

## **Windows to the Flat World - Industry leaders discuss high-tech manufacturing trends at Microsoft Global High Tech Summit**

Oct 12, 2006 By: Kenneth Wong

It was a mild, sunny Thursday afternoon in the heart of the Silicon Valley late last month. At the Santa Clara Marriott, Microsoft Global High Tech Summit came to a momentary halt as lunchtime arrived. Glazed-eyed IT managers and executives stumbled out of the large presentation hall, where they had been sequestered for the better part of the morning. Few would dare stand between this famished mob and the pan-seared chicken promised by the lunch menu. Yet, at that very moment, the organizers ushered the next speaker into the clamorous lunchroom.

When New York Times columnist Thomas Friedman, the author of *The World is Flat*, took the stage, even the hungriest attendees put down their silverware and coffee cups to pay attention. Probably because this crowd, assembled from some of the best minds in the high-tech universe, knew that their own innovations -- such as Web-based communication tools and collaboration platforms -- helped level the old economic hierarchies and flatten the world. In the new global playing field, individual programmers and engineers in India, China and Wisconsin can compete on equal footing with -- or work with -- the IBMs and GMs of the world. Collaboration now enters a new phase.

### **Collaboration 2.0**

Friedman recently expanded his globalization compendium to reflect the latest developments in technology and geopolitics. The new edition is aptly titled, *The World is Flat: Release 2.0*. Borrowing his logic, we may refer to the new age of collaboration -- a mixture of competition and cooperation among rivals with common business goals -- as Collaboration 2.0.

People-ready Microsoft wants you to know its solutions are ready for Collaboration 2.0 too. Drew Gude, Microsoft's technology strategist for high-tech manufacturing, said, "If you look at high-tech manufacturing, the whole industry has gone from a vertical integration to a partner-driven, hyper-discrete model. Manufacturing centers, design shops and customer-service centers are all over the place, all around the world. We feel we bring to market technologies that allow the people behind these units to connect with one another."

Kevin Turner, Microsoft's chief operating officer, argued, "The most collaborative software is Windows," citing the variety of Windows-compatible plugins, add-ons, software and hardware. He went on to point out that Microsoft's next big product, Windows Vista, has a "built-in security culture" in anticipation of collaboration.

Gude remarked, "Individuals sometimes sign on from home, sometimes remotely, working from a very different environment than they were a few years ago, when all the work was done in a corporate office behind closed doors. High-tech competition is really in innovation -- what you're bringing to the market faster than your competition. It's becoming all about the intellectual property [IP]. How do you maintain, manage, and secure it? And Microsoft recognizes that its operating system [OS] is not only the standard for much of the desktops but also for much of the manufacturing environments creating the products. It's paramount that the IP is protected."

### **Lingua Franca of Data Exchange**

In a borderless digital world driven by instantaneous communication, "anything that can be done, will be done," Friedman predicted. "The only question is, will it be done by you, or will it be done to you?"

And Microsoft isn't about to sit around and wait for someone else to determine the lingua franca of data exchange. If it's to be done, Microsoft would rather do it to the rest. To that end, during the summit, Microsoft and Intel announced "a joint effort to improve supplier collaboration in the high-tech industry." Together, the OS giant and the chip giant proposed "the next-generation of open,

interoperable business standards for small to medium enterprise supplier collaboration, based on the Microsoft Office Open XML formats for documents." Both are cosponsoring the next-generation RosettaNet Automated Enablement program run by the RosettaNet consortium, a global standards-setting organization.

Turner said, "The adoption of the Office Open XML standard will mean that manufacturing companies are able to use Microsoft Office 2007 not only as a document-authoring tool for information workers, but also as an effective supply chain platform for value-chain integration."

Gude said, "This is huge. It's a paradigm shift from using binary, proprietary file formats -- like XLS, DOC or PPT -- to using the XML standards in the XML format as default." And that, he predicts, will go a long way toward using Office 2007 products, such as Excel, to drive critical supply-chain transactions, such as materials declaration for RoHS compliance.

#### Office Says "Hi!" to PLM

During most of the morning, Jeffrey Lyons, UGS' industry marketing manager for High Tech & Electronics, was on booth duty in the Partner Pavilion next door, so he watched the presentations on video screens. "Booth duty took some of my attention, but I did hear most of it," he said, adding that he's quite clear about what XML can potentially do for PLM (product lifecycle management).

"We're already leveraging XML in our tools today, plus some direct integrations to Office using WebDAV [Web-based distributed authoring and versioning]," he says. "There's live linking to Word, Excel and Visio from our system engineering and requirements management tools, and 3D visualization embedded into Internet Explorer, enabled by XML. Our customers struggle with collaboration, with getting information from internal to external sources. Microsoft is such an influential provider of these tools, so I see nothing but good from further support for XML."

Microsoft's strategy, as expressed by COO Turner, is "innovation, commitment, partnership." The last item -- partnership -- is where UGS and Microsoft have pledged allegiance to each other. "Microsoft has clearly expressed an intention to penetrate the digital manufacturing space and collected complementary partners at the conference to highlight this initiative," said UGS' Lyons. "UGS has partnered with Microsoft to help in this effort. UGS provides enabling [PLM] solutions that leverage Microsoft platforms and applications to improve collaboration across the 'flat' world."

#### Innovation 2.0

Microsoft's Turner reveals that his company annually pumped \$6.2 billion into its R&D efforts and, in last year alone, filed more than 3,000 patents. In his words, Microsoft is "the number one company in innovation investment."

In the presentation titled "The Convergence Paradox: Innovation Everywhere," Phil Hester, AMD's corporate vice-president and chief technology officer, observed, "The navigation system in your car [the Lexus G545 device] has well over a hundred times the computing capacity of the [space shuttle] Apollo's computer." By the same token, he predicts, "The PC of the future is probably today's super computer." The new computing territory to explore is, he said, "things between the cell phone and the notebook."

The explosion, and implosion, of innovation is all around us, not only in the improvement of existing technologies but also in how these technologies are deployed, marketed and distributed. As examples, Hester points to the one laptop per child initiative from a nonprofit group developing a \$100 laptop, primarily targeted at those in the developing world with limited disposal income, as well as online social networking platforms such as MySpace and Friendster. "Technology for technology's sake is a bad idea," he cautions. "We have to develop technology that creates a good customer experience." (For more on social networking, read "Today's Youth and Innovation: Get With It, or Prepare to Be MySpaced" by Lester Craft on Cadalyst's sister Web site, Innovate Forum.)

In Hester's view, perhaps one of the best embodiments of technology convergence is Alpha Rex, a robotic kit from toymaker LEGO's Mindstorms Division. For about \$250, a child age 10 or older - - or a curious adult -- can pick up a kit to build what the company calls "the smartest, strongest and most advanced LEGO robot ever." The finished product is a humanoid machine, with a 32-bit microprocessor for a brain, LEGO's NXT Intelligent bricks for limbs and an ultrasonic sensor for eyes. Using a Mac or PC, the creator can shape the Alpha Rex's behaviors using National Instruments LabVIEW, a graphical programming environment.

"Everything is essentially becoming a network device," AMD's Hester concluded.

#### Cultural Values

Along with presenters from AMD, HP and STMicroelectronics , NY Times columnist Friedman graced the stage once more for the final part of the summit, a panel discussion titled "Collaboration in High Tech Manufacturing."

During the Q&A session, a few attendees expressed concerns that U.S. manufacturers might be at a disadvantage in competing with overseas counterparts. The man who discovered the flat world had this to say: "When the world is flat, culture matters more, not less. If you have a culture that's open, you're more likely to succeed."

Friedman acknowledges he has heard speculation that the United States is now in decline, that the present century belongs to China . But not so fast, he warned. His parting shot was a quote, derived from his venerable grandmother's wisdom: "Never cede a century to a country that censors Google."

