FROM SPREADSHEET TO WEBSHEET

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November 20, 1996 - The Internet is moving so fast that instead of trying to predict what the future holds, I prefer to go out and find the people who are already ahead of their time. It's safer. Some people are doing things so cool and so innovative, you don't have to be a psychic to figure out that the rest of the computer-literate, Net-surfing, Java-awakened world will soon follow.

One of the best examples I can think of is no farther away than Wall Street, an industry well known for being on the leading edge of technology. I'm constantly amazed by how firms on The Street are using intranets and Java computing to bring real meaning to one of the original killer apps, the spreadsheet.

From my perspective, what's starting to happen to the spreadsheet is another inevitable result of the move to the network, something we've been talking about at Sun since the early 1980s. The power of a network such as the Internet means that a computer gets geometrically more useful in proportion to the other computers it's connected to. This is a very simple equation that has just started to dawn on many in the desktop-centric, LAN-myopic PC industry in the past year or so, and they are now struggling to catch up by trying to incorporate the network into their desktop-centric view of the world.

What do I mean? My personal view is that while the PC application revolution initially brought us many useful tools to improve productivity, these same tools have now been developed too far. They require too many millions of lines of code and too many chip instructions to generate what is essentially a lot of nonproductive activity. How many of us, for example, need a spreadsheet to do anything other than a small subset of the total functionality now available? And why do we need it in multiples upon multiples of colors and fonts, with clip art, color tables, and animated bar graphs? What's next - calculations that sing when you get them wrong?

No, my contention is that the single act of making the spreadsheet into a "websheet" adds the necessary fourth dimension. A spreadsheet without data is wasted disk space. A spreadsheet with data on a local disk is not fulfilling its potential for the corporation. And spreadsheet data on a floppy disk is potentially an epidemic - allowing users to inject viruses into your network. A spreadsheet that works on the "webtop" is infinitely more valuable.

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spreadsheet."

What is the webtop? It's part of a system that lets us break the bond between the OS, the software application, and the hardware so that users have safe and instant access to the network itself, from any machine, using any OS, at any time. In other words, accessing the websheet on the webtop is as easy for anyone on the corporate intranet as getting to their own default URL on the Netscape Navigator browser.

Imagine the ability to communicate budgets, sales targets, or available hours if your browser and your websheet were intimately linked as part of a webtop: Your data could be transferred with total transparency between the two and made available immediately across the network. Isn't that more useful than a table?

The point is, you're not tied to what's on your local hard drive that's hardwired to a server in the closet down the hall. And you're not limited to a laptop you have to lug to your house or your hotel room. Hardware, software, and operating systems are much less important than network access. So you're no longer sentenced to a lifetime of OS or application upgrades. You just need a Java-enabled device to get to your websheet.

Examples of the Java-enabled webtop come from companies as diverse as Corel and Oracle. I encourage you to read about the concept of Java computing at Sun's Web site.

One good example of a websheet, the Anyware WebSheet, comes from a company called Applix. This applet makes the traditional spreadsheet look like a 98-pound weakling. It has the "just gotta have" 600 functions of a regular spreadsheet, but it's also tied into live data feeds from the intranet and Internet using the Java language. Live data from the network is automatically embedded into the spreadsheet cells, so that instead of inputting figures, the user spends time interacting with the program and using the information.

The work Wall Street brokers are doing with the Anyware WebSheet is a sneak peek at how many of us will be working in the future. Brokers and traders - both of whom live and die by their spreadsheets - can log into a current, real-time spreadsheet that includes all of their crucial market data, positions, portfolios, and the like. Even better, they can log in to it from any Java-enabled device - whether it's a PC in the office, a network computer at home, or a laptop on the road. And to top it off, the applet for Anyware WebSheet downloads in about a minute over a 28.8Kbps modem. That certainly beats installing a spreadsheet application anywhere you might ever potentially work.

As applications move onto the network and as browser interfaces become even more widespread, many of us will be working on webtops instead of desktops. If it sounds far off, look no further than your broker. If the concept can make it in the trading room, it won't be long before we see it in the living room. That's one prediction I *will* make.

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