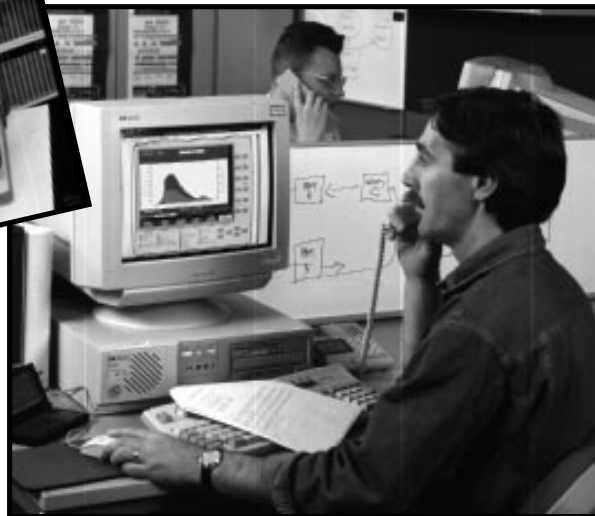

Interactive diagnosis for more effective support of SDH and ATM networks

Product note



HP E4540A distributed network analyzer software



Competitive pressures are forcing network operators to reduce support costs while, at the same time, improve customer support. But with fewer engineers skilled in new technologies like SDH and ATM, it's not always possible to have a technical expert in the right location to resolve network problems quickly and bring back customer services on-line promptly. With increasing road traffic congestion and longer air travel times, it's also taking longer for the experts to arrive at the appropriate location to support local technicians. And once committed to one location, the expert is no longer available to help with other critical problems elsewhere in the network.

Having a technical support expert at each location in the network obviously conflicts with the requirement for reducing costs. This product note, however, describes how you *can* have an expert in every location—using remote control.

Putting an expert in every network location

Introduction

Traditional methods of remote control have usually required programming skills and knowledge of control commands.

A much more attractive solution is offered by the HP E4540A distributed network analyzer software for HP 377xxx PDH, SDH, ATM and jitter performance analyzers. This software provides the central site PC with a real-time graphical user interface, displaying the front panel of the remote instrument. A technical expert at the central site now has interactive control of the remote site instrument and instant access to its test results. The user-interface also allows two-way interaction between the expert and the technician at the remote site for faster problem resolution.

Using interactive diagnosis

The HP E4540A distributed network analyzer software is Windows® based PC software. It provides an easy-to-use interactive display capability that allows a remote instrument's front panel to be operated from a central site PC.

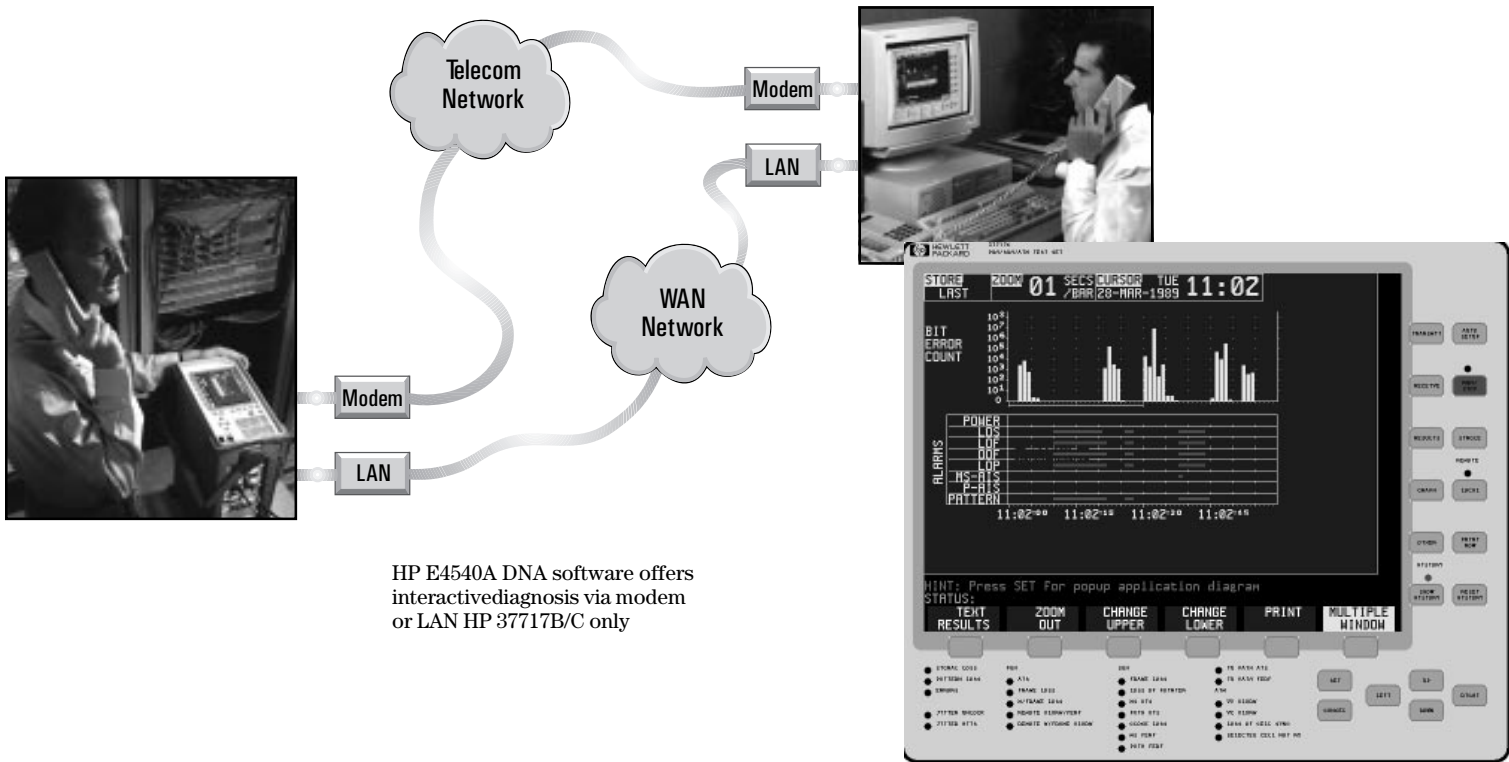
Since no programming skills are required and the link is via LAN or standard modems, action to resolve problems can start immediately. This saves costly travel time and avoids any delay in responding to customer problems.

Control is two-way (in real-time) allowing the technician to demonstrate the exact nature of the fault. With the expert fully briefed, the expert and technician can work together to resolve the problem – effectively putting an expert in every network location.

In addition, technicians feel more comfortable when supporting SDH and ATM network equipment knowing that comprehensive technical support is only a phone call away.

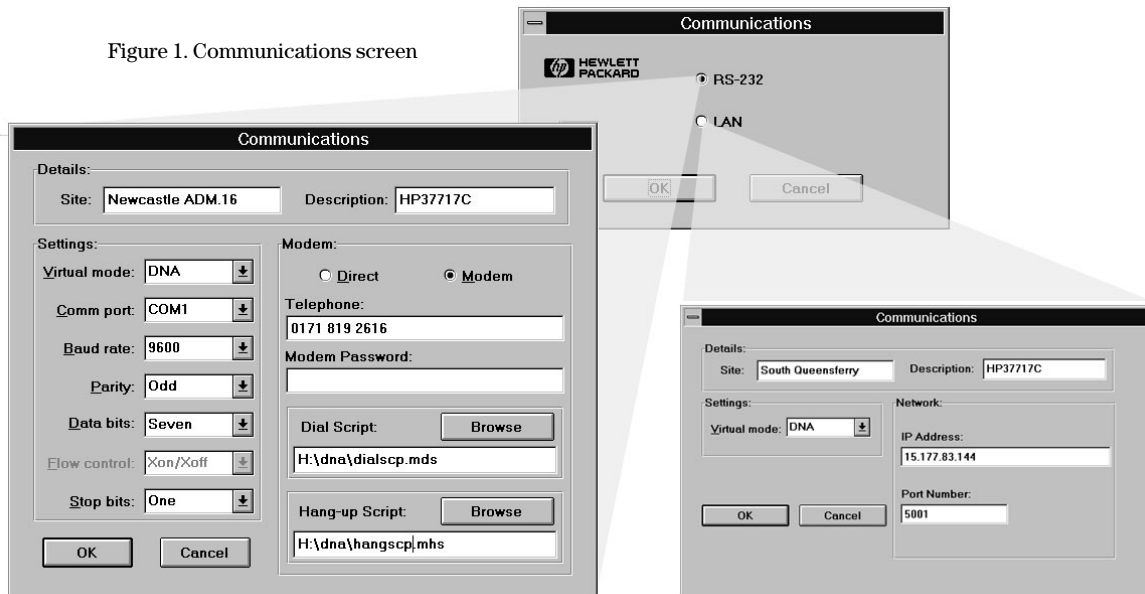
Finally, if there are problems elsewhere in the network, the expert simply connects up to the next remote problem site. More customer problems can, therefore, be resolved than before, greatly increasing department efficiency.

Clearly, increasing the availability and effectiveness of the central site experts reduces operating costs. In fact, the improved operational efficiency associated with interactive control easily satisfies the demands placed on technical support groups.



HP E4540A DNA software offers interactive diagnosis via modem or LAN HP 37717B/C only

Figure 1. Communications screen



Configuring the equipment

The HP E4540A software uses icons to simplify the set-up.

At the central site, the engineer double-clicks on the 'DNA' icon to start the software. If this is the first time a connection is being made to the remote site, the comms link must be set-up. Simply click on the 'New' icon. Select either modem or LAN connection. The communications window then appears.

Modem connection

Details section: Fill in with the location of the site to be accessed and any description you want to use to identify the instrument.

Settings section: Recommended values are shown in figure 1. The 'Comm port' must be set to the port on the PC that is connected to the modem.

Modem section: Set as follows. Select the modem field (note that direct local control is also possible) and the telephone number for the remote site. To connect to the modems, two script files are provided: one to dial, the other to hang-up the modem. In some cases it may be necessary to customize these files for some country-specific modems. This is easily done using the notepad application in the 'Windows Accessories' program group. In most cases, however, simply select the default script files. In performance monitoring applications, it is possible to set password protection on the modem to prevent unauthorized access.

LAN connection

Enter the IP address and port number as well as the site and location information.

The instrument at the remote site must have the same communications set-up as at the PC. These are set up by pressing the 'Other' key and selecting the 'remote control' page. For modem connection, set the controller type to 'computer'.

Establishing the connection

With the remote site information stored, it is only necessary to select the remote site from the 'Open' icon at the central site any time connection is required.

For interactive control, click on the 'Virtual Access' icon to establish the remote connection.

Clicking the mouse on the any of the keys on the virtual instrument display on the PC, or by pressing keys on the instrument at the remote site, instantly updates both displays.

HP E4540A distributed network analyzer software

The HP E4540A software capability is available for use with the HP 377xxx range of test equipment for measurement and characterization of SDH/PDH/ATM digital networks and tributaries.



Key features include a virtual instrument display that allows a technical expert at a central site to support technicians troubleshooting at a remote site, simplified testing using stored test sequences and configurations, robust automatic results retrieval, and transfer of results into Windows applications for analysis or to produce graphs and reports.

This software is compatible with PC or laptop running Windows 3.1, Windows NT or Windows 95 software. Note that for use with the HP 37717C communications performance analyzer, a high resolution PC monitor (for example UVGA 1020 × 760) is recommended.

Configuration

At a central site you need:

HP E4540A distributed network analyzer software for PC or laptop.
Minimum PC configuration: 80486 processor, 3.5-inch disk drive, 8 MB RAM, 20 MB free hard disk storage and 33 MHz clock speed.
Modem: 9600 b/s Hayes-compatible with MNP-5 (or better) error correction.

At a remote site you need:

HP 377xxx test set: Each instrument to be controlled also requires the HP E4540A distributed network analyzer firmware to be fitted (HP 377xxx Option USS).
Modem: 9600 b/s Hayes-compatible with MNP-5 (or better) error correction.

Related literature

- HP E4540A brochure, 5964-2240E
- HP E4540A product note, Test sequences for more effective testing of SDH and ATM networks, 5965-4911E
- HP 37717B/C communications performance analyzer brochure, 5965-4968E
- HP 37778A STM-16 test set brochure, 5965-4969E
- HP 37722/32A telecom/datacom analyzer brochure, 5965-3129E

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Hewlett-Packard manufactures the HP E4540A distributed network analyzer software (for HP 377XXX PDH/SDH/ATM family of portable test sets) under a quality system approved to the international standard ISO 9002 (BSI Registration Certificate No FM 10987).

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