## Market Roundup

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The Fab Five Take On Storage Management Standards Collaboration CA Adds More Muscle and Intelligence to Storage Management IBM's Top Gun



## The Fab Five Take On Storage Management Standards Collaboration

By Joyce Tompsett Becknell

Five key storage industry players have gotten together to announce a coordinated effort to drive standards-based storage management. EMC, HP, Hitachi Data Systems, Sun Microsystems, and Symantec have undertaken the job of advancing the Storage Networking Industry Association (SNIA) Storage Management Initiative Specification (SMI-S) for storage management. The group hopes to enhance SMI-S with new specifications and programming interfaces for a web services framework for advanced management. They will drive this effort under the auspices of SNIA to ensure that SMI-S becomes a widely used industry standard. The collaboration is intended to give hardware and software vendors, service providers, system integrators, and enterprise IT organizations a common, standards-built pluggable platform to develop high-value storage management services. The companies plan to contribute staff resources, specifications, and code to the initiative.

We can't say it enough: management is the next big thing in computing; there is too much heterogeneity, too much stuff in the data center, and that isn't going to change. The alternative to constant, expensive, and pointless ripping and replacing is to better manage the resources in the data center. Storage is one of the hottest parts of the IT industry, it's growing, it's becoming more important to the business people, and it's getting more complex. Naturally the vendors all want to own a significant part of this market, but they understand there has to be some cooperation for customers to actually derive value from their products. In storage, SNIA is an organization that almost everyone belongs to; it's a good idea and we support it and its initiatives. Unfortunately, SMI-S is a standard that's been baking in the SNIA kitchen for a couple of years without much luck. When it was launched a little more than three years ago, SMI-S was designed to be an abstraction layer to map storage resources and processes back to business applications requiring storage services. However, the standard has languished in a land of growing complexity and performance losses. There are some who would rather SMI-S went away, but there are clearly some vendors who think it still has potential.

The fab five are hoping to break through the inertia surrounding SMI-S by renewing efforts to work together. They acknowledge that heterogeneous software is the solution; they realize that ISVs still have to invent too much to build advanced management applications, and they rightly argue that SMI-S today is a device integration specification, and not a set of common building blocks. It's not clear how the vendors will be able to surmount the existing stagnation of SMI-S development, but any attempts to get it moving are useful and the situation can only improve.

At the end of last October, IBM launched Aperi, an open source group dedicated to solving the same problem. Although IBM claimed it invited other vendors to join, only Sun initially did so, and it is now leaving Aperi. Additionally, IBM claims that it has asked to be a part of this new SMI-S initiative. IBM maintains that Aperi is supposed to help accelerate SMI-S development, but the other vendors were unconvinced that Aperi would not evolve into a competitive set of standards and cause more stovepipes to form. Therefore they declined to join Aperi. Although Aperi remains committed to SMI-S, it has taken eight months since its launch by IBM for the group to get enough momentum together to make this announcement of intent. IBM is attempting an open source approach with Aperi, where the SMI-S group has made no mention of open source. Additionally, HP purchased AppIQ last October and both HDS and Sun rely on the AppIQ technology for their storage management. Both

Symantec and EMC have relationships with AppIQ, which integrated with both their technologies, so there is common ground between the partners.

Clearly, the development of standards for storage management has a long way to go. However, we applaud the fact that all the vendors remain committed in their own special ways, and we look forward to the results as the fab five do the vendor eye for the storage management guy.

## CA Adds More Muscle and Intelligence to Storage Management

By Tony Lock

The last two weeks has seen CA push out the boat with the acquisition of one organization and a noteworthy agreement to incorporate a third party file management tool to its BrightStor range. During this period CA first announced an agreement under which CA will incorporate the Arkivio Auto-Stor enterprise file management solution into BrightStor products. Arkivio Auto-Stor provides data classification capabilities allowing information to be assigned "value" based on customer-specified business criteria. The software then utilizes a patented scoring system to allow data to be transparently moved among the storage resources present in the infrastructure. In this way it becomes possible to implement relatively sophisticated Information Lifecycle Management (ILM) processes based in business-related information value rather than more simplistic approaches applied in other ILM solutions. The second move by CA came last week as the company announced that it had acquired MDY Group International. As is customary in such deals, no financial details of the transaction were revealed. MDY provides enterprise records management software and services that are designed to permit businesses to centrally manage both physical and electronic records across the enterprise. Essentially MDY's FileSurf product provides highly developed search and discovery capabilities across multiple platforms, including support for email repositories such as Notes, Exchange and Groupwise. The software also offers a number of record automation processes and some image search capabilities along with capabilities to track physical documents via the use of barcodes and check-in/check-out functionality; this functionality will be valuable in a world where paper documents continue to proliferate. In the short term CA will market the entire suite of existing MDY products and services and will continue to support existing customers. The company also plans to integrate the MDY record management technology with CA Message Manager to provide an offering capable of managing email and other business documents.

Over the last three years CA has been organically developing its storage management capabilities and adding tools and technologies via acquisition to a comprehensive range of offerings. CA is clearly focusing its attentions on developing solutions that address the areas of resource management, recovery management and the increasingly important matter of storage optimization and compliance. It is very clear that CA recognizes the growing burden and cost that storage management now places on all organizations, large and small. The two addition to its capabilities that these two announcements represent will eventually add significant capabilities to its overall storage management capabilities, capabilities that are already among the most sophisticated available from a single vendor.

However, before CA can bring these new resources to the market outside of North America where Arkivio and MDY have operated, the company needs to expend some effort. For example, at the time of writing the MDY software is only available to support the English language. Equally, CA will need to develop the sales and support skills necessary to take these solutions to market across the globe. It is likely that CA will devote the resources required to allow it to develop these solutions for a worldwide market and then take them to a very broad base of customers in Europe and the rest of the world. CA is developing a comprehensive range of storage management capabilities and this is an area to which the company is committed.

## IBM's Top Gun

By Susan Dietz

IBM and the Georgia Institute of Technology announced today that their researchers have demonstrated the first silicon-based chip capable of operating at frequencies above 500GHz by cryogenically "freezing" the chip to −451°

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Fahrenheit (4.5 Kelvins). By comparison,  $500 \, \mathrm{GHz}$  is more than 250 times faster than today's cell phones, which typically operate at approximately  $2 \, \mathrm{GHz}$ . Computer simulations suggest that the silicon-germanium (SiGe) technology used in the chip could ultimately support even higher (near-TeraHertz  $-1,000 \, \mathrm{GHz}$ ) operational frequencies even at room temperature. The experiments, conducted jointly by IBM and Georgia Tech researchers, are part of a project to explore the ultimate speed limits of silicon-germanium (SiGe) devices, which operate faster at very cold temperatures. The chips used in the research are from a prototype fourth-generation SiGe technology fabricated by IBM on a 200-millimeter wafer. At room temperature, they operated at approximately  $350 \, \mathrm{GHz}$ .

This is a prototype chip that is being showcased in a laboratory environment. However, it is real, and demonstrated as such; it is not just someone's dream or theory. Cooling will most likely remain a factor, albeit a lesser one if this chip is running at a fraction of the clock rate it was tested and showcased at. This chip is created on slightly different material than today's chips. As we have increasingly come upon the limits of current silicon technology, this is one way around those limits, i.e., changing the material used to change the physical limitations of materials in use. There are very few companies worldwide that could undertake such a project; IBM is one of them. The value of R&D and investing in very expensive foundry facilities has proven to pay off for the company time and again, and this is likely to be another example.

The new chip can run at ridiculous speeds frozen, and it can still run the pants off of any off-the-shelf CPU in the market today at room temperature, which is the more practical usage scenario. At room temperature, it has a clock rate about 170 times faster than typical CPUs today. But just having faster chips doesn't make any device necessarily run faster, as there are still bottlenecks in the throughput—complementary chipset and devices will be needed. However, without a chip such as this, there would be less emphasis on developing the faster complements. Hence, a virtuous circle. That said, given the fact that the chip needs freezing to run at optimum speeds, there are only limited applications, so this may not be a price-producer suited to the mass market at first (even though the cost of making the chip is claimed to be not much more expensive than regular chips). This is not a chip you will be able to go to Fry's or Best Buy next week and buy in a system. In any case, The need for speed seems to have hit IBM in a big way recently. Quite frankly, we are enjoying the ride.