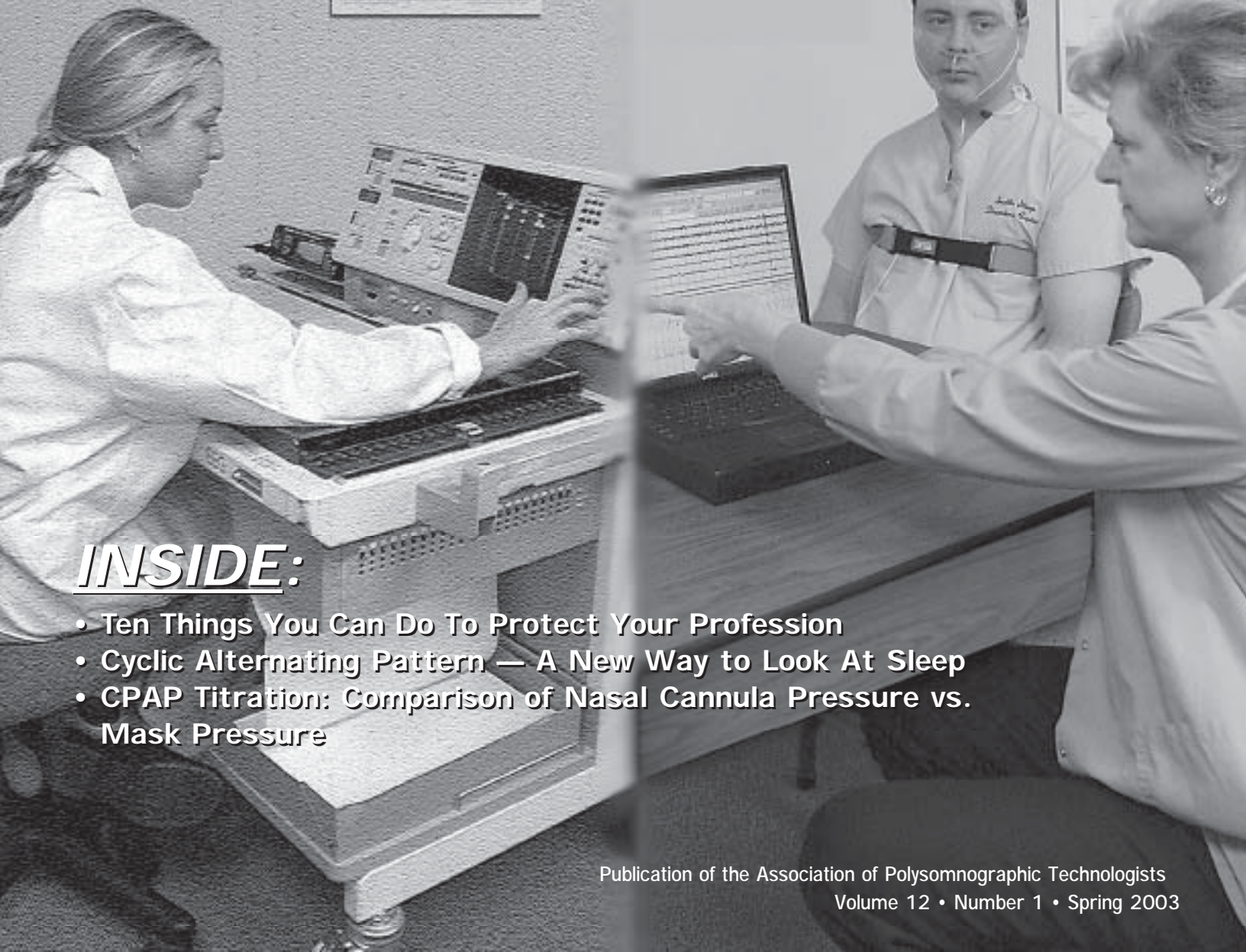


Our Profession:

Yesterday, Today and Tomorrow



2003



INSIDE:

- Ten Things You Can Do To Protect Your Profession
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Sleep Technology Institute: Sleep Disorders Testing Without Geographical Boundaries

BY THERESA SHUMARD, EDITOR

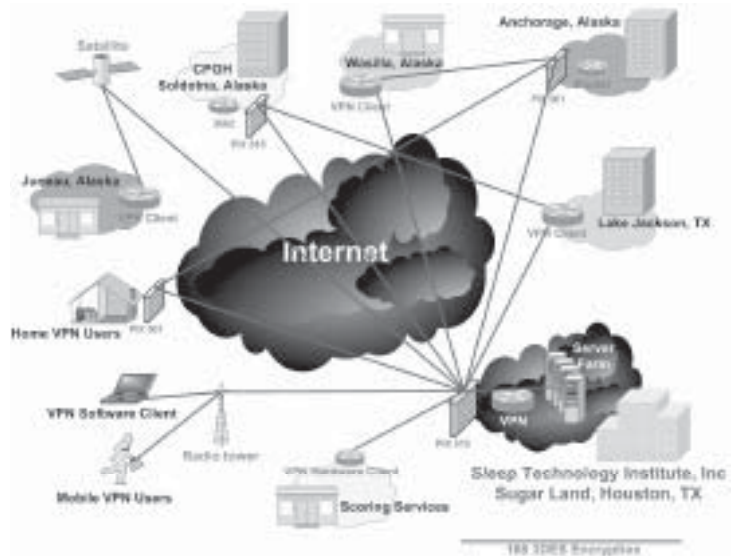
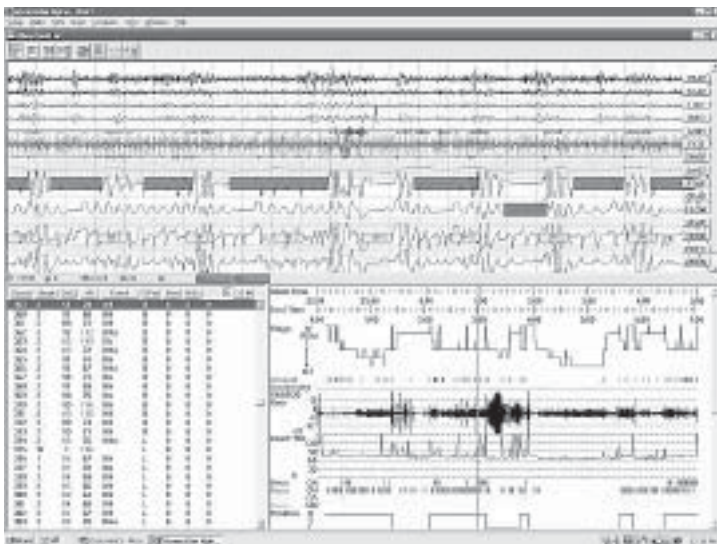
When Kevin Asp, RPSGT, CRT of Sugar Land, Texas gets a call from one of his night techs in need of assistance, he doesn't put on his shoes at 2 a.m. to jump in the car and drive to the lab to see the sleep study tracing to troubleshoot. It would be a distance to drive anyway since the main location is in Sugar Land and three of his sleep labs are in Alaska and one in Lake Jackson, Texas. Asp, CEO of Sleep Technology Institute (STI), keeps his slippers on and signs onto the problem location via his server instead and can view exactly the epoch the night tech is seeing in real-time through their group of servers utilizing domain logon authentication, user specific privileges, permissions and limitations via the virtual private network (VPN) technology.

Virtual private networks can (VPN) provide a strongly encrypted connection between a user's distributed sites over a public network (e.g., the Internet). By contrast, a private network uses dedicated circuits and possibly encryption. An organization might deploy VPN's on its internal nets (intranets) to encrypt sensitive information. The basic idea is to provide an encrypted IP tunnel through the Internet that permits distributed sites to communicate securely. The encrypted tunnel provides a multi user with multi location access via a secure path for network applications and requires no changes to the application.

The VPN networking enables real time technical and clinical support through the encrypted connection from the site of the sleep study to the main STI hub in Sugar Land, a Houston suburb. The on-call senior polysomnographic technologist can view the study in real time and troubleshoot difficult titrations and eliminate technical difficulties while the study runs. Asp explained that the technologist at the main location actually takes command of the computer mouse and cursor and the technologist at the remote location of the sleep study can see the cursor on his own screen moving at the hand of the tech at the main hub. Both techs are then viewing the same tracing as it runs (including the digital video). This allows a superior level of support regardless of the location.

"The abilities of the system are limitless. It could conceivably run hundreds of studies at one time on our network," Asp said.

According to Raymond L. Miller, RPSGT, Houston, chief technologist at STI, who assists the night techs either from his home through the main hub, or at the main hub in Sugar Land, the benefits of the VPN technology have helped him to give better feedback to the newer employees. "If when scoring the data there was something that I needed to communicate to the techs, with them being able to review the screen with me at their remote locations before the study was too old and they forgot the case, or the actions they took in the study," Miller said. "Likewise, if one of the physicians needs to look at the study again for some reason, he doesn't have to drive all the





way back to a lab to see the data, because he's got it right on his office computer."

Miller recalled one night in particular where a tech in Alaska was performing two very difficult simultaneous bi-level positive airway pressure titrations. The tech had plenty of experience and appropriate training, but the advice of a seasoned technologist certainly helped matters. "I've been performing PSG for 14 years, and these were two very difficult studies. It really helped her that I could see both screens in real time as she was to adjust pressures, and explain why and when the support adjustments should be done," he said.

"The most important part is not just the capability, but the effect that the immediacy has on the process. Without Herculean effort to resolve individual minor or major changes, but solution that works on a hour by hour, day by day basis, of being able to get information, provide answer questions, review data and make corrections on an ongoing basis," Miller said. He added that this brings together the process and the physicians and coworkers together in a way that dissolves distance to less than the trip to the physicians office or the sleep lab.

STI provides turn-key services for hospitals and/or physicians looking to start new sleep disorder centers in their areas. In addition, the networking services Sleep Technology Institute provides for their clients provides instant real-time access to experienced physicians and tech-

nologists. The data recorded at remote facilities are transferred to the main location within minutes upon ending a polysomnogram with the scored data then returned to the remote facility available for interpretation the same day!

The challenges of shipping the data from other locations as our company grew, matched with the upcoming HIPPA standards to take effect in April 2003 that makes shipping the data via FedEx or other carriers a potential violation of patient confidentiality, the development of these services made perfect sense Asp said. The initial investment of time and money on the project was significant but necessary to maintain efficiency with our growth and being proactive to address the upcoming HIPPA challenges.

Sleep Technology Institute was founded in 1996 as a consulting and educational provider for sleep medicine and technology. The company now operates multiple sleep centers in Texas and Alaska and is planning on opening another 4 locations this year. ★

"No one ever attains very eminent success by simply doing what is required of him; it is the amount and excellence of what is over and above the required, that determines the greatness of ultimate distinction."
—Charles Kendall Adams

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