Agilent Technologies E7490A
CDMA Over-Air-Maintenance Tool
Product Overview

CDMA Over-Air-Maintenance Tool

Improve CDMA network quality while maintaining budget control.

Proactively maintain even hard-to-reach base stations efficiently and economically.

Agilent Technologies
Innovating the HP Way

Fierce competition characterizes the mobile communication industry. If you manage or maintain a wireless communications network, you know that in order to stay competitive, you have to continually improve quality of service to attract new customers and maintain your current base, and you have to reduce operating costs at the same time. Proactive maintenance can help in both of these areas, but it typically requires time that your technicians just don't have.

The Agilent E7490A CDMA Over-Air Maintenance Tool makes proactive testing possible. Technicians can easily execute first-level diagnostics on CDMA base stations using the system's over-the-air measurement functionality. Measurements are fast (less than 5 minutes per sector) and easy (usually 2 or 3 mouse clicks from start to finish with a complete report) and technicians can complete these diagnostics without getting out of their vehicle.

The ability to do proactive maintenance with little or no impact on the technician's time is particularly important for maintaining difficult to access sites. Pole-top base stations, for example, promise to reduce operating and deployment costs as well as deployment time. However, traditional testing methods are not practical for pole-top installations. With the E7490A, maintaining pole-top installations is now practical.

System components

The Agilent E7490A software runs on a PC that interfaces with an Agilent digital RF receiver and/or a CDMA mobile phone.

Key features

- **Projects** – User-defined test scenarios remember all measurement and display configurations.
- **Automated report generator** – Two mouse clicks produce a complete report of the test.
- **Alarms** – Measurement thresholds and complex Boolean conditions can be defined to alert users of specific signal conditions.
- **Data recording and playback** – Data can be logged to the database and played back via "VCR-like"controls.
- **Scalability** – The system architecture is completely scalable with Agilent's drive test solutions. New functionality can be added as measurement requirement change.

Measurement functionality

The Code Domain Power measurement displays each of the 64 Walsh channels in a color-coded bar graph. Key parameters are displayed in large, easy-to-see text:

Base station health parameters

- Channel power
- Pilot power
- PN offset number
- Pilot delay (absolute delay with respect to GPS time)
- Pilot-paging amplitude delta
- Pilot-sync amplitude delta
- Estimated Rho
- Frequency error
- Carrier feedthrough

Base station traffic parameters

- Instantaneous number of active traffic channels
- Average number of active traffic channels
- Peak number of active traffic channels
- Average power per active traffic channel
- Peak power per active traffic channel
- Percentage of amplifier capacity

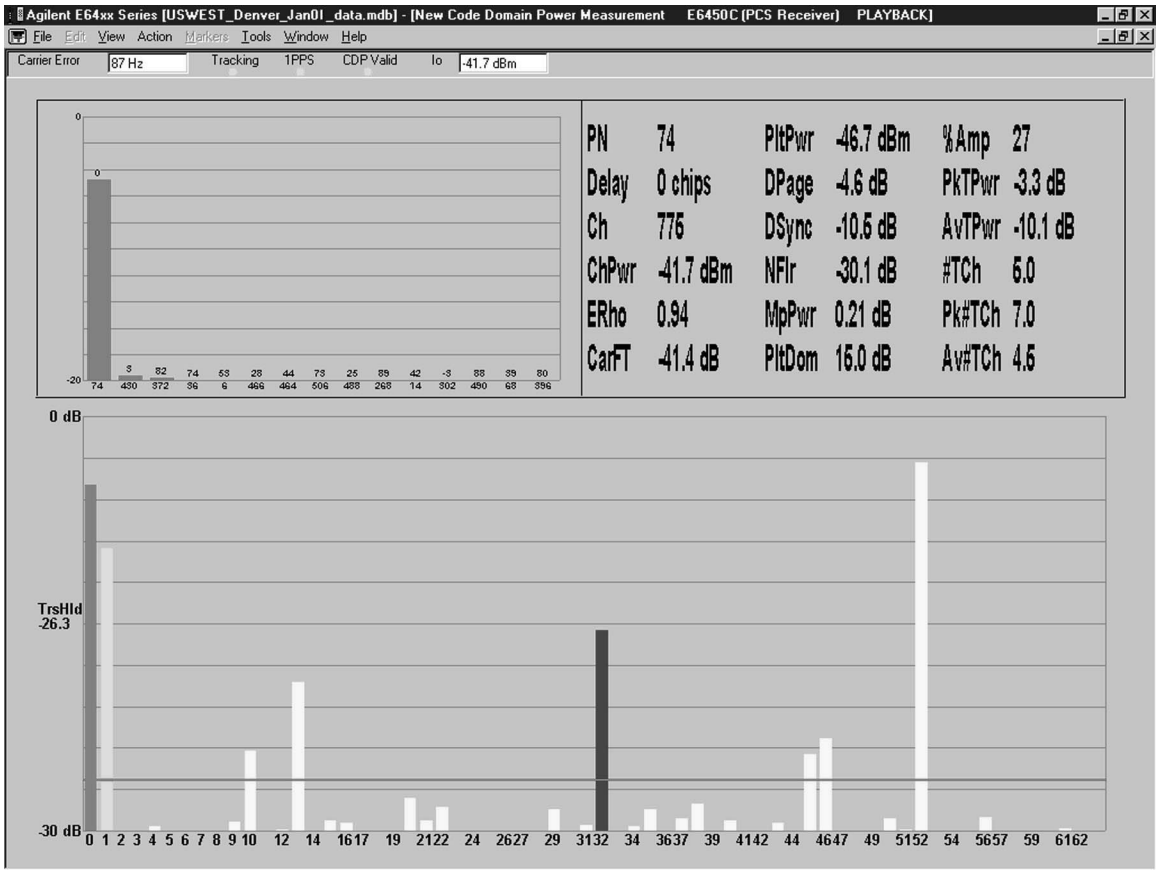

Figure 1. Code Domain Power display

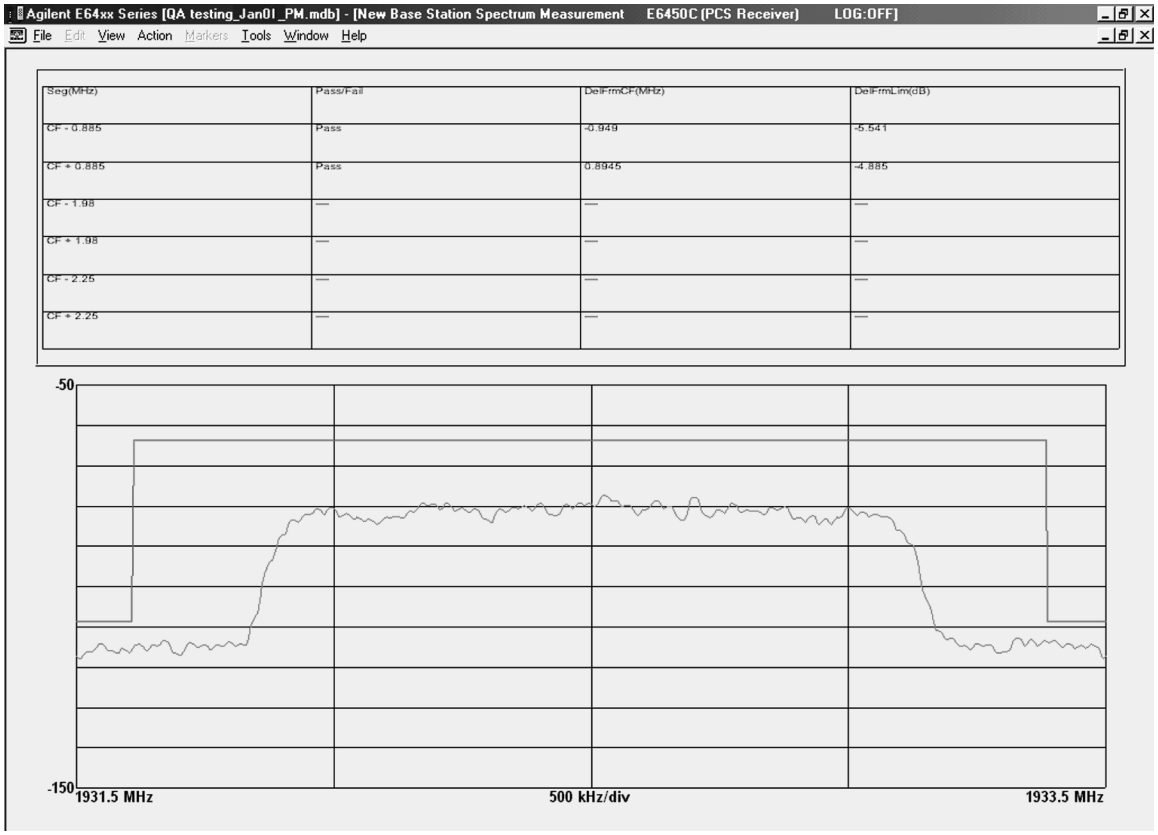

Figure 2. Spectrum display

The **spectrum** display includes the IS-97 spectrum mask. The control functions are very easy-to-use to support fast test execution.

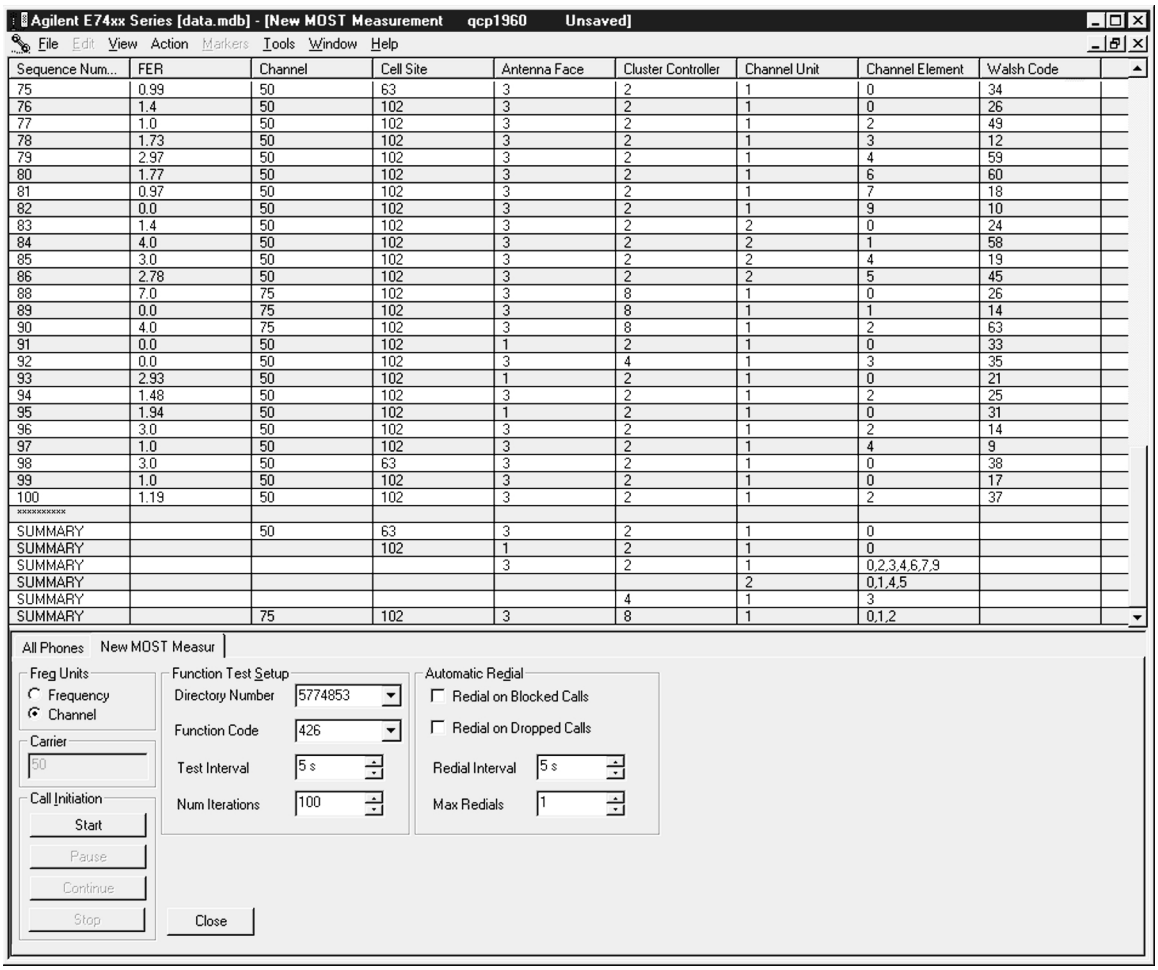

Figure 3. Phone-based BTS test display

The **phone-based BTS test** automates the Lucent MOST function. With just a few mouse clicks, the test is executed automatically. A complete record is made of which channel elements, channel units and channel controllers were exercised.

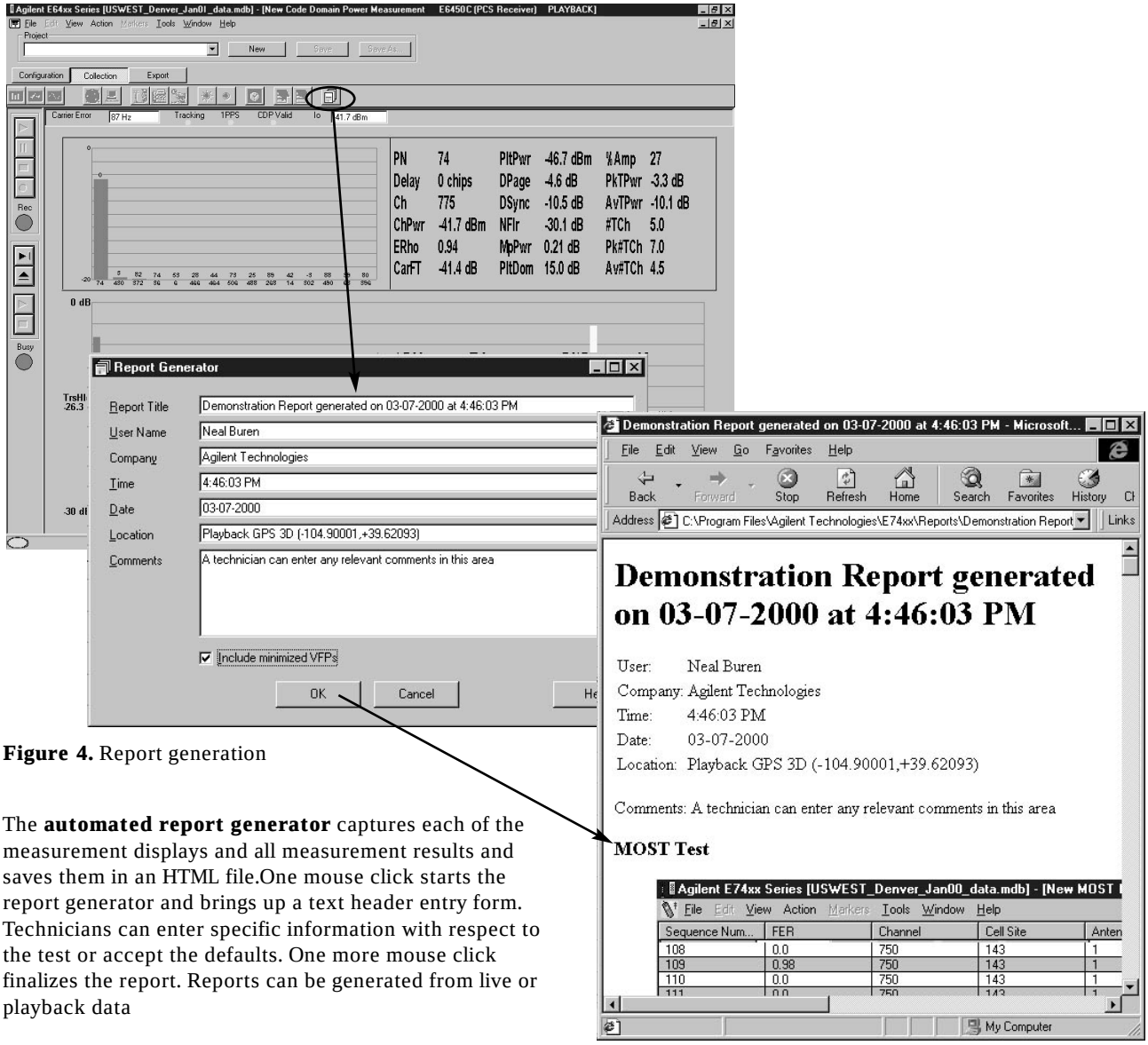

Figure 4. Report generation

The **automated report generator** captures each of the measurement displays and all measurement results and saves them in an HTML file.One mouse click starts the report generator and brings up a text header entry form. Technicians can enter specific information with respect to the test or accept the defaults. One more mouse click finalizes the report. Reports can be generated from live or playback data

Ordering Information

For detailed ordering information, please refer to the *Agilent E7490A Technical Specifications* (literature number 5968-8687E) and the *Agilent E7490A Configuration Guide* (literature number 5968-8696E).

Software options:

- Option 101: CDMA phone-based BTS test software license
- Option 111: Code domain power and spectrum mask software license

Receiver hardware options:

- Option 300: Cellular band receiver
- Option 310: Cellular band receiver with internal GPS receiver
- Option 320: PCS band receiver
- Option 330: PCS band receiver with internal GPS receiver
- Option 380: Japan Cellular band receiver
- Option 381: Japan Cellular band receiver with internal GPS receiver
- Option 390: Korea PCS band receiver
- Option 391: Korea PCS band receiver with internal GPS receiver

Accessory options:

- Laptop PC
- External GPS receiver with dead reckoning
- Carrying case
- Phone interface cables

Additional literature

		literature number
E7490A	CDMA Over-Air Maintenance Tool Technical Specifications	5968-8687E
E7490A	CDMA Over-Air Maintenance Tool Configuration Guide	5968-8696E
E7473A	CDMA Drive Test System Configuration Guide	5968-5553E
E7473A	CDMA Drive Test System Technical Specification	5968-5555E
CDMA	Drive Test Product Note	5968-5554E
E7480A	CDMA Post Processing Product Overview	5968-1549E
E7474A	TDMA Drive Test System Technical Specifications	5968-5556E
E7474A	TDMA Drive Test System Configuration Guide	5968-5861E
E7474A	TDMA Drive Test System Product Overview	5968-8689E
E7475A	GSM Drive Test System Technical Specifications	5968-5564E
E7475A	GSM Drive Test System Configuration Guide	5968-5563E
E7475A	GSM Drive Test System Awareness Brochure	5968-5562E

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