

Network Analysis System

The NMS Communications Network Analysis System™ gives telecom operators the ability to monitor and analyze the performance of their network via interaction with NMS voice quality systems (VQS). Network parameters are collected and processed, and can be displayed in a variety of report formats that allow telecom operators to tune their network for optimum performance and identify potential problems quickly and easily.

APPLICATIONS

The NMS Network Analysis System retrieves multiple parameters directly from NMS voice quality systems that are deployed and operating in the network. The Network Analysis System functions are transparent and do not interrupt traffic, degrade network services, or interfere with VQS equipment operations.

The Network Analysis System collects parametric data, stores the data for later use, and utilizes special algorithms to process the data and generate reports for analyzing network characteristics. For example, the system can provide assistance during network troubleshooting or testing by revealing

potential performance issues derived from unusual data patterns, resource allocations, or parameter settings. Similarly, it can be used to routinely monitor the parametric characteristics of a network to ensure consistently acceptable service is being delivered to subscribers.

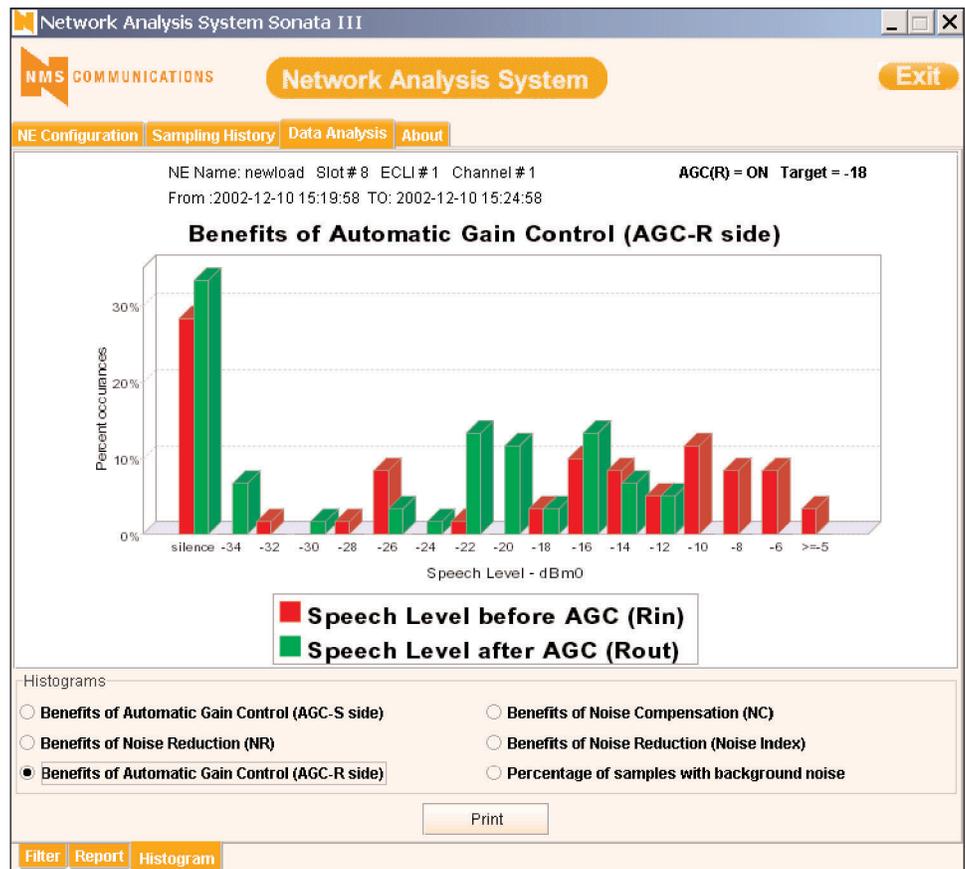


Figure 1: Typical Graphic Report Screen Display

FUNCTIONAL DESCRIPTION

The Network Analysis System can be installed on a personal computer configured with Windows® XP, 2000, 98, or NT. The Network Analysis System communicates with NMS voice quality systems over Ethernet LAN connections using TCP/IP protocol.

The Network Analysis System can be configured to select, extract, and record the configuration and performance information for each of the individual voice channels (i.e., 64 kbps signals) contained in any T1 or E1 facility terminated by the NMS voice quality system being monitored. Monitoring is continuous, with samples being collected at a 5-second rate. The data samples are identified by facility and channel number, along with a time-stamp. The system can also export historical data to storage media (e.g., generate archival data files) that can be used at a later date.

The Network Analysis System records the following parametric data for each channel within a specific E1 or T1 facility signal that is being monitored:

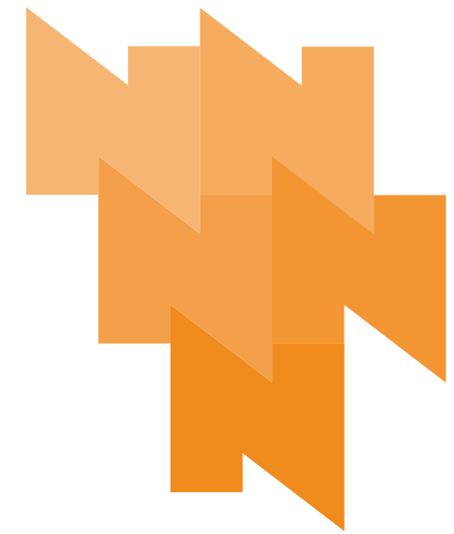
- Speech levels measured at the S_{in} , S_{out} , R_{in} , and R_{out} ports of the NMS voice quality system
- Noise levels measured at the R_{in} and R_{out} ports of the NMS voice quality system
- Echo characteristics including:
 - Echo Return Loss (ERL)
 - Echo Return Loss Enhancement (ERLE)
 - Echo Path Delay (echo tail delay)

The Network Analysis System can generate a variety of standard reports using different formats (e.g., tabular or graphical). In addition, the user can specify time intervals. This capability allows the user to produce customized reports that are focused on the specific facility signals, performance parameters, and collection intervals of interest. The stored historical data is not affected by the Network Analysis System report generation functions, so the user can specify different settings to either include or exclude data when generating alternate "views" using the same historical data. Figure 1 is an example of a typical screen display.

TECHNICAL SPECIFICATIONS

General

- Speech sample rate: 1 sample every 5 seconds
- Sample time period: Up to 7 days
- Sample size: 1 E1 or T1 (31 or 24 channels, respectively)
- Network measurements:
 - Speech levels at R_{in} , R_{out} , S_{in} , S_{out}
 - Noise levels at R_{in} , R_{out}
 - Echo Return Loss
 - Echo Return Loss Enhancement
 - Echo Path Delay
- Report format: Tabular or graphic representation
- Transmission rate: 10/100Base-T Ethernet
- Protocol (network layer): TCP/IP
- Operating system: Windows XP, 2000, 98, and NT
- Minimum PC configuration
 - Pentium III
 - 128 MB RAM
 - 2 GB hard drive
- Database: MySQL



For the latest information on supported features and operating systems, refer to our web site at www.nmscommunications.com.

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