Something from nothing

In the early 1980s, as Linear Technology was just beginning, we had a fundamental problem: products in development but none to sell. But, we wanted prospective customers to know our name and what we were up to. Our public-relations company glibly urged "controlling the press" and "getting our message out" but offered little real substance.

This approach seemed arrogant folly, and I felt a restless, uneasy malaise. We couldn't and shouldn't control the press; we should feed it what it wants. Editors aren't fools. They value what interests their readers. Going to them with puffery and hype would be self-defeating. The real issue was finding a way to productively use the seeming dead time before product availability. What *EDN*'s editors and their readers wanted was a series of credible, full-length technical articles in the language of relevant, working circuits.

I moped for weeks over this problem before a possible solution became apparent. Instead of waiting for products, I'd simply go into the lab, develop the applications, and then write the articles. The key to this approach was to synthesize the expected products using available ICs and discretes to build rough equivalents on small plug-in boards. We could develop functional applications and write most of the text. We'd then shelve the manuscript and breadboards. Later, when products became available, we could put them into the breadboards and implement the attendant final changes. Once we had done these tasks, we could drop scope photos and specifications into the waiting text, tweak the manuscript, and ship it off to *EDN*. This approach would speed publication by perhaps a year and synchronize the article's appearance with product introduction.

Initially, the whole scheme appeared absurd and eminently unworkable, with uncountable technical and editorial sinkholes. Getting started was much more difficult than I had imagined. Synthesizing the hardware for our unborn ICs proved tricky; my methods, clumsy and stumbling. Breadboarding the applications was laborious and slow, primarily because I wasn't sure how accurately I was mimicking the forthcoming IC's performance. Writing was equally painful. Text flow was staccato and disjointed because of the gaps that occurred while I waited for results with actual products. I had to keep separate notes directing me to unfinished text when we finally dropped the products into the breadboards.

The first article took almost two months, but things slowly became easier. Tricks to move along the lab work evolved, and I found ways to write more efficiently, making the manuscripts inherently adaptable to the planned additions and changes. Soon, I was producing an almost-finished article every two weeks or so, roaring along, powered by adrenaline, solder, pencils, paper, and pizza.

During the next year, life was a dizzy seven-day-a-week blur of breadboards and manuscripts shuttling between work and my home lab. My diet was a cardiologist's nightmare. I don't recall having a meal at home. The refrigerator was devoid of food but well-provisioned with Polaroid film to feed the oscilloscope camera. All this frenetic bustle boiled off any semblance of a normal social life. At dinner in San Francisco, while nominally listening to my date describe her job intricacies, I silently calculated the optimum chopper-channel crossover frequency in a composite amplifier. This regimen of madness continued for about a year, resulting in 35 full-length feature articles appearing in *EDN* between June 1983 and November 1987.

I still write for *EDN*, although at a significantly less frenetic pace. Now, when the kids in our lab complain to me about writing technical material, I try not to sound like the curmudgeon I am not so slowly becoming. I think that mad tear almost 25 years ago contributes to my current lack of empathy. These kids today, with a catalog full of products, they don't know what they've got.

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