

Customer Profile

PRODUCT

Acutime™ 2000 Synchronization Kit

USER

Trimble

LOCATION

Sunnyvale, California

GPS Goes to Work at Trimble: Timing Technology Gives Network Security A Boost

The Acutime 2000 Synchronization Kit economically and reliably provides precise timing signals to keep Trimble's network server in sync with RSA Security's SecurID® User Authentication system.



Rapid changes in the way the world does business have elevated the need for corporate security. Secure email, Web access, e-commerce, VPNs and extranets require strong security that provides confidentiality, authentication, access control, data integrity and accountability. One of the world's leading e-security solutions uses two-factor authentication based on Time Synchronization technology for network-wide "hacker resistant" protection. This kind of global security solution requires dependable timing signals for both the user and server, a demand easily met by the Global Positioning System (GPS). GPS provides a universal precision timing source, referenced to Universal Coordinated Time (UTC), that is readily available anywhere in the world. That's why Trimble, the leader in GPS solutions, uses its own unique Time Trigger™ technology to precisely synchronize its network server—making the Company's use of RSA's SecurID system even more reliable and effective

When Trimble, the leader in GPS technology, needed enterprise-wide security for its internal systems, it turned to the leader in e-security solutions: RSA Security Inc.

With more than 2000 employees worldwide, Trimble wanted a robust security mechanism that would ensure that remote access to its networks be secure and 'hacker proof.' RSA's SecurID was the answer.

Early in 1999, Trimble installed the SecurID system, which is designed to protect valuable network resources by helping guarantee only authorized users are granted access to e-mail, Web servers, intranets, extranets, network operating systems and other resources. Initially, the system worked like a charm.

Authenticating IDs

The SecurID system includes the RSA SecurID authenticator and RSA ACE/Server software. Each user receives a personal RSA SecurID authenticator token, which functions like an ATM card.

The patented SecurID authenticator card has a liquid crystal display (LCD) exhibiting a six-digit code. Each user's token generates a new, unpredictable code every 60 seconds. The user combines this number with a secret personal identification number (PIN) to log onto protected resources.

"We chose the RSA SecurID system for its excellent security features," said Trimble IS Customer Support Manager Zane Brady. "We felt that its two-factor authentication would best guard against unauthorized remote access to any component of Trimble's global network."

To remotely log onto Trimble's system, employees must enter their PIN combined with the token's one-time passcode. Only when the PIN and the one-time passcode are recognized by RSA ACE/Server is access granted, providing substantially greater security than traditional, reusable passwords. It seemed foolproof.

The Importance of Timing

However, some time after installing SecurID, Trimble's IS Department began to realize there was a problem: too many

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users were repeatedly denied access to the network. Investigating further, it was discovered that the internal time of Trimble's system was drifting off real-time—either delaying or accelerating; this drift contributed to synchronization problems between the RSA network server and SecurID cards.

"When we realized we needed a timing solution, it was a no-brainer," said Brady. "GPS is one of the most reliable universal precision timing source available – and we are the technology leader. That part of the answer was in our own backyard."

So Brady turned to Trimble's own GPS timing technology for a solution: the Acutime 2000 Synchronization Kit.

Time Syncing with GPS

The IS team installed the Acutime 2000 Synchronization Kit, including Trimble's jam-resistant Acutime 2000 GPS Smart

Antenna and a compact Synchronization Interface Module (SIM). It works in conjunction with Network Time Protocol (NTP), the leading standard for time distribution over networks.

The kit synchronizes networks to Stratum 1 precision with the reliability and universal convenience of GPS. The Acutime 2000 GPS Smart Antenna produces a pulse-per-second (PPS) output accurate to Universal Coordinated Time (UTC) to within 50 nanoseconds (ns). In addition, Trimble's Synchronization Kit uses patented Time Trigger

technology, in which the host system sends a pulse to the smart antenna and responds with a time tag. Time Trigger technology enables a user to utilize precise GPS timing without introducing latencies associated with using a customary PPS output.

"It's simple to use: we just installed the sync kit on one server and synced the rest of the network – including the secured systems – from this one device," said Brady. "The Trimble smart antenna allows anyone to quickly and easily add GPS timing capability to their product lines without becoming GPS experts."

Once Acutime 2000 was installed, the SecurID system worked accurately again: no slippage, no access denied. Trimble's Acutime 2000 Synchronization Kit provided a simple solution to an unexpected timing problem.

Trimble GPS = perfect timing. Even at home.



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