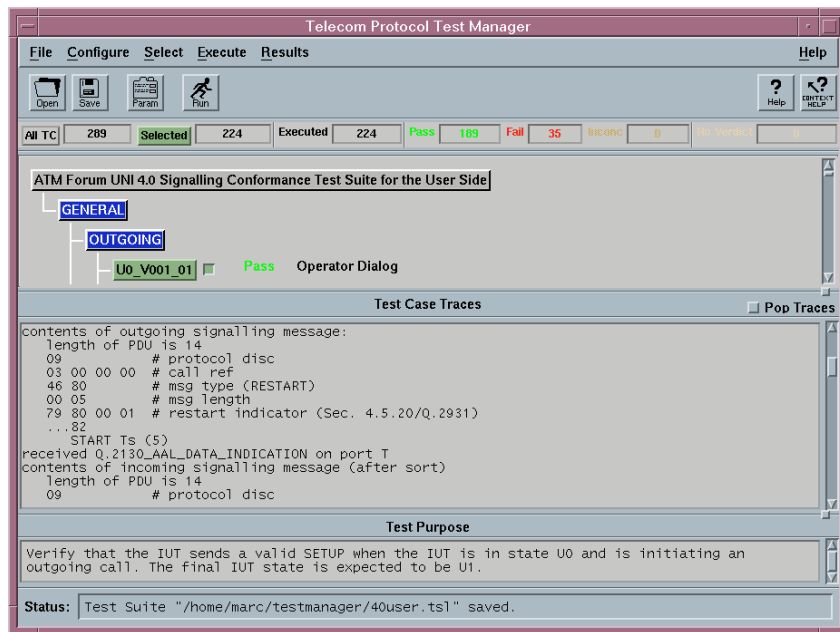


ATM Forum UNI 4.0 Signalling Conformance ETS for User Side

Agilent Technologies Broadband Series Test System
E7845A



ATM Forum UNI 4.0 Signalling Conformance Test Suite for the user side: test suite browser and trace window.

Test Suite Coverage

- Point-to-point call establishment (outgoing and incoming calls) and call clearing
- ATM Anycast capability (Section 7.0 of UNI 4.0 specification)
- Connection characteristics negotiation during call establishment (Section 8.0)
- Signalling of individual Quality-of-Service (QoS) parameters (Section 9.0)
- Available Bit Rate (ABR) capability (Section 10.0)
- Frame discard capability

The Agilent Technologies E7845A ATM Forum UNI 4.0 signalling conformance automated test suite is designed to verify the conformance of ATM terminal equipment, such as an ATM NIC card, to the user side signalling requirements of the ATM Forum UNI 4.0 specification.

It contains 289 test cases and covers all basic aspects of call establishment and clearing for point-to-point calls.

It can be used at all phases of the product life cycle, by R&D engineers in the early stages of development (by selecting only the desired test cases) to QA engineers (by selecting all applicable test

cases); as well as for automatic regression testing.

Agilent is among the first to offer the capability of UNI 4.0 signalling conformance testing. With this new automated test suite, NEMs and network operators can quickly and accurately verify the conformance of their products and implementations, or equipment being evaluated for use in a network, prior to market introduction. It can also be used to check the interoperability of UNI products from different vendors.

It is expected that most if not all NEMs will implement the signalling requirements of the ATMF UNI 4.0

specification since they were generally adopted in the ATM Forum's Anchorage Accord.

NEMs need to perform exhaustive, automated testing of signalling implementations, with a recognized set of tests.

The Agilent E7845A automated test suite has been submitted to the ATM Forum for approval, ensuring even greater acceptance of test results.

It complements the comprehensive family of available BSTS ATM signalling applications and conformance test suites.



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Key Features

The first version of the test suite covers the following aspects of the UNI 4.0 specification:

UNI 4.0 Features Covered in This Test Suite

The E7845A can emulate all UNI 4.0 signalling functions, including:

- Point-to-point call establishment (outgoing and incoming calls) and call clearing
- ATM Anycast capability (Section 7.0 of UNI 4.0 specification)
- Connection characteristics negotiation during call establishment (Section 8.0)
- Signalling of individual QoS parameters (Section 9.0)
- Available Bit Rate (ABR) capability (Section 10.0)
- Frame discard capability

UNI 4.0 Features Not Covered in This Version

- Point-to-Multipoint calls & Leaf Initiated Join capability (LIJ)
- Abnormal Behavior
- Timers
- Status Enquiry Procedures

- Proxy signalling
- Virtual UNIs
- Supplementary services (such as Direct Dialling In, Calling Line Identification Presentation, etc.)

Software Benefits

Agilent's Telecom Protocol Test Manager user interface for conformance testing offers the following benefits:

- Fully automated stimulus-and-response testing simplifies the verification process of ATM products at all phases of R&D. A complete, automated suite of tests in a single package can help reduce design cycle costs by producing results more quickly and with less operator intervention.
- Flexible test case selection translates into either exhaustive testing or tailoring test case selection to suit the specific functions under test.
- Clear verdict assignments for each test case run (such as PASS or FAIL) can help solve implementation errors.
- Diagnostic information in test case traces can help pinpoint errors.
- Flexible data recording and playback capabilities built-in to the interface's trace window simplify the review of frames and cells transmitted. The operator can either pop traces to

a separate window or keep track of overall results by generating variable-detail test campaign summary reports. The full exchange of messages produced by the test cases is recorded for later analysis.

- Test repeatability is achieved by saving test session setups and results. This allows quick regression testing of product enhancements or bug fixes.
- Test campaigns are easily configured via interactive True/False or value setting questions for most PICS, PIXIT and other types of statements.
- Selecting test cases based on previously assigned verdicts helps concentrate on problem areas.
- The test suite follows an internationally recognized protocol testing standard methodology as defined in ISO 9646.

Applicable Standards

The following protocols are covered by the present test suite:

ATM Forum

ATM Forum UNI Signalling Specification Version 4.0 (af-sig-0061.000), July 1996.

ITU-T

Sections of ITU-T Recommendation Q.2931, Feb. 1995 that are referenced in the ATM Forum UNI Signalling Specification Version 4.0.

Abstract Test Suite (ATS)

The test matrix for this test suite has been submitted to the ATM Forum. The ATS has been written by Agilent and will be submitted to the ATM Forum for approval in the near future.

Areas Tested

Test Case Group Name		Test Cases
General	Outgoing	7
	Incoming	177
	Clearing	105
Total		289

Software Package Contents

- ETS (on CD-ROM)
- ETS User's Agilent
- ATS Manual
- Release Notice
- Test Manager GUI (on CD-ROM)
- Test Manager User's Guide
- Test Manager Release Notice.
- Hardware key

Configuration & Use With BSTS Line Interfaces, Hardware Modules & Test Software

The E7845A ATM Forum UNI 4.0 Signalling Conformance Test Suite requires a minimum configuration of the E4200/E4210 Broadband Series Test System consisting of a Model A or B chassis, one E4209 Cell Protocol Processor, and any compatible ATM cell-based line interface.

The BSTS must be running the following software: Base System V3.02 or higher; E4214A UNI Signalling Test Application, V3.02 or higher.

The equipment under test must support deactivation of the keep-alive feature of UNI 4.0.

NOTE: E4214B Enhanced UNI Signalling Test Software is not required to run this test suite.

Product Numbers

- **E7845A** ATM Forum UNI 4.0 Core Signalling Conformance Test Suite for the User Side
- **E7844A** ATM Forum UNI 4.0 Core Signalling Conformance Test Suite for the Network Side
- **E7842A, E7843A** ATM Forum UNI 3.0/3.1 ILMI Address Registration Test Suites for the Network/User Side
- **E7823A, E7833A/C, E7834A** ATM Forum UNI 3.0/3.1 Signalling Conformance Test Suites for network or terminal equipment
- **E4214A** UNI Signalling Test Software
- **E4214B** Enhanced UNI Signalling Test Software
- **E4217B** NNI Signalling Test Software
- **E6280A** PNNI Signalling Test Software
- **E6273B** ILMI Emulation Test Software

Warranty & Support Options

Agilent Broadband Series Test System software and firmware products are supplied on transportable media such as disk, CD-ROM or integrated circuits. The warranty covers physical defects in the media, and defective media is replaced at no charge during the warranty period. When installed in an Agilent Broadband Series Test System, the software/firmware media has the same warranty period as the product.

This test software has no components requiring calibration.



Agilent Technologies Broadband Series Test System

The Agilent Technologies BSTS is the industry-standard ATM/BISDN test system for R&D engineering, product development, field trials and QA testing. The latest leading edge, innovative solutions help you lead the fast-packet revolution and reshape tomorrow's networks. It offers a wide range of applications:

- ATM traffic management and signalling
- Packet over SONET/SDH (POS)
- switch/router interworking and performance
- third generation wireless testing
- complete, automated conformance testing

The BSTS is modular to grow with your testing needs. Because we build all BSTS products without shortcuts according to full specifications, you'll catch problems other test equipment may not detect.

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