Optivity Workgroup

Simplifies Network Management

Maximizes Network Uptime

Simplifies Network Configuration and Installation

Optimizes Network Resources

Bay Networks™ Optivity Workgroup™ family of network management applications — EZ LAN™ and EZ Internetwork™ — are designed to manage, configure, and troubleshoot small or workgroup networks. Both applications are quickly installed, easy to configure, and feature color-coded icons that report device status at a glance.

EZ LAN 3.1 operates in the background on any 486-class or Pentium PC. Support is provided for Bay Networks System 800,™ System 2000™ and System 3000™ Ethernet and Token Ring hubs, as well as the new BayStack™ product line, including the 100BASE-T stackable hub, 10BASE-T hub, and the BayStack Ethernet Workgroup Switch.

EZ Internetwork 1.0 operates in the background on any 486-class or higher PC, and provides support for Bay Networks ASN,™ and BayStack AN™ and ANH™ routers. The application features Quick2Config,™ an application that allows Bay Networks router configuration files to be quickly and easily created or modified, and RouterMan,™ a real-time, simple-to-use graphical monitoring and diagnostic application for network routers.

Used together, EZ LAN and EZ Internetwork provide an easy method of managing, configuring, and troubleshooting hubs, routers, and other critical network components. When EZ Internetwork and EZ LAN are installed on the same PC, they operate as a single application under the Workgroup Command Center.

SNMP-based, Optivity Workgroup provides a comprehensive set of network management capabilities accessible through a point-and-click, Windows-based user interface.

At the heart of both applications is the Workgroup Command Center, a home screen providing views on the health, numerical and graphical utilization, and error rate percentages on the network. Additional applications are used to focus on specific management areas, and are accessed from the tool bar at the top of the screen.

Bay Networks

Benefits

Simplifies Network Management

Optivity Workgroup integrates a comprehensive set of monitoring, diagnostic, and configuration applications to simplify hub and router management of small networks and workgroups. To simplify operation, Optivity Workgroup applications install in less than 10 minutes. All Optivity Workgroup functions are initiated from the Workgroup Command Center, an intuitive point-and-click, graphical user interface. Workgroup Command Center allows thresholds for selected devices to be custom-configured through a simple drag-and-drop graphical interface.

Maximizes Network Uptime

Optivity Workgroup's integrated applications maximize network availability by quick identification and resolution of problems affecting efficient network performance.

Color-coded icons in EZ Internetwork's RouterMan application indicate router performance status at a glance, providing access to detailed views of network router performance.

Simplifies Network Configuration and Installation

EZ Internetwork features Quick2Config, an application that hides the underlying complexities of router configuration, enabling the router configuration process to be completed in minutes. Additionally, with Quick2Config, router configuration files can be saved to the central management station, thereby reducing the time and effort for configuring additional routers. Quick2Config is fully compatible with Bay Networks Site Manager application.

Optimizes Network Resources

Both Optivity Workgroup applications provide fully integrated context-sensitive on-line help, simplifying the use of more advanced EZ LAN and EZ Internetwork features.

Graphical representations of utilization and error rates for selected devices are displayed within the Workgroup Command Center, providing a simple method for viewing the current state and history of activity for selected devices.

Features

Workgroup Command Center

Featured in both EZ LAN and EZ Internetwork, the Workgroup Command Center is a new, simple, at-a-glance view of the network.

The EZ LAN Workgroup Command Center view automatically organizes discovered network devices into groups of routers and bridges, hubs, and critical devices.

EZ Internetwork's Workgroup Command Center provides a simple at-a-glance view of automatically discovered routers.

Displayed in table format, the Workgroup Command Center in EZ LAN provides information on utilization and error rates for hubs, routers, and other critical devices, while EZ Internetwork's view provides information on router operational status, utilization, and error rates. Devices in both views can be displayed by their Media Access Control (MAC) address, network address, or network name.

Simply clicking on a device or group of devices launches a real-time graphical representation of utilization and error rates for the selection.

The Workgroup Command Center for both applications also provides a toolbar, which allows easy access to commonly used functions (see Figure 1). The toolbar for EZ LAN provides access for views such as the Expanded View™ graphical user interface, ping, extended autodiscovery, online help, find device, and alarm manager. EZ Internetwork's toolbar functionality provides easy access to RouterMan, Quick2Config, extended autodiscovery, online help, find device, and router description information.

EZ LAN

EZ LAN 3.1 is an integrated, easy-to-use, Windows-based network management application designed to manage and troubleshoot small networks. The application allows Bay Networks System 800, System 2000 and System 3000 Ethernet and Token Ring hubs, as well as the new BayStack product line — including the 100BASE-T stackable hub, 10BASE-T stackable hub, and the BayStack Ethernet Workgroup Switch — to be managed and configured. The application also monitors network routers and other critical devices, such as NetWare file and print servers.

EZ LAN 3.1, now shipping on CD-ROM, can be installed and begin monitoring network activity in less than 10 minutes. Once installed and launched, EZ LAN begins automatically discovering network devices, graphing utilization and error rates, and tracking alerts from the network.

Autodiscovery

A powerful new feature of EZ LAN 3.1 is autodiscovery, which makes a previously difficult and time-consuming process easy and automatic. The autodiscovery function begins when EZ LAN is launched. During the autodiscovery process, the application automatically identifies all Bay Networks hubs, routers, bridges, and NetWare file and print servers and enters them into the Workgroup Command Center. Following the initial discovery

Figure 1 **EZ LAN's Workgroup Command Center View**

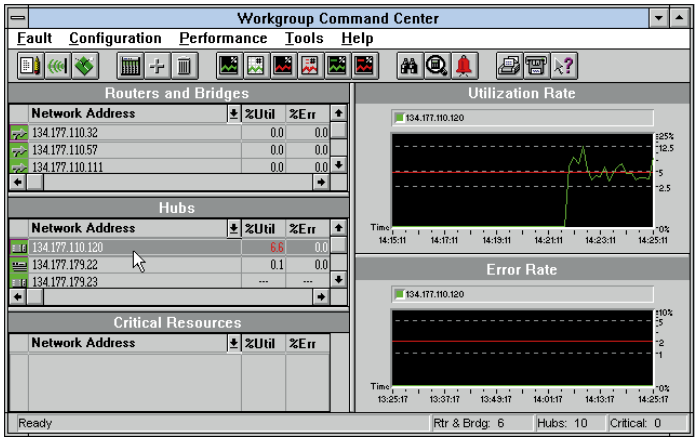


Figure 2 **Autodiscovery Window**

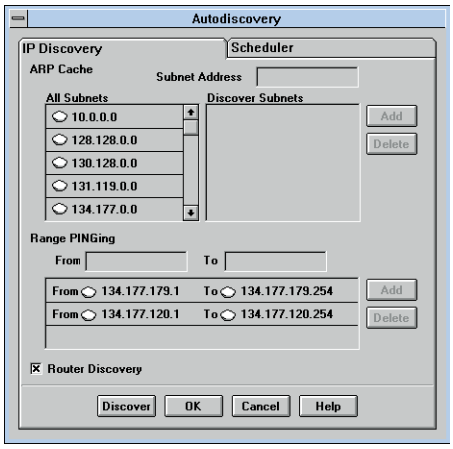
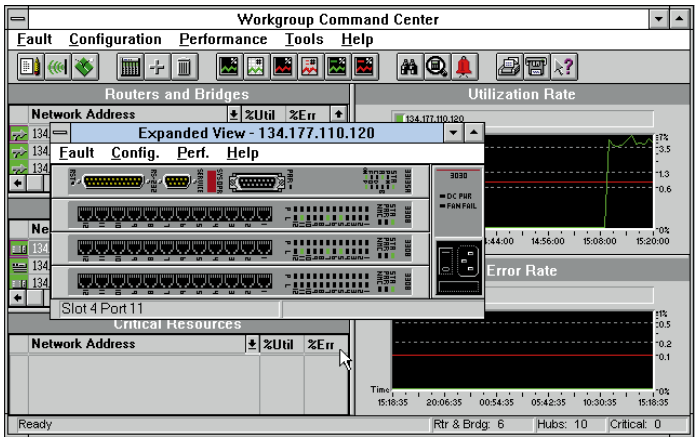


Figure 3 **Expanded View Window**



process, which will identify devices on the local subnet, extended autodiscovery can be initiated for selected subnets or through range pinging (see Figure 2).

Dynamic Graphical and Tabular Utilization and Error Monitoring

Graphical representations of utilization and error rates for selected devices are displayed within the Workgroup Command Center, providing a simple method for viewing the current state and history of activity for selected devices. All collected data is stored in tabular format and easily viewed via the Workgroup Command Center's toolbar. Both the graphical and tabular information can be saved to disk and imported into popular word processor or spreadsheet applications for report generation, or they can be printed directly from EZ LAN.

Custom-configurable Thresholds

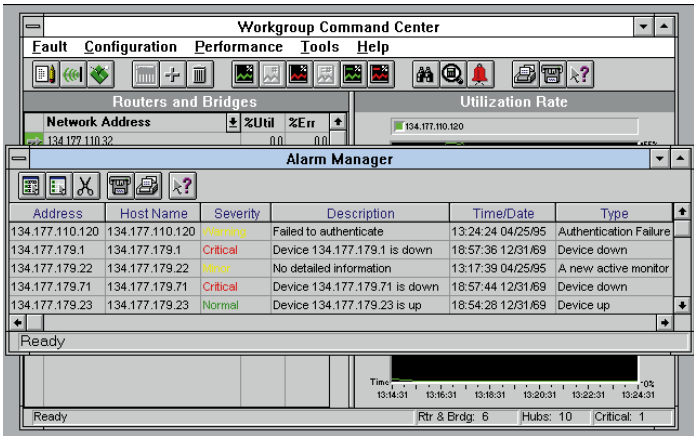
EZ LAN 3.1 allows benchmarks to be established by setting system-wide utilization and error rate threshold levels. In addition, thresholds for selected devices can be custom-configured through a simple drag-and-drop graphical interface and then saved based on the unique attributes of their environment.

Complete Hub Management

EZ LAN's Expanded View provides an accurate real-time representation of a selected hub or switch. Complete with installed modules and active LED indicators, Expanded View provides real-time hub- and port-level monitoring and configuration (see Figure 3).

EZ LAN's Integrated Alarm Manager provides real-time, color-coded trap management for easy identification and resolution of network problems.

Figure 4 **Alarm Manager Window**



Integrated Alarm Manager

Easily accessible from the Workgroup Command Center toolbar, the Alarm Manager provides an organized, color-coded record of alert messages received from the network (see Figure 4). Detailed alarm descriptions, including network address, hub slot and port, date, time, and integration with on-line help expedites problem identification and resolution. A full export capability allows for detailed reports using common word processor or spreadsheet applications.

Context-sensitive On-line Help

Fully integrated context-sensitive on-line help assists users with the use of these applications. The on-line help addresses application functionality, as well as alarm descriptions and recommended actions based on warning messages received from the network (see Figure 5).

Agent Manager and EZ Install

Basic functionality is provided for Optivity's Standard, Advanced, and Advanced Analyzer™ software agents. EZ LANs Agent Manager provides a simple-to-use method for managing software agent configurations and performing agent upgrade installations from a single management station.

Both Agent Manager and EZ Install are new enhancements for the EZ LAN application. Previously found only in the more complex Optivity Campus™ and Optivity Enterprise™ solutions, Agent Manager provides a simple-to-use method for managing software agent configurations and performing agent upgrade installations from a single management station.

To simplify and expedite remote hub installation, EZ Install, an extension of Agent Manager, allows for automated policy-based setup of new hubs. Working together, Agent Manager and EZ Install enable ranges of IP addresses to be assigned and reserved for hub agents. When a new hub is added to the network, EZ Install automatically identifies the subnet the hub should be part of, assigns an available address, and completes the boot process.

EZ Internetwork

EZ Internetwork 1.0 is an easy-to-use integrated suite of three MS Windows-based network management applications—Workgroup Command Center, RouterMan, and Quick2Config. Designed for configuring, managing, and monitoring Bay Networks AN, ANH, and ASN routers, as well as other MIB II-compliant routers, EZ Internetwork applications optimize network resources by simplifying network management and router configuration and installation.

Figure 5 **Context-Sensitive On-line Help Screen**

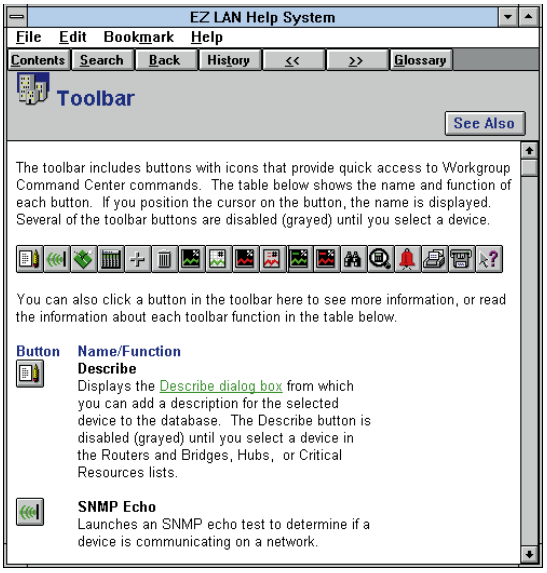


Figure 6 **EZ Internetwork Workgroup Command Center**

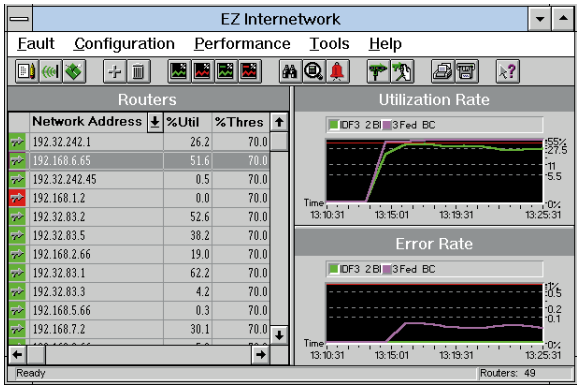
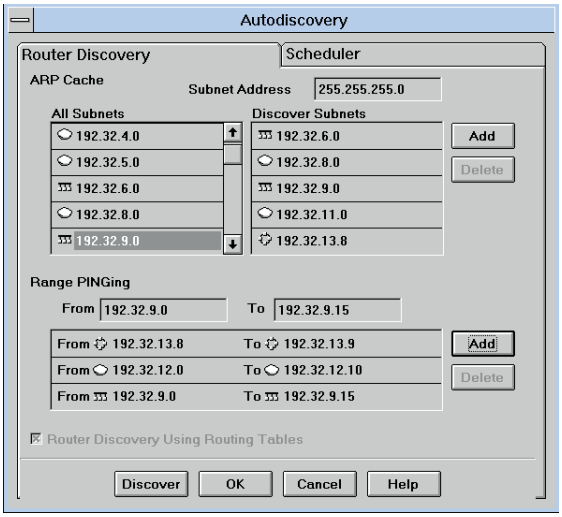


Figure 7 **Autodiscovery**



Workgroup Command Center Within EZ Internetwork

EZ Internetwork's Workgroup Command Center provides a simple at-a-glance view of automatically discovered routers. These devices are displayed in tabular format and provide information about each router's operational status, utilization, and error rates (see Figure 6). Devices can be displayed by Media Access Control (MAC) Address, Network Address, or Network Name. Simply selecting a router or group of routers launches a real-time graphical representation of utilization and error rates for the selected routers. Graphing multiple routers simultaneously enables easy comparison of router throughput and error rates.

The Workgroup Command Center also provides a toolbar to easily access commonly used functions, including RouterMan, Quick2Config, extended autodiscovery, ping, online help, find device, and router description information.

Autodiscovery

A powerful new feature in EZ Internetwork 1.0 is router autodiscovery, making a process that used to be inexact and time consuming now easy and automatic. The autodiscovery function begins when EZ Internetwork is launched from Windows. During the autodiscovery process, Bay Networks and other MIB II-compliant routers are identified and entered into the Workgroup Command Center. Following the initial discovery process, which will identify routers on the local subnet plus four hops from the local subnet, extended autodiscovery can be initiated for selected subnets or through range pinging (see Figure 7).

Color-Coded Status Display

Color-coded router icons represent the operational status of the routers. At a glance, users can see which routers are functional on the network. Red signifies that the router is down, and green signifies that the router is up and functional.

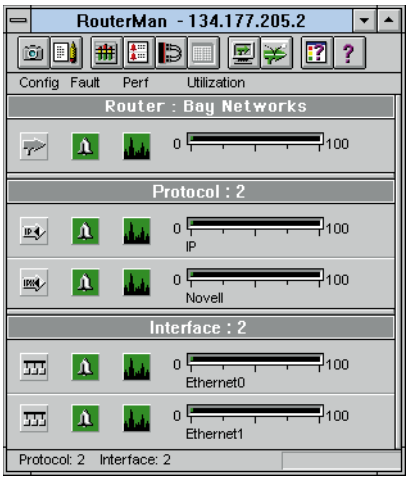
Performance Baselining and Thresholds

EZ Internetwork 1.0 enables system-wide default thresholds for utilization and error rates to be manually set. Additionally, thresholds for selected devices can be custom configured and saved based on the unique attributes of the environment.

Dynamic Graphical and Tabular Utilization and Error Monitoring

Graphical representation of utilization and error rates for selected routers is displayed within the Workgroup Command Center, providing an easy way to view the current state and history of activity for the selected routers. In addition, the actual data collected is stored in tabular format and easily viewable via the Workgroup Command Center's toolbar.

Figure 8 | **RouterMan Window**



Both the graphical and tabular information can be saved to disk and imported into popular word processor or spreadsheet applications for report generation, or simply printed directly from EZ Internetwork.

RouterMan

RouterMan is a real-time, simple-to-use graphical monitoring and diagnostic application for network routers.

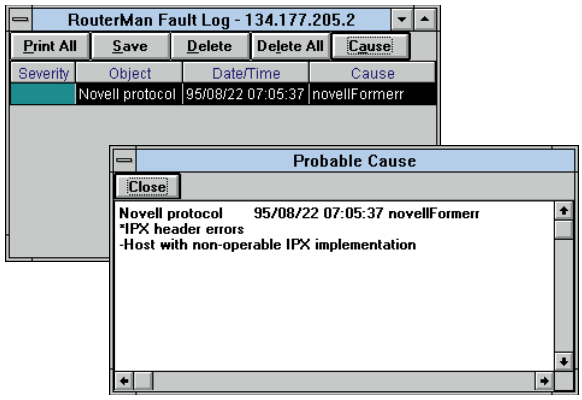
Highlights include:

- Complete real-time monitoring and management of multiple routers from a single PC.
- Display of all protocols enabled on routers, complete with fault and performance status for each. IP, DECnet IV, XNS, AppleTalk, IPX, and Banyan VINES are all supported.
- Display of all interfaces supported by routers, including Ethernet, Token Ring, FDDI, and serial line connections.
- Color-coded interface reports of overall router status at a glance.
- Graphical interface simplifying SNMP and MIB management.
- Support of all Bay Networks, Cisco, and MIB II-compliant routers.

RouterMan allows the network manager to proactively monitor a router by automatically polling important information. When an interface goes down, the icon automatically changes color to notify the network manager that an event has taken place. By continuously monitoring the router, RouterMan provides early notification of problems before they affect LAN/WAN performance.

RouterMan lets users monitor and control all Bay Networks, Cisco, and other MIB II-compliant routers on a network from a single application, reducing router management to a simple point-and-click mouse operation.

Figure 9 | **RouterMan Fault Log**



RouterMan automatically determines the enabled protocols as well as the number and type of interfaces present in the router. Polling will automatically begin for all enabled protocols and interfaces. The interface types are indicated by the various icons.

The RouterMan window is divided into three sections (see Figure 8). The top section contains information related to the router as a whole; the middle section contains protocol-specific information; and the lower portion of the window contains interface-specific information.

Each row of the main window contains buttons and a gauge. The buttons in any row are arranged in the order of configuration, fault, and performance. The colors of each button and gauge are significant because they represent the current status and are updated in real time.

Configuration buttons are either black or gray. A black button implies that the router, protocol, or interface is enabled; a gray button implies disabled. Fault and performance buttons are either green, yellow, or red. Fault color changes are based on packet drops. All fault button state changes are in the Fault Log (see Figure 9). In addition, any fault will cause the RouterMan icon (when minimized on the desktop) to change colors. The thresholds

Figure 10 **RouterMan Performance by Interface**

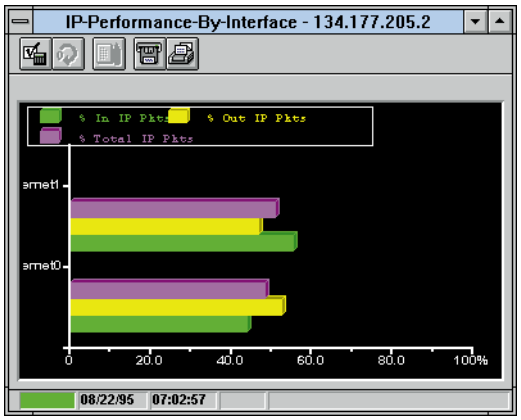
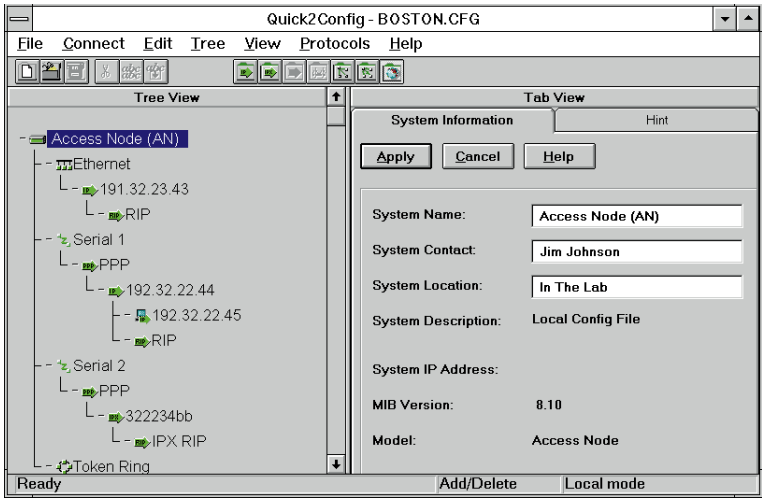


Figure 11 **Quick2Config**



for these color changes are user-configurable through a toolbar button. Other user-configurable parameters include the SNMP poll-time and timeout intervals.

General Router Information The Configuration menu contains options to determine the router profile, begin a Telnet session with the router, or perform an echo test. The Fault menu contains the Fault Log where all faults detected by the application are tracked. The severity of the fault, Object Type, Date/Time, and Cause are logged for each entry.

Protocol-specific Information For the protocol section, the Configuration menu contains configuration information specific to each protocol. For example, the IP configuration menu has options to display the ICMP and IP Interface profiles, as well as IP Routing, ARP, and Accounting tables. The Fault menu gives the option of displaying or graphing IP fault. The Performance menu gives the option of displaying or graphing IP performance (see Figure 10).

Interface-specific Information The Interface section's Configuration menu provides the ability to determine the physical interface parameters and their operational state. For example, a serial line interface configuration would provide information such as the line speed, Maximum Transmission Unit (MTU) size, and operational status. The Fault menu provides the option of displaying or graphing interface-level faults. The Performance menu provides the option of displaying or graphing interface-level performance statistics.

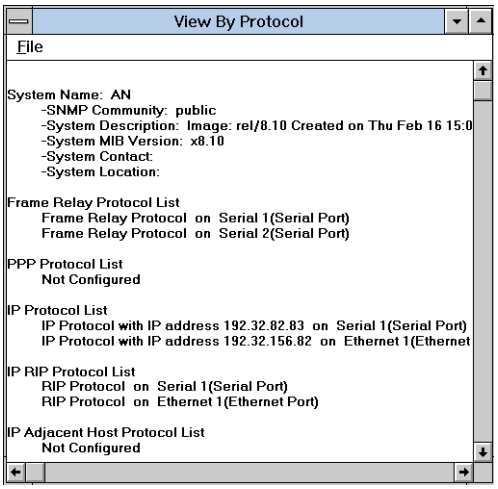
Quick2Config

Quick2Config is a Windows-based application that allows router configuration files for Bay Networks AN, ASN, and ANH devices to be quickly and easily created or modified. The intuitive graphical user interface hides the underlying complexities of router configuration, enabling Quick2Config to complete the router configuration process in minutes (see Figure 11).

Quick2Config allows the most commonly used configuration parameters to be created, modified, and viewed. For most small or remote branch office networks, Quick2Config provides the complete router configuration solution. For other networks requiring more extensive configuration, Quick2Config saves time by specifying the basic router configuration before moving on to use the router terminal interface or the Site Manager application.

Quick2Config supports configuration of Ethernet, Token Ring, and serial interfaces. Protocols supported by Quick2Config include IP, IP RIP, SNMP, IPX, IPX RIP, AppleTalk, Frame Relay, industry standard Point-to-Point (PPP), transparent bridge, and source route bridge.

Figure 12 **Quick2Config Text View Screen**



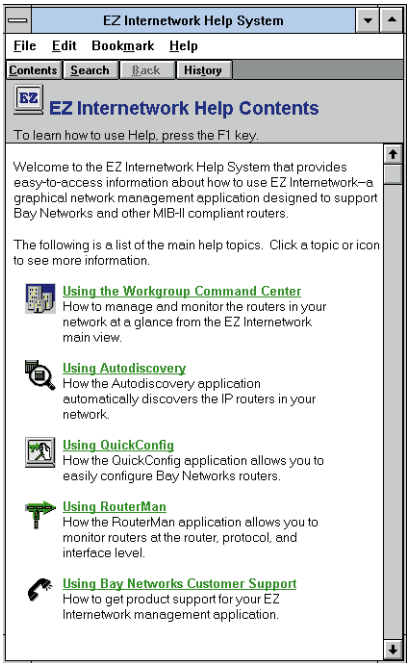
Simplistic User Interface For Microsoft Windows users, the Quick2Config user interface has a familiar look and feel. Quick2Config uses the file folder tab format for router configuration. Simply clicking on a file folder tab enables protocol interface configuration parameters to be edited.

A collapsable/expandable branch list displays the router configuration in a graphical and hierarchical fashion. This view automatically displays the protocols, protocol address information, and routing parameters configured on each interface. When any interface or protocol is selected in the branch list, the corresponding interface or protocol configuration file folder is automatically displayed. Users can move/copy/modify information from one interface to another simply by using the branch list drag-and-drop option.

The interface is customizable so that font size, font type, and colors can be changed to meet individual specifications. Standard tool bar icons such as save, print, cut, and paste are provided for use with Quick2Config.

With Quick2Config, router configuration files can be saved to the local PC. These files can then be "reloaded" into Quick2Config so that they may serve as templates for future router configurations, thereby reducing the time and effort for configuring additional routers.

Figure 13 **Context-Sensitive On-line Help**



Out-of-Band Support

With Quick2Config, configuration files can be created in advance and then downloaded on site through the router's console port from the PC. Completed configuration files can be downloaded to the router in seconds. Out-of-band support eliminates the need to have the router initially up and running on the network with at least one configured interface, which saves significant time and effort.

Quick2Config also supports in-band configuration via the network.

Automatic Hardware Discovery

Quick2Config will automatically detect the router model type, number of interfaces, and interface types. The information is then displayed in a simplistic, graphical format, which simplifies and streamlines the configuration process by eliminating the need to know router model numbers, number, and type of interfaces to configure the router.

Text View

The configuration file can also be viewed or printed in text format (see Figure 12). The file can be displayed based upon interface or protocol selection.

Site Manager Compatibility

Quick2Config is fully compatible with Bay Networks Site Manager application. Any changes made to the router configuration via Quick2Config will be recognized by Site Manager. In addition, any changes made by Site Manager to the router configuration will be recognized by Quick2Config for those interface type, protocols, and protocol parameters supported by Quick2Config.

Context-Sensitive On-line Help

Fully integrated context-sensitive on-line help provides the quick reference and guidance needed to answer a variety of questions about network management or the EZ Internetwork application (see Figure 13).

Setup and Configuration

EZ Internetwork's enhanced setup and configuration program eases product installation. The advanced product installation program automatically integrates with existing WINsock-compliant TCP/IP stacks or loads and configures NetManage's Chameleon TCP/IP stack for those users not running with a TCP/IP stack. The often complex and time-consuming task of TCP/IP configuration is hidden from the user.

During the installation process, the program displays and describes many of the user interface screens contained in the product, increasing familiarity with the product even before its initial use.

Ordering and Availability

Item	Description
76024	EZ Internetwork 1.0
600	EZ LAN 3.1

EZ Internetwork Hardware and Software Requirements

Hardware	80486 or Pentium processor or compatible PC operating at 33 MHz or higher 12 MB RAM 50-MB free hard disk space VGA adapter and display or other Windows supported display Microsoft-compatible mouse Network adapter card CD-ROM (optional; recommended for future functionality)
Software	MS-DOS 5.0 or higher (MS-DOS 6.2 recommended) Microsoft Windows 3.1

EZ LAN Hardware and Software Requirements

Hardware	80486 or Pentium processor or compatible PC operating at 33 MHz or higher 8 MB RAM (12 recommended) 25-MB free hard disk space VGA adapter and display or other Windows-supported display Microsoft-compatible mouse Network adapter card CD-ROM drive (optional; recommended for future functionality)
Software	MS-DOS 5.0 or higher (MS-DOS 6.2 recommended) Microsoft Windows 3.1

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