MIAMI
Remote Network Monitoring

Allows pro-active fault finding of telecomms networks from a central site. Uses configurable scans and graphical displays

■ Reduces maintenance costs
■ Automatic scanning of trunks and tributaries
■ Allows pro-active fault finding
■ Control test equipment from a central site
■ Terminal emulation mode
■ Graphical display of G.821 errors

One application area of increasing importance is that of network monitoring. This is especially true where the network is providing a service to the public, for example a telecommunications network or a cable network. IFR has provided remote network monitoring solutions which allow network operators to monitor PDH traffic at key network nodes from a central location.
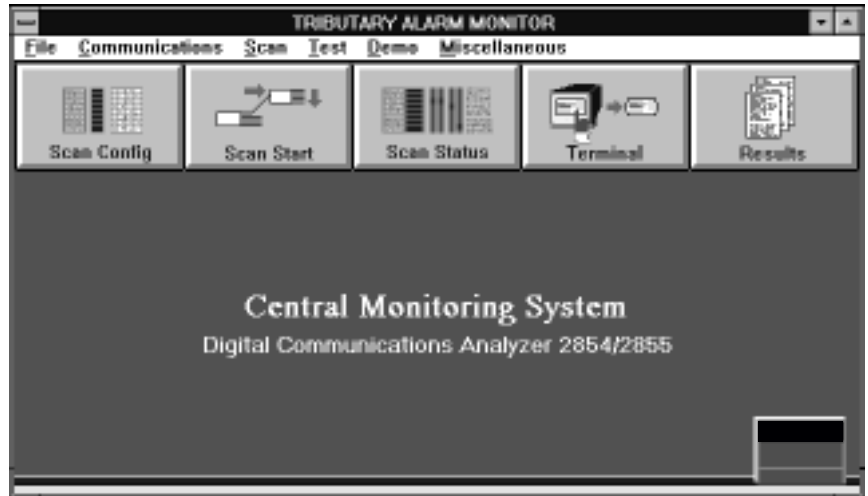
The monitoring system is split into two parts - the central node and multiple remote nodes. The central node provides facilities for configuring the whole system and is connected to the remote nodes using ISDN, kilostream or modem and bridges. It additionally provides access to any of the remote nodes for in depth monitoring of lines and analysis of errors and alarms.

The remote nodes are equipped with IFR 2854/5 Digital Transmission / Communications Analyzers which are connected to the 140 Mbit/s transmission lines through a switch module. This allows the computers at the remote nodes to select which of the 140 Mbit/s lines are being scanned at any particular time.

Proactive Fault Finding

The system provides records of network error levels. These can be used to reduce the time taken to locate and diagnose the causes of faults. In addition, the continuous monitoring of the networks means that you can be pro-active in fault finding. Instead of reacting to fault reports from customers, you can detect and correct potential problems before they are noticed.

The software facilities are split into four main modes, Scan Configure, Scan, Test and Terminal Emulation of the instrument front panel.
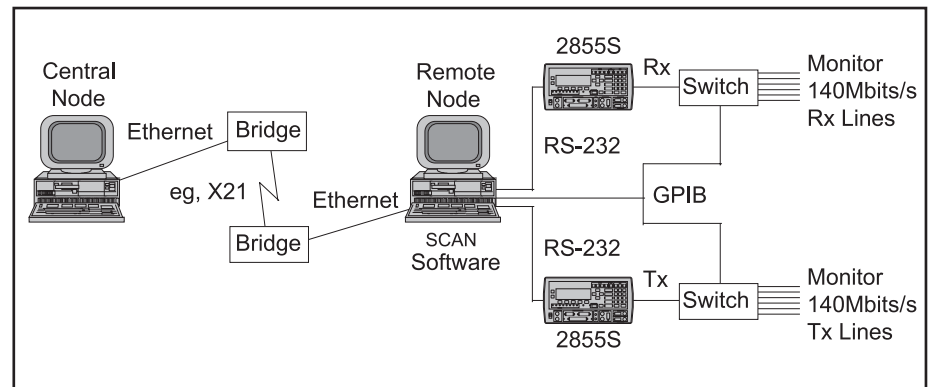
Scan Configure

This mode allows the system to be configured from the central node. Remote nodes can be added to a site list and which trunk and tributaries will form part of the scan can be selected. Configuration tables show the status of each node and list the numbers of lines and tributaries selected at each node.

Status Mode

Scan

Scans are performed automatically by the remote computers but can be monitored centrally. Each configured switch port in turn is selected and the computer stores the results of all alarms down to 2 Mbit/s. The results of these scans can be

Example Configuration

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monitored from the central node and date stamped records of failure alarms can be logged to a file. Three levels of display allow the choice of displays for site, trunk or tributaries.

Features on the displays are color coded to indicate the status of the different lines.

Feature	Color
Untested tributaries	Blue
Unconfigured tributaries	Grey
Passes	Green
Failures	Red
Historical failures	Orange

A quick access mode is provided whereby individual tributaries can be selected by means of a reference code.
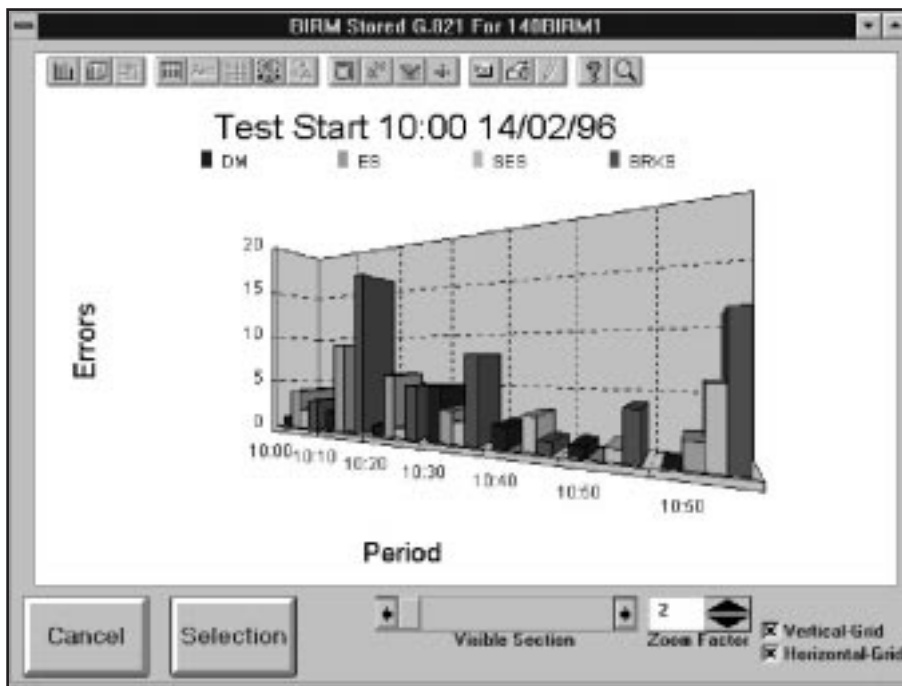
Test

The test mode allows the user to perform tests for various errors and present the results in a format which can be customised to suit his needs. Standard facilities include graphical representation of G.821 errors and major errors against time. Other facilities include the logging of DTMF numbers against time, and displays of CAS and Frequency values. Results can also be obtained in tabular format.

Terminal

The terminal mode gives the user full control of the analyzer at any remote node. By a combination of key presses or by using the computer mouse, the operator is able to 'push' buttons on the remote instrument front panel. The response on the instrument is echoed back to the central computer screen. This means that no additional training is required for those familiar with manual operation of the instrument. A choice of standard screen or zoom modes is provided.
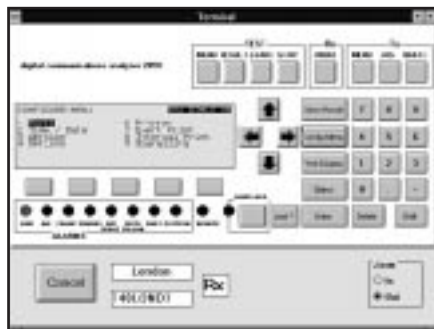
Test Mode

Terminal Mode
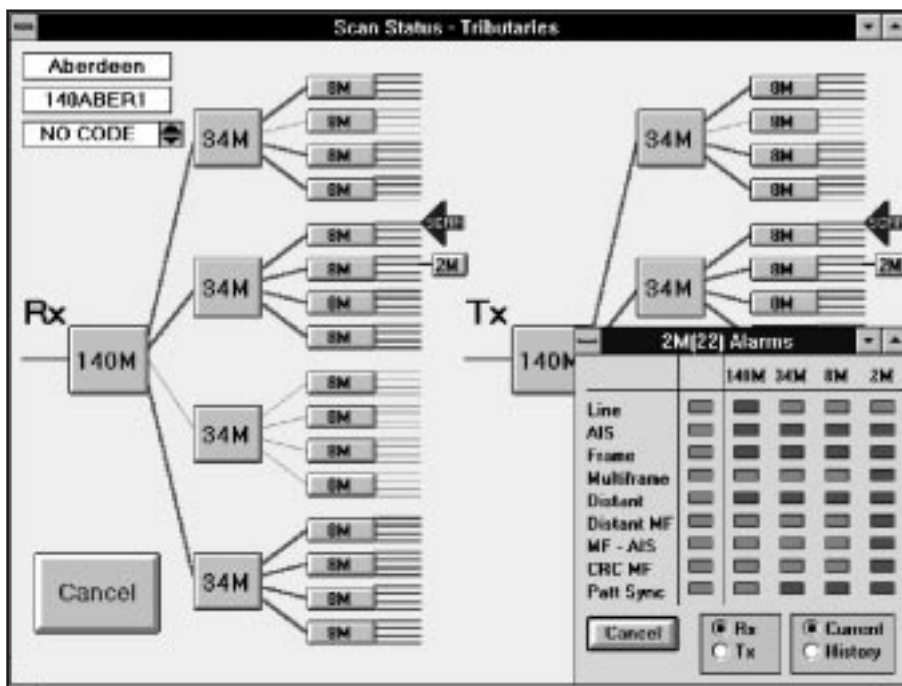
Scan Mode

Typical Specification

Minimum Recommended PC Requirements
486 machine with 8Mbytes of memory, SVGA resolution and Windows for Workgroups 3.11.

Digital Communications Analysis
G.703 input
2Mbit/s - 140Mbit/s
Frame Analysis
2Mbit/s, 8Mbit/s, 34Mbit/s and 140Mbit/s and Analysis of CAS signal codes
Detection of alarm and errors at all tributary levels
2Mbit/s G.703 output
DTMF Decoding
Analoge output for voice analysis

Multi-way Input Selection
Modular, up to 126 receive and 126 transmit digital signals at 140Mbit/s
75 Ω BNC connectors or Type 43
19 in rack or bench mounted

GPIB Interface
National Instruments PCIIa or PCMCIA

http://www.ifrinternational.com

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