



When your time has come—and gone

THE LIFETIMES of the product families that *EDN* readers design vary widely. Some product categories, such as TVs and PCs, become so embedded in our lives that they seem like have been around forever and will continue to be there, in some form; others burst brightly onto the scene and then fade away.

Consider the fax machine and the fax function. Once the G3 facsimile standard was established and the key technology pieces were available—processing engines, thermal-printer mechanisms, and DAA/modems—fax machines became affordable and were the coolest things. According to CEA (Consumer Electronics Association, www.ce.org) market research, manufacturers sold 1.2 million stand-alone single-function or multifunction units in 1989 at an average price of \$675. Unit sales peaked in 1997 at more than 3.6 million and an average price of \$313. They dropped to 2.3 million in 2002 but with an average price of just \$129; during that period, machines shifted from thermal-paper to plain-paper output.

From a business standpoint, the market of dollars spent on these machines dropped dramatically due to the combination of lower unit sales and falling prices, and the fax machine became yesterday's news. There just hasn't been much more you can do to improve the fax machine because it has reached the late stages in its product-design life. Part of the decline, of course, is due to the longevity of the machines and market saturation. Once you install a fax machine, and it works reasonably well, you don't need another one unless you want to upgrade to plain paper, or you need more memory or better dialing features.

Much of the decline is due to e-

mail's superseding the fax function for many users. For a while, there were even fax kiosks in public areas, such as airports, and some stores offered faxing for a few dollars per page. These setups are pretty much gone now, and, when I see one, it looks more like a museum piece than the chic technology it may have once been.

The fax function still has its place in life, especially for legal docu-

ment and a newer, better approach to solving the problem it addresses? If I said I knew, I'd join the club of presumptuous folks who make a living predicting our futures. But these crystal-ball gazers are occasionally right. Some pundits say that stand-alone PDAs will be the next to go, as cell phones begin to integrate their functions as personal communicators, wallets, and organizers, all in one small unit.

Products and functions have different life cycles, ranging from a few years to decades; after all, radio is still very much with us, and, after more than 50 years, analog TV still doesn't want to go away and die. Nonetheless, you need to be prepared to watch the product family into which you have invested significant design and debugging hours and sweat become yesterday's news. Your challenge will be to see

WHICH APPARENTLY INDISPENSABLE DEVICE OR SYSTEM WILL BE THE NEXT TO DECLINE?



ments that require signing (the digital signature has yet to catch on), for sketches, and for symbol-based written languages that are not easily compatible with keyboards. But certainly, for many users and applications, fax machines have lost their allure and coolness, as well as their necessity. Now, e-mail rules the waves.

So, which apparently indispensable device or system will be the next to decline through functional ob-

the change coming before it's too late, learn what you have to about the wave of the new mode, and decide whether you want to help push the leading edge or nurture the older one as long as possible. It's tough to do both. As a designer, you want to go after a new technology. But, as a customer who has invested in equipment, maintenance, and peace of mind, you might want to keep what you have for as long as you can. □

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