

# No More SNA = Speedy, Reliable Remote Access

By Marc Vadeboncoeur

**M**y employer, Astro-Med®, Inc., is a New England-based global manufacturer of high-technology products, with three distinct product groups:

**Grass-Telefactor**, which manufactures neurophysiological recording instrumentation including polygraphs, neurodata acquisition systems, data acquisition & analysis software, EEGs, and long-term monitoring systems for research and clinical applications

**QuickLabel(r) Systems**, which designs, manufactures and sells products for automatic identification and packaging applications, offering color label printers, monochrome and color barcode printers, automatic label applicators and print-and-apply systems, label creation software, and premium thermal transfer ribbon, label, and tag materials.

**Test & Measurement**, which manufactures graphic recorder and data acquisition systems that display, monitor, analyze and print data for aerospace, industrial and medical applications.

We run the enterprise with **J.D. Edwards World** software on an **iSeries AS/400 Model 720**. Located at Astro-Med's West Warwick, Rhode Island headquarters, the system serves some 200 local users and 50 remote users at the Grass-Telefactor manufacturing facility in Braintree, Massachusetts.


Our big problem was response time for the 50 remote users in Braintree. We decided to improve it by replacing a 56Kb leased line and SNA connection with a TCP/IP connection over our new T-1 Wide Area Network. I was adamant that we no longer use SNA, because of SNA's notorious tendency to create undue overhead on network routers and its sensitivity to timing issues.

At the time there were two remote controllers available to choose from: one based on IBM's AnyNet, and the other that had a proprietary TCP/IP implementation. We chose the first. Unfortunately, it was immediately problematic. All the devices came up when we installed it, but terminals and printers started dropping off randomly. Managers and users were becoming agitated.



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After trying for three weeks to resolve the drop-off issues, we switched to the BOScom e-Twin@x Controller. Life immediately became much more pleasant. Configuration only took 15 minutes, compared to three hours for the first one. We turned it on and haven't had to look at it since.

Now that we have eliminated SNA and are using the pure TCP/IP controller, our remote users get reliable, speedy connections. Even though they're in another state, they get virtually the same response time as our local users. 

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## AnyNet vs TCP/IP: a Primer

AnyNet implements the Multi Protocol Transport Networking (MPTN) architecture, introduced by IBM (Raleigh, NC) in 1992. AnyNet enables communication protocols such as SNA to connect across various other network types, including SNA (APPC) over TCP/IP, SNA (APPC) over IPX, etc. Although SNA is not a routable protocol, when used with AnyNet, remote users were able to use standard TCP/IP or IPX routers to connect to 5250 and 3270 IBM systems.

As users started to adopt AnyNet, flaws began to appear, particularly when transporting large amounts of data. Typical problems included disconnecting sessions and slow performance. These problems were not readily apparent on local networks; they were much more prevalent when the timing between the host and device is delayed.

With the arrival of V4R2, IBM began to support TN5250e and TN3270e. This enhanced TCP/IP support enabled the AS/400 and mainframe hosts to support device naming and SCS printer support. For the first time, users could really take advantage of native TCP/IP support on these hosts. IPDS was also supported directly with TCP/IP using PPD/PPR (a special protocol developed for this specific purpose).

Recent versions of Client Access (Client Access Express) contain support for native TCP/IP only – proof that IBM's direction is to provide better support for native TCP/IP on these host computers.

Because TN5250 and TN3270 use native support on the system, they do not require as many CPU cycles to make use of it. Since TN5250e and TN3270e do not have the timing limitations that AnyNet has, these protocols can be used over the Internet with no problem. IBM has realized this and that is one of the reasons that Client Access Express supports SSL encryption, to enable users who want to connect using the Internet a way to do so without encountering security issues. Recent tests show that IPDS printing takes three times the number of TCP/IP packets to print the same document via AnyNet than via native TCP/IP. In recent years, IBM has focused on developing TN5250.

Since the introduction of AnyNet in 1992 we have seen desktops adopt and then abandon AnyNet in favor of TN5250e. Controllers are following suit. IBM, Perle and Nlynx marketed remote controllers that use AnyNet. IBM withdrew its 5494 controller at the end of 1999, and Nlynx and Perle have virtually discontinued their marketing efforts. Today, the only pure TCP/IP controller available is the e-Twin@x Controller from BOScom, Better On-Line Solutions.

# e-Twin@x Controller

Discover Excellence in Connectivity

The e-Twin@x Controller has a built-in Remote Access Server (RAS), providing remote PC users with network access, in addition to AS/400 access

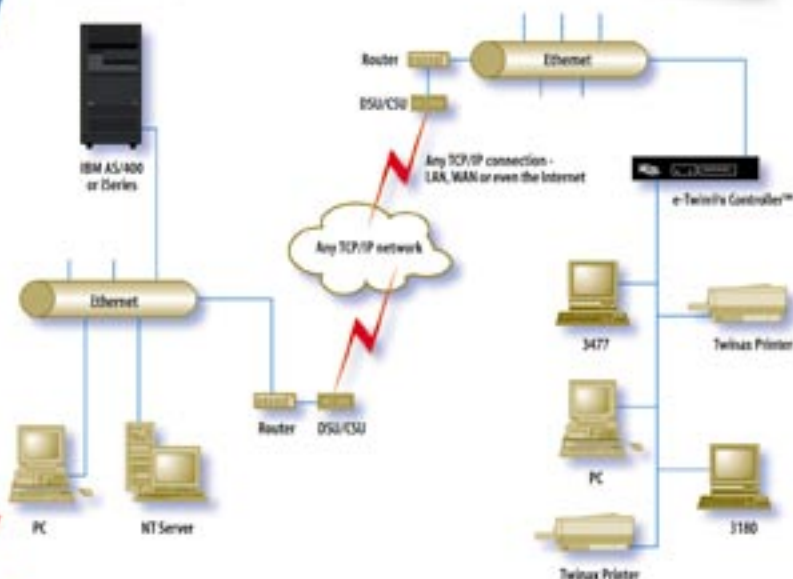


## New e-TwinSt@r Series Available!

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## The only SNA-free TCP/IP remote Twinax controller in existence!

- Installs in less than 10 minutes, with no AS/400 configuration required!
- Simple, easy-to-configure TCP/IP using TN5250e – no MPTN (Anynet), SNA or DLSw (Data Link Switching)!
- Can be configured using a dumb terminal, or PC with browser
- Supports any Twinax terminal or printer (SCS or IPDS)
- Enables remote management of your Twinax devices from anywhere on your LAN, WAN or VPN
- Optional secure connection via the Internet, eliminating leased line charges, with robust backup capabilities
- Special models for local configurations

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