Gabe on EDA

DAC was a success on many fronts

By Gabe Moretti
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The 43rd DAC has just closed its doors, and the show was a success on many fronts. Well over 11,000 people attended the conference, exhibitors reported a higher than average number of business leads, significant new products were demonstrated, the technical sessions were well attended, and the keynote speeches gave people food for thought. It is too bad that SIWeekly reported last years keynote by Bernie Meyerson of IBM instead of this year's speech by Hans Stork, Senior VP and CTO at Texas Instruments on tools and methods required to support the wireless communication market. Dr. Stork speech certainly resonated with what Dr. Meyerson had to say the previous year: power is the major issue facing designers today. The number of EDA companies exhibiting at DAC addressing some facet of the power problem was significantly greater this year, so people are listening and taking action.

On Monday morning, for the first time ever, I attended the Workshop for Women in EDA. The workshop is open to both sexes but somehow I had never before managed to attend. I left with the conviction that everyone, not just women, would benefit from workshops of this kind. The topic this year was the 80/20 rule. Not surprisingly much of the discussion was about the need to balance work and family requirements, as well as finding the best ways to improve efficiency and effectiveness in the work place. I sat there thinking that these are not just women's issues. Men also have to balance work and life, including home life, and would certainly benefit from many of the techniques discussed by both the keynote speaker, Reynette Au, and the panel that followed.

In solving the problem of manufacturability both tools and methods have equal importance. Good management of the design chain by integrating the requirements and contributions of design, third party IP vendors, mask, process, and package companies is as critical as using tools that provide accurate results. Cadence's insistence on keeping its SKILL language proprietary is an example of the obstacles to the development of an open design flow. Companies and designers seeing the OpenAccess database initiative by Cadence and Si2, find that it is not quite as open as advertised. The fault rest on both parties: Cadence for using OpenAccess more as a marketing tool than an engineering solutions, and SI2 for being so blind to the engineering obstacles the system whose technological deployment they are supposed to manage. One of the specific issues that is gaining center stage in

a market driven by communication application is the availability of Pcell models to third parties. By keeping SKILL proprietary, Cadence is keeping its Pcell models, written in SKILL, proprietary fending off any third party attempt to improve its presence in the analog/mixed signal market. Of course when there is an engineering problem, some EDA startup will provide a suitable solution. So, Ciranova (http://www.ciranova.com [1]) has announced the availability of a free tool, PyCell Studio, a universal Pcell and custom layout generator design environment. I am told that Cadence's management is neither amused nor impressed by Ciranova's ingenuity.

DFM and DFY tools are available and are becoming better and better, witness the introductions by both Mentor and Synopsys. Mentor's Calibre nmDRC is not a "ho-hum" upgrade, as some editors have written. Yes it is not a new tool, but it might just as well be. And although those designers who will not venture below 90 nm may find it "ho-hum" because they will not need the new features, those at 65 nm and researching 45 nm processes will be very glad that Calibre nmDRC is available. The same can be said for Synopsys' introduction of PrimeTime VX, Star-RCXT VX, and PrimeYield, three products that enhance Synopsys capabilities in the market. Attending demos of these two products alone would have justified a trip to DAC, but there is more. I chose three other EDA vendors because they represent different and still small aspects of the EDA market: Lynguent, ChipEstimate, and TurboTools. There are others I could mention, but other sites, like www.pldesignline.com provide lists of interesting vendors.

Lynguent (www.lynguent.com [2]) is a startup headquartered in Portland, Oregon. At DAC it had the small booth traditional of the self-funded startups. It introduced ModLyng a modeling environment for analog/mixed signal designers. The modeling environment is language neutral, provides graphical modeling tools that are familiar to analog/mixed signal designers, and features unique analysis and debug capabilities. Although I am not an analog designers, I understand the challenges of developing and porting language based analog models. I came away from the booth convinced that many analog/mixed signal designers will lust after an environment like ModLyng.

ChipEstimate (www.chipestimate.com [3]) is another company that attracted my attention. Yes this website links to theirs, but only due to historical events. They purchased the rights to the VCX IP inventory, thus the link. This company is actually expanding the EDA available market. In addition to the traditional designers market, the InCyte tool addresses the needs of engineering managers, marketing and financial professionals, and even venture capitalists interested in estimating the feasibility and cost of developing a chip.

Turbotools (www.turbotools.com [4]) has been around for a few years but this was its first DAC show. It develops and markets CablEquity a EDA/PLM solution for designing, documenting, and manage hardware electrical systems. It takes the designers from the definition of electrical interfaces through the development of cables and harnesses. The tool provides a robust alternative in a market that is almost totally owned by Mentor. Chip design tools and issues

dominate at DAC. It is nice to see a vendor that deals with systems issues invest in DAC, and, according to Alex Chernyak, its CEO, get good results from the investments.

It was a very good DAC, in spite of Cadence's experiment in isolation policy: but this is a topic for another discussion

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