



Trimble Enhances Telecom Network Timing

TEK-100 and TEK-150 Timing Enhancement Kits Help Ensure Call Connect Continuity for Remote SONET Node Timing

SUNNYVALE, Calif., March 18, 2004 -- Trimble (NASDAQ:TRMB) introduced today the TEK™-100 and TEK-150 timing enhancement kits. The TEK provides a simple and economical solution to eliminate loss-of-synchronization problems for remote node switches in Synchronous Optical NETWORK (SONET) telecommunication networks. The TEK was designed to enhance the operation of remote switches to ensure call connect continuity in today's diverse telecommunications network infrastructure.

The TEK is a small electronic unit that mounts inside a remote switch cabinet; it ensures timing integrity for the switch by filtering or retiming the input clock signal. Adding a TEK to the remote switch is a much simpler and less expensive method to remove pointer adjustments from the remote timing node than previously deployed methods.

In today's expanding SONET telecommunications networks, most remote switches are connected via copper cabling. Because the remote switches generally are not designed to accept an external clock input, they derive their timing from the input signal from the host switch. The problem arises when the remote copper connection is being driven by SONET with embedded pointer adjustments. The remote acts as a 'slave' clock, following the input signal, which makes it susceptible to pointer adjustment hops. These timing hops cause the clock in the remote switch to lose sync with the rest of the system.

The TEK-150 uses a retimer or filter to maintain the phase integrity of the clock signal during pointer adjustments. If a separate BITS (Building Integrated Timing Supply) signal is available, the TEK-150 retimes the primary AMI (alternate mark inversion) input signal based on the BITS input. If a BITS signal is not available, the unit filters the primary AMI signal to remove the phase shift caused by the pointer adjustments. The TEK-100 is a filter only with no retiming capability.

The Trimble TEK is compact and easily mounts in existing switch cabinets. Unlike external timing units, there is no need for East/West coding, making the input and output designations more intuitive. This minimizes the risk of cascading errors due to improper connections and timing loops.

The TEK-150 and TEK-100 is expected to be available April 2004.

About Trimble

Trimble is a leading innovator of Global Positioning System (GPS) technology. In addition to providing advanced GPS components, Trimble augments GPS with other positioning technologies as well as wireless communications and software to create complete customer solutions. Trimble's worldwide presence and unique capabilities position the Company for growth in emerging applications including surveying, automobile navigation, machine guidance, asset tracking, wireless platforms, and telecommunications infrastructure. Founded in 1978 and headquartered in Sunnyvale, Calif., Trimble has more than 2,000 employees in more than 20 countries worldwide.

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