Civilized Computing / Cheryl Currid

System-cost analysis might be start of client/server backlash

My dad used to say, "Figures don't lie, but liars can figure." That little bit of wisdom has always made me a little cautious about taking some numbers at face value.

These days I'm especially sensitive about numbers attached to the cost of computing systems, especially when mainframe vs. microcomputer comparisons are offered. I keep seeing people who are in "save the mainframe mode" trying to cost-justify keeping big iron around (or worse, buy new big iron) to do jobs in which client/server technology could and would do better — and save money.

Lately, some of the comparisons between mainframes and PC-based LANs have gotten downright creative. One analysis multiplied the cost of PC-based servers by three, reasoning that most people only use them during business hours but mainframes keep humming 24 hours a day. Don't laugh, it gets better.

Recently I saw one consultant trying to preserve the past with a clever new-math angle. He decided that the company needed no PCs (anywhere or for anything) and then estimated the cost of a brand new manufacturing system with dumb terminals. That's right, a new dumb tube for everyone — knowledge workers, administrative people, plant managers, everybody! He then bragged about how much cheaper this was than a PC-LAN-based system.

Can you imagine how distressed these people would have been once they figured out that their new terminals couldn't run Excel or WordPerfect for Windows? These programs weren't just nifty interfaces to play with. Users in departments all over the company had used their PC-based data and applications to improve their productivity and sales — analyzing data in different ways and creating proposals that answered customers' immediate needs. Oh, and the fact that the entire plant was already running on cc:Mail didn't seem to faze our creatively calculating consultant. His estimate simply placed a spanking new terminal on everyone's desk.

His assessment was that manufacturing organizations are low-tech and don't need all the bells and whistles of PCs. He didn't bother to check out what these people were already doing, nor ask them what they might intend to do in the future.

Still another analysis I saw recently (this time in a respected computer magazine) compared the costs of intangibles — such as support and training. It noted that those darn flexible PC-LAN-based client/server systems could cost up to five times as much per user as a mainframe. After all, with mainframes, IS can "control" the environment, so end-user support is minimal.

Of course, that's because end-users can't do anything on a mainframe. Their wings are clipped — they can only perform jobs and tasks preordained by the IS department. (That ought to keep them quiet!)

What's an IS manager to do? Watch the numbers and the assumptions, and by all means challenge the calculations.

All these analyses and cost revelations have me really worried that people might take them seriously. We could be entering into a time of client/server backlash.

That is, we could be seeing situations in which people take too narrow a view; as a result, they don't notice the organization's total information needs. That's like looking at an elephant at close range with a microscope. The view is going to be a lot different than if you step back a few paces.

This reminds me of the old days, when minicomputers reigned. Back then, the emphasis was on specialized equipment for specific tasks. People didn't think about general-purpose computing. Instead, each computing task was looked upon as a discrete activity. Hence, we had discrete applications running on different platforms to do everything. Of course, back then it wasn't unusual to see people with three and four terminals on their desks: a 3270 for the mainframe, a 5250 for the System-36, a Wang for word processing, and a PC so they could rekey everything they saw on the other terminals into spreadsheets. There was barely room for a picture of the kids.

From my perspective, this blast from the past should fly all the way into the upper stratosphere. So, what's an IS manager to do? Watch the numbers and the assumptions, and by all means challenge the calculations.

If something doesn't look right, it just might not be. The right system for your company is the one that enhances the abilities of your work force. Few companies can afford to go backward and start computing 1970s style. And be especially wary of wonderful savings from mainframes. If the savings comes with control and restrictions on the users, you'll be hurting more than helping.

Mainframes cheaper than PCs? Come on. The real figures don't lie.

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The Network Curmudgeon / David Strom

Multiprotocol network support is easiest with Macs or OS/2

If you want to run a multiprotocol network, you have two basic configurations: You can handle the protocols either at your server or at each individual client. Usually, you don't have a choice: Your particular network configuration (and the protocols you want to route over your wide area network) will dictate which way you go on this.

The best choice for a multiprotocol server is still NetWare, Version 3.11 or 4.0. Why? Because it was initially designed to work that way, it has the largest selection of drivers and adapters, and it is relatively easy to set up.

I'm running three protocols on my NetWare server: IPX, AppleTalk, and IP. This means that my PC running IPX, my Macintosh running AppleTalk, and a Unix client running IP all can see the same set of files on my server: The Mac thinks it is talking to another Mac, and the Unix client thinks it is talking to another Unix machine. This is pretty neat.

You can do this with other types of servers, but it isn't as easy, flexible, or elegant. For example, with NetWare I can bind whatever protocol to whatever network adapter, almost. This means I can create a multiprotocol router inside my file server: I can have an Ethernet board running IP and a Token Ring board running both IP and IPX, for example. Indeed, Novell Inc. recognized this capability and now sells this routing software as a separate product, called the Netware Multiprotocol Router.

But what if you don't want to put your protocols on any server? Say you have just one or two users who need this capability, and you don't want to support all these protocols around your enterprise. Then you have to look at supporting multiple protocols on the client, and here is where it gets a bit dicey, mainly because the best networking client is the Mac.

AppleTalk comes built-in on every Mac, so there's no need to do anything extra here. Novell has recently started shipping native IPX for the purists (or cheapskates) out there who don't want to load AppleTalk on their servers. And you can get IP and LAT/DECnet drivers too. When I was at *Network Computing*, my Mac connected to NetWare, LAN Manager (both running AppleTalk), a VAX (running DECnet), a Sun (running IP), and an IBM mainframe. The icons for these servers appeared on my desktop, looking just like the icons for other AppleShare servers. And I could have files opened on each server concurrently, with applications running across all of them. That's the power and flexibility of the Mac.

It was pretty easy to just add the necessary protocol drivers (you just copy the files into your System folder, and the Mac figures out where they go). You have some setup to do, such as with IP (giving it network addressing information), but nothing too complex. You follow this procedure for each protocol (there is an icon in the Control Panel folder that you click on and pick your choices), and you attach to each server in the same way as well (by use of the Chooser dialog). Explaining it in words makes it sound harder than it is. The important thing here is the consistency of the Mac.

DOS and Windows are still the great unwashed as far as multiple protocols are concerned.

Well, you may not want to give everyone a Mac just so they can run multiple protocols. In my book, OS/2 is the second-best networking client.

With OS/2, you have almost the same thing to do with each protocol: There is a configuration file called PROTOCOL.INI that configures each protocol and is loaded in CONFIG.SYS. But that's not quite as graphical or intuitive as the Mac. Plus, there is this little matter of finding the driver for the particular networking adapter that you want to use. Support for IP and AppleTalk are both quite nice (and you can even get some software from IBM that works well). The support for IPX is less nice (this is Novell's fault; it hasn't done much with this since Version 1.0 of OS/2).

Once you get your OS/2 machine set up, you can open windows, see files on different servers, and run applications across the network. Of course, you don't get the cute little server icons that you do on a Mac, but you are working in a graphical environment, and after a while, you forget that your F: drive is NetWare and your S: drive is your Sun.

What about Windows and DOS? Definitely third-rate. You can do it with a combination of Open Data-Link Interface or Network Device Interface Specification drivers, but it isn't easy or pretty, and you may not have any RAM left over to run any hefty application. You can try a third-party product, such as Cogent Data's Win Net or Novell's LAN Workplace series, which allow you to run the multiple protocols in Windows in a more graphical and logical way. But DOS and Windows are still the great unwashed as far as multiple protocols are concerned.

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