Designer's death wish?

THE DESIGN ENGINEERS who read *EDN* do lots of great things, and they do them well. And *that's* the problem. This good-news/bad-news situation hit me while I was reading a recent article (**Reference 1**).

The article showed how the proliferation and sheer volume of available electronic "gadgets"—I hate the demeaning implications of that word—means basic DVD players are now selling for $49, down from about $500 just five years ago.

We're all familiar with the factors driving these numbers. IC development and production fixed costs are so high that you need enormous production volumes to justify the effort and the product. At the same time, if you get the product features, timing, and marketing right, and luck breaks your way, you can make some good money for a while. But "a while" is getting shorter, and the treadmill for designers is going faster. Good products, whose vendors expect only modest volumes, simply can't cover these fixed costs. Most products are either stunning winners or also-rans.

This situation is for many reasons bad for engineers, engineering, and our industry. Useful but modest products have trouble getting traction. The drive for product volume, above almost all other accomplishments, increases the pressure for designers to cut corners and release products, whether hardware or software, without adequate evaluation. Our industry has set up an expectation that whatever we are doing, we'll be doing more of the same but in less space, at a lower cost, and with a faster cycle time.

But what I fear the most is what these products are doing to the image of engineering as a profession. Rather than designing and building great things, the engineering role is soon reduced to maybe doing some great things but primarily driving down cost. This situation, in turn, creates the impression among the consumers that engineers are just sophisticated cost managers, not creative designers. Further, if the products we create become inexpensive so quickly and not that complex or noteworthy, they must have been overpriced to begin with. When we quickly make complex things, such as DVD players and cell phones, into $50 consumables, we make ourselves somewhat disposable as well.

What can we do? Frankly, I don't know. I wish we had never become so enamored of the highly publicized technology road map, which shows everyone how fast we'll drive innovation forward, costs down, and volumes up. The road map has created a sense of expectation rather than appreciation and gratitude among our audience. It makes progress seem deterministic instead of the battle it really is, with gains, slippages, surprises, and discoveries. Worst of all, it makes what engineers do seem so pedestrian and predictable, rather than inciting respect for the accomplishments they are.□

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REFERENCE
1. Hansell, Saul, "Selling Gadgets in a Wal-Mart World," *The New York Times*, Aug 18, 2003.

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