORRECT ADDRESSES
FRAME W/FCS ERROR -----)

DISC W/I FIELD -----)

- IGNORES ALL THESE FRAMES

DISC -----)
(----- - DM

TEST NO. 6 (The information field of the I-frame can be null)

I/P=1 -----)
(----- - DM/F=1

TEST NO. 7

RR/P=1 -----)
(----- - DM/F=1

TEST NO. 8

RNR/P=1 -----)
(----- - DM/F=1

TEST NO. 9

REJ/P=1 -----)
(----- - DM/F=1

TEST NO. 10

DM -----) - DO NOTHING or
(----- - SABM

MODULE B2
VERIFICATION OF LINK LEVEL LINK DISCONNECT
(DUT=DCE)

SKIP THIS MODULE IF THE INITIAL CONDITION (DUT TO SEND A DISC COMMAND) CANNOT BE REALIZED.

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1 (DISC collision)		
	(-----	- DISC
DISC	-----)	
	(-----	- UA, LINK DISC STATE
SABM	-----)	- (verify if it is in link disc state)
	(-----	- DM
TEST NO. 2 (DISC collision)		
	(-----	- DISC
DISC/P=1	-----)	
	(-----	- UA/F=1, LINK DISC STATE
SABM	-----)	
	(-----	- DM
TEST NO. 3 (DISC and SABM collision)		
	(-----	- DISC
SABM	-----)	
	(-----	- DM
TEST NO. 4 (DISC and SABM collision)		
	(-----	- DISC
SABM/P=1	-----)	
	(-----	- DM/F=1
TEST NO. 5		
	(-----	- DISC
UA	-----)	- DISC PHASE
DISC	-----)	- (verify if DTE is in disc phase)
	(-----	- DM
TEST NO. 6 (DUT receives frames other than SABM or DISC)		
	(-----	- DISC
FRMR	-----)	
I FRAME	-----)	
I W/P=1	-----)	

I W/INVALID NR	-----)	
I W/INVALID NS	-----)	
I FRAME TOO LONG	-----)	
I W/O I FIELD	-----)	
RR	-----)	
RR W/P=1	-----)	
RNR	-----)	
RNR W/P=1	-----)	
REJ	-----)	
REJ W/P-1		
ALL POSSIBLE	-----)	
UNKNOWN COMMANDS		
ALL POSSIBLE	-----)	
UNKNOWN RESPONSES		
RR W/F=1	-----)	
ALL POSSIBLE	-----)	
INCORRECT ADDRESSES	-----)	
UA WITH FCS ERROR	-----)	
UA WITH I FIELD	-----)	
		- DUT IGNORES ALL THESE FRAMES.
		- DUT MAY RETRANSMIT DISC AFTER T1 EXPIRES.
SABM	-----)	- (verify if DUT is in link disc state)
	(-----	- DM

TEST NO. 7

	(-----	- DISC
DM	-----)	- DO NOTHING, GO TO DISC PHASE
	(-----	- OR SEND DISC/P
		- START T1

TEST NO. 8 (Timer T1 and T1/N2)

	(-----	- DISC
DO NOTHING		- T1 EXPIRES
	(-----	- DISC or DISC/P=1 START T1
		- T1/N2 EXPIRES
		- GO TO DISCONNECT PHASE
	(-----	- SABM or SABM/P (DUT wishes to set up link), or
DISC	-----)	
	(-----	- DM

MODULE B3
VERIFICATION OF LINK LEVEL LINK SETUP
(DUT=DCE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
DISC	——)	
	(——	**- UA or DM**
DM	——)	
	(——	**- SABM**

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1 (SABM and DISC collision)		
DISC	-----)	
	(-----	- DM, DISC PHASE
TEST NO. 2 (SABM and DISC collision)		
DISC/P=1	-----)	
	(-----	- DM/F=1, DISK PHASE
TEST NO. 3 (SABM collision)		
SABM	-----)	
	(-----	- UA, LINK SETUP
UA	-----)	- INFORMATION TRANSFER
TEST NO. 4 (SABM collision)		
SABM/P=1	-----)	
	(-----	- UA/F=1, LINK SETUP
UA	-----)	- INFORMATION TRANSFER PHASE
TEST NO. 5		
UA	-----)	- INFORMATION TRANSFER PHASE
TEST NO. 6 (DUT receives frames other than SABM or DISC)		
FRMR	-----)	
I	-----)	
I/P=1	-----)	
I/INVALID NR	-----)	

I/INCORRECT NS	-----)	
I FRAME TOO LONG	-----)	
I FRAME W/O I FIELD	-----)	
RR	-----)	
RR/P=1	-----)	
RNR	-----)	
RNR/P=1	-----)	
REJ	-----)	
REJ/P=1	-----)	
ALL POSSIBLE	-----)	
UNKNOWN COMMANDS		
ALL POSSIBLE	-----)	
UNKNOWN RESPONSES		
UA/F=1	-----)	
UA W/ALL POSSIBLE	-----)	
INVALID ADDRESSES		
UA W/FCS ERROR	-----)	
UA W/I FIELD	-----)	
		- DUT IGNORES ALL THESE FRAMES
		- DUT T1 EXPIRES
	(-----	- SABM or SABM/P=1

TEST NO. 7 (Timer T1 and T1/N2)

DO NOTHING		
		- DUT T1 EXPIRES
	(-----	- SABM or SABM/P=1
DO NOTHING		
		- DUT T1 EXPIRES N2 TIMES
		- GO TO DISCONNECT PHASE
	(-----	- SABM or SABM/P (DUT wishes setup link), or NOTHING
DISC	-----)	
	(-----	- DM

TEST NO. 8

DM	-----)	
	(-----	- DO NOTHING or
		- SABM/P=1, START T1
UA/F AS APPROPRIATE	-----)	

MODULE B4
VERIFICATION OF LINK STATE "FRAME REJECT CONDITION"
(DUT=DCE)

EACH TEST MUST BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
DISC	——)	
	(——	**- UA or DM**
SABM	——)	
	(——	**- UA**
I/INVALID NR	——)	
	(——	**- FRMR**

FRAME REJECT INITIALIZED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
DISC	-----)	
	(-----	- UA
TEST NO. 2		
DISC/P=1	-----)	
	(-----	- UA/F=1
TEST NO. 3		
SABM	-----)	
	(-----	- UA
TEST NO. 4		
SABM/P=1	-----)	
	(-----	- UA/F=1
TEST NO. 5*		
UA	-----)	
	(-----	- FRMR, SABM, or DISC
SABM IF RECEIVES FRMR; UA OTHERWISE	-----)	

TEST NO. 6

```
FRMR                -----)
                    (-----      - SABM or DISC
UA                  -----)
```

TEST NO. 7 (The information field of the I-frame can be null)

```
I                   -----)
                    (-----      - FRMR
SABM                -----)
                    (-----      - UA
```

TEST NO. 8 (The information field of the I-frame can be null)

```
I/P=1               -----)
                    (-----      - FRMR/F=1
SABM                -----)
                    (-----      - UA
```

TEST NO. 9 (The information field of the I-frame can be null)

```
I/INVALID NR        -----)
                    (-----      - FRMR
SABM                -----)
                    (-----      - UA
```

TEST NO. 10 (The information field of the I-frame can be null)

```
I/INCORRECT NS      -----)
                    (-----      - FRMR
SABM                -----)
                    (-----      - UA
```

TEST NO. 11 (The I-frame is longer than N1)

```
I FRAME TOO LONG    -----)
                    (-----      - FRMR
SABM                -----)
                    (-----      - UA
```

TEST NO. 12

```
I W/O I FIELD       -----)
                    (-----      - FRMR
SABM                -----)
                    (-----      - UA
```

TEST NO. 13

RR COMMAND	-----)	
	(-----	- FRMR
SABM	-----)	
	(-----	- UA

TEST NO. 14

RR/P=1	-----)	
	(-----	- FRMR/F=1
SABM	-----)	
	(-----	- UA

TEST NO. 15

RNR COMMAND	-----)	
	(-----	- FRMR
SABM	-----)	
	(-----	- UA

TEST NO. 16

RNR/P=1	-----)	
	(-----	- FRMR/F=1
SABM	-----)	
	(-----	- UA

TEST NO. 17

REJ COMMAND	-----)	
	(-----	- FRMR
SABM	-----)	
	(-----	- UA

TEST NO. 18

REJ/P=1	-----)	
	(-----	- FRMR/F=1
SABM	-----)	
	(-----	- UA

TEST NO. 19

ALL UNKNOWN COMMANDS; SEND OUT EVERY DUT T1 SECOND	-----)	
	(-----	- FRMR FOR EVERY UNKNOWN COMMANDS RECEIVED
SABM	-----)	
	(-----	- UA

TEST NO. 20

ALL UNKNOWN RESPONSES; OUT EVERY DUT T1 SECOND	-----)	- IGNORE or
	(-----	- FRMR
SABM	-----)	
	(-----	- UA

TEST NO. 21*

RR RESPONSE W/F=1	-----)	
	(-----	- IGNORE
SABM	-----)	
	(-----	- UA

TEST NO. 22

SABM WITH ALL INCORRECT ADDRESS	-----)	
		- IGNORES THESE FRAMES
SABM	-----)	
	(-----	- UA

TEST NO. 23

SABM W/FCS ERROR	-----)	- IGNORE
SABM	-----)	
	(-----	- UA

TEST NO. 24

SABM W/I FIELD	-----)	
	(-----	- FRMR
SABM	-----)	
	(-----	- UA

TEST NO. 25

DM	-----)	
	(-----	- SABM or DISC
UA	-----)	

TEST NO. 26* (Test Timer T1)

	- T1 EXPIRES
(-----	- FRMR or DO NOTHING

* - See Note 1

MODULE B5
VERIFICATION OF NORMAL LINK INFORMATION TRANSFER STATE
(DUT=DCE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

DISC	——→	
	←——	**- UA or DM**
SABM	——→	
	←——	**- UA**

INITIATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
DISC	----→	
	←----	- UA
TEST NO. 2		
DISC/P=1	----→	
	←----	- UA/F=1
TEST NO. 3		
SABM	----→	
	←----	- UA
TEST NO. 4		
SABM/P=1	----→	
	←----	- UA/F=1
TEST NO. 5 UNSOLICITED UA RESPONSE		
UA	----→	
	←----	- FRMR, SABM, or DISC
SABM IF RECEIVES FRMR; UA OTHERWISE	----→	
TEST NO. 6		
FRMR	----→	
	←----	- SABM or DISC
UA	----→	

TEST NO. 7 (The information field of the I-frame can be null)

```
I FRAME                  -----)
                         (-----      - RR or I FRAMES
```

TEST NO. 8 (The information field of the I-frame can be null)

```
I W/P=1                  -----)
                         (-----      - RR/F=1
```

TEST NO. 9 (The information field of the I-frame can be null)

```
I W/INVALID NR           -----)
                         (-----      - FRMR
CHECK FRMR FORMAT
SABM                     -----)
                         (-----      - UA
```

TEST NO. 10 (The information field of the I-frame can be null)

```
I W/INCORRECT NS         -----)
                         (-----      - REJ
CHECK REJ FORMAT
I W/CORRECT NS           -----)
                         (-----      - RR
```

TEST NO. 11 (I-frame is longer than N1)

```
I FRAME TOO LONG         -----)
                         (-----      - FRMR
CHECK FRMR FORMAT
SABM                     -----)
                         (-----      - UA
```

TEST NO. 12

```
I FRAME WITHOUT          -----)
I FIELD
                         (-----      - I/RR
```

TEST NO. 13

```
RR                       -----)
                                     - DO NOTHING or
                         (-----      - RR or REJ or I
```

TEST NO. 14

```
RR/P=1                   -----)
                         (-----      - RR/F=1
```

TEST NO. 15

RNR/P	-----)	- REMOTE BUSY
	(-----	- RR/F=1 or REJ/F=1

TEST NO. 15A

RNR	-----)	- DO NOTHING or
	(-----	- RR

TEST NO. 16

	(-----	- DUT SENDS: 14 I frames (information field has no significance)
REJ	-----)	
	(-----	- I frame
RR	-----)	

TEST NO. 17

	(-----	- DUT sends: more than one I frame (information field has no significance)
REJ/P=1		
	(-----	- RR/F=1
	(-----	- I frames
RR	-----)	

TEST NO. 18

ALL UNKNOWN COMMANDS; OUT EVERY DUT T1 SECOND	-----)	
	(-----	- FRMR FOR EVERY UNKNOWN COMMAND
SABM	-----)	
	(-----	- UA

TEST NO. 19

ALL UNKNOWN RESPONSES; OUT EVERY DUT T1 SECOND	-----)	
	(-----	- FRMR FOR THE 1ST UNKNOWN RESPONSE THEN FRMR AFTER T1, OR DO NOTHING
SABM	-----)	
	(-----	- UA

TEST NO. 20 UNSOLICITED F BIT

```
    RR/F=1                          -----)
                                    (-----      - FRMR, SABM, or DISC
    SABM IF RECEIVES                -----)
    FRMR; UA OTHERWISE
```

TEST NO. 21

```
    SABM WITH ALL                   -----)
    INVALID ADDRESS
                                                - IGNORES
```

TEST NO. 22

```
    SABM W/FCS ERROR                -----)
                                                - IGNORES
```

TEST NO. 23

```
    SABM W/I FIELD                  -----)
                                    (-----      - FRMR
    SABM                            -----)
                                    (-----      - UA
```

TEST NO. 24

```
    DM                              -----)
                                    (-----      - SABM or DISC
    UA                              -----)
```

TEST NO. 25 (Timer T1)

```
                                    (-----      - DUT sends: more than one I
                                                  frame (information field has no
                                                  significance)
    DO NOTHING
                                                - T1 EXPIRES
                                    (-----      - RR/I P=1
    RR/F=1                          -----)
```

TEST NO. 26 (T1/N2 Time-out)

```
                                    (-----      - DUT sends: more than one I
                                                  frame (information field has no
                                                  significance)
    DO NOTHING
                                                - T1 EXPIRES
                                    (-----      - RR/I P=1
```

```
     DO NOTHING
                                                  - T1/N2 EXPIRES
                                   (-----         - SABM
     UA                            -----)

TEST NO. 27        WINDOW ROTATION

     MORE THAN 7                   -----)
     I FRAMES
                                   (-----         - RR or I FRAMES

TEST NO. 28        TRANSPARENCY

     I WITH I FIELD =              -----)
     7E7E7E7E7E7E7E7E
     WITH ZERO INSERTIONS
                                   (-----         - RR or I FRAMES

TEST NO. 29

     I RESPONSE                    -----)
                                   (-----         - FRMR
     SABM                          -----)
                                   (-----         - UA

TEST NO. 30

     SABM TOO LONG                 -----)
                                   (-----         - FRMR
     SABM                          -----)
                                   (-----         - UA

TEST NO. 31

     DISC TOO LONG                 -----)
                                   (-----         - FRMR
     SABM                          -----)
                                   (-----         - UA

TEST NO. 32

     DM TOO LONG                   -----)
                                   (-----         - FRMR
     SABM                          -----)
                                   (-----         - UA

TEST NO. 33

     FRMR TOO LONG                 -----)
                                   (-----         - FRMR
     SABM                          -----)
                                   (-----         - UA
```

MODULE B6
VERIFICATION OF LINK LEVEL REMOTE BUSY STATE
(DUT=DCE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
DISC	——)	
	(——	- **UA or DM**
SABM	——)	
	(——	- **UA**
RNR	——)	

INITIATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
DISC	-----)	
	(-----	- UA
TEST NO. 2		
DISC/P=1	-----)	
	(-----	- UA/F=1
TEST NO. 3		
SABM	-----)	
	(-----	- UA
TEST NO. 4		
SABM/P=1	-----)	
	(-----	- UA/F=1
TEST NO. 5 UNSOLICITED RESPONSE		
UA	-----)	
	(-----	- FRMR, SABM, or DISC
SABM IF RECEIVES FRMR; UA OTHERWISE	-----)	
TEST NO. 6		
FRMR	-----)	
	(-----	- SABM or DISC
UA	-----)	

TEST NO. 7 (The information field of the I-frame can be null)

I	-----)	
	(-----	- RR

TEST NO. 8 (The information field of the I-frame can be null)

I W/P=1	-----)	
	(-----	- RR/F=1

TEST NO. 9 (The information field of the I-frame can be null)

I W/INVALID NR	-----)	
	(-----	- FRMR
SABM	-----)	
	(-----	- UA

TEST NO. 10 (The information field of the I-frame can be null)

I W/INCORRECT NS	-----)	
	(-----	- REJ
I W/CORRECT NS	-----)	
	(-----	- RR

TEST NO. 11

I TOO LONG	-----)	
	(-----	- FRMR
SABM	-----)	
	(-----	- UA

TEST NO. 12

I W/O I FIELD	-----)	
	(-----	- RR

TEST NO. 13

RR	-----)	
	(-----	- DUT sends: 14 or more I frames (information field has no significance)
RNR	-----)	- STOP SENDING I FRAMES
	(-----	- RR, REJ, or Nothing

TEST NO. 14

RR/P=1	-----)	
	(-----	- RR/F=1

TEST NO. 15

RNR	-----)	
	(-----	- RR, REJ, OR DO NOTHING

TEST NO. 16

RNR/P=1	-----)	
	(-----	- RR/F=1 or REJ/F=1

TEST NO. 17

REJ	-----)	
	(-----	- DUT sends: 14 or more I frames (information field can be null)
RNR	-----)	- STOP SENDING I FRAMES
	(-----	- RR, REJ, OR DO NOTHING

TEST NO. 18

REJ/P=1	-----)	
	(-----	- RR/F=1

TEST NO. 19 (Invalid commands, all possible permutations)

ALL UNKNOWN COMMANDS; OUT EVERY DUT T1 SECOND	-----)	
	(-----	- FRMR FOR EVERY UNKNOWN COMMAND
SABM	-----)	
	(-----	- UA

TEST NO. 20 (Invalid responses, all possible permutations)

ALL UNKNOWN RESPONSES; OUT EVERY DUT T1 SECOND	-----)	
	(-----	- FRMR FOR THE 1ST UNKNOWN RESPONSE THEN FRMR AFTER T1 OR DO NOTHING
SABM	-----)	
	(-----	- UA

TEST NO. 21 UNSOLICITED F BIT

RR/F=1	-----)	
	(-----	- FRMR, SABM, or DISC
SABM FOR FRMR; UA OTHERWISE	-----)	

TEST NO. 22

SABM W/ALL POSSIBLE INCORRECT ADDRESSES	-----)	
		- IGNORES THESE FRAMES
SABM	-----)	
	(-----	- UA

TEST NO. 23

SABM W/FCS ERROR	-----)	
		- IGNORES THIS FRAME
SABM	-----)	
	(-----	- UA

TEST NO. 24

SABM W/I FIELD	-----)	
	(-----	- FRMR
SABM	-----)	
	(-----	- UA

TEST NO. 25

DM	-----)	
	(-----	- SABM or DISC
UA	-----)	

MODULE B7
VERIFICATION OF LINK LEVEL RESET STATE
(DUT=DCE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
DISC	——)	
	(——	**- UA or DM**
SABM	——)	
	(——	**- UA**
FRMR	——)	
	(——	**- SABM**

INITIATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1 (SABM and DISC collision)		
DISC	-----)	
	(-----	- DM
TEST NO. 2 (SABM and DISC collision)		
DISC/P=1	-----)	
	(-----	- DM/F=1
TEST NO. 3 (SABM collision)		
SABM	-----)	
	(-----	- UA
UA	-----)	
TEST NO. 4 (SABM collision)		
SABM/P=1	-----)	
	(-----	- UA/F=1
UA	-----)	
TEST NO. 5		
UA	-----)	
I FRAMES	-----)	
	(-----	- RR

TEST NO. 6

```
     FRMR                    -----)
                             (-----      - SABM or DISC or DM or DO
                                           NOTHING
     UA                      -----)
```

TEST NO. 7 (DUT receives frames other than DISC or SABM)

```
     I FRAME                 -----)
     I W/P=1                 -----)
     I W/INVALID NR          -----)
     I W/INCORRECT NS        -----)
     I FRAME TOO LONG        -----)
     I W/O I FIELD           -----)
     RR                      -----)
     RR/P=1                  -----)
     RNR                     -----)
     RNR/P=1                 -----)
     REJ                     -----)
     REJ/P=1                 -----)
     ALL POSSIBLE            -----)
     UNKNOWN COMMANDS
     ALL POSSIBLE            -----)
     UNKNOWN RESPONSES
     UA/F=1                  -----)
     UA W/ALL INVALID        -----)
     ADDRESSES
     UA W/FCS ERROR          -----)
     UA W/I FIELD            -----)
                                         - IGNORES ALL THESE FRAMES

                                         - TI EXPIRES
                             (-----      - SABM or SABM/P=1
     UA or UA/F=1            -----)
```

TEST NO. 8

```
     DM                      -----)
                             (-----      - DO NOTHING OR SABM/P
     UA/F                    -----)
```

TEST NO. 9 (Timer T1 and T1/N2 time-out)

```
     DO NOTHING
                                         - T1 EXPIRES
                             (-----      - SABM or SABM/P=1

                                         - T1/N2 EXPIRES

                             (-----      - DM
```

* - See Note 1

MODULE B8
VERIFICATION OF LINK LEVEL "SEND REJECT" STATE
(DUT=DCE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
DISC	——)	
	(——	**- UA or DM**
SABM	——)	
	(——	**- UA**
I W/INCORRECT NS	——)	
	(——	**- REJ**

INITIATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
DISC	-----)	
	(-----	- UA
TEST NO. 2		
DISC/P=1	-----)	
	(-----	- UA/F=1
TEST NO. 3		
SABM	-----)	
	(-----	- UA
TEST NO. 4		
SABM/P=1	-----)	
	(-----	- UA/F=1
TEST NO. 5 UNSOLICITED RESPONSE		
UA	-----)	
	(-----	- FRMR, SABM, or DISC
SABM FOR FRMR; UA OTHERWISE	-----)	

TEST NO. 6

```
FRMR                    ----->)
                        (-----      - SABM or DISC
UA                      ----->)
```

TEST NO. 7 (The information field of the I-frame can be null)

```
I FRAME                 ----->)
                        (-----      - RR
```

TEST NO. 8 (The information field of the I-frame can be null)

```
I W/P=1                 ----->)
                        (-----      - RR/F=1
```

TEST NO. 9 (The information field of the I-frame can be null)

```
I W/INVALID NR          ----->)
                        (-----      - FRMR
SABM                    ----->)
                        (-----      - UA
```

TEST NO. 10 (The information field of the I-frame can be null)

```
I W/INCORRECT NS        ----->)
                                    - IGNORES THIS FRAME
I W/CORRECT NS          ----->)
                        (-----      - RR
```

TEST NO. 11

```
I FRAME TOO LONG        ----->)
                        (-----      - FRMR
SABM                    ----->)
                        (-----      - UA
```

TEST NO. 12

```
CORRECT I FRAME         ----->)
WITHOUT I FIELD
                        (-----      - RR
```

TEST NO. 13

```
RR                      ----->)     - IGNORE
CORRECT I               ----->)
                        (-----      - RR
```

TEST NO. 14

RR/P=1	-----)	
	(-----	- RR/F=1
CORRECT	-----)	
	(-----	- RR

TEST NO. 15

RNR	-----)	- REMOTE BUSY AND SEND REJECT STATES - DO NOTHING

TEST NO. 16

RNR/P=1	-----)	
	(-----	- RR/F=1 - REMOTE BUSY AND SEND REJECT STATES

TEST NO. 17 (Retransmission of I-frames)

	(-----	- DUT sends: more than one I frame (information field can be null)
REJ	-----)	
	(-----	- I FRAMES
CORRECT I FRAME	-----)	
	(-----	- RR

TEST NO. 18

	(-----	- DUT sends: more than one I frame (information field can be null)
REJ/P=1	-----)	
	(-----	- RR/F=1
	(-----	- I FRAMES
CORRECT I FRAMES	-----)	

TEST NO. 19 (Invalid commands, all possible permutations)

ALL UNKNOWN COMMANDS; OUT EVERY DUT T1 SECOND	-----)	
	(-----	- FRMR FOR EVERY UNKNOWN COMMANDS
SABM	-----)	
	(-----	- UA

TEST NO. 20 (Invalid responses, all possible permutations)

ALL UNKNOWN RESPONSES; OUT EVERY DUT T1 SECOND	-----)	
	(-----	- FRMR FOR THE 1ST UNKNOWN RESPONSE THEN FRMR AFTER T1 OR DO NOTHING
SABM	-----)	
	(-----	- UA

TEST NO. 21 UNSOLICITED F BIT

RR/F=1	-----)	
	(-----	- FRMR, SABM, or DISC
SABM FOR FRMR; UA OTHERWISE	-----)	

TEST NO. 22

CORRECT I WITH ALL POSSIBLE INVALID ADDRESS	-----)	
		- IGNORES ALL THESE FRAMES
CORRECT I FRAME	-----)	
	(-----	- RR

TEST NO. 23

SABM W/I FIELD	-----)	
	(-----	- FRMR
SABM	-----)	
	(-----	- UA

TEST NO. 24

SABM W/FSC ERROR	-----)	
		- IGNORES THIS FRAME
SABM	-----)	
	(-----	- UA

TEST NO. 25

DM	-----)	
	(-----	- SABM or DISC
UA	-----)	

* - See Note 1

MODULE B9
(See Note 4)
VERIFICATION OF PACKET LEVEL RESTART r1
(DUT=DCE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART REQUEST	——–)	
	(——	**- RESTART CONFIRMATION**

STATE r1 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
RESTART REQUEST	-----)	- (r2)
	(-----	- RESTART CONFIRMATION (r1) OR - RESTART INDICATION (r1)
TEST NO. 2		
RESTART CONFIRMATION	-----)	
	(-----	- DISCARD - RESTART INDICATION, #17 (r3)
RESTART CONFIRMATION	-----)	(r1)
TEST NO. 3		
RESTART REQUEST TOO LONG	-----)	- DISCARD
	(-----	- DIAGNOSTIC (opt) (r1), #39
TEST NO. 4		
RESTART CONFIRMATION TOO LONG	-----)	- DISCARD
	(-----	- DIAGNOSTIC (opt) (r1), #39
TEST NO. 5		
RESTART REQUEST NON-OCTET ALIGNED	-----)	- DISCARD
	(-----	- DIAGNOSTIC (opt) (r1), #39

TEST NO. 6

RESTART REQUEST CAUSE CODE NOT = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC (opt) (r1), #81

TEST NO. 7 - PACKETS, OTHER THAN RESTART AND DIAGNOSTIC, WITH LOGICAL CHANNEL NUMBER EQUAL 0

CALL REQUEST W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CALL ACCEPTED W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CLEAR REQUEST W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CLEAR CONFIRMATION W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
DATA W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
INTERRUPT W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
INTERRUPT CONFIRMATION W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RR W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RNR W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RESET REQUEST W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RESET CONFIRMATION W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36

TEST NO. 8 - PACKETS WITH UNASSIGNED LOGICAL CHANNEL NUMBER

CALL REQUEST W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CALL ACCEPTED W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CLEAR REQUEST W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CLEAR CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
DATA W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36

RR W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RNR W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RESET REQUEST W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
INTERRUPT W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
INTERRUPT CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RESET CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36

TEST NO. 9

RESTART REQUEST W/ALL POSSIBLE INVALID GFI	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #40

MODULE B10
(See Notes 4, 5)
VERIFICATION OF PACKET LEVEL RESTART REQUEST r2
(DUT=DCE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART REQUEST	——)	
	(——	**- RESTART CONFIRMATION**
RESTART REQUEST	——)	

STATE r2 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
RESTART REQUEST	——)	- DISCARD (r2)
TEST NO. 2		
RESTART CONFIRMATION	——)	
	(——	- DISCARD
		- RESTART INDICATION, #18 (r3)
RESTART CONFIRMATION	——)	- (r1)
TEST NO. 3		
CALL ACCEPTED	——)	
	(——	- DISCARD
		- RESTART INDICATION, #18 (r3)
RESTART CONFIRMATION	——)	- (r1)
TEST NO. 4		
CLEAR REQUEST	——)	
	(——	- DISCARD
		- RESTART INDICATION, #18 (r3)
RESTART CONFIRMATION	——)	- (r1)
TEST NO. 5		
CALL REQUEST	——)	
	(——	- DISCARD
		- RESTART INDICATION, #18 (r3)
RESTART CONFIRMATION	——)	- (r1)

TEST NO. 6

DATA	----)	
	(----	- DISCARD
		- RESTART INDICATION, #18 (r3)
RESTART CONFIRMATION	----)	- (r1)

TEST NO. 7

INTERRUPT	----)	
	(----	- DISCARD
		- RESTART INDICATION, #18 (r3)
RESTART CONFIRMATION	----)	- (r1)

TEST NO. 8

RR	----)	
	(----	- DISCARD
		- RESTART INDICATION, #18 (r3)
RESTART CONFIRMATION	----)	- (r1)

TEST NO. 9

RNR	----)	
	(----	- DISCARD
		- RESTART INDICATION, #18 (r3)
RESTART CONFIRMATION	----)	- (r1)

TEST NO. 10

REJECT	----)	
	(----	- DISCARD
		- RESTART INDICATION, #18 (r3)
RESTART CONFIRMATION	----)	- (r1)

TEST NO. 11

RESET	----)	
	(----	- DISCARD
		- RESTART INDICATION, #18 (r3)
RESTART CONFIRMATION	----)	- (r1)

TEST NO. 12

DIAGNOSTIC	----)	- DISCARD
LCN = THE INITIALIZED LCN		
	(----	- RESTART INDICATION, #33 (r3)
RESTART CONFIRMATION	----)	

TEST NO. 13*

PACKET WITH PACKET SHORTER THAN 1 OCTET	----)	
	(----	- DISCARD - RESTART INDICATION, #38 (r3)
RESTART CONFIRMATION	----)	- (r1)

TEST NO. 14

ANY UNIDENTIFIABLE PACKET	----)	
	(----	- DISCARD - RESTART INDICATION, #33 (r3)
RESTART CONFIRMATION	----)	- (r1)

TEST NO. 15

RESTART REQUEST WITH LC NOT = 0	----)	
	(----	- DISCARD - RESTART INDICATION, #41 (r3)

TEST NO. 16

RESTART REQUEST TOO LONG	----)	- DISCARD
	(----	- RESTART CONFIRMATION

TEST NO. 17*

RESTART REQUEST NON-OCTET ALIGNED	----)	
	(----	- DISCARD - RESTART CONFIRMATION

TEST NO. 18

CALL REQUEST W/LCN = 0	----)	- DISCARD
	(----	- DIAGNOSTIC, #36
	(----	- RESTART CONFIRMATION

TEST NO. 19

CALL REQUEST W/UNASSIGNED LCN	----)	- DISCARD
	(----	- DIAGNOSTIC, #36
	(----	- RESTART CONFIRMATION

TEST NO. 20

CALL REQUEST W/INVALID GFI	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #40
	(-----	- RESTART CONFIRMATION

* - See Note 3

MODULE B11
(See Note 4)
VERIFICATION OF PACKET LEVEL RESTART INDICATION r3
(DUT=DCE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART REQUEST	——)	
	(——	**- RESTART CONFIRMATION**
RESTART CONFIRMATION	——)	
	(——	**- RESTART INDICATION**

STATE r3 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
RESTART REQUEST	-----)	- (r1)
TEST NO. 2		
REQUEST CONFIRMATION	-----)	- (r1)
TEST NO. 3 - PACKET IN WRONG STATE		
CLEAR REQUEST	-----)	- DISCARD
CALL ACCEPTED	-----)	- DISCARD
CALL REQUEST	-----)	- DISCARD
DATA	-----)	- DISCARD
INTERRUPT	-----)	- DISCARD
RR	-----)	- DISCARD
RNR	-----)	- DISCARD
REJECT	-----)	- DISCARD
RESET	-----)	- DISCARD
DIAGNOSTIC	-----)	- DISCARD
PACKET TOO SHORT	-----)	- DISCARD
UNIDENTIFIABLE PACKET	-----)	- DISCARD
RESTART REQUEST WITH LC NOT = 0	-----)	- DISCARD
		- TIMER T10 TIMEOUTS
	(-----	- RESTART INDICATION, #52 (r3) OR DIAGNOSTIC, #52 (r3)
RESTART CONFIRMATION	-----)	- (r1)

TEST NO. 4

RESTART REQUEST TOO LONG	-----)	- DISCARD
	(-----	- RESTART INDICATION, #39 (r3)
RESTART CONFIRMATION	-----)	- (r1)

TEST NO. 5*

RESTART REQUEST NON-OCTET ALIGNED	-----)	
	(-----	- DISCARD - RESTART INDICATION, #82 (r3)
RESTART CONFIRMATION	-----)	- (r1)

TEST NO. 6

RESTART REQUEST CAUSE CODE NOT = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC (opt) (r3), #81

TEST NO. 7 - PACKETS, OTHER THAN RESTART AND DIAGNOSTIC, WITH LOGICAL CHANNEL NUMBER EQUAL 0

CALL REQUEST W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CALL ACCEPTED W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CLEAR REQUEST W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CLEAR CONFIRMATION W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
DATA W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
INTERRUPT W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
INTERRUPT CONFIRMATION W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RR W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RNR W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RESET REQUEST W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RESET CONFIRMATION W/LCN = 0	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RESTART CONFIRMATION	-----)	- (p1)

TEST NO. 8 - PACKETS WITH UNASSIGNED LOGICAL CHANNEL NUMBER

CALL REQUEST W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CALL ACCEPTED W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CLEAR REQUEST W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CLEAR CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
DATA W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RR W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RNR W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RESET REQUEST W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
INTERRUPT W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
INTERRUPT CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RESET CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RESTART CONFIRMATION	-----)	

TEST NO. 9

RESTART REQUEST W/ALL POSSIBLE INVALID GFI	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #40
RESTART CONFIRMATION	-----)	

* - See Note 3

MODULE B12
(See Note 4)
VERIFICATION OF PACKET LEVEL CALL SETUP AND CLEARING p1
(DUT=DCE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART REQUEST	——)	
	(——	- **RESTART CONFIRMATION**

STATE p1 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
CALL REQUEST	——)	
	(——	- CALL CONNECTED
CLEAR REQUEST	——)	
	(——	- CLEAR CONFIRMATION (p1)
TEST NO. 2		
CALL REQUEST W/D=1	——)	
	(——	- CALL CONNECTED W/D BIT
CLEAR REQUEST	——)	
	(——	- CLEAR CONFIRMATION (p1)
TEST NO. 3		
CALL REQUEST W/FAST SELECT USER DATA = 128 OCTETS	——)	
	(——	- CLEAR INDICATION WITH USER DATA = UP TO 128 OCTETS OR - CALL CONNECTED WITH USER DATA = UP TO 128 OCTETS
CLEAR REQUEST	——)	
	(——	- CLEAR CONFIRMATION (p1) (IF SENT CALL CONNECTED) - NOTHING (p1) (IF SENT CLEAR INDICATION)
TEST NO. 4		
CALL REQUEST W/FS USER DATA = 130 OCTETS	——)	- DISCARD
	(——	- CLEAR INDICATION, #39 (p7)
CLEAR CONFIRMATION	——)	- (p1)

TEST NO. 5

CALL ACCEPTED	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #20 (p7)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 6

CLEAR CONFIRMATION	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #20 (p7)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 7

DATA	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #20 (p7)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 8

INTERRUPT	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #20 (p7)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 9

RR	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #20 (p7)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 10

RNR	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #20 (p7)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 11

REJECT	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #33 (p7)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 12

RESET	——→)	
	(——	- DISCARD
		- CLEAR INDICATION, #20 (p7)
CLEAR CONFIRMATION	——→)	- (p1)

TEST NO. 13

DIAGNOSTIC LCN = THE INITIALIZED LCN	——→)	- DISCARD
		- CLEAR INDICATION, #33 (p7)

TEST NO. 14*

PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	——→)	
	(——	- DISCARD
		- CLEAR INDICATION, #38 (p7)
CLEAR CONFIRMATION	——→)	- (p1)

TEST NO. 15

ANY UNIDENTIFIABLE PACKET	——→)	
	(——	- DISCARD
		- CLEAR INDICATION, #33 (p7)
CLEAR CONFIRMATION	——→)	- (p1)

TEST NO. 16

RESTART REQUEST WITH LC NOT = 0	——→)	
	(——	- DISCARD
		- CLEAR INDICATION, #41 (p7)
CLEAR CONFIRMATION	——→)	- (p1)

TEST NO. 17

RESTART CONFIRMATION WITH LC NOT = 0	——→)	
	(——	- DISCARD
		- CLEAR INDICATION, #41 (p7)
CLEAR CONFIRMATION	——→)	- (p1)

TEST NO. 18

CLEAR REQUEST TOO LONG	——→)	
	(——	- DISCARD
		- CLEAR INDICATION, #39 (p7)
CLEAR CONFIRMATION	——→)	- (p1)

TEST NO. 19**

CALL REQUEST WITH DUPLICATED FACILITY CODE	-----)	
	(-----	- DISCARD
	(-----	- CLEAR INDICATION, #177 (p7)
CLEAR CONFIRMATION	-----)	

TEST NO. 20

CALL REQUEST WITH ADDRESS CONTAINS A NON-BCD DIGIT	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #67, 68 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 21

CALL REQUEST WITH FACILITY LENGTH GREATER THAN 63	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #64 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 22

CALL REQUEST WITH FACILITIES NOT = FACILITY LENGTH	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #64 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 23

CALL REQUEST WITH FACILITY LENGTH GREATER THAN REMAINDER OF PACKET	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #38 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 24

CALL REQUEST WITH FACILITY CODE NOT ALLOWED	-----)	
	(-----	- DISCARD

		- CLEAR INDICATION, #65 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 25

CALL REQUEST WITH FACILITY VALUE NOT ALLOWED	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #66 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 26*

CLEAR REQUEST NON-OCTET ALIGNED	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #82 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 27

CLEAR REQUEST WITH CAUSE FIELD NOT 0	----)	- DISCARD
	(-----	- CLEAR INDICATION, #81 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 28

CLEAR CONFIRMATION TOO LONG	-----)	- DISCARD
	(-----	- CLEAR INDICATION, #20 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

* - See Note 3
** - See Note 1

MODULE B13
(See Notes 4, 5)
VERIFICATION OF PACKET LEVEL CALL SETUP AND CLEARING STATE p2
(DUT=DCE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART REQUEST	——)	
	(——	**- RESTART CONFIRMATION**
CALL REQUEST	——)	

STATE p2 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
CLEAR REQUEST	----)	
	(----	- CLEAR CONFIRMATION (p1)
TEST NO. 2		
CALL REQUEST	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #21 (p7)
CLEAR CONFIRMATION	(----	- (p1)
TEST NO. 3		
CALL ACCEPTED	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #21 (p7)
CLEAR CONFIRMATION	----)	- (p1)
TEST NO. 4		
CLEAR CONFIRMATION	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #21 (p7)
CLEAR CONFIRMATION	----)	- (p1)
TEST NO. 5		
DATA	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #21 (p7)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 6

INTERRUPT	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #21 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 7

RR	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #21 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 8

RNR	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #21 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 9

RESET	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #21 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 10

REJECT	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #33 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 11

DIAGNOSTIC	-----)	- DISCARD
LCN = THE INITIALIZED LCN		
	(-----	- CLEAR INDICATION, #33 (p7)
CLEAR CONFIRMATION	-----)	

TEST NO. 12*

PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #38 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 13

ANY UNIDENTIFIABLE PACKET	----)	
	(----	- DISCARD - CLEAR INDICATION, #33 (p7,
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 14

RESTART REQUEST WITH LC NOT = 0	----)	
	(----	- DISCARD - CLEAR INDICATION, #41 (p7)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 15

RESTART CONFIRMATION WITH LC NOT = 0	----)	
	(----	- DISCARD - CLEAR INDICATION, #41 (p7)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 16

CLEAR REQUEST TOO LONG	----)	
	(----	- DISCARD - CLEAR INDICATION, #39 (p7)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 17

CALL REQUEST W/DUPLICATED FACILITY CODE	----)	
	(----	- DISCARD - CLEAR INDICATION, #21 (p7)

TEST NO. 18

CALL REQUEST WITH ADDRESS CONTAINS A NON-BCD DIGIT	----)	
	(----	- DISCARD - CLEAR INDICATION, #21 (p7)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 19

CALL REQUEST WITH FACILITY LENGTH GREATER THAN 63	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #21 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 20

CALL REQUEST WITH FACILITIES NOT = FACILITY LENGTH	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #21 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 21

CALL REQUEST WITH FACILITY LENGTH GREATER THAN REMAINDER OF PACKET	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #21 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 22

CALL REQUEST WITH FACILITY CODE NOT ALLOWED	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #21 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 23

CALL REQUEST WITH FACILITY VALUE NOT ALLOWED	----)	
	(-----	- DISCARD - CLEAR INDICATION, #21 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 24*

CLEAR REQUEST NON-OCTET ALIGNED	----)	
	(-----	- DISCARD - CLEAR INDICATION, #82 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 25

CALL REQUEST W/UNASSIGNED LCN	----)	- DISCARD
	(----	- DIAGNOSTIC, #36
	(----	- CALL CONFIRMATION

TEST NO. 26

CALL REQUEST W/INVALID GFI	-----)	- DISCARD
	(----	- DIAGNOSTIC, #40
	(----	- CALL CONFIRMATION

TEST NO. 27

CLEAR REQUEST WITH CAUSE FIELD NOT 0	----)	- DISCARD
	(----	- CLEAR INDICATION, #81 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 28

CLEAR CONFIRMATION TOO LONG	----)	- DISCARD
	(----	- CLEAR INDICATION, #21 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

* - See Note 3

MODULE B14
(See Note 4)
VERIFICATION OF PACKET LEVEL CALL SETUP AND CLEARING STATE p3
(DUT=DCE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART REQUEST	——)	
	(——	**- RESTART CONFIRMATION**
	(——	**- INCOMING CALL**

STATE p3 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
CALL REQUEST	-----)	- (p5)
	(-----	- CALL CONNECTED (p4)
CLEAR REQUEST	-----)	
	(-----	- CLEAR CONFIRMATION (p1)
TEST NO. 2		
CALL ACCEPTED	-----)	- (p4)
CLEAR REQUEST	-----)	
	(-----	- CLEAR CONFIRMATION (p1)
TEST NO. 3		
CLEAR REQUEST	-----)	
	(-----	- CLEAR CONFIRMATION (p1)
TEST NO. 4		
CLEAR CONFIRMATION	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #22 (p7)
CLEAR CONFIRMATION	-----)	- (p1)
TEST NO. 5		
DATA	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #22 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 6

INTERRUPT	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #22 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 7

RR	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #22 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 8

RNR	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #22 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 9

REJECT	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #33 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 10

RESET	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #22 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 11

DIAGNOSTIC	-----)	- DISCARD
LCN = THE INITIALIZED LCN		
	(-----	- CLEAR INDICATION, #33 (p7)

TEST NO. 12*

PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #38 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 13

ANY UNIDENTIFIABLE PACKET	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #33 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 14

RESTART REQUEST WITH LC NOT = 0	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #41 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 15

RESTART CONFIRMATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #41 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 16

CALL ACCEPT TOO LONG	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #39 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 17

CLEAR REQUEST TOO LONG	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #39 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 18

DO NOTHING		- T11 TIMEOUTS (180s) - CLEAR INDICATION, #49 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 19**

CALL REQUEST W/DUPLICATED FACILITY CODE	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #177 (p7)
CLEAR CONFIRMATION	-----)	

TEST NO. 20

CALL REQUEST WITH ADDRESS CONTAINS A NON-BCD DIGIT	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #67, 68 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 21

CALL REQUEST WITH FACILITY LENGTH GREATER THAN 63	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #64 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 22

CALL REQUEST WITH FACILITIES NOT = FACILITY LENGTH	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #64 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 23

CALL REQUEST WITH FACILITY LENGTH GREATER THAN REMAINDER OF PACKET	----)	
	(-----	- DISCARD - CLEAR INDICATION, #38 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 24

CALL REQUEST WITH FACILITY CODE NOT ALLOWED	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #65 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 25

CALL REQUEST WITH FACILITY VALUE NOT ALLOWED	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #66 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 26*

CLEAR REQUEST NON-OCTET ALIGNED	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #82 (p7)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 27 - PACKETS WITH UNASSIGNED LOGICAL CHANNEL NUMBER

CALL REQUEST W/UNASSIGNED LCN	----)	- DISCARD
	(----	- DIAGNOSTIC, #36
CALL ACCEPTED W/UNASSIGNED LCN	----)	- DISCARD
	(----	- DIAGNOSTIC, #36
CLEAR REQUEST W/UNASSIGNED LCN	----)	- DISCARD
	(----	- DIAGNOSTIC, #36
CLEAR CONFIRMATION W/UNASSIGNED LCN	----)	- DISCARD
	(----	- DIAGNOSTIC, #36
DATA W/UNASSIGNED LCN	-----)	- DISCARD
	(----	- DIAGNOSTIC, #36
RR W/UNASSIGNED LCN	----)	- DISCARD
	(----	- DIAGNOSTIC, #36
RNR W/UNASSIGNED LCN	-----)	- DISCARD
	(----	- DIAGNOSTIC, #36
RESET REQUEST W/UNASSIGNED LCN	-----)	- DISCARD
	(----	- DIAGNOSTIC, #36
INTERRUPT W/UNASSIGNED LCN	----)	- DISCARD
	(----	- DIAGNOSTIC, #36
INTERRUPT CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
	(----	- DIAGNOSTIC, #36
RESET CONFIRMATION W/UNASSIGNED LCN	----)	- DISCARD
	(----	- DIAGNOSTIC, #36
CALL ACCEPTED	-----)	

TEST NO. 28

RESTART REQUEST W/ALL POSSIBLE INVALID GFI	----)	- DISCARD
	(----	- DIAGNOSTIC, #40

TEST NO. 29

CLEAR REQUEST WITH CAUSE FIELD NOT 0	-----)	- DISCARD
	(-----	- CLEAR INDICATION, #81 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 30

CLEAR CONFIRMATION TOO LONG	-----)	- DISCARD
	(-----	- CLEAR INDICATION, #22 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

* - See Note 3

** - See Note 1

MODULE B15
(See Note 4)
VERIFICATION OF PACKET LEVEL CALL SETUP AND CLEARING STATE p4
(DUT=DCE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART REQUEST	——)	
	(——	**- RESTART CONFIRMATION**
CALL REQUEST	——)	
	(——	**- CALL CONNECTED**

STATE p4 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
CALL ACCEPTED	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #23 (p7)
CLEAR CONFIRMATION	----)	- (p1)
TEST NO. 2		
CLEAR CONFIRMATION	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #23 (p7)
CLEAR CONFIRMATION	----)	- (p1)
TEST NO. 3		
CALL REQUEST WITH DUPLICATED FACILITY CODE (SAME CHANNEL AS PREVIOUS CALL REQUEST)	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #23 (p7)
CLEAR CONFIRMATION	----)	- (p1)
TEST NO. 4		
CALL REQUEST WITH ADDRESS CONTAINS A NON-BCD DIGIT (SAME CHANNEL AS PREVIOUS CALL REQUEST	----)	
	(----	- DISCARD

```
                                        - CLEAR INDICATION, #23 (p7)
    CLEAR CONFIRMATION      -----)      - (p1)

TEST NO. 5

    CALL REQUEST WITH       -----)
    FACILITY LENGTH
    GREATER THAN 63
    (SAME CHANNEL AS
    PREVIOUS CALL REQUEST)
                            (-----      - DISCARD
                                        - CLEAR INDICATION, #23 (p7)
    CLEAR CONFIRMATION      -----)      - (p1)

TEST NO. 6

    CALL REQUEST WITH       -----)
    FACILITIES NOT =
    FACILITY LENGTH
    (SAME CHANNEL AS
    PREVIOUS CALL REQUEST)
                            (-----      - DISCARD
                                        - CLEAR INDICATION, #23 (p7)
    CLEAR CONFIRMATION      -----)      - (p1)

TEST NO. 7

    CALL REQUEST WITH       -----)
    FACILITY LENGTH
    GREATER THAN
    REMAINDER OF PACKET
    (SAME CHANNEL AS
    PREVIOUS CALL REQUEST)
                            (-----      - DISCARD
                                        - CLEAR INDICATION, #23 (p7)
    CLEAR CONFIRMATION      -----)      - (p1)

TEST NO. 8

    CALL REQUEST WITH       -----)
    FACILITY CODE NOT
    ALLOWED (SAME CHANNEL
    AS PREVIOUS CALL
    REQUEST)
                            (-----      - DISCARD
                                        - CLEAR INDICATION, #23 (p7)
    CLEAR CONFIRMATION      -----)      - (p1)
```

TEST NO. 9

CALL REQUEST WITH FACILITY VALUE NOT ALLOWED (SAME CHANNEL AS PREVIOUS CALL REQUEST)	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #23 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 10*

CLEAR REQUEST NON-OCTET ALIGNED	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #82 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 11 - PACKETS WITH UNASSIGNED LOGICAL CHANNEL NUMBER

CALL REQUEST W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CALL ACCEPTED W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CLEAR REQUEST W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CLEAR CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
DATA W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RR W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RNR W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RESET REQUEST W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
INTERRUPT W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
INTERRUPT CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RESET CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36

TEST NO. 12

RESTART REQUEST W/ALL POSSIBLE INVALID GFI	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #40

TEST NO. 13

CLEAR REQUEST WITH CAUSE FIELD NOT 0	-----)	- DISCARD
	(-----	- CLEAR INDICATION, #81 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 14

CLEAR CONFIRMATION TOO LONG	-----)	- DISCARD
	(-----	- CLEAR INDICATION, #23 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

* - See Note 3

MODULE B16
(See Note 4)
VERIFICATION OF PACKET LEVEL CALL SETUP AND CLEARING STATE p5
(DUT=DCE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART REQUEST	——)	
	(——	**- RESTART CONFIRMATION**
	(——	**- DUT SENDS: INCOMING CALL**
CALL REQUEST	——)	

STATE p5 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
DATA	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #24 (p7)
CLEAR CONFIRMATION	(-----	- (p1)
TEST NO. 2		
CALL REQUEST	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #24 (p7)
CLEAR CONFIRMATION	(-----	- (p1)
TEST NO. 3		
CLEAR CONFIRMATION	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #24 (p7)
CLEAR CONFIRMATION	-----)	- (p1)
TEST NO. 4		
INTERRUPT	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #24 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 5

RR	----->)	
	(-----	- DISCARD
		- CLEAR INDICATION, #24 (p7)
CLEAR CONFIRMATION	----->)	- (p1)

TEST NO. 6

RNR	----->)	
	(-----	- DISCARD
		- CLEAR INDICATION, #24 (p7)
CLEAR CONFIRMATION	----->)	- (p1)

TEST NO. 7

REJECT	----->)	
	(-----	- DISCARD
		- CLEAR INDICATION, #33 (p7)
CLEAR CONFIRMATION	----->)	- (p1)

TEST NO. 8

RESET	----->)	
	(-----	- DISCARD
		- CLEAR INDICATION, #24 (p7)
CLEAR CONFIRMATION	----->)	- (p1)

TEST NO. 9

DIAGNOSTIC LCN = THE INITIALIZED LCN	----->)	- DISCARD
	(-----	- CLEAR INDICATION, #33 (p7)

TEST NO. 10*

PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	----->)	
	(-----	- DISCARD
		- CLEAR INDICATION, #38 (p7)
CLEAR CONFIRMATION	----->)	- (p1)

TEST NO. 11

ANY UNIDENTIFIABLE PACKET	----->)	
	(-----	- DISCARD
		- CLEAR INDICATION, #33 (p7)
CLEAR CONFIRMATION	----->)	- (p1)

TEST NO. 12

RESTART REQUEST WITH LC NOT = 0	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #41 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 13

RESTART CONFIRMATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #41 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 14

CLEAR REQUEST TOO LONG	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #39 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 15

CALL REQUEST W/DUPLICATED FACILITY CODE	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #24 (p7)
CLEAR CONFIRMATION	-----)	

TEST NO. 16

CALL REQUEST WITH ADDRESS CONTAINS A NON-BCD DIGIT	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #24 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 17

CALL REQUEST WITH FACILITY LENGTH GREATER THAN 63	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #24 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 18

CALL REQUEST WITH FACILITIES NOT = FACILITY LENGTH	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #24 (p7)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 19

CALL REQUEST WITH FACILITY CODE NOT ALLOWED	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #24 (p7)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 20

CALL REQUEST WITH FACILITY VALUE NOT ALLOWED	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #24 (p7)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 21*

CLEAR REQUEST NON-OCTET ALIGNED	----)	
	(----	- DISCARD
		- CLEAR INDICATION, #82 (p7)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 22

CALL REQUEST W/UNASSIGNED LCN	----)	- DISCARD
	(----	- DIAGNOSTIC, #36
	(----	- CALL CONNECTED

TEST NO. 23

CALL REQUEST W/INVALID GFI	----)	- DISCARD
	(----	- DIAGNOSTIC, #40
	(---	- CALL CONNECTED

TEST NO. 24

CLEAR REQUEST WITH CAUSE FIELD NOT 0	-----)	- DISCARD
	(-----	- CLEAR INDICATION, #81 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 25

CLEAR CONFIRMATION TOO LONG	-----)	- DISCARD
	(-----	- CLEAR INDICATION, #24 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

* - See Note 3

MODULE B17
(See Notes 4, 5)
VERIFICATION OF PACKET LEVEL CALL SETUP AND CLEARING STATE p6
(DUT=DCE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART REQUEST	——)	
	(——	**- RESTART CONFIRMATION**
CLEAR REQUEST	——)	

STATE p6 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
CALL REQUEST	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #25 (p7)
CLEAR CONFIRMATION	-----)	- (p1)
TEST NO. 2		
CALL ACCEPTED	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #25 (p7)
CLEAR CONFIRMATION	-----)	- (p1)
TEST NO. 3		
CLEAR REQUEST	-----)	- DISCARD (p6)
TEST NO. 4		
CLEAR CONFIRMATION	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #25 (p7)
CLEAR CONFIRMATION	-----)	- (p1)
TEST NO. 5		
DATA	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #25 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 6

INTERRUPT	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #25 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 7

RR	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #25 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 8

RNR	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #25 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 9

REJECT	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #33 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 10

RESET	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #25 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 11

DIAGNOSTIC	-----)	- DISCARD
LCN = THE INITIALIZED LCN		
	(-----	- CLEAR INDICATION, #33 (p7)

TEST NO. 12*

PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	-----)	
	(-----	- DISCARD
		- CLEAR INDICATION, #38 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 13

ANY UNIDENTIFIABLE PACKET	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #33 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 14

RESTART REQUEST WITH LC NOT = 0	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #41 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 15

RESTART CONFIRMATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #41 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 16

CALL REQUEST W/DUPLICATED FACILITY CODE	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #25 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 17

CALL REQUEST WITH ADDRESS CONTAINS A NON-BCD DIGIT	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #25 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 18

CALL REQUEST WITH FACILITY LENGTH GREATER THAN 63	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #25 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 19

CALL REQUEST WITH FACILITIES NOT = FACILITY LENGTH	——)	
	(——	- DISCARD - CLEAR INDICATION, #25 (p7)
CLEAR CONFIRMATION	——)	- (p1)

TEST NO. 20

CALL REQUEST WITH FACILITY LENGTH GREATER THAN REMAINDER OF PACKET	——)	
	(——	- DISCARD - CLEAR INDICATION, #25 (p7)
CLEAR CONFIRMATION	——)	- (p1)

TEST NO. 21

CALL REQUEST WITH FACILITY CODE NOT ALLOWED	——)	
	(——	- DISCARD - CLEAR INDICATION, #25 (p7)
CLEAR CONFIRMATION	——)	- (p1)

TEST NO. 22

CALL REQUEST WITH FACILITY VALUE NOT ALLOWED	——)	
	(——	- DISCARD - CLEAR INDICATION, #25 (p7)
CLEAR CONFIRMATION	——)	- (p1)

TEST NO. 23

CLEAR REQUEST PACKET TOO LONG	——)	- DISCARD
	(——	- CLEAR CONFIRMATION

TEST NO. 24*

CLEAR REQUEST NON-OCTET ALIGNED	——)	
	(——	- DISCARD - CLEAR CONFIRMATION

TEST NO. 25

CALL REQUEST W/UNASSIGNED LCN	----)	- DISCARD
	(----	- DIAGNOSTIC, #36
	(----	- CLEAR CONFIRMATION

TEST NO. 26

CALL REQUEST W/INVALID GFI	----)	- DISCARD
	(----	- DIAGNOSTIC, #40
	(----	- CLEAR CONFIRMATION

TEST NO. 27

CLEAR REQUEST WITH CAUSE FIELD NOT 0	----)	- DISCARD
	(----	- CLEAR INDICATION, #81 (p7)
CLEAR CONFIRMATION	----)	- (p1)

TEST NO. 28

CLEAR CONFIRMATION TOO LONG	----)	- DISCARD
	(----	- CLEAR INDICATION, #25 (p7)
CLEAR CONFIRMATION	----)	- (p1)

* - See Note 3

MODULE B18
(See Note 4)
VERIFICATION OF PACKET LEVEL CALL SETUP AND CLEARING STATE p7
(DUT=DCE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART REQUEST	——)	
	(——	**- RESTART CONFIRMATION**
CALL REQUEST	——)	
	(——	**- CALL CONNECTED**
CALL CONFIRMATION	——)	
	(——	**- CLEAR INDICATION**

STATE p7 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1 - PACKETS IN WRONG STATE		
CALL REQUEST	——)	- DISCARD
CALL ACCEPTED	——)	- DISCARD
DATA	——)	- DISCARD
INTERRUPT	——)	- DISCARD
RR	——)	- DISCARD
RNR	——)	- DISCARD
REJECT	——)	- DISCARD
RESET	——)	- DISCARD
DIAGNOSTIC	——)	- DISCARD
LCN = THE INITIALIZED LCN PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	——)	- DISCARD
ANY UNIDENTIFIABLE PACKET	——)	- DISCARD
RESTART REQUEST WITH LC NOT = 0	——)	- DISCARD
RESTART CONFIRMATION WITH LC NOT = 0	——)	- DISCARD
CLEAR CONFIRMATION	——)	- (p1)
TEST NO. 2		
DO NOTHING		
		- T13 EXPIRES (60s)
	(——	- CLEAR INDICATION, #50 (p7) OR

		- REMAINS IN p7 AND DOES NOTHING, OR - REMAINS IN p7 AND SEND DIAGNOSTIC PKT, #50
CLEAR CONFIRMATION	-----)	(p1)

TEST NO. 3

CLEAR REQUEST PACKET TOO LONG	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #39 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 4

CLEAR CONFIRMATION TOO LONG	-----)	- DISCARD
	(-----	- CLEAR INDICATION, #39 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 5*

CLEAR REQUEST NON-OCTET ALIGNED	-----)	
	(-----	- DISCARD - CLEAR INDICATION, #82 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 6 - PACKETS WITH UNASSIGNED LOGICAL CHANNEL NUMBER

CALL REQUEST W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CALL ACCEPTED W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CLEAR REQUEST W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CLEAR CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
DATA W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RR W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RNR W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RESET REQUEST W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36

INTERRUPT W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
INTERRUPT CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RESET CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 7

RESTART REQUEST W/ALL POSSIBLE INVALID GFI	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #40
CLEAR CONFIRMATION	-----)	- (p1)

TEST NO. 8

CLEAR REQUEST WITH CAUSE FIELD NOT 0	-----)	- DISCARD
	(-----	- CLEAR INDICATION, #81 (p7)
CLEAR CONFIRMATION	-----)	- (p1)

* - See Note 5

MODULE B19
(See Note 4)
VERIFICATION OF PACKET LEVEL DATA TRANSFER AND RESET STATE d1
(DUT=DCE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART REQUEST	——)	
	(——	**- RESTART CONFIRMATION**
CALL REQUEST	——)	
	(——	**- CALL CONNECTED (d1)**

STATE d1 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
RESET REQUEST	-----)	
	(-----	- RESET CONFIRMATION (d1)
TEST NO. 2 (THE CONTENT OF DATA PACKET HAS NO SIGNIFICANCE)		
DATA WITH D=0	-----)	
	(-----	- RR, RNR, OR DATA

CONTINUOUSLY SEND 9 CONSECUTIVE DATA PACKETS
DUT RESPONDS WITH RR, RNR, OR DATA PACKETS

TEST NO. 3 (THE CONTENT OF DATA PACKET HAS NO SIGNIFICANCE)		
DATA WITH D=1	-----)	
	(-----	- RR, RNR, OR DATA

CONTINUOUSLY SENDS 9 CONSECUTIVE DATA PACKETS
DUT RESPONDS WITH RR, RNR, OR DATA PACKETS

TEST NO. 4		
INTERRUPT	-----)	
	(-----	- INTERRUPT CONFIRMATION
TEST NO. 5		
DIAGNOSTIC LCN = INITIALIZED LCN	-----)	- DISCARD
	(-----	- RESET INDICATION, #27 (d3)

TEST NO. 6

RESET CONFIRMATION	-----)	
	(-----	- DISCARD - RESET INDICATION, #27 (d3)
RESET CONFIRMATION	----)	- (d1)

TEST NO. 7*

PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	----)	
	(-----	- DISCARD - RESET INDICATION, #27 (d3)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 8

REJECT	-----)	
	(-----	- DISCARD - RESET INDICATION, #27 (d3)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 9

ANY UNIDENTIFIABLE PACKET	-----)	
	(-----	- DISCARD - RESET INDICATION, #27 (d3)
RESET CONFIRMATION	----)	- (d1)

TEST NO. 10

RESTART REQUEST WITH LC NOT = 0	----)	
	(-----	- DISCARD - RESET INDICATION, #41 (d3)
RESET CONFIRMATION	----)	- (d1)

TEST NO. 11

RESTART CONFIRMATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD - RESET INDICATION, #41 (d3)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 12

DATA PACKET TOO LONG	----)	
	(-----	- DISCARD - RESET INDICATION, #39 (d3)
RESET CONFIRMATION	----)	- (d1)

TEST NO. 13

DATA W/INVALID P(S)	----)	
	(----	- DISCARD
		- RESET INDICATION, #1 (d3)
RESET CONFIRMATION	----)	- (d1)

TEST NO. 14

DATA W/INVALID P(R)	----)	
	(----	- DISCARD
		- RESET INDICATION, #2 (d3)
RESET CONFIRMATION	----)	- (d1)

TEST NO. 15

RR W/INVALID P(R)	----)	
	(----	- DISCARD
		- RESET INDICATION, #2 (d3)
RESET CONFIRMATION	----)	- (d1)

TEST NO. 16

DATA W/P(S) OUT OF SEQUENCE BUT WITHIN THE WINDOW	----)	
	(----	- DISCARD
		- RESET INDICATION, #1 (d3)
RESET CONFIRMATION	----)	- (d1)

TEST NO. 17

INTERRUPT CONFIRMATION	----)	
	(----	- DISCARD
		- RESET INDICATION, #43 (d3)
RESET CONFIRMATION	----)	- (d1)

TEST NO. 18

INTERRUPT	----)	
INTERRUPT	----)	
	(----	- DISCARD
		- RESET INDICATION, #44 (d3)
RESET CONFIRMATION	----)	- (d1)

TEST NO. 19

INTERRUPT	----)	
INTERRUPT CONFIRMATION	----)	
	(----	- DISCARD
		- RESET INDICATION, #43 (d3)
RESET CONFIRMATION	----)	- (d1)

TEST NO. 20

DO THIS TEST ON A PERMANENT VIRTUAL CIRCUIT

CALL REQUEST	----)	
	(-----	- DISCARD
		- RESET INDICATION, #35 (d3)
RESET CONFIRMATION	----)	- (d1)

TEST NO. 21*

DATA W/USER DATA NOT = INTEGRAL # OF OCTETS	----)	
	(-----	- DISCARD
		- RESET INDICATION, #82 (d3)
RESET CONFIRMATION	----)	- (d1)

TEST NO. 22*

RESET REQUEST NON-OCTET ALIGNED	----)	
	(-----	- DISCARD
		- RESET INDICATION, #82 (d3)
RESET CONFIRMATION	----)	- (d1)

TEST NO. 23 - PACKETS WITH UNASSIGNED LOGICAL CHANNEL NUMBER

CALL REQUEST W/UNASSIGNED LCN	----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CALL ACCEPTED W/UNASSIGNED LCN	----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CLEAR REQUEST W/UNASSIGNED LCN	----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CLEAR CONFIRMATION W/UNASSIGNED LCN	----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
DATA W/UNASSIGNED LCN	----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RR W/UNASSIGNED LCN	----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RNR W/UNASSIGNED LCN	----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RESET REQUEST W/UNASSIGNED LCN	----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
INTERRUPT W/UNASSIGNED LCN	----)	- DISCARD
	(-----	- DIAGNOSTIC, #36

INTERRUPT CONFIRMATION W/UNASSIGNED LCN	----)	- DISCARD
	(----	- DIAGNOSTIC, #36
RESET CONFIRMATION W/UNASSIGNED LCN	----)	- DISCARD
	(----	- DIAGNOSTIC, #36

TEST NO. 24

RESTART REQUEST W/ALL POSSIBLE INVALID GFI	----)	- DISCARD
	(----	- DIAGNOSTIC, #40

* - See Note 3

MODULE B20
(See Notes 4, 5)
VERIFICATION OF PACKET LEVEL DATA TRANSFER AND RESET STATE d2
(DUT=DCE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART REQUEST	——)	
	(——	**- RESTART CONFIRMATION**
CALL REQUEST	——)	
	(——	**- CALL CONNECTED**
RESET REQUEST	——)	

STATE d2 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
RESET CONFIRMATION	----)	
	(----	- DISCARD
		- RESET INDICATION, #28 (d3)
RESET CONFIRMATION	----)	- (d1)
TEST NO. 2		
DATA	----)	
	(----	- DISCARD
		- RESET INDICATION, #28 (d3)
RESET CONFIRMATION	----)	- (d1)
TEST NO. 3		
INTERRUPT	----)	
	(----	- DISCARD
		- RESET INDICATION, #28 (d3)
RESET CONFIRMATION	----)	- (d1)
TEST NO. 4		
RR	----)	
	(----	- DISCARD
		- RESET INDICATION, #28 (d3)
RESET CONFIRMATION	----)	- (d1)

TEST NO. 5

RNR	-----)	
	(-----	- DISCARD
		- RESET INDICATION, #28 (d3)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 6

REJECT	-----)	
	(-----	- DISCARD
		- RESET INDICATION, #28 (d3)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 7

DIAGNOSTIC LCN = THE INITIALIZED LCN	-----)	- DISCARD
	(-----	- RESET INDICATION, #28 (d3)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 8*

PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	-----)	- DISCARD
	(-----	- RESET INDICATION, #28 (d3)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 9

ANY UNIDENTIFIABLE PACKET	-----)	
	(-----	- DISCARD
	(-----	- RESET INDICATION, #28 (d3)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 10

RESTART REQUEST WITH LC NOT = 0	-----)	
	(-----	- DISCARD
		- RESET INDICATION, #41 (d3)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 11

RESTART CONFIRMATION WITH LC NOT = 0	-----)	
	(-----	- DISCARD
		- RESET INDICATION, #41 (d3)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 12

DO THIS TEST ON A PERMANENT VIRTUAL CALL

CLEAR REQUEST	-----)	
	(----	- DISCARD
		- RESET INDICATION, #35 (d3)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 13

RESET REQUEST WITH NON-OCTET ALIGNED	-----)	
	(-----	- DISCARD
		- RESET CONFIRMATION

TEST NO. 14

CALL REQUEST W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
	(-----	- RESET CONFIRMATION

TEST NO. 15

CALL REQUEST W/INVALID GFI	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #40
	(----	- RESET CONFIRMATION

* - See Note 3

MODULE B21
(See Note 4)
VERIFICATION OF PACKET LEVEL DATA TRANSFER AND RESET STATE d3
(DUT=DCE)

EACH TEST WILL BE INITIALIZED BY THE FOLLOWING SEQUENCE:

TESTER SENDS		**DUT SENDS**
RESTART REQUEST	——)	
	(——	**- RESTART CONFIRMATION**
CALL REQUEST	——)	
	(——	**- CALL CONNECTED**
RESET CONFIRMATION	——)	
	(——	**- RESET INDICATION**

STATE d3 INITIALIZATION IS COMPLETED

TESTER SENDS		DUT VALID RESPONSE
TEST NO. 1		
RESET REQUEST	——)	- (d1)
TEST NO. 2		
RESET CONFIRMATION	——)	- (d1)
TEST NO. 3 - PACKETS IN WRONG STATE		
DATA	——)	- DISCARD
INTERRUPT	——)	- DISCARD
RR	——)	- DISCARD
RNR	——)	- DISCARD
REJECT	——)	- DISCARD
DIAGNOSTIC	——)	- DISCARD
LCN = THE INITIALIZED LCN PACKET WITH PACKET TYPE SHORTER THAN 1 OCTET	——)	- DISCARD
ANY UNIDENTIFIABLE PACKET	——)	- DISCARD
RESTART REQUEST WITH LC NOT = 0	——)	- DISCARD
RESTART CONFIRMATION WITH LC NOT = 0	——)	- DISCARD
RESET CONFIRMATION	——)	- (d1)

TEST NO. 4

DO NOTHING

		- T12 EXPIRES (60s)
	(-----	- RESET INDICATION, #51 (d3) OR CLEAR INDICATION, #51 (p7)
RESET CONFIRMATION (IF RECEIVED RESET INDICATION)	-----)	- (d1)/(p1)
CLEAR CONFIRMATION (IF RECEIVED CLEAR INDICATION)		

TEST NO. 5

DO THIS TEST ON A PERMANENT VIRTUAL CIRCUIT

CLEAR CONFIRMATION	-----)	- DISCARD
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 6*

RESET REQUEST WITH NON-OCTET ALIGNED	-----)	
	(-----	- DISCARD
	(-----	- RESET INDICATION, #82 (d3)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 7

RESET REQUEST TOO LONG	-----)	- DISCARD
	(-----	- RESET INDICATION, #39 (d3)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 8

RESET CONFIRMATION TOO LONG	-----)	- DISCARD
	(-----	- RESET INDICATION #39 (d3)
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 9 - PACKETS WITH UNASSIGNED LOGICAL CHANNEL NUMBER

CALL REQUEST W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CALL ACCEPTED W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
CLEAR REQUEST W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36

CLEAR CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
DATA W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RR W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RNR W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RESET REQUEST W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
INTERRUPT W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
INTERRUPT CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RESET CONFIRMATION W/UNASSIGNED LCN	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #36
RESET CONFIRMATION	-----)	- (d1)

TEST NO. 10

RESTART REQUEST W/ALL POSSIBLE INVALID GFI	-----)	- DISCARD
	(-----	- DIAGNOSTIC, #40
RESET CONFIRMATION	-----)	- (d1)

* - See Note 3

MODULE B22
MULTIPLE LOGICAL CHANNELS
(DUT=DCE)

PURPOSE: Test DUT capability of handling simultaneously more than one VC's and more than one PVC's.

Data transfer simultaneously operates on 9 virtual calls and 2 permanent virtual circuits. Packet size = 128 octets. Determine the length it takes to transmit 15 data packets.

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