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Observations on Several Topics that Affect this Industry

Gary Breed
Editorial Director

There are so many different things happening in the world, not only in the realm of high frequency engineering, but other areas of science and technology—as well as politics and economics—that will have a strong influence on our future.

Decommissioning the Hubble?

The Hubble Space Telescope can arguably claim to be the single biggest contributor in the history of astrophysical research. Yet, NASA does not plan to provide any more maintenance, repair or upgrades to this marvelous tool, and it has no plan for its timely replacement. At the level of basic science, the macro and micro worlds are connected, with knowledge that can be applied to atomic structures that result in new or enhanced materials. At the hardware level, the optical power of the Hubble has augmented, or even created the need for, radio and microwave technology that can make observations at longer wavelengths. To NASA: please don't scale back your scientific mission; the payback may not be immediate, but it is certain.

Economic Recovery: Real, but Piecemeal

Yes, there is growth in the business of RF, microwave and lightwave technology. However, it not happening for all companies. Companies with military business are leading the way as munitions are replenished after the actions of the past two years, and as increased military action demands acceleration of programs that either provide or require communications infrastructure. The delayed rollout of 2.5G/3G wireless is now underway, and demand is growing for picture phones, wireless-connected PCs and PDAs, and soon, video phones. The auto industry is rapidly ramping up radar measurement and sensing applications, which reportedly will be standard equipment for 2007 model vehicles.

I also see companies that are not yet participating in the recovery. Sometimes by pure chance they miss a big contract, and there are not enough smaller jobs to make up the difference. In these market segments with over-capacity, the recovery is slower and competition tougher. On the bright side, I have also seen creative management decisions that will help keep companies going until more business comes their way.

A Growing List of New Ideas

The slow growth of the past few years has not allowed as many new technical and marketplace concepts to be developed and launched.

Even before 2001, there were more potential new products than the marketplace could absorb, but with plenty of free-spending investors, there was much more marketplace trial-and-error than is considered prudent today.

Since then, with less production-targeted work, engineers and market researchers spent more time thinking. Sometimes they simply found a way to leapfrog stalled efforts, but mostly they added to an already long list of technical capabilities and potential products, all of which can't possibly be brought to market. With the boom times of the 1990s—and its now-famous stories of recklessness and fraud—fresh in our memories, these ideas will require a greater degree of pre-sorting in the boardroom, not the marketplace.

Educational Bright Spots

The high demand for engineers with "modern" skills in the 1990s boom motivated a number of colleges and universities to focus on RF, microwave, optical and other telecommunications subject areas. Those programs are still in place, with students making their way toward bachelor's and master's degrees. The job market may be difficult today, but further down the road to recovery, there will be new engineers who are well-prepared to go to work for companies that need their skill and creativity.

Besser/Gilmore Book Note:

Errata sheets are available for the books reviewed in the February issue: *Practical RF Circuit Design for Modern Wireless Systems*, Vols 1 & 2, by Les Besser and Rowan Gilmore. They are available at:

http://www.besserassociates.com/ErrataSheetVolume1.pdf

–and–

http://www.besserassociates.com/ErrataSheetVolume2.pdf

COMING IN THE APRIL ISSUE:

Amplifier Matching for Laser Driver Applications

Tutorial on Power Amplifier Linearization

Update on Lightwave Communications

Product Coverage: RFICs & MMICs; Couplers & Combiners

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