

## IBM Does Open Source for Microprocessors

### Put Up or Shut Up

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The logo for Sageza, featuring the word "sageza" in a large, bold, blue sans-serif font. The letters are separated by small vertical bars on either side, creating a grid-like appearance.

## IBM Does Open Source for Microprocessors

By Joyce Tompsett Becknell

In an announcement this week, IBM laid out its plans to build a community of innovation and open collaboration around its Power microprocessor architecture. IBM's stated goal is to create a platform enabling researchers and vendors of electronics firms to add features and capabilities for new devices and applications. IBM believes that real potential for innovation now sits in the final chip design rather than in the underlying architecture.

IBM's decision to officially open the architecture is interesting but not surprising. IBM has long embraced the open source process in software, and has now put its money where its mouth is by applying the same sort of principles to its hardware. At the same time this announcement reinforces Power's position as an industry standard for 64-bit computing, not only as a specific chip for computer systems, but as a dominant architecture. This move is also not surprising because the microprocessor industry has been moving this way for years. Once upon a time each industry had its own discrete microprocessor architecture, and while variations existed within that industry, there was minimal or no interaction with other industries' architectures. However, by the late 90s, mutants were becoming the norm rather than the exception, and more and more industries began looking to save costs and leverage capabilities across industries, especially as the price of building a fab, for microprocessor construction, continued to escalate. With its relatively new Fishkill facility, IBM now has the manufacturing capability as well as the technological know-how to make this vision a reality. Finally, IBM had been touting its program to design and build custom ASICs (application-specific integrated circuit) for some time, and to take this up to the microprocessor level is a logical progression as they continue to create new programs for partners and customers to take advantage of its underlying technology prowess.

With this announcement IBM has articulated that real value is shifting. As much as Intel would have us believe that we have to have the absolute latest processor in order to have a worthwhile system, it is really integrated, optimized systems that matter, and processors are just one component in that system. The old Digital Alpha systems were an example where superior chip architecture did not lead to superior systems, and Sun has leveraged superior system architecture to outperform Sparc limitations for years. To us, this sounds similar to the story HP was telling when it first announced its intention to abandon its own processors in favor of Intel's Itanium processor. Unfortunately, the two companies may collaborate on platform issues, but the resultant products are controlled by Intel and are targeted exclusively at the enterprise server and desktop markets. The road has been bumpy, and the market has yet to see real benefits from these systems as a 64-bit version of the most popular operating system for Intel-based servers, Microsoft's Windows, has yet to emerge. IBM, having taken advantage of the benefits of the open source software community, has staked its claim on a hardware version of this model as well. In the end, if IBM is successful, this should lead to the first truly "open" system architecture on the market, and to new opportunities for entrepreneurial partners across the electronics spectrum.

## Put Up or Shut Up

By Jim Balderston

IBM has filed court papers asking the U.S. District Court of Utah for a declaratory judgment in its favor in its ongoing legal dispute with SCO over copyright and contractual obligations. The amended counterclaim also asks the judge to rule that SCO cannot put restrictions on the software it distributed under the Linux open source license. The judge in the case could make such a ruling after the discovery process is over and before the case actually goes to a full trial. IBM stated in its filing that SCO's threats that lawsuits against IBM and others using Linux are without merit are only that, and have no merit and were merely a part of a scheme to get Linux users to pay SCO unnecessary licensing fees. SCO sued IBM in March 2003, and is seeking \$5 billion in damages.

SCO has been successful enough in spreading a sufficient amount of FUD that some vendors selling Linux products are going so far as to include promises of indemnity against any SCO legal action resulting in the customer's use of Linux. Obviously, some vendors feel the need to do so as a means of calming nervous customers who think that at some point down the road any savings from deploying Linux could be eaten up in licensing fees or legal wrangling. It is reasonable to assume that one of IBM's reasons for filing the request for declaratory judgment is that the company has conducted its own internal investigation and found itself to be clean of any actions or evidence that could bolster SCO's case.

If that assumption is true, then IBM's action in court may turn out to be beneficial not only to IBM but to the industry as a whole. In essence, IBM is saying to the court, "Make SCO put up or shut up." In our mind, this is exactly what the industry should be doing. SCO's claims have been vague at best, and without substance at worst. In the meantime, the noise surrounding the \$5 billion lawsuit is giving a more than few corporate executives pause, and they are asking their IT staffs to consider the possibility of future damages that may be due SCO as a result of the lawsuit. While Linux continues to enjoy the support of many major IT vendors, the cloud SCO's legal maneuverings cast over the adoption rate of Linux may be having substantial impacts. Removing that cloud would certainly hasten Linux adoption rates, which to date have been fairly robust despite the unresolved legal issues. If, in fact the judge agrees, and issues a judgment in IBM's favor, Big Blue will have done itself, and a large section of the IT vendor community, a very big favor indeed.

## IBM Announces Grid Offering for Clash Analysis

By Charles King

IBM has introduced the Grid Offering for Design Collaboration: Clash Analysis in Automotive, Aerospace, and Defense, which the company said would help companies speed time to market and improve product quality through more rapid and comprehensive engineering design analysis. Created in cooperation with Platform Computing, the new offering grid-enables Dassault Système's CATIA and ENOVIA collaborative product development solutions. IBM also announced new projects utilizing the new offering, including one at Magna Steyr, a supplier of niche vehicle production for companies including Mercedes, Daimler Chrysler, Saab, and BMW. According to a Magna Steyr spokesperson, implementing IBM and Platform's grid solution reduced the time typically required for clash testing from seventy-two to four hours. IBM said the new offering is also being used in grid projects at Cetim, the French technical center for the mechanical industry; the French Petroleum Institute (IPF); and OMRON, a Japanese electronics manufacturer. No pricing details were included in the announcement.

Though not particularly well known outside of certain manufacturing industries, clash testing is a process that tangibly affects the cost and effort of bringing new products to market. In areas where complex products such as automobile engines are assembled from components provided by scores of third party specialists the final phase of product development includes clash testing analysis to ensure that all a product's requisite parts fit together as planned. When clash testing was a literal nuts and bolts exercise, weeks or months could be added to a product cycle when design mistakes occurred. Collaborative design tools such as Dassault's CATIA allow clash testing to be performed virtually, saving huge amounts of time and expense, but the complexity of the process relegated clash testing to the end of the product design cycle, when dedicated servers could spend days processing a job. In

comparison, IBM's new offering provides the means for manufacturing customers to grid-enable workstations and servers, creating clustered, multi-processor environments that can run clash analyses in a fraction of the time previously required, and allowing daily clash testing to become a dynamic part of the design process.

What does this mean in real world terms? Three things. First, this new IBM offering should allow manufacturers to leverage new or existing IT infrastructures in value-added ways. While the sheer complexity of automotive and aerospace product development make them key beneficiaries of IBM and Platform's initial efforts, other manufacturing processes and sectors could also enjoy grid-enabled clash testing solutions. Second, the offering should also help change the public perception of grid computing as little more than a highly geeky method for dealing with compute job scheduling. Sure, grid solutions allow enterprises unmatched flexibility in scheduling computing tasks, but IBM is in the process of proving that grid can also be an engine for adding literal value to products. Perhaps most importantly, the new Grid Offering for Design Collaboration shows that grid can also be an agent of change that fundamentally alters the way work is performed, with the end result being more effective design processes, shorter development cycles, and substantial savings in creating and delivering new products. While IBM's Grid Offering for Design Collaboration may not be a solution everyone looks for today, it could have a profound impact on the products we see in the market tomorrow.

## Tadpole Announces Opteron-Based Portable Workstation

By *Charles King*

Tadpole Computer has announced plans to expand its 64-bit solutions by developing a notebook offering based on the AMD Opteron processor that will come pre-installed with Sun Microsystems' Java Desktop System. The announcement makes Tadpole the first Sun iForce partner to develop solutions for the Opteron platform. According to Tadpole, Opteron-based notebooks will offer its customers unparalleled security against virus attacks, simultaneous 32-bit and 64-bit application support, and extreme performance. In addition, the company said that by pre-installing Sun's Java Desktop System on the new notebooks, Tadpole customers will have access to a highly secure, comprehensive, and affordable solution for handling compute-intensive 64-bit applications. The new Opteron notebook become available in the second quarter of 2004, joining Tadpole's other notebook solutions including the UltraSPARC-based Sparcbook, Viper, and Sparkle, and the Pentium 4-based Talin. No pricing information was included in the announcement.

For many, Tadpole's portable workstations have much in common with Dr. Johnson's talking dog, whose mere existence was more notable than anything it had to say. But that glibly shortchanges a company that has enjoyed particular success by developing highly-ruggedized, flexible 64-bit portable computing solutions to a range of private and public sector users including the U.S. Department of Defense. However, during the past year Tadpole has been focusing its attention and efforts, with products such as the Talin and Sparkle notebooks, at broader market opportunities. Sparkle leverages Tadpole's experience with portable solutions and Sun's UltraSPARC platform into a robust, affordable solution for commercial applications including software development, scientific applications, design engineering, MCAD, CAD/CAE, finance, and systems operations/management. We expect that Tadpole hopes Opteron-based notebooks will offer it a leg up in a still-evolving market by providing some interesting opportunities both by dint of the recently announced alliance between AMD and Sun, and by catching a bit of AMD's Opteron lightning in a Tadpole-shaped bottle.

However, despite the iForce love-in language of Tadpole's announcement, it is reasonable to wonder how cultivating an OEM deal with AMD could affect Tadpole's traditional UltraSPARC focus and long relationship with Sun. At one level, an Opteron-based notebook plays well to the aspirations of all parties, offering AMD additional market opportunities, Sun a new platform for its x86-based (and possibly 64-bit) Solaris OS, and Tadpole a chance to leverage the 32-/64-bit solutions from Sun, Linux, and Windows developers. But realistically, working with AMD also provides Tadpole other lines to pursue in case things take a turn for the worse and Sun really heads toward a nadir. Sun suffered some horrendous times after the dotcom bust, and while the company has been catching some recent breaks, its long term prospects are unclear. By developing solutions on platforms such as Pentium4 and Opteron, Tadpole can nurture its bright relationship with Sun while positioning itself for potentially rainier days.