Uniting the **World** of **Storage**

SNIA
STORAGE NETWORKING INDUSTRY ASSOCIATION

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Letter from the SNIA Chair

As I look back on the year 2002, and as we move solidly into 2003, I am both excited and challenged by what lies ahead for the Storage Networking Industry Association. We are working in troubled economic times, fueled in part by reduced corporate spending, and the climate for technology growth and change seems uncertain at best. Given these circumstances, it is truly rewarding to see how focused the organization is on the challenges that lie ahead as we deliver our objectives for the coming year. Regarding the fulfillment of our mission, I believe the work of the SNIA in 2003 will produce changes that are no less than revolutionary.

"The mission of the Storage Networking Industry Association is to ensure that storage networks become efficient, complete, and trusted solutions across the IT community." Since it's inception in 1997, the SNIA has acted on these words to provide the education, technical standards, programs, and infrastructure to enable companies to come together and deliver on this promise. Looking back on 2002, we see some significant accomplishments toward this goal.

In 2002, the SNIA grew increasingly comfortable with its leadership role in the storage industry. Our membership remained steady in a year when many associations were shrinking. Our impact on the industry grew during a time when company budgets and resources were tightening, and when projects that fuel the SNIA's mission were becoming diversified and more complex. The value of the SNIA for our members, for end users, and for the industry as a whole came into clear view as we focused on core competencies and new objectives. Key 2002 highlights included:

Technology

- We launched the SNIA Storage Management Initiative (SMI), with the full weight of the SNIA behind it.
- We allocated significant resources in time and dollars to launch the Interoperability Conformance Test Program (ICTP), with specific tests demonstrated at Storage Networking World (SNW), Fall 2002.

End-User Programs

- We created and launched the Customer Executive Council (CEC) and the Customer Advisory Council (CAC). These two groups, along with the newly formed Customer Focus Committee, a standing board committee, have already improved our organization by bringing to us the user perspective that we lacked.

Education and Events

- We delivered two Storage Networking World (SNW) conferences with a total of over 4,000 attendees including over 1,500 end users. We continue to be the premier storage conference, and with our strategic partner, Computerworld, we have set ambitious goals for future SNWs.
- We presented dozens of educational tutorials at SNW and in Boston and Los Angeles. The SNIA's commitment to industry education was a highlight of the year 2002, with expanded programs and publications planned for next year.
- We provided, through the SNIA Technology Center, a key staging point for interoperability demonstrations and launched a series of events on key industry topics such as CIM technology, storage security, and back-up and restore strategies.
- We launched, with our partner, Infinity I/O, one of the first industry certification programs, with FC-SAN Certification Levels 1, 2, and 3 in place.

Geographic Expansion

- We continued international expansion in 2002 under the SNIA's International Committee by forming SNIA Japan (SNIA-J). SNIA-J joins SNIA Europe (SNIA-E) as a new SNIA geographic affiliate. We're preparing to launch a geographic affiliate in the People's Republic of China, while Australia, India, Singapore, and South America have also expressed interest in becoming geographic affiliates.

Letter from the SNIA Chair

Technology Forums

- We brought the total number of SNIA Forums to five in 2002 when we created the DAFS Forum, the Storage Management Forum, and the Storage Security Industry Forum. These three new forums join the Supported Solutions Forum and the IP Storage Forum.

Looking forward to 2003 – The SNIA Storage Management Initiative

Fiscal year 2003 promises to be significant for our organization, fueled by rapid developments in storage management. Midway through 2002, the SNIA was asked to consider a proposal that would both affect our members and benefit the end user. A task force evaluated the proposed SNIA adoption of the "Bluefin" project and then recommended the SNIA proceed with this challenge. Even as we delivered the programs described above, the SNIA Storage Management Initiative (SMI) was born. The SNIA is emerging as the only organization with the resources, desire, and ability to deliver on the SMI objectives. I believe that there are few organizations that could have embraced this large and significant program with such speed, enthusiasm, and commitment.

The technology and programs associated with the SMI have the power to transform the way consumers manage their storage environments. This potential to enable better manageability and to further interoperability contributes to making the SMI a top priority for 2003.

Our goal is simple: to have all storage products managed by SMI in 2005. All new network storage client and server products developed by SNIA member companies for general availability after 2005 will conform to the SNIA Storage Management Initiative Specification. The technical working groups, the supporting forums, and programs like the Interoperability Conformance Test Program (ICTP) will support the SNIA as it works to achieve this ambitious goal.

In addition to the focus on the SMI, you will see continued support for programs that hold great interest for our customers in areas such as storage security, IP storage, and supported solutions.

As always, I continue to be impressed by the dedication of our members, the vehicle for the success of everything we do. Whether an individual is helping with delivery of events at the Technology Center, or making a technical contribution to the Storage Management Initiative Specification, the focus is on the final goal: meeting the needs of the end user. This will be a critical year for the SNIA – much has been accomplished, but there is much more to be done. We cannot take our eyes off the ball as we fulfill our promise of efficient, complete, interoperable, and manageable storage networking solutions.

Thank you members, and welcome to 2003!

Sincerely,

Sheila Childs
SNIA Board Chair

Marketing Report

North American Marketing Committee

The SNIA Marketing Committee supports the growing public relations and marketing requirements for the SNIA and its constituent groups. These requirements have grown significantly in the past year. They reflect the natural evolution of an industry association that has grown from an initial focus on technical matters to a mature and value-based association that brings value to both its members and their customers. The SNIA Marketing Committee supports the goal of the SNIA to become a leading force for advancing technology and business value in the storage industry.

The Marketing Committee is led by the Marketing Executive Team consisting of a chairperson and three vice chairpersons heading the committee's work in strategic marketing, marketing communications, public relations, and marketing programs and events. Currently, fifty-three individuals from SNIA member companies are registered as members of the Marketing Committee and provide valued support to SNIA marketing efforts.

The Marketing Committee is the focal point for several SNIA resources:

- SNIA director of public relations and marketing
- SNIA marketing assistant
- Marketing managers of SNIA forums

Collaborating with the SNIA director of public relations and marketing, the Marketing Committee receives and responds to requests for marketing and public relations support from any SNIA group. These requests are fulfilled by either contractor support, the director of public relations and marketing or the SNIA marketing assistant, or through the services of Marketing Committee volunteers.

2002 Accomplishments

In 2002, the SNIA Marketing Committee supported the production and execution of:

- Storage Networking World, Palm Desert, CA
- Storage Networking World, Orlando, FL
- Backup and Restore Workshop – SNIA Technology Center
- Storage Management Summit – SNIA Technology Center
- Storage Security Summit – SNIA Technology Center
- CIM-SAN Plugfest – SNIA Technology Center
- Storage Security Industry Forum launch
- New SNIA Web site and management tools
- Taking SNIA "On the Road" in Boston and Los Angeles
- SNIA Certification Program
- Creation of the Consumer Executive Council (CEC)
- Multiple keynote speaking opportunities
- SNIA's Monthly Column in storage trade journal
- SNIA's Shared Storage Model

Marketing Report

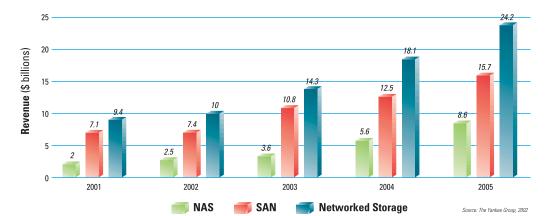## The Marketing Committee in 2003

In 2003, the Marketing Committee will continue to create branding and messaging both consistent with the SNIA Board's goals and objectives and focused on the Marketing Committee's main communication objective: to increase overall awareness of the SNIA.

SNIA benefits will be marketed to its membership; to the vendor community at large; to SNIA forums and committees; and to storage and networking end users. A special focus will be given to 2003's release of the first publicly reviewed SNIA Storage Management Initiative Specification, along with related support facilities.

Communications will be enhanced and strengthened through an expanded series of SNIA presentations, the SNIA newsletter, called *The SNIA Net,* and the SNIA Web site at www.snia.org. To widen SNIA's international presence, the committee will continue its strong relationship with SNIA Europe, SNIA Japan, and other new geographic affiliates.

The Marketing Committee will continue to provide direction, guidance and support to SNIA committees and forums on 2003 activities, including Technology Center activities, conferences, seminars, speaking engagements, and special events. An emphasis on consistent SNIA messaging and branding will be the focus here as well, with the goal to increase overall awareness of SNIA through outbound and internal events, and to expand the awareness of the value of SNIA knowledge and expertise through SNIA programs.

Storage Networking Market Growth

Source: The Yankee Group, 2002

Committee Reports

Customer Executive Council

The SNIA Customer Executive Council (CEC) provides the SNIA with end user perspectives on storage networking technologies, helping align SNIA strategic initiatives with the needs of storage consumers.

This council benefits both customers and developers of storage networking technology. Storage customers have a forum where they communicate strategic directions for shared needs to the industry. With an accurate definition of end user priorities, the storage industry can develop features and functions to best address customers' business-level issues and opportunities. The CEC provides a means to streamline turning shared storage industry efforts into business-level solutions, which expands business opportunities for vendors and puts valued products into the customers' hands sooner.

The SNIA CEC is composed of corporate and institutional information technology (IT) executives and managers who are responsible for the business needs posed by their organizations' storage strategies. CEC members are invited by the SNIA or the CEC and are not required to be SNIA members.

Continuing its 2002 activities, the CEC will serve in 2003 as a conduit for the end user viewpoint to the SNIA membership, working with SNIA forums and committees to define solution sets for particular industry and end user problems.

Standards Committee

The Standards Committee has been chartered in 2003 to clarify the SNIA strategy for standardizing SNIA technical work products, manage the official relationships with standards organizations, and perform other standards-related work.

Conferences Committee

The Conferences Committee works to ensure that all SNIA conferences enhance the value of the SNIA to its members, consumers, and others. As in 2002, the Conferences Committee in 2003 will continue working with Computerworld to create compelling, respected, and visible conferences that provide a forum to educate, learn, debate, create, ensure and demonstrate the success of storage networking solutions worldwide.

Members at Storage Networking World, October, 2002

Education Committee Report

Education Committee

The mission of the Education Committee is to accelerate the adoption of storage networking by increasing the level of knowledge about storage networking among end users.

Committee activities to meet their mission include:
- Developing and maintaining a curriculum of topics that address the specific knowledge requirements of each discipline.
- Delivering educational content in activities and resources, seminars, classes, publications, Web sites, and speaking opportunities.
- Establishing and maintaining a Web site for a repository of resources and materials such as white papers, success stories, courses and the SNIA Dictionary of Storage Networking Terminology, recognized by the industry and marketplace as a definitive reference on storage networking terms.

Highlighted 2002 achievements included:

Tutorials

In 2002, users viewed tutorials on backup, business continuity, infrastructure design, IP storage, networking, SAN management, security, storage and virtualization at a variety of SNIA-endorsed events.

At the Fall 2002 Storage Networking World (SNW), fourteen well-attended SNIA tutorials helped draw hundreds of end users to participate in the SNW. The tutorials group also partnered with the Information Storage Industry Center (ISIC) at the University of California, San Diego on a program to bring these tutorials to cities across the US. Following the success of the pilot program, the tutorials group is exploring plans for additional tutorial road shows.

Publications

In 2002, the Education Committee delivered its first educational tutorial booklet based on a SNIA tutorial, with the Storage Networking Security tutorial providing content for the *Storage Network Security* booklet. This booklet can be ordered from the SNIA Web site. Four more publications based on SNIA tutorials are planned for the 2003 fiscal year. The Committee also manages the publication of white papers to the SNIA Web site.

SNIA Storage Networking Certification Program (SNCP)

The SNCP was developed in response to demand from enterprise customers worldwide in order to provide standards for measuring the storage networking expertise of IT professionals. The first certification track in the SNCP, Fibre Channel-SAN (FC-SAN) certification, is designed to test professionals' skills and knowledge in these technologies. In 2002, 450 people from SNIA member companies were FC-SAN certified. This number represented 44 percent of the total 1034 people certified and the following SNIA membership categories:

- Large Voting Members accounted for 46 percent of the total member certifications, or 205 certified individuals.
- Regular Voting Member companies sponsored 38 percent of the total SNIA certifications with 169.
- Associate Member companies had 17 percent with 72 certified professionals.

The Education Committee in 2003

2003 plans include the update of the recommended roadmap for storage management skills assessment services. The Education Committee will base this recommendation on their experience in offering the current three level FC-SAN certification program, plus a new project to research and forecast market needs.

Technical Council & Work Groups

Technical Council and Work Groups

The SNIA Technical Council is elected by the membership to oversee all SNIA technical activities. In collaboration with the SNIA technical director, the Technical Council approves, reviews, guides, and supports the technical work groups (TWGs); participates in strategic planning; and advises the SNIA Board of Directors on technical issues.

2002 Accomplishments

2002 was a year of growth, consolidation, and maturity for the SNIA technical organization. Key achievements were made possible through members' continued contributions and support, not just in dollars, but in time and talent, in the areas of:

Summits

In September 2002 , the Security TWG hosted a Security Summit at the SNIA Technology Center in Colorado Springs. Invited speakers and industry experts discussed security experiences in other technologies, emerging legal requirements, and ideas for future developments. A town hall-style meeting at the end of the summit discussed the next steps toward storage security.

The first-ever Technical Council sponsored event, the Storage Management Summit, was held in Colorado Springs. This developer-focused event featured technical tutorials on the key technologies of CIM, WBEM, and the SNIA SM Initiative taught by leading experts and architects.

Interoperability Demonstrations

An emerging technologies area to showcase standards-based work-in-progress has traditionally been part of the biannual Storage Networking World conference and show. Through the efforts of the Disk Resource Management (DRM), Fibre Channel (FC), and Storage Media Library (SML) TWGs, attendees at SNW in October 2002 were able to see vendors come together for CIM-SAN-1, the first public demonstration of Common Information Model (CIM)- and Web Based Enterprise Management (WBEM)-based SAN management.

Manageability

To better focus on the changing and evolving requirements for storage management, the Storage Network Management TWG (SNMTWG) was dissolved and replaced with three individually chartered and tightly focused TWGs: Disk Resource Management (DRM), Fibre Channel (FC), and Storage Media Library (SML).

The Technical Council responded to the SNIA Storage Management Initiative (SMI) by forming a seven-person SM-Technical Steering Group (SM-TSG). Composed of representatives from the Technical Council and leaders from the TWGs, the SM-TSG is chartered to define and drive the SMI technical program, including project management of the SMI technical activities and coordination with external organizations. The SM-TSG is responsible for the overall architectural integrity and coherence of the CIM/WBEM-based SNIA Storage Management Initiative Specification, and maintains a close liaison with the Distributed Management Task Force (DMTF).

The Technical Council also endorsed the charters of two new TWGs specifically to support the SNIA Storage Management Initiative (SMI). The Management Protocol TWG is chartered to work on the management protocol components of the SNIA Storage Management Initiative that are outside the charter of existing TWGs. Example work items include discovery, security, roles, and locking mechanisms. The Management Application TWG (MAPTWG) provides management application vendors an opportunity to participate in and influence the SMI, meeting the needs of the management application community.

Technical Council & Work Groups

Additional technical teams developing SM-Initiative Specification content include the:

- Disk Resource Management (DRM) Technical Work Group
- Fibre Channel Technical Work Group
- Storage Media Library (SML) Technical Work Group
- Management Protocol (MAP) Technical Work Group
- Management Application Technical Work Group
- Policy Technical Work Group
- Network Attached Storage (NAS) Technical Work Group

Innovation

The SNIA Technical Council continued to enhance and extend the SNIA Shared Storage Model (SSM), the first widely-accepted architectural model for shared storage in our industry. In 2002, the Technical Council completed additions to the SSM to support tape, and began the process of defining a Shared Services Model for storage.

The Network File System over Remote Direct Memory Access (NFS/RDMA) TWG turned over the first draft for NFS over RDMA transports to the Internet Engineering Task Force (IETF), launching the process for an interoperable standard.

Education

The SNIA Technical Council announced an Academic Outreach Initiative, with the goal of attracting more of the best and brightest computer scientists and engineers to a career in storage technology. In support of this initiative, a new affordable class of SNIA membership for academic institutions was endorsed. The SNIA joined in sponsorship of the 2002 File and Storage Technology (FAST) Conference, and several Technical Council members were guest lecturers in the Storage I/O graduate-level course at Carnegie-Mellon University.

The Technical Council and Work Groups in 2003

In 2003, work has begun on the SNIA Roadmap. The goal is to provide the architectural framework, the business process evaluation methodologies, and the foundation elements necessary to realize the SNIA mission of deployable, efficient, and trusted storage. Our goal for the roadmap is to use the common linkage of verifiable business benefits to tie together many disparate SNIA activities along a five-year timeline. Additionally, the insights gained during the roadmap process will be used to identify new opportunities for both the public sector and academia to contribute through innovation and research.

As part of the Academic Outreach Initiative, the Technical Council will sponsor 10 students to attend the 2003 File and Storage Technology (FAST) Conference. Technical Council members will also be featured speakers.

The Shared Storage Model will receive further enhancements, including storage services and security.

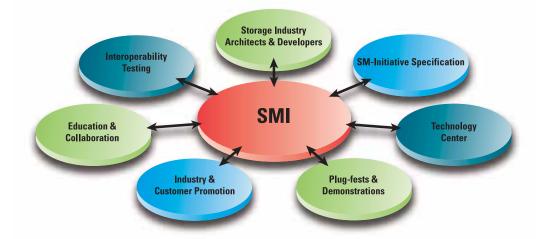Also in 2003, the Technical Council and the TWGs will promote the following:

- The Technical Council will help increase the focus and progress on SMI across all TWGs.
- The IO Performance Tools TWG will collect and make available a repository of Storage I/O traces and tools for viewing and analyzing these traces.
- The Policy TWG will develop an automated, policy-driven storage management, including service level metrics, and a CIM Policy Model.
- The NAS TWG will develop NAS snapshot services.
- The IP Storage TWG will develop an iSCSI Management API (IMA), to define a management interface for iSCSI-capable adapters, and an interoperability and compliance test specification for the iSCSI Management API.
- The Object-Based Storage Devices TWG (OSD TWG) will prepare a framework and requirements document for object-based storage devices.

Storage Management Forum

Storage Management Forum

Efficiently managing multivendor storage area networks (SAN) is a key concern for end users and integrators alike. Ultimately, the high cost of management often deters the end user from aggressively embracing storage networking technology. The SNIA Storage Management Forum is the central organization in the SNIA for building broad organizational consensus on the plans and execution of the SNIA Storage Management Initiative (SMI).

2002 Accomplishments

In mid-2002, the Storage Networking Industry Association launched an initiative to unify the storage industry on an interoperable, open, and highly functional interface for network storage management. The SNIA Storage Management Initiative brings together the vast resources of the SNIA, including education, interoperability, technical work groups, marketing, conferences, and the SNIA Technology Center to deliver this interface technology, called the SNIA Storage Management Initiative Specification.

The SNIA SM Initiative - Specification will streamline the way the entire storage industry deals with management. Management application developers will no longer have to integrate incompatible, low-functionality interfaces into their products. Component developers will no longer have to push their unique interface functionality at applications developers. Instead, both will be better able to concentrate on developing features and functions that have value to end users. With a common interface, the management of network storage will become simpler and cheaper than managing an equivalent amount of storage attached directly to servers. Ultimately, faced with reduced costs for management, end users will be able to adopt storage networking technology faster to build larger, more powerful networks.

Storage Management Summit, December, 2002

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Storage Management Forum

The Storage Management Forum in 2003

In 2003 the SNIA will release the first publicly reviewed SNIA SM-Initiative Specification, initiate storage management conformance testing and launch a broad based effort to inspire vendor implementation of the SM-Initiative Specification interface. SNIA member participation in this industry breakthrough may occur in a number of areas:

- **SNIA Storage Management Committee**

  The SNIA Storage Management Committee provides oversight and coordination to each SNIA element working on the SNIA SM-Initiative , and launches new programs making sure goals are met and tangible value accrues to member companies on a time line that is respected by the industry.

- **SNIA Storage Management Technical Steering Group**

  The SNIA Storage Management Technical Steering Group (SNIA SM-TSG) comprises technical leaders from the SNIA Technical Council as well as chairs from technical work groups. The SNIA SM-TSG ensures that the SNIA SM-Initiative Specification provides interoperability and function- ality that are respected by implementers of the interface. Additional technical teams will also develop SNIA SM-initiative specification content.

- **SNIA Storage Management Forum**

  The SNIA Storage Management Forum goals are to promote the SNIA SM-Initiative and its work products, drive the SNIA SM-Initiative interface to broad adoption in the industry, create multi- vendor interoperability, and collect requirements for and guide the functional direction of the SNIA SM-Initiative.

- **CIM-SAN**

  The CIM/WBEM-managed SAN, or CIM-SAN, is the first permanent and open multivendor development and demonstration environment for accelerating implementation of the SNIA SM-Initiative Specification. CIM-SAN has been successfully demonstrated at a number of Storage Networking World Conferences.

One of SNIA's many plugfests held at the SNIA's Technology Center in Colorado Springs, CO

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Interoperability & ICTP

Interoperability Committee

The Interoperability Committee promotes standards-based interoperability of storage network products and applications. The committee works to:

- Establish and implement guidelines for consistent interoperability testing.
- Create SNIA certification for proven compliance with SNIA-approved interoperability testing.
- Help the SNIA technical work groups define and execute interoperability tests, including those required for certification.
- Prioritize test suite development.
- Provide interoperability-proven demonstrations for SNIA events.
- Participate in interoperability activity with other storage industry organizations.
- Solicit customer requirements for both infrastructure and application-level interoperability.

2002 Accomplishments

As part of their charter, the Interoperability Committee defined and organized **interoperability demonstrations at SNW** Spring 2002 and Fall 2002. At SNW Fall 2002, more than 40 storage networking companies gathered to stage the world's largest storage networking interoperability demonstration to date. Solution themes were supported by tutorials presented by the SNIA Education Committee, so that attendees could combine concepts with live demonstrations

The **Interoperability Conformance Test Program (ICTP)** validating standards compliance was developed. The ICTP enables the IT consumer to gain confidence in standards compliance, while it helps developers and Integrators comply with a common interpretation of the standards. For both, the reward is greater productivity and improved interoperability of network and shared storage solution components. In 2002, the first SNIA ICTP industry developed standards conformance tests were successfully run on multiple vendors iSCSI HBAs at the SNIA Technology Center.

The **Brand-value Task Force** is a subcommittee of the Interoperability Committee. This task force was convened to investigate and make recommendations to develop a branding or logo program for the Interoperability Conformance Test Program.

The Interoperability Committee in 2003

2003 will see continued interoperability demonstrations at SNW and continued ICTP activity.

Plugfest at The SNIA Technology Center

IP Storage

The IP Storage Forum promotes block storage networking solutions using standard Internet Protocol (IP) networks. The forum is organized into three subgroups: FCIP, iFCP and iSCSI. Each subgroup is preparing a standards-track protocol under the auspices of the Internet Engineering Task Force (IETF).

- Fibre Channel over IP protocol (FCIP) is a TCP/IP-based tunneling protocol for connecting geographically distributed Fibre Channel SANs transparently to both FC and IP.
- Internet Fibre Channel protocol (iFCP) is a TCP/IP-based protocol for interconnecting Fibre Channel storage devices or Fibre Channel SANs using an IP infrastructure along with, or in place of, Fibre Channel switching and routing elements.
- Internet SCSI (iSCSI) is a TCP/IP-based protocol for establishing and managing connections between IP-based storage devices, hosts, and clients.

The IP Storage Forum in 2003

in 2003, the IP Storage Forum will continue its efforts to promote Internet Protocol as a means of transporting block storage data over computer networks by establishing:

- Marketing collateral explaining the principles, features, and benefits of IP-based storage networks.
- White papers covering the more technical aspects of IP-based storage solutions.
- Educational presentations for distribution to customers, industry partners, and others.
- Forums, panels, and other public presentations at appropriate industry events.
- Interoperability and showcase demonstrations of IP-based storage technology and solutions.
- Participation in SNIA events that are relevant to the work of the IP Storage Forum.
- An environment of camaraderie among the IP Storage Forum participants and within the SNIA.

SNIA Security Summit, September, 2002

Storage Security Industry Forum

Storage Security

In response to end user and member requests, the SNIA created the Storage Security Industry Forum (SSIF) in July 2002 to research, market, and promote standards-based storage security solutions and best industry and customer security practices for networked storage infrastructures.

2002 Accomplishments

Security has a multifaceted role in storage networks. In researching that role, the SSIF has clarified how enterprises view security in their storage networks. First, security needs for storage networks are driven by business issues and objectives. For overall business continuance and competitiveness, enterprises demand greater availability of storage both in terms of when and where it is available. Without the means to secure data in insecure networks, this business objective is thwarted. Placing data onto networks requires an approach to security that assumes the data networks are inherently, perennially vulnerable and insecure. This assumption allows the lowest common denominator in networking to flourish, thereby driving an unbelievable expansion in networking deployments.

The same outcome should be expected for storage networks. Storage is placed, for business reasons, onto insecure networks. The challenge is to determine what to do then.

With this in mind, the SSIF works closely with end users to understand and document their storage security requirements. In turn, the SSIF communicates this feedback to industry technical groups for incorporation into upcoming standards, initiatives, and best practices. Since November, the SSIF has participated in media interviews that focus on the crucial need for end users to drive the storage security agenda with their vendors. By creating its Customer Advisory Board in September 2002, the SSIF has focused its efforts on collecting, assessing, and documenting end user suggestions for storage security best practices and concerns.

Major General Meyerrose, CIO of Northern Command, Speaking at The SNIA Security Summit, September, 2002

The Storage Security Industry Forums in 2003

2003 will see the SSIF continuing to fulfill its mission by identifying the best practices on how to build secure storage networks and promoting these standards-based solutions. To further communicate the research findings and industry progress, the SSIF has recently launched a new Web site which serves as an information marketplace for the storage security industry. Sections include a risk assessment tool for prospective end users, documents and research detailing the storage security marketplace from third-party industry analysts, and up-to-date news reports and articles regarding this growing marketplace.

Supported Solutions Forum

Supported Solutions

The Supported Solutions Forum (SSF) provides testing and approval of working Open SAN supported solutions. The Supported Solutions Forum complements the drive to open standards and builds on top of the many interoperability activities underway in the industry by:

- Establishing an industry-wide community of SNIA members working on supported solutions.
- Providing solutions developed and qualified by Forum members.
- Accelerating customer implementation of storage networking solutions.
- Providing end users with a receiving point for comments on and requests for heterogeneous storage configurations.
- Providing thought leadership on strategies to enable storage interoperability as well as pointing out the pitfalls to avoid.

The Supported Solutions Forum sponsors two subgroups. The Interoperable Configurations Subgroup manages the standardized methods for evaluating heterogeneous storage and storage networking configurations. The Cooperative Support Subgroup manages the commitments of Supported Solutions Forum members to deliver support to customers deploying heterogeneous configurations.

2002 Accomplishments

Since it was established in 2001, the Supported Solutions Forum has tested and registered Open SAN supported solutions, including mixed vendor combinations of disk storage, tape storage, and tape backup software.

The Supported Solutions Forum in 2003

In 2003, the Supported Solutions Forum will examine which common storage networking components can be used universally in heterogeneous storage environments, the use of Fibre Channel switches from different vendors, and other configurations.

SSF solution verification conducted at The SNIA's Technology Center

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DAFS Forum

DAFS Forum

The Direct Access File System (DAFS) Implementers' Forum was formed in 2002 to advance the development, delivery, and promotion of interoperable storage networking solutions for standard high-performance clustered server environments.

2002 Accomplishments

During 2002, Forum members were focused primarily on the "development" phase of the initiative, both collectively and in a number of related industry forums.
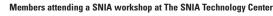
Major milestones include the following:

- A demonstration DAFS-over-InfiniBand client and server implementations at the Intel Developer Forum.
- The publication of a TPC-C result using DAFS-based storage.
- Shipment of the first DAFS product using a VI/IP HBA.
- The publication of v1.0 of a platform-independent, RDMA Transport API, and the release of an open-source reference implementation which was subsequently adopted by InfiniBand infrastructure vendors.

The DAFS Forum in 2003

For 2003, the Forum's focus will move to the "delivery and promotion" phase, as enabling technology becomes available from server vendors. Members will be involved in activities such as conference and tradeshow demonstrations of emerging technologies and solutions.

A key component of 2003 activity will be to broaden the DAFS Forum's focus on networked storage solutions for clustered server environments, and to tie its efforts more closely to the SNIA Storage Management Initiative.

Members attending a SNIA workshop at The SNIA Technology Center

International Report

SNIA International

Despite difficult economics, which have affected all world business regions, SNIA has never been so strong and in demand around the world. The SNIA International Committee and SNIA International members have been working to prepare SNIA to become a global organization.

2002 Accomplishments

2002 was an active year for geographic affiliates SNIA-E and SNIA-J.

SNIA Europe (SNIA-E) counted over 50 members, with country-committees in Belgium Luxemburg, France, Germany, UK, and The Netherlands. SNIA-E 2002 achievements include:

- Delivering marketing collaterals, an end-user storage survey, the SNS magazine and E-Newsletter.
- Helping to prepare SNW-EuroStorage and its demonstration lab.
- Participating in other key European and North American industry events.
- Producing end-user seminars in France, Germany, and the UK.
- Preparing materials and presenting SNIA tutorials.
- Promoting the SNIA certification program.

With over 30 members, SNIA Japan transformed their Web site, translated many SNIA documents including the SNIA Dictionary of Storage Networking Terminology and published a book in Japanese called *Storage Networking.* In addition to training its membership, the SNIA-J team also participated in Japanese storage events including SNW-Japan, Net&Com, and Data Storage Expo. In support of the SNIA Storage Management Initiative, SNIA Japan established an SMI Technical Work Group to help educate its membership about the SNIA Storage Management Initiative Specification and to organize key SMI technology demonstrations.

In 2002 the SNIA International Committee, in conjunction with the SNIA Board of Directors, answered requests for keynote speakers in regions such as Australia, Brazil, China, Europe, Japan, and Singapore. These contributions from SNIA helped to support their existing regional activities and to assess the need for new SNIA local chapters.

SNIA International in 2003

2003 should be an exciting time for SNIA worldwide. SNIA International will continue to connect with regional storage networking markets worldwide. SNIA International will work with SNIA-E and SNIA-J to develop a transition plan to transform the current organizations into regional affiliates as seamlessly as possible.

As a result of the growing number of requests to establish a SNIA presence in regions not covered today by geographic affiliates, the SNIA International Committee developed the SNIA Regional Affiliate Plan. This plan will enable the SNIA to expand its worldwide activities in the United States and elsewhere. The SNIA international expansion plan today includes the People's Republic of China, Singapore, Australia and New-Zealand, Latin America, and South Asia.

SNIA-China plans are expected to be finalized before the end of the 2nd quarter 2003 to benefit from keynote speaker engagements promoting SNIA-China at SNW-Hong Kong and SNW-China 2003.

A new and very motivated SNIA formation team is on a fast-track to establish the SNIA-South Asian affiliate, with over 15 companies from several south-Asian countries expressing great interest in launching a new SNIA chapter. Interest has also been demonstrated for the presence of SNIA in India. SNIA International will also investigate Australia-New Zealand, and assess the Latin American area.

Following a request from Europe's storage and storage networking market leaders and industry association members, SNIA Europe has united with the Fibre Channel Industry Association Europe (FCIA-Europe) to build a broader organization under the SNIA umbrella to address all aspects of the European storage networking market requirements.

Additionally, the SNIA Europe Web site (www.snia-e.org) and the SNIA Japan Web site (www.snia-j.org) will continue to be expanded with news, education and events content.

Technology Center

SNIA Technology Center

In 2001, the SNIA Board of Directors implemented a strategic decision to support the organization's goals by opening the Technology Center, a unique lab and classroom facility located in Colorado Springs, CO. The 14,000 Sq Ft high-technology lab, classroom, and meeting facility was built and donated by Compaq Computer Corporation (now Hewlett-Packard Corporation).

The Technology Center's mission is to:

- Be the industry's own venue for joint validation of storage networking technologies and solutions.
- Provide an industry meeting place for communication, education, and collaboration.
- Build customer trust by hosting topical events and educational programs.
- Be a catalyst to drive faster time-to-market for industry technical advances.

In the two years since the Technology Center was opened, it has evolved from a start-up status to becoming a fully-integrated asset that accelerates the collaborative, customer-focused programs of the industry.

2002 Accomplishments

In 2002, the Technology Center hosted the following major industry activities:

cim san

- CIM-SAN-1, the industry's first permanent and "open" multi-vendor development and demonstration environment for accelerating the implementation of CIM/WBEM technology into products.
- The first SNIA ICTP (Interoperability Conformance Test Program) industry-developed standards-conformance tests were successfully run on multiple vendors iSCSI HBA's.
- Several plugfests designed to advance the state of storage networking, including iSCSI companies and the FCIA (Fibre Channel Industry Association) SANmark™ program.
- Multiple vendors utilized the services of the Technology Center to conduct interoperability tests on pre-release hardware and software products.
- The Technology Center supported the SNIA's- education objectives by hosting:
    - An end-user focused "Backup and Restore" event, which provided industry-collaborative tutorials and dramatic "1-terabyte per hour" demonstrations, all designed to ease the most difficult area of storage management.
    - A Storage Networking Security Summit designed to drive cohesiveness as the industry works to support ever higher security requirements.
    - A Storage Management Summit, which brought the industry together in order to reach a "level-set" position and prepare for the rapid introduction of CIM-based management standards by SNIA.

The Technology Center in 2003

In 2003, the Technology Center is well positioned to support the existing industry standards and interoperability programs, and to successfully introduce newly planned industry activities. The Technology Center has become the "Center for Storage Excellence".
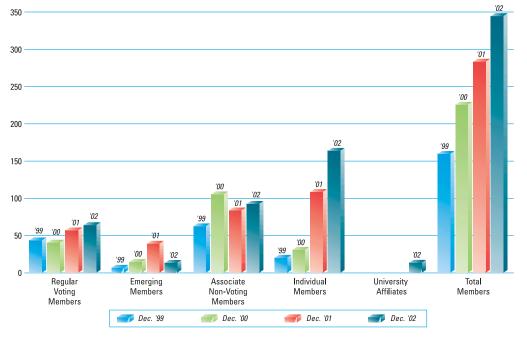

IP SAN Fest, March, 2002

Membership

Membership Report

While 2002 was a year of mixed financial results in the industry, membership in the Association increased as a result international expansion and strong interest in several Association initiatives.

Membership in the U.S. chapter stood at 354 at the end of 2002, a growth of 18%. This included 11 University Associate members, a new category instituted during 2002. Membership in the Europe and Asia geographic affiliates stood at 56 and 17 respectively, bringing total worldwide membership up to 427.

As shown in the chart below, there was particularly strong growth in the 'individual' category due to the Association launching the Customer Advisory Council.

SNIA Membership by Category, 1999-2002

There was also growth attributed to the Association launching the Storage Management Forum. The SNIA Storage Management-Forum and other affinity forums are expected to be an attractive reason for companies and individuals to join the Association in 2003.

The focus of membership effort in 2003 will be to attract information technology (IT) firms which are major consumers of storage, software vendors, start-ups, and storage resellers. The inclusion of these communities is expected to increase membership revenues and bring new perspectives to the table as the Association continues to grow its professional staff and outbound marketing activities, and continues the development of the SNIA Technology Center, expansion of the Storage Networking World conferences and work on product interoperability, standard development and testing, professional certification, and other programs which provide value to the membership.

European Membership

The SNIA Europe's membership continues to grow with 46 company members at the end of 2002. The forum will continue to focus on initiatives to attract more members in 2003 and the SNIA Europe leadership expects that membership will increase significantly.

Financials

Fiscal Year 2002: Revenue and Expense Report

The SNIA Fiscal Year 2002 reflected another year of solid growth. Membership continued to grow despite spending restrictions in our industry. Our Forums, the Technology Center and our events all increased their revenue.

The SNIA also significantly invested in several key initiatives, new programs, and committees in 2002:

- The SNIA Marketing Committee
- The Interoperability ICTP Program
- The Customer Focus Committee (CFC)
- The Education Committee
- The Technical Council
- The SNIA Storage Management Initiative

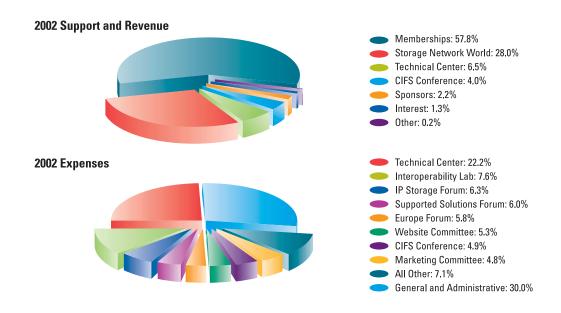With all this activity the expenses for FY2002 were under budget.

Total Support and Revenue for the Year Ended November 30, 2002 ………….. $ 4,172,925

Total Expenses for the Year Ended November 30, 2002………………………….. $ 3,062,822

Cash reserves continue to be strong - increased by $195,712

Unrestricted Net Assets increased during fiscal year 2002 by $1,110,103 to $3,974,396 at 11/30/02.

A full audit of our accounts and business practices was performed by the professional services of McCahan, Helfrick, Thiercof, and Butera, of San Jose, California. We are proud to present the full audit for review based on the following statement:

"In our opinion, the financial statements present fairly, in all material respects, the financial position of Storage Networking Industry Association as of November 30, 2002, and the changes in its net assets and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America."

Robert K. Taylor, CPA
McCahan, Helfrick, Thiercof & Butera Accountancy

2002 Support and Revenue

- Memberships: 57.8%
- Storage Network World: 28.0%
- Technical Center: 6.5%
- CIFS Conference: 4.0%
- Sponsors: 2.2%
- Interest: 1.3%
- Other: 0.2%

2002 Expenses

- Technical Center: 22.2%
- Interoperability Lab: 7.6%
- IP Storage Forum: 6.3%
- Supported Solutions Forum: 6.0%
- Europe Forum: 5.8%
- Website Committee: 5.3%
- CIFS Conference: 4.9%
- Marketing Committee: 4.8%
- All Other: 7.1%
- General and Administrative: 30.0%

Financials

Independent Auditor's Report

Board of Directors
Storage Networking Industry Association
Mountain View, California

We have audited the accompanying statement of financial position of Storage Networking Industry Association (a California nonprofit organization) as of November 30, 2002, and the related statements of activities and cash flows for the year then ended. These financial statements are the responsibility of the Organization's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Storage Networking Industry Association as of November 30, 2002, and the changes in its net assets and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

McCahan, Helfrick, Thiercof & Butera
Accountancy Corporation

San Jose, California
February 18, 2003

Financials

Storage Networking Industry Association
Statement of Financial Position
November 30, 2002

Assets

Cash and Cash Equivalents	$	3,710,249
Accounts Receivable-Memberships		3,067,986
Accounts Receivable-Other		492,126
Fixed Assets (Less Accumulated Depreciation of $8,590)		5,350
Prepaid Rent		2,917
Total Assets	$	7,278,628

Liabilities and Net Assets

Liabilities:

Accounts Payable	$	264,372
Deferred Revenue		3,039,860
Total Liabilities		3,304,232

Net Assets:
Unrestricted:

Designated by Board for Regional Affiliates and Forums	439,468
Undesignated	3,534,928
Total Unrestricted	3,974,396
Temporarily Restricted	0
Permanently Restricted	0
Total Net Assets	3,974,396
Total Liabilities and Net Assets	$ 7,278,628

See accountant's audit report and accompanying notes

Financials

Storage Networking Industry Association
Statement of Activities and Changes in Net Assets
For the Year Ended November 30, 2002

Unrestricted Net Assets:

Support and Revenue:

Memberships	$	2,417,263
Storage networking world and other events		1,167,270
Technical center		270,525
CIFS conference		165,335
Sponsors		90,000
Interest		53,151
Other		9,381
Total Unrestricted Revenues		4,172,925

Expenses:

Program Services:

Technical center		679,275
Interoperability lab		231,258
IP storage forum		193,484
Supported solutions forum		184,860
Europe forum		177,852
Website committee		162,483
CIFS conference		150,934
Marketing committee		145,858
Education committee		64,595
Storage networking world		36,260
SMI forum		35,868
SSI forum		22,369
Technical council		17,660
DAFS implementers forum		10,547
CEC committee		10,137
SMI committee		9,655
Membership committee		6,587
Other		3,148
Total Program Services	$	2,142,830

See accountant's report and accompanying notes

Financials

Storage Networking Industry Association
Statement of Activities and Changes in Net Assets
For the Year Ended November 30, 2002

Unrestricted Net Assets (Continued):

Expenses:
  Supporting Services:
    General and Administrative Expenses:

Board of directors	$	32,130
Staff		414,631
Technical director		170,327
Conference director		34,725
Operations		28,950
Meetings		136,081
Legal and accounting		103,148
Total Supporting Services		919,992
Total Expenses		3,062,822
Increase in Unrestricted Net Assets		1,110,103
Changes in Temporarily Restricted Net Assets		0
Changes in Permanently Restricted Net Assets		0
Increase in Net Assets		1,110,103
Net Assets at December 1, 2001		2,864,293
Net Assets at November 30, 2002	$	3,974,396

See accountant's report and accompanying notes

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Financials

Storage Networking Industry Association
Statement of Cash Flows
For the Year Ended November 30, 2002

Cash Flows From Operation Activities:

Increase in Net Assets	$	1,110,102
Adjustments to Reconcile Net Assets to Net Cash		
Provided by Operating Activities:		
Depreciation and Amortization		3,487
(Increase) Decrease in Operating Assets:		
Accounts Receivable		(1,258,465)
Prepaid Expenses		(2,917)
Increase (Decrease) in Operating Liabilities:		
Accounts Payable		1,115
Accrued Liabilities		(19,845)
Deferred Revenue		362,235
Total Adjustments		(914,390)
Net Cash Provided by Operating Activities		195,712
Cash flows From Investing Activities		0
Cash flows From Financing Activities		0
Net increase in Cash and Cash Equivalents		195,712
Cash and Cash Equivalents, Beginning of Year		3,514,537
Cash and Cash Equivalents, End of Year	$	3,710,249

Supplemental Disclosure of Cash Flow Information:

No payments were made for taxes or interest during the current fiscal year

See accountant's report and notes to financial statements

Financials

Storage Networking Industry Association
Notes to Financial Statements
November 30, 2002

Note A - Summary of Significant Accounting Policies

Organization:

Storage Networking Industry Association was incorporated on December 22, 1997 under the corporate laws of the State of California.

Purpose and Operations:

Storage Networking Industry Association (The Organization) is a non-profit mutual benefit corporation engaged in the promotion, growth, and development of storage networking systems and technologies throughout the world. The Organization provides education, training, and market information to companies in the field of storage networking technologies as well as developing standards, specifications, and infrastructure. The Organization also acts as a referral and information network for such companies.

Basis of Accounting:

The accompanying financial statements have been prepared on the accrual basis of accounting and accordingly reflect all significant receivables, payables, and other liabilities. The Organization maintains its accounting records on a fiscal year commencing on December 1.

Revenue:

Revenues are derived primarily from annual membership fees, sponsors, special events, and trade shows. Membership fees are recognized over the period to which the dues relate. Funds from events and trade shows are recorded as they occur. Revenue from events is recorded at the net amount received from the entity coordinating that event. The Organization offers voting memberships to companies depending upon sales volume. Companies with an annual sales volume over five hundred million dollars are eligible for a large membership whereas companies with sales volume over ten million dollars are allowed to purchase a regular annual membership. Companies have the option of purchasing an initial emerging company annual membership at a discount but will revert to the regular or large membership dues the following year.

Cash and Cash Equivalents:

For the purposes of the statement of cash flows, the Organization considers all unrestricted highly liquid investments with maturities of three months or less at acquisition to be cash equivalents.

Allowance for Doubtful Accounts:

The Organization provides an allowance for doubtful accounts based on management's assessment of the collectability of existing specific accounts. Management considers accounts receivable to be fully collectible; accordingly, no allowance for doubtful accounts is required.

Depreciable Assets:

The Organization owns various electronic equipment located at their offices in Mountain View, California. These assets are stated at cost and depreciated over the estimated useful lives of the assets computed on the accelerated method used by the Organization for income tax purposes.

Use of Estimates:

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

Donated Services:

A portion of the Organization's functions and activities is conducted by unpaid volunteer officers and committees. The value of this contributed time is not reflected in the accompanying financial statements since the volunteers' time does not meet the criteria for recognition under SFAS No. 116, Accounting for Contributions Received and Contributions Made.

Note B - Income Taxes

The Organization is exempt from Federal Income Tax under Internal Revenue Code Section 501(c)(6) and from California State Tax under Revenue and Taxation Code Section 23701(e).

Note C - Uninsured Cash Balances

The Organization maintains cash balances at a financial institution with locations primarily in the state of California. Accounts at this institution are secured by the Federal Deposit Insurance Corporation to a maximum of $100,000. Uninsured balances were approximately $3,529,483 at November 30, 2002.

Note D- Deferred Revenue

The Organization offers annual voting and non-voting memberships to companies and individuals. The membership term begins upon the invoice date and continues until the fiscal year end. Income from membership dues is recognized over the period to which the dues relate. The portion that covers the period subsequent to the end of the Organization's fiscal year is recorded as deferred revenue on the Statement of Financial Position.

Note E Commitments

The Organization uses an independent management company to run the day-to-day operations. The management company, for a monthly fee of $38,044 plus out-of-pocket expenses, provides an executive director, a project manager, and two project coordinators to the Organization as well as office facilities, utilities, telephone services, and other necessary administrative services. The initial term of the contract with the management company was for twelve months commencing June 1998 with an automatic annual renewal option which has been exercised.

SNIA Members as of December, 2002

Large

AT&T
BMC Software, Inc.
Brocade Communications Systems, Inc.
Cisco Systems
Computer Associates International, Inc.
Dell Computer Corp.
EMC Corporation
Hewlett-Packard
Hitachi Data Systems
IBM Corporation
Imation Corporation
Intel Corporation
Nortel Networks
Quantum Corporation
Seagate Technology
Storage Technology Corporation
Sun Microsystems, Inc.
VERITAS Software Corporation

McDATA Corporation
MTI Technology Corporation
Netreon
Network Appliance, Inc.
Nishan Systems, Inc.
Nth Gen Computing, Inc.
PANASAS, Inc
Procom Technology, Inc.
QLogic Corporation
SAN Valley Systems
Stonefly Networks, Inc.
Storability, Inc.
Storage Area Networks, Inc.
Syncsort, Inc.
Trebia Networks, Inc.
Troika Networks
XIOtech Corporation
Xyratex

Regular

Adaptec, Inc.
ADIC
Agilent
American Megatrends, Inc.
AppIQ, Inc.
Arrow Electronics, Inc.
ATTO Technology, Inc.
Broadband Storage, Inc.
Cloverleaf Communications
CommVault Systems, Inc.
Computer Network Technology
CreekPath Systems
Crossroads Systems, Inc.
DataCore Software Corporation
Emulex Corporation
Eurologic Systems
Exabyte Corporation
Extreme Networks
Falconstor, Inc.
Fujitsu SofTek Technology Corporation
Gadzoox Networks
Infostream
INRANGE Technology Corporation
InterSAN, Inc.
JNI Corporation
Legato Systems, Inc.
LSI Logic Corporation
ManagedStorage International

Associate Members

AKARA Corp.
Alacritech
Aristos Logic Corp.
BakBone Software
Bell Microproducts
BellSouth
BlueArc Corp.
Candera, Inc.
Chaparral Network Storage
CIENA Corporation
Ciprico, Inc.
ClariStor, Inc.
Cylink Corporation
DataPeer Inc.
Exanet
Finisar Corporation
Fujitsu Computer Products
Fujitsu Prime Software Technologies Limited
Global Knowledge
Great Northern Consulting Svc
HCL Technologies
HUAWEI
InfiniCon Systems, Inc.
Interphase Corp.
Invio Software
Iomega Corporation
iQstor Networks, Inc.
iStor Networks, Inc.

Members

I-Tech Corporation
Ixia
JMR Electronics
KOM Networks
Korea Electronics Technology Institute (KETI)
Lucent Technologies
Maranti Networks
Maxtor Corporation
MaXXan Systems, Inc.
Microsoft Corporation
Molex Connector Corporation
Motive Communications, Inc.
NEC Corporation
NeoScale Systems
Nippon Tel and Tel. (NTT)
Novell, Inc.
Overland Storage, Inc.
Plasmon
Powerquest Corporation
Qualstar Corporation
Rhapsody Networks
Sanera Systems
SANgate Systems
SGI
Sony Corporation
Spectra Logic Corporation
Spinnaker Networks, Inc.
Spirent Communications, Inc.
Sprint
Storage Engine, Inc.
StorageNetworks, Inc.
StorageWay
StoreAge Networking Tech
Tandberg Data, Inc.
Tata Consultancy Services
Tek-Tools, Inc.
Texas Memory Systems
TeraCloud Corporation
Tokyo Electron Limited
TrueSAN Networks
Unisys Corporation
Vicom Systems, Inc.
Vixel Corporation
YottaYotta, Inc.
Xilinx Inc.

Emerging

Alacritus Software
Atempo
Decru, Inc.
Empirix
FMJO
Hifn
Incipient, Inc.
Intransa, Inc.
Knowledge Transfer, Inc.
iReady Corporation
iVivity, Inc.
Kasten Chase
LightSand Communications
Monosphere
Neartek
Pillar Data Systems
ProvisionSoft, Inc.
SANcastle Technologies, Inc.
Sandial Systems, Inc.
Silverback Systems, Inc.
Sistina Software
Solution Technology
SSH Communications Security Corporation
Vormetric, Inc.
Yosemite Technologies, Inc.

University Affiliates

Boston Children's Hospital
Center for Magnetic Recording Research at UCSD
Data Storage Institute
Information Storage Industry Center at UCSD
Johns Hopkins University - Dept. of Computer
Science
Penn State University
San Diego Supercomputer Center at UCSD
Sandia National Laboratories
University of California, San Diego Extension
University of Chicago
University of Colorado
University of Minnesota
University of PA, Graduate School of Education
University of Miami

Members

Europe Integrator/Reseller

Perot Systems
System-Haus-Dresden
Telindus SA Luxembourg

Europe Large

Adaptec
ADIC
BMC
Brocade Communication Systems
Cisco Systems
Computer Associates International
Dell Computer Corporation
EMC Corporation
Fujitsu Siemens Computers
Hewlett-Packard
Hitachi Data Systems
IBM
INRANGE Technology Corp
LSI Logic
Sony UK Limited
Storage Technology Corporation
Sun Microsystems
VERITAS Software Corporation
Xyratex

Europe Medium

Atempo
Auspex Systems
CommVault
JNI Corporation
Legato Systems
Quantum Corporation

Europe Only

Aino B.V.
Hardware Planning Svc (HPS)
Hi-Stor Technologies
ISIT
NEST
SANRAD
SM Data, S.A.
TBA-Telemtica e Burutica
TiM AG

Europe Small

DataCore Software
Datasave Services, PLC.
Falconstor, Inc.
Infinity I/O
Network Appliance
Procom Technology
Solution Technology
StoreAge Networking Technology

Board of Directors

Board of Directors

Executive Board

Sheila Childs
SNIA Board Chair,
Legato Systems
Vincent Franceschini
Vice-Chair,
Hitachi Data Systems
Gene Chesser
Treasurer,
Hewlett-Packard
Phil Mills
Secretary,
IBM Corporation

Members Board of Directors

Wayne Adams
EMC Corporation
Mark Bradley
Computer Associates
Tom Clark
Nishan Systems
Tony DiCenzo
Brocade Communications Systems
Steve Luning
Dell Computer Corporation
Paul Massiglia
Veritas Software Corporation
Dona Stever
Sun Microsystems
Lynne VanArsdale
Quantum Corporation

Technical Council Members

Wayne Rickard
Co-Chair
Seagate Technology
David Thiel
Co-Chair
Compaq Computer Corporation
David L. Black
EMC Corporation
Jim Carlson
IBM Corporation
Mark Carlson
Sun Microsystems
Roger Cummings
Veritas Software
Dr. Garth Gibson
Panasas Inc.
Harald Skardal
Network Appliance, Inc.
John Wilkes
Hewlett-Packard Labs

SNIA Staff Roster

2002 SNIA Staff Roster

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SNIA
STORAGE NETWORKING INDUSTRY ASSOCIATION