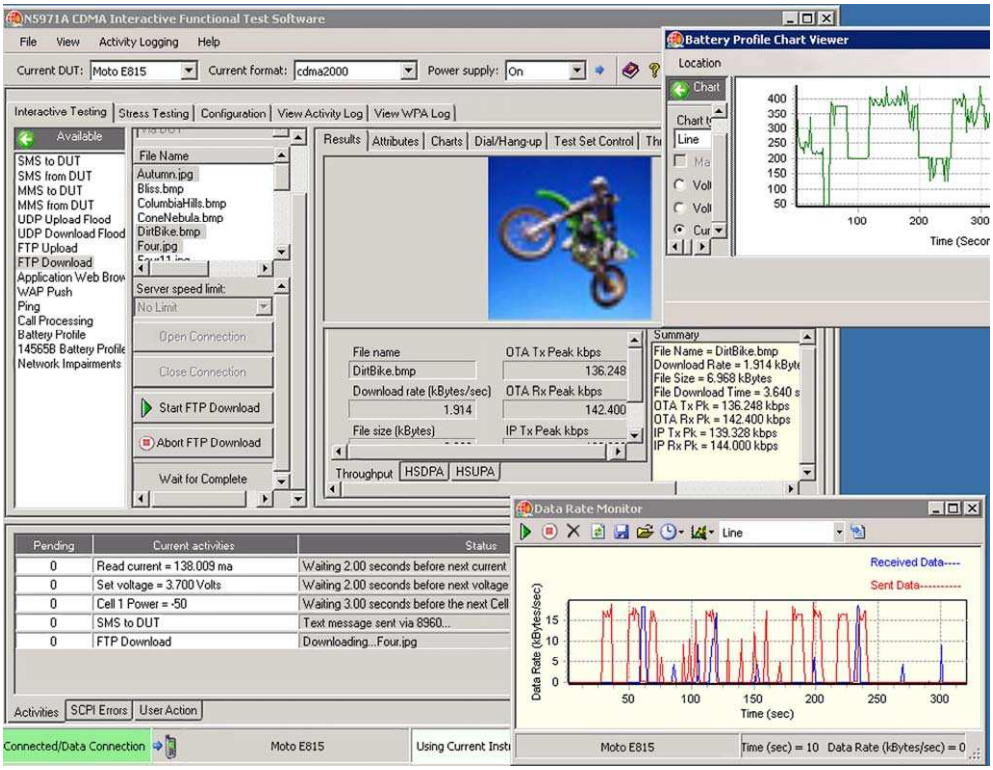
Agilent N5971A CDMA Interactive Functional Test Software

Technical Overview

For use with the E5515C Wireless Communications Test Set and the cdma2000® and/or 1xEV-DO Lab Application Suite



The N5971A CDMA Interactive Functional Test Software with the 8960 Series 10 (E5515C) Wireless Communications Test Set provides an automated and simplified interface for realistically testing user experiences by stress testing cellular mobile devices in real-world network scenarios.

Agilent's N5971A software provides an automated solution for functional test, including parallel test execution. For example, it can simultaneously test call processing, FTP, and SMS, all while monitoring current drain and changing the RF power to the device under test (DUT). This ability to simultaneously perform activities is key for simulating real-world tests – before the device is tested on a real network.

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Key Benefits

Improve time to market

By allowing earlier identification of design issues, which drives down time to market, this software is ideal for cdma2000 and 1xEV-DO mobile phone/device developers conducting functional validation, as well as service providers performing acceptance tests.

Reduce design/validation cycles

This solution brings a real-world testing aspect into the design cycle earlier, enabling faster and easier design modifications. It also ensures the user is able to find complex hardware, protocol, or software issues that are specific to how the cellular mobile device will function on a real network. Finding such "user experience" issues before a device is rolled out to a network eliminates expensive validation cycles and the costs associated with re-releasing a device.

Parallel test execution

There are many available functional test activities within the software, all of which can be executed simultaneously. These available activities include:

- SMS to the DUT
- SMS from the DUT
- UDP upload flood
- UDP download flood
- Application web browser
- Battery profile
- 14565B Battery Profile
- MMS to the DUT
- MMS from the DUT
- FTP download
- FTP upload
- Ping
- WAP Push
- Call processing
- Network impairments

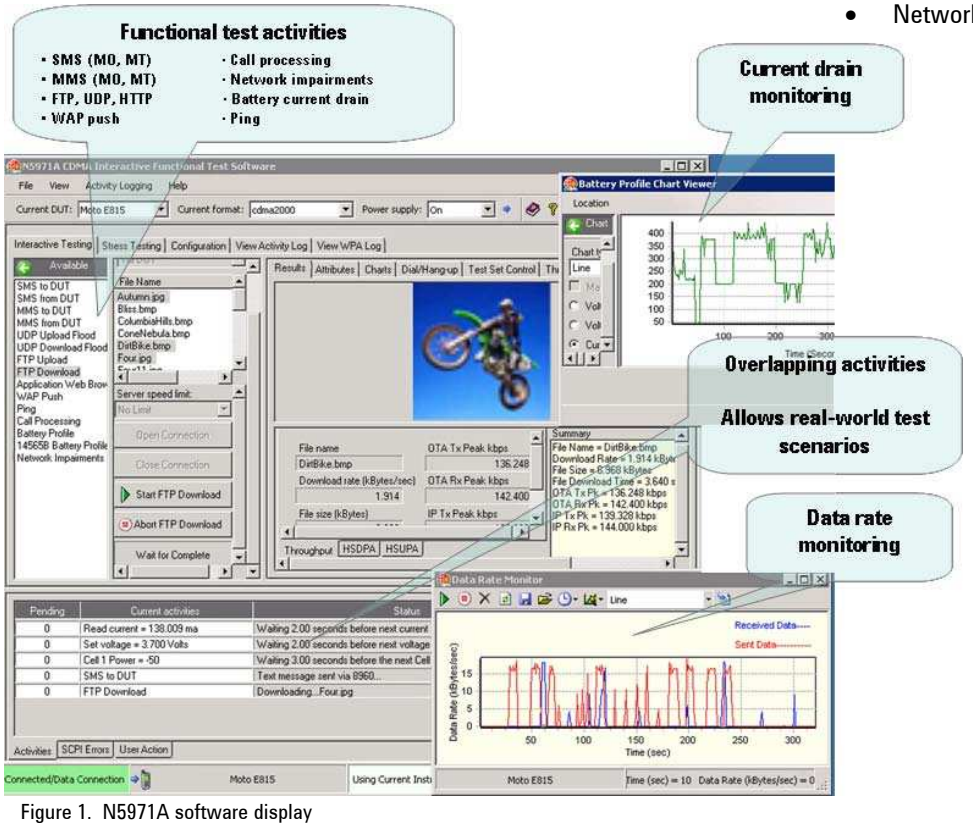

Figure 1. N5971A software display

For more information, visit
www.agilent.com/find/8960ift

Modes of operation

The N5971A encompasses three modes of operation:

- Interactive mode – Allows users to manually set up and run activities through easy-to-use controls. This mode is ideal investigating which scenarios to test and also for troubleshooting design issues. Any test sequence performed in the interactive mode can be easily made into a script to be automatically run later.

- Script development mode – Once a test process has been defined through the interactive mode, users can easily save the setup as a script with a simple drag-and-drop method. Users can also enhance and modify the scripts to include other user-defined tasks as well as use pre-defined snippets for common programming functions.

- Stress test mode – Users can setup an automated test plan that runs the scripts they created and can even combine multiple scripts into a single test plan. The TCP/IP API interface can control test plan execution through other programs and users can setup e-mail notification of test plan status and results.

Configuration Information

Required Agilent hardware and software

N5971A Interactive Functional Test Software

- N5971A-1TP CDMA Transportable, perpetual license
- Includes: USB security dongle, client installation disk, and server installation disk

8960 (E5515C) Wireless Communications Test Set[1]

- E5515C-002 Second RF source
- E5515C-003 Flexible CDMA base station emulator

E6702B or E6706B/U (or E6785E/U with an E6702B or E6706B/U license)[2]

Notes:

1. The E6706B Requires Annual Contract E6702A-006
2. E5515C-H08 (adds special high data rate/high performance hardware to E5515C) is required to run the E6706U and E6785U applications.

Required Agilent hardware and software for fading applications

E5515C-004 Digital bus

N5105A Baseband Studio PCI Card

N5115B-102 License E8267D PSG for one channel

N5115B-168 Add AWGN to one channel

N5115B-125 License E5515C for one channel

Required Agilent hardware and software for battery drain applications

The N5971A supports the following power supplies for generic battery profile analysis:

- 66311B or 66311D
- 66321B or 66321D
- 66319B
- 66309B or 66309D

For advanced battery profile analysis, the following are required:

- 14565B Device Characterization Software license
- 66319/21 B or D Mobile communication dual-output DC source, with battery emulation, DVM, GPIB

Non-Agilent components required

Client PC

- 1 GHz Pentium® III or higher
- 2 GB RAM
- 20 GB hard drive space available
- Microsoft® Windows® XP

Server PC

- 1 GHz Pentium III or higher
- 2 GB RAM
- 20 GB hard drive space available
- Microsoft Windows XP

Linksys router

- Part number BEFSER81 – 8 ports (Orderable from Agilent, part number N5979A-LSR)

Cellular mobile device

- RF, USB, power supply cables
- USB drivers or equivalent
- Supported AT command or proprietary commands for phone control automation

LAN cables

- 4 required (10 foot cables minimum)

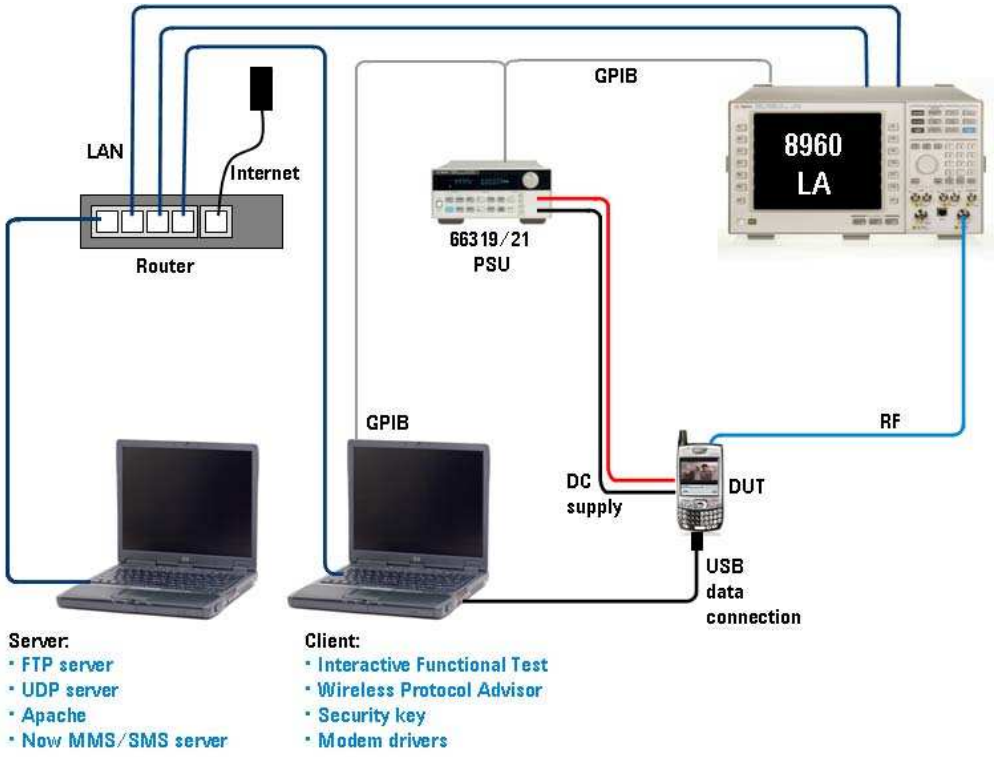

Figure 2. Interactive functional test system

Software Included with N5971A

N5971A client installation disk

N5971A IFT software installation

Agilent IO libraries installation

N597xA server installation disk

The UMTS and CDMA versions of IFT share a common server installation disk. Included on the server installation disk are:

Now SMS installation

Appache installation

FileZilla installation

UDP and MMS installation

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For more information on repair and calibration services, go to:

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Product specification and descriptions in this document subject to change without notice.

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