Cutting-Edge Trimble Technology Expands Earthmoving System Capability

New Version of SiteVision GPS System Supports Tilt-Bucket Excavators and Roading Applications

SUNNYVALE, Calif., Nov. 19, 2004 -- Trimble (NASDAQ:TRMB) introduced today a new version of its SiteVision® GPS system. This cutting-edge system is designed to enhance the performance requirements of excavators with tilt-bucket attachments. Trimble's SiteVision GPS sets a new standard for performing side-to-side tilt measurement of an excavator tilt-bucket attachment and offers additional features designed for roading applications.

The SiteVision GPS system uses dual GPS antennas to compute the position of the machine blade or bucket. An on-board computer determines the position of each tip of the blade or bucket and compares these positions to a design elevation. It then computes the cut or fill to grade. This information is displayed on the in-cab screen, and the cut/fill data is used to drive the valves for automatic blade control or passed to the SiteVision lightbars which guide the operator up or down for grade and right or left of a defined alignment.

With this new version, the GPS receiver measures 3D position of both bucket tips of a tilt-bucket. The SiteVision tilt-bucket feature allows the contractor to use a tilt-bucket attachment on an excavator when working on jobs involving digging to a sloped plane perpendicular to the boom's axis, such as trenches with sloped walls. The SiteVision system's AS300 solid state angle sensors are specifically designed for easy installation on excavators. The sensors are mounted on the boom, stick and tilt bucket linkage; the output is used to calculate the relative position of the tilt bucket teeth. This is combined with the GPS positioning to calculate an accurate 3D position and orientation. Since the AS300 sensors have no moving parts, they are more rugged and better suited for applications requiring high reliability. Additionally, the sensors can be submerged in up to 20 meters (66 feet) of water.

Contractors also now have a choice of using encoders for high-accuracy applications or angle sensors for increased ruggedness or underwater operations, making it ideal for contractors involved in dredging or other near-shore hydrographic applications.

Designed for use on all machine types, the SiteVision GPS system software offers a variety of new features:

- Layered lift lets end-users build up a large fill in layers. This is ideal for road construction where layers are parallel to the road surface, but extend out to intersect the side slope.
- Perpendicular offset enables the surface to be offset perpendicularly instead of vertically to ensure correct fill on sloped surfaces. At any time, the operator can choose which type of offset to use-perpendicular or vertical.
- User-configurable menus allow a supervisor to tailor the system functionality to a specific job or operator.
- The 3D lines software feature provides machine guidance without the need to create a complete design surface.

The new version of Trimble's SiteVision GPS system is expected to be available in the fourth quarter of 2004 through Trimble's Geomatics and Engineering dealer network.

About Trimble's Geomatics and Engineering Business

Trimble, a world leader in GPS, construction lasers, robotic total stations and machine control solutions, is creating a broad range of innovative solutions that will change the way construction work is done. The Geomatics and Engineering Business of Trimble is focusing on the development of technology and solutions in the core areas of surveying, construction and infrastructure. From concept to completion, Trimble's integrated systems streamline jobs and improve productivity.

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.

Media Contact: Jeff Winke of High Velocity Communications: +1 262-544-6600

Media Contact: LeaAnn McNabb of Trimble: 408-481-7808