Consumer behavior infects the IC market

By Charles Dilisio -- 5/1/2004
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As the semiconductor industry emerges from the frightful downturn, we hope to see new business models emerge, models based on the way the market evolved when business was bad. Why are new business models necessary? Because we've moved into what we call the consumer era for ICs, an era that will have far-reaching effects on IC vendors, EDA software companies and foundries alike.

The consumer era is typified by short product cycles, market segment fragmentation and a flood of products at the sub-$200 price point. We call this price point the Non-Spousal Approval SKU—that is, the price you can pay without having to ask your spouse. It could be a digital camera, an MP3 player or a cell phone, but it's always below the price point where Non-Spousal Approval applies.

There is nothing new about short product cycles. The French have a saying about the product cycles in the electronics industry: *Plus ça change, plus c'est la même chose* (the more things change, the more they stay the same). With new products coming out every 12 months or less, the issue with consumerlike behavior is that IC design, specifically ASIC design, is unable to match the quickening pace.

The result of this consumer model is market segment fragmentation. Say goodbye to markets with width and depth, which translated into long production runs for ICs. They are gone because at the sub-$200 price point, products change rapidly, allowing consumers to buy exactly what they want at that moment.

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This trend toward consumerlike cycles, coupled with rising design and process costs, means that IC vendors, EDA software houses and foundries must analyze their business model to determine three important variables:

Value: Companies must create value; they can no longer simply rely on shrinks to reduce cost. Historically, value was equated to greater integration, and as integration became costly or lengthened the time to market—no problem—a die shrink would cover the increased costs of greater functional integration. Today, value cannot depend on shrinks for profit but is expressed in deep system knowledge.

Growth: Companies need to figure out how to capture growth even after long/deep product runs are history. Leave hitting for the fences to high-risk one-product startups. It's always better to hit singles and load the bases. A winning growth strategy is to build upon existing markets by layering one profitable market on top of another profitable market.

Profit: Companies must generate profit by understanding the entire market, not just product life cycles. Traditionally, profit was the result of fully amortizing development costs over the entire product life cycle or to a point where development and manufacturing costs were fully amortized prior to declining demand for the product. Often this left the company locked into a situation in which the reinvestment costs of design and process were enormous. Maximize profit by comparing the R&D investment with the product life cycle.

Ultimately, the winners in the new consumer market will be companies not tied down by past assumptions, companies that are willing to not only revisit their business model regularly but also change the model when they determine that their fundamental assumptions are now wrong.

How will the infection of consumer behavior affect your business? Send thoughts to feedback@eb.reedbusiness.com.

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