

Anesthesiology Practice Scores a Knockout with Pocket PCs

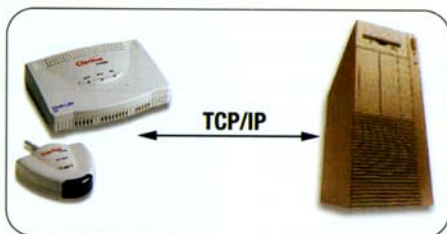
by John Fox

Society Hill Anesthesia Consultants is a Philadelphia-based anesthesia practice which provides anesthesia services for three Philadelphia hospitals and two office-based GI practices. As the practice grew in size and expanded to multiple locations, it became very difficult to supply departmental information to all members. Department leadership began to develop a Web-based approach to supply daily operating room, call, and vacation schedules. We also included a general information section, a "what's new" section, and the ability to submit forms online. Although the site functions well, most of the members of the department do not have access to a PC on a daily basis while in the surgical suite. Anesthesia definitely involves a mobile work force. To solve this problem we began developing a PDA support program.

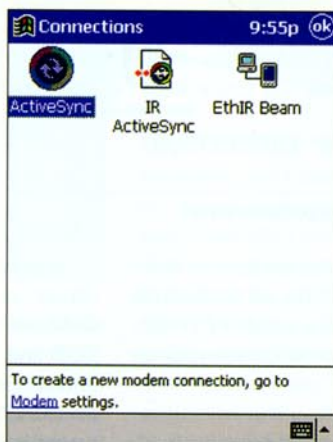
Our initial support was for Windows CE devices. We felt Windows CE was robust and could meet our needs. The first hurdle was how to connect to the information on the Web site. Our specification required a method that was simple, cost-effective, and did not require a constant connection to the Internet.

Clarinet System's Infrared Access (EthIR LAN 101) provided a solution that was extremely easy to implement (www.clarinetsys.com). This device provides a very simple method, using the IR port on the PDA, to connect to the Internet via the hospital network. The EthIR LAN 101 plugs into a network connection and obtains two IP addresses from the hospital DHCP server (Fig. 1).

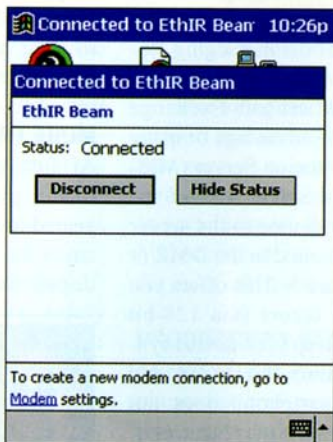
One address is used to identify the EthIR LAN device and one is used for the Windows CE device. A small program, EthIR Beam, is run on the Windows CE device to make the connection to the EthTR LAN 101 (Fig. 2) and to the Internet. Once EthIR Beam is opened you are prompted with



● Fig. 1. EthIR LAN connects to hospital DHCP server



● Fig. 2. EthIR Beam software makes EthIR LAN connection



● Fig. 3. EthIR Beam connection screen

the connection screen (Fig. 3).

This method requires very little hospital IT support and the connection devices can be placed at sites within the operating room suites. It is not necessary to obtain a network interface card (NIC) for the Windows device or have a dedicated IP address for each connected device.

We set up an AvantGo account that synchronizes with the department Web site, so that the information on the Windows CE device can be easily updated with a network sync and available on the device when it's disconnected from the EthIR LAN 101 (Fig. 4).

When SHAC (Society Hill Anesthesia Consultants) is selected from the AvantGo screen, the SHAC Web site is viewed on the PDA (Fig. 5).

The Web site is password-protected. After the first sync, AvantGo will prompt users for their logon and at the next sync will automatically take care of all logons. The system is also bi-directional. Users can fill out forms and these forms, when synced, will be uploaded to the Web site and forwarded to the intended individual (Fig. 6).

We are able to provide e-mail function to the Department members via the EthIR LAN 101. By setting up the PDA to use an existing POP3 e-mail account, the EthIR Beam connection, and the hospital SMTP server, users can have their e-mail updated with a sync.

Our system enables department members to obtain department information, receive and send e-mail, and submit forms from their PDAs without syncing to a desktop and without dealing with network interface cards and IP addresses. The system was not difficult to set up and provides members with a very simple method to update their handheld devices. ■



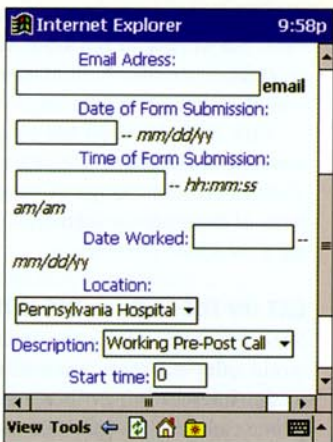
John Fox is an Anesthetist practicing at Pennsylvania Hospital and a member of Society Hill Anesthesia Consultants. He has a broad background in computers and clinical engineering as they relate to anesthesia. He has worked as a consultant in information systems in anesthesia and anesthesia related devices. He can be reached at jofox@pahosp.com.



● Fig. 4. AvantGo provides custom Web site for SHAC



● Fig. 5. SHAC Web site



● Fig. 6. Data submitted through AvantGo at sync