TRILITHIC **Application Note**

860 DSPi PING Testing

The number one reason to ping is connectivity, do you have a connection between point A and point B. When a subscriber is unable to browse, and the modem is indicating a good connection, there may be a problem with DNS. If you can ping the IP address for a web site but you can't ping the URL, this points to a DNS (Domain Name Server) issue. If you can't ping the IP address, then you need to work back, pinging known routing points. First ping the gateway. If you can ping the gateway, then what's the next routing point? Sometimes it's helpful to run a tracert from the subscriber's PC. This will show the routing point where the transmission stops. Some devices can be configured not to respond to ping, as a security measure (firewalls for instance). This is why it is important to know what IP address to ping to for your test. We recommend a device located near your CMTS. That way you can test from the 860 DSPi to that location to see if it is a HFC problem. Trilithic provides a server for ping testing to our customers [207.67.51.46]. Pinging this address would test from your current location through your HFC network and IP backbone and out onto the Internet to Indianapolis. Another great location to test to is www.yahoo.com when at a subscriber's home since they would recognize Yahoo as a legitimate location. However, neither of these locations would isolate the problem just to your system.

Some other reasons to use the ping test in your 860 DSPi are round-trip delay and packet loss.

- For connectivity or delay, set small packet size and long delay between pings
- For packet loss, set small packet size and short delay between pings

If checking connectivity to another device, a small packet size is recommended, for example 64 bytes and 1000 msec delay. The reason is some devices ignore pings with large packets, which would give a false indication of no connection. Also, small packets are great for testing round trip delay and packet-loss.

What are you using to ping from the PC? If you're using MS DOS you need to use the command "ping (host/ip) -l 256" to ping the host/IP with 256 bytes of data. To set packet delay in MS DOS use the command: ping IP –s 1500 –c –t 10 (this will send 1500 packets with a 10ms delay). By default MS DOS' packet delay is 1sec and the packet size is only 32 bytes.

If you are pinging a public host (e.g. yahoo.com) there are a number of different variables that could come in to play that would give both the meter and the PC different results. I would suggest pinging a local source (if you aren't already).

For Additional Help Contact
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