Panel:
Emerging Companies — Acquiring Minds Want to Know

Chair: Dan Schweikert, Sun Microsystems
Organizer: Mike Murray, Acuson

Abstract

The EDA industry is entering its third decade with more software suppliers than ever before, automating smaller and smaller pieces of the design flow. The question invariably is whether an emerging EDA company, or any semiconductor industry supplier for that matter, can remain independent and grow large enough to rival the big industry players. In fact, executives managing newcomer players know what it takes to be a publicly traded company. They understand first and foremost about business issues related to the technology and other ensuing challenges. Customer support is crucial to the equation. Executives managing these emerging and much talked about companies are colorful and seasoned EDA and semiconductor veterans. They have a healthy mix of senior-level experience, business acumen and vision — much like the big players — and the intimate knowledge of the work in the trenches which appeals to real designers. They are pushing the envelope of company strategy by introducing clever and innovative ideas related to new business models, pricing and technologies that are currently being implemented or are working. The panel will offer a lively and spirited debate on the correct strategy for success.

Position Statements

Joe Costello
Chairman, Barcelona Design

The traditional EDA business model is dying, and the emergence of Web-based computing will be the final nail in the coffin. Imagine an EDA world with real platform independence; no upgrade hassles or haggling salesmen; intuitive user interfaces and use models; point-and-click real time interaction (and results); and a true value-based pricing model. The future is now as innovative new technologies and an emerging breed of quick moving companies are coming to market with products not on CD-ROMs, but with Web-based tools and services that catapult design automation into the Internet Age.

Rajeev Madhavan
CEO, Magma Design Automation

What does Magma have that will make it the market leader? As an EDA start-up, Magma had the unique opportunity to develop its chip implementation software from scratch. With ultimate flexibility, Magma was able to approach chip design from a completely different angle than virtually any other EDA company. Magma has been able to design its system to specifically address deep submicron design challenges, rather than try to make incremental enhancements or acquire tools to augment 10-year-old design flows. Magma’s Blast Fusion™ is a complete physical design system based on the company’s FixedTiming™ methodology. That methodology, coupled with the unique architecture of the tool, enables Blast Fusion to establish the best possible timing prior to detailed layout, and to hold that timing constant throughout the place and route process. This eliminates all iterations between logical and physical design. Blast Fusion includes built-in physical design and optimization engines plus analysis tools, all of which operate on a single unified data model. These allow Blast Fusion to handle very large designs flat and to manage timing and signal integrity throughout the flow. Magma will be a market leader because it provides what the electronics market needs: a complete RTL to GDSII design system that enables IC designers to deliver the best performance in the least amount of time.

Y.C. (Buno) Pati
CEO, Numerical Technologies, Inc.

The semiconductor industry is at a key inflection point. With geometries falling below 0.25 micron, the industry -- for the first time ever -- is facing the challenge of designing and manufacturing ICs with feature sizes smaller than the wavelength of the optical light source used to manufacture them. This 'subwavelength era' requires the introduction of new enabling manufacturing technologies, such as phase shifting, which then must be abstracted and applied intelligently throughout the design-to-silicon flow. This generates a driver for change in the design paradigm. Just as, for deep-sub-micron geometries, physical effects required designers to begin considering layout information sooner in the design flow, SubWavelength geometries today require that silicon information be passed up to the logic designer. Because few design teams include process experts, design tools must become 'SubWavelength-enabled' in order to provide designers with transparent access to subwavelength processes. As the leading provider of comprehensive subwavelength solutions, Numerical Technologies is uniquely positioned to provide the backbone for this SubWavelength-enabled design flow. Our technologies have been adopted by leading semiconductor manufacturers such as Motorola, Lucent, Texas Instruments,
TSMC and UMC; we have established relationships with capital
equipment vendors, photomask suppliers, SIP and library
providers, and major EDA companies; and our products are in
place to deliver a subwavelength solution that spans the entire
design-to-silicon flow.

Judy Owen
CEO, SiliconX

The EDA Industry is facing ever-growing costs in customer access
and cost of tool development while users are facing even higher
costs of purchase and implementation of those tools. EDA tools,
both new and established, are attempting to address the widening
productivity gap, but alone they do not cover the entire design
flow. To address the rapid and fundamental changes in the EDA
and semiconductor industry dynamics of increasing fragmentation,
shrinking development schedules, and time-to-market constraints,
SiliconX is building the foremost integrated circuit designer’s
portal to help individuals and companies easily find the design
tools and services, technologies and manufacturing providers to
complete critical silicon projects. SiliconX will enable both
customers and suppliers to effectively address these business and
technical challenges through a centralized online “Resource
Locator.” It will also enable industry associations and the
community of IC designers to focus on key issues quickly
through online user forums and seminars as well as locate and
demo new EDA tools. This fundamental shift to an internet-based
solution will revolutionize the service model for the EDA and
semiconductor industry by forging collaborative relationships
between these formerly disparate organizations. The result will be
an infrastructure that provides access to the vast amount of online
resources and create a unified community that users can access
through the Web. In addition, this will provide value-added
application design tools and services targeted to a vertical market
segment to facilitate and create business-to-business efficiency.
This will provide value to the emerging EDA vendors by lowering
cost sales and creating a new marketing channel.

Steve Carlson
CEO, Tharas Systems

The EDA industry is exploring various solutions to solve the
verification bottleneck -- from moving design capture to the
system level, to developing specialized test languages. Tharas
Systems has taken a proven approach from the network industry
and one that's divergent from the rest of the EDA industry to
address -- and solve -- the verification problem. It's next-
generation hardware accelerator, designed by hardware and
software experts, lets designers and verification engineers continue
using their proven design flow ... faster. The heart of Tharas
Systems competitive advantage comes from its patented ASIC
architecture for RTL acceleration. The architecture yields
software simulator-like compile times and near emulator
performance, with the ease of use that SoC designers have come to
expect in their verification environments. As a result, Tharas
Systems has the potential to become the leading supplier in the
market sector.

Moshe Gavrielov
CEO, Verisity

Functional verification is the most pressing problems facing
engineering teams today. It consumes between 50-70 percent of
the overall design effort on typical high complexity design
projects. And with the advent of deep-submicron design,
functional verification is continuing to grow in importance. Solving
this critical business problem is one factor towards becoming a
market leader, but there are other key aspects to sustained market
success. First and foremost, a company must address its
customers' needs with a powerful and unique technological
solution. The company must have an infrastructure, support team
and expertise to ensure customers' continued success. Finally the
market the company is serving must be large enough to sustain and
a degree of growth. It is for these reasons that Verisity holds 77
percent of the functional verification automation market. Verisity's
leading technology solutions and commitment to customer success
will guarantee our continued leadership in the market.