

Wednesday
December 17

Coulda closed the big one.



MASS
High Tech
THE JOURNAL OF NEW ENGLAND TECHNOLOGY

Qualify for a free print subscription [Go!>>](#)
Register now! FREE daily Tech Flash e-mail! [Go!>>](#)

[HOME](#)
[SUBSCRIPTIONS](#)
[ADVERTISING](#)
[ARCHIVE SEARCH](#)
[CONTACT US](#)

The Journal of New England Technology

Purchase the
New England
Directory of High
Tech Companies

Start searching the
Directory of High
Tech Companies

List your company in the
Directory of High
Tech Companies

OUR CURRENT ISSUE

[Software](#)
[Multimedia](#)
[Movers & Innovators](#)
[Patent Watch](#)
[Innovation In ...](#)
[Biotech](#)
[Med Tech](#)
[Hardware](#)
[Telecommunications](#)
[Networking](#)
[Security](#)
[Personnel](#)
[Internet Security](#)
[Finance](#)
[Education](#)
[Energy](#)
[Community](#)
[Life Sciences](#)

THIS WEEK'S CLOSEUP

[High Tech Finance](#)
[DIALOGUE](#)
[CALENDAR](#)
[MOVERS](#)
[PERSONNEL FILE](#)
[TECH KNOWLEDGE](#)
[COLUMNS](#)
[COMPANY CULTURE](#)
[Special Report](#)
[Innovation in
Massachusetts](#)

OTHER TECHNOLOGY NEWS

[American City Business
Journals](#)

(news from 41 Business
publications around the
country)

OTHER USEFUL LINKS

[SURVEYS](#)
[COMMUNITY LINKS](#)
[EDITORIAL CALENDAR](#)
[STOCK INDEX](#)
[All-Stars 2003](#)
[TechCitizenship](#)
[SUPPLEMENTS](#)
[NE Fast 50 2003](#)

Bluespec banks \$4 million in VC cash

12/08/2003 07:56 AM

By Matt Kelly

A software company in Waltham has staked its fortunes on a new programming language for hardware design, which it claims will dramatically cut the painstaking process of confirming that new hardware products actually work.

Bluespec Inc., a 14-person startup, announced this week that it has a new software tool for electronic design automation that will quickly boil down an engineer's abstract designs into working machine code — a bottleneck that has bedeviled hardware manufacturers for years and pushed the cost of new product development through the roof.

The company uses SystemVerilog, a next-generation design language, and a patented technology from MIT called Term Rewriting Systems. Combined, Bluespec executives say, the two will let engineers use far fewer lines of code to design hardware. That means less chance of error, and consequently less time and money spent trying to correct those errors after the fact.

Bluespec also announced \$4 million from Atlas Venture Partners and Northbridge Venture Partners, its first round of funding. The company is in pilot tests with several unnamed customers now and expects to have its product ready for sale early next year.

"We need a significant effort at attacking the root of the problem — the design phase — by providing a toolset that raises the level of abstraction but is grounded in hardware design," said Shiv Tasker, Bluespec's chief executive officer. "With our design tools, engineers will get to closure faster, reduce verification cost, and eliminate bugs and re-spins that contribute to these constant delays."

Few would dispute that hardware design is the chore Tasker paints it to be. Thanks to the ever-shrinking dimensions of silicon structures, chip designs have grown enormously complex. Verifying that a design works correctly is an exhaustive process, usually taking more time than the original design work itself. Discovering a design flaw after the start of manufacture means the chip must be "re-spun;" it's a million-dollar blunder that can cost an engineer his job.

The bottleneck occurs when engineers try to use a high-level design language. By comparison, software engineers can use a high-level language like Java to design a program quickly, and then compile it into machine code a computer can understand. That quick compiling function doesn't exist in the hardware world, so engineers must write their designs in the hardware equivalent of machine code. Errors abound and progress is slow in an industry where time-to-market is crucial.

Bluespec's combination of the SystemVerilog language and the Term Rewriting Systems will solve that compiling problem, Tasker says. Early tests show that the tool cuts the necessary lines of code on a project by 90 percent.

Rita Glover, an analyst with EDA Today in Arizona, said Bluespec is an impressive product that will appeal to mainstream designers. Yet the company can still expect stiff competition from rivals that offer design-automation tools to specific vertical markets, such as communications or digital signal processors.

"But these guys are the only ones who address all (of the market sectors)," she said.

Bluespec must also contend with Synopsys Corp., a kingpin in the EDA industry. Synopsys was a prime supporter of SystemVerilog and could conceivably introduce its own tool to compete with Bluespec — or it could acquire the company if it gains traction. The other big players in EDA are Candace Design Corp. and Mentor Graphics.

Competition aside, research firm Gartner Dataquest predicts a

healthy future for EDA. It predicts 14.9 percent growth in 2004 and total revenues hitting \$5.5 billion, twice today's figure, by 2007.

Bluespec originated from Sandburst Corp., a fabless semiconductor company in Andover. Arvind, the MIT professor who developed the Term Rewriting Systems (he has only one name), used the technology at Sandburst as a design tool. Eventually management there decided Bluespec could survive as its own company. They found Tasker through acquaintances at MIT, and rounded out the management team with Rishiyur Nikhil, another Sandburst technology veteran who is now Bluespec's chief technical officer.

Matt Kelly is a freelance journalist based in Somerville.

EMAIL ARTICLE TO A FRIEND... >>

[Home](#) | [Subscriptions](#) | [Contact Us](#) | [Advertising](#)

All Rights Reserved. Mass High Tech 2000

[Privacy Policy](#) | [User Agreement](#)

