

## Application Note – SONABeam™ Network Management



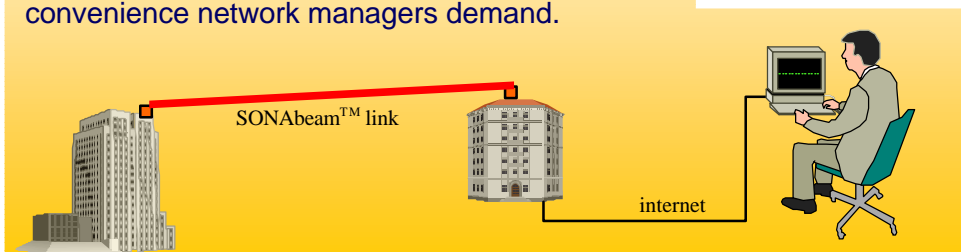
*Even if the hardware used to build a network is the most robust and has the highest performance in the industry, efficient and thorough network management is a must. One might argue that a more reliable network requires less management. At fSONA, we think you should have it all.*

### Managing to Stay Connected

fSONA's new network management capabilities provide technical personnel with unprecedented control over every significant aspect of their network. Diagnostics and health monitoring, performance verification, network continuity... all from a single location or at specific network nodes. These new capabilities are available with the latest SONABeam™ platform<sup>†</sup>, and include those features most requested by our customers and by the general market. For example...

#### IP Addressability

Access information on any terminal in the network remotely from any location, via the internet. This provides the flexibility to address network issues quickly and efficiently, and offers the kind of convenience network managers demand.



#### Local Logging

Fundamental performance parameters, such as received signal strength, transmitter output power, and temperature, can be recorded and stored in a log file. No external PC or logging equipment is necessary. This feature is a valuable tool for analyzing and debugging potential performance issues. It provides a history of network performance at each network node.

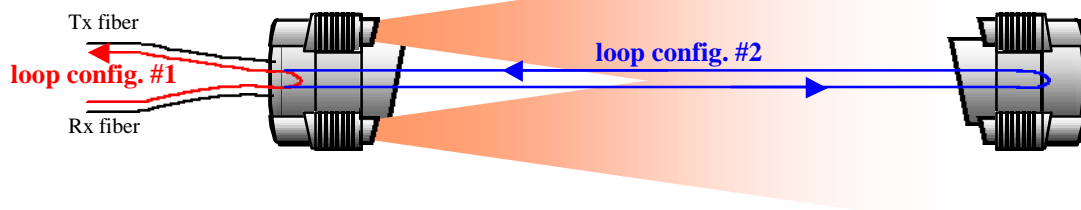
#### Multi-Level Security

One of the advantages of a SONABeam™ link is the inherently secure nature of the free-space optical transmission. This feature is maintained throughout the network with password protection and encryption, incorporated at different levels of the architecture.

<sup>†</sup> Not backward-compatible with previous hardware platforms. Please contact your sales representative for alternative solutions.

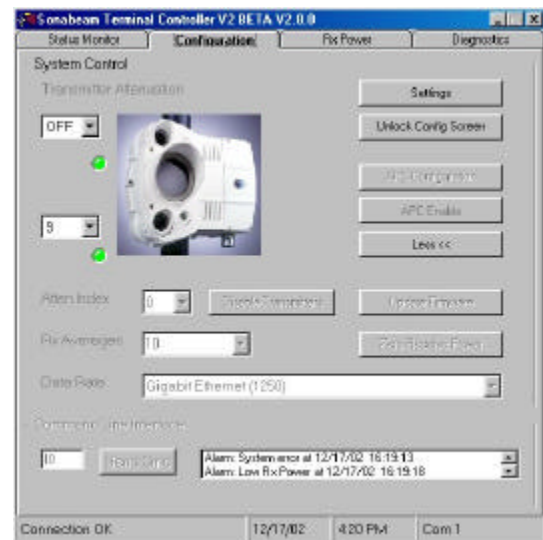
## Internal Loop-Back Capability

A useful diagnostics tool, this feature allows technical personnel to check the operation of a link at different stages along the data path. In one configuration, the signal going into a terminal from the user's Tx fiber is routed directly back, through that terminal's electronics, to the user's Rx fiber. This allows one to check the basic fiber/electrical operation of that terminal. In another configuration, the signal travels across the link, but at the opposite end is routed directly back via the transmitters. This allows one to check the general operation and alignment of the terminal in the link.



## SONAbeam Terminal Controller (STC)

fSONA's STC software provides a user-friendly graphical user interface (GUI) to monitor and control all important aspects of each SONAbeam™ terminal. Diagnostic information can be assessed, and various parameters (such as transmitter power and data rate) can be manually controlled.



## Network Management Options

In addition to the functionality described above, fSONA offers optional features that can be purchased at any time and upgraded in the field. These include...

### SNMP

Multiple network devices can be managed using the industry standard SNMP-based protocol. Custom MIB's are supplied with positive and negative alarms, supporting a comprehensive set of parameters.

### Far-End Terminal Management (FETM)

FETM allows the network manager to be connected to one end of the link (via RS232 or IP address) while monitoring information about the terminal at the far end of the link.

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