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Success Doesn't Necessarily Require a "Killer App"

Gary Breed
Editorial Director



Starting with the cellular/PCS boom of the 1990s, it seems that everyone wants to know what the next "killer application" will be. Does WLAN fit that description? What about WiMAX, RFID or Zigbee? Does it really matter? I don't think so.

As I've said before in this column, we see a huge variety of applications in high frequency/high speed electronics. Maybe one or two of the zillion ideas being developed will grow into one of those mythical "killer apps," but plenty of companies will be nicely successful without them.

A few pundits think killer apps are a bad thing—a 900-pound gorilla that stifles creativity and drains resources away from future development to work on today's products. They believe that the demand for lower and lower pricing in a high-volume environment is not a good trade for reasonable profit margins in more modest quantities. In part, I agree. It certainly takes a unique understanding of high-volume manufacturing to successfully compete. More than a few companies have tried to shift from specialized technologies to commodity markets and failed spectacularly. Still, some notable successes keep the killer app dream alive.

There are many small and mid-size companies working on RF, microwave, optical and other high frequency products. Most of them would be delighted to experience a steady stream of "pretty good apps" that use their particular skills. High frequency expertise is a marketable commodity that is needed for many applications beyond mass-market consumer products. In a few minutes, most of you can probably think of several companies that are visibly successful serving a niche market. Sometimes it's an extremely narrow niche, like a car mechanic who only works on Mercedes diesels—there may not be a lot of customers, but in a large city, he may get more than enough business to stay busy.

For every company trying to get into the next hot market, there's another that is returning to its core competency after trying the same thing. Playing in the "big time" is not for everyone. I admire the vision and force of will that drives companies to success at the highest level. I also admire the ability of a company (and its engineers) to compete in smaller markets, exploiting their knowledge and experience to serve a more specialized market.

Success has a different meaning to everyone—just be sure you know what it means to you before deciding your course.

The Value of Live Events

It's time for the MTT-S International Microwave Symposium and Exhibition, and a good time to reflect on the importance of in-person contact with people and companies. Among RF and microwave engineers and educators, IMS is the single largest event, an opportunity to accomplish a lot in a short time.

Conferences and exhibitions are great places to learn. The technical papers teach you new techniques, as well as show you what problems are getting research and development attention. This information is valuable market research, both for product development and for the technical career marketplace.

In the exhibition hall, you learn what new products are being offered, usually with an applications engineer available to help teach you how to use them most

effectively. In the process, you learn how different companies approach business and technology. This is valuable when you are choosing who you want to work with on a future project.

These events are great places to test ideas and get feedback. Many of the technical papers are presented with the intention of getting feedback, not just showing off recent work. The ability to get instant feedback can be a valuable way to guide the next step in the development process.

Exhibiting companies often introduce new products at a major trade show. Mostly, they are looking to get attention for having something new, but sometimes these introductions are actually a trial run. The response of the attending engineers can help a company predict how well a product will be received in the marketplace.

Finally, there is nothing like personal interaction. Peer-to-peer discussions let you explore ideas and learn how other engineers approach problems like yours. Large conferences like IMS have a good mix of industry and academia, which increases the number of perspectives on any topic.

Smaller conferences, like the recent Wireless and Microwave Conference (WAMICON) often have significant student participation (mostly graduate students). Since these are future engineers and educators, it is important for them to get a broader perspective on the technology they are pursuing and the industry that uses it.

If you see me at IMS, don't be afraid to initiate personal interaction! I enjoy hearing about new ideas or new twists on old ideas.