

# Storage Networking Times

**Issue 3**

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## Letter from the Chairman

*Juergen Arnold, Chair, SNIA Europe, eurochair@snia.org*



Welcome to the latest issue of *Storage Networking Times*. My name is Juergen Arnold and I am the newly-elected SNIA Europe Chairman. I have been involved in the IT industry for over 26 years and have been actively working with the SNIA Europe Board of Directors for more than two years; as part of my new-found role I am looking forward to continue to strengthen the relationship between the association and yourselves, the end users.

For the new year we have scheduled plenty of activities to keep you busy; the SNIA Europe Academy has already started its latest tour and in 2007 will visit Dubai, Switzerland, Norway, Sweden, Denmark and Russia. Then in October, SNW Europe will once again give you the opportunity to learn about the latest technologies and source the answers to all your questions. For a com-

plete list of upcoming events please refer to the relevant section in this issue of *Storage Networking Times*.

Another initiative focused on your needs is the newly-established EEUC (European End User Council), a group we created to support the Board of Directors in putting end users first. I am very excited about this new project as it will allow your organisations to have a direct influence on our activities. We will keep you informed on the development of the EEUC through *Storage Networking Times*, the SNIA Europe website and of course announcements in the press.

But right now you will be able to find out more about unfounded storage myths, the state of the German storage market, the latest SMI-S and XAM developments and much more in this issue of *Storage Networking Times*. And if you have any questions you would like to ask me I look forward to hearing from you!

## Standards Update

*Michael Peterson, SNIA Data Management Forum, mpeterson@snia-dmf.org*



Just like in the old TV game "Wordplay", all I have to do is say the word 'archive' and I get dozens of different interpretations. Archivists, records and information managers (RIM), Information technologists (IT), legal, the busi-

ness group, and the vendors all have different ideas of what 'archive' means. And, in the context of their practices, their viewpoints are valid. Here's the paradox. The archivist and records manager's practices are well-developed for preserving specific digital information collections, digital records, and their provenance. A number of International Standards Or-

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**Standards Update**

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organisation (ISO) standards and best practices exist on which they base their methods. In contrast, IT has at least four barriers that make this job particularly hard.

Working in an organisational vacuum – RIM and IT don't communicate clearly. IT rarely knows the requirements even though there may be compliance policies in place. Add to this the obstacle that few IT shops see long-term "archiving" as important or even an honourable occupation and you have a better understanding of the dilemma;

The notion of records does not necessarily exist to IT. Instead, IT is usually dealing with tens-to-hundreds of terabytes of data that it has to retain for varying periods of time;

IT has little to no context about what these data objects are as part of a business record, where they came from (their provenance) and which object is the original or final version (as if that concept even makes sense in an IT practice) as many duplicates and many versions are spread all around to assure recovery of one of them;

There are no storage practice standards or industry best practices for long term digital information retention in common use in the IT domain.

**Table 1: What does "long-term" mean?**

<u>% Respondents</u>	<u>Define Long-Term as</u>
35%	>100 years
17%	50-100 years
17%	21-50 years
17%	11-20 years
13%	7-10 years
1%	3-6 years

Source: SNIA 100 Yr Archive Reqmts Survey, Nov 2006

Let's further establish the problems that IT has to overcome. First, the notion of what "long-term" means varies widely within the organisation based on their business, operating, legal, and regulatory compliance needs. Most IT professionals assume that long-term means more than seven years. It is not difficult to preserve information and be able to read it for ten years, so why is this an issue? What about in 20 years, or 50 years, or more than a hundred years? Based on the SNIA-DMF's "100 Year Archive Task Force Requirements Survey",

most organisations have a long-term retention problem that exceeds 50 years and the respondents are far from confident that they can meet these requirements. Not only is there a disconnect between awareness and requirements, but as said before IT lacks the methods (and often the interest) for long term preservation.

The next point to understand about the nature of the long term preservation problem in an IT context is that it is very complex. The following table illustrates many of the challenging factors such as maintaining physical and logical readability.

**Table 2**

<u>Technology Challenges</u>	<u>Operations Challenges</u>
<ul style="list-style-type: none"> <li>• Maintaining Physical readability</li> <li>• Maintaining Logical readability</li> <li>• Migration of large repositories</li> <li>• Emulation of formats</li> <li>• Maintenance of historical readers and applications</li> <li>• Protection from change</li> <li>• Protection from loss or damage</li> <li>• Physical &amp; logical Security</li> <li>• Automation</li> <li>• Deletion &amp; Purging</li> <li>• Search-Discovery</li> <li>• Testing/Auditing</li> </ul>	<ul style="list-style-type: none"> <li>• Collaboration on requirements</li> <li>• Setting requirements</li> <li>• Classification</li> <li>• Establishing adequate Metadata</li> <li>• Standardizing practices</li> <li>• Finding value in the archives</li> </ul>

Point one - long-term digital information retention is not a media problem. Even if storage media survived for fifty to a hundred years, the systems on which to read and interpret the information would also have to be archived along with spare components, software, and the knowledge on how to operate them. It is one thing to be able to physically read media and another to logically interpret it in the context of the application. Figure 1 is a simple, but pertinent example. Files written in early PDF formats are not always readable by the current version PDF Reader. This is why in 2005 the ISO standard PDF/A format was adopted. Yet, even that standard warns us with these caveats<sup>3</sup>:

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## Spotlight On: Storage Management Initiative

By Bob Plumridge, SNIA Europe SMI Chair, [SMI-Europe-Chair@snia.org](mailto:SMI-Europe-Chair@snia.org)



The Storage Management Initiative Specification (SMI-S) was created in 2002 to develop and standardise interoperable storage management technologies. The development and maturing of SMI-S is continuing as evidenced by the recent announcements of further developments and enhancements to this standard which continues to progress as version 1.2 is planned for submission to INCITS for review early this year.

Since its inception in the spring of 2004 more than 450 products from 24 companies have passed the SNIA Conformance Testing Program (SNIA-CTP) which ensures the products submitted for testing conform to the SMI-S specifications. Several new features such as host-based controllers, storage enclosures, support for file system quotas, volume protection and consistency management for snapshot and replication management support are being added with the coming development of SMI-S version 1.2.

Future revisions of SMI-S will extend the interoperable, distributed management capabilities defined in SMI-S

1.0.3 and 1.1.0. At a high-level these management capabilities will target basic data management and advanced systems management. The following is an overview of the targeted management areas for SMI-S 1.2.0 (please note that the specific areas addressed in SMI-S 1.2.0 are subject to change):

### Configuration

- Port configuration - including Parallel, Serial ATA, Serial Attached SCSI, Direct Attached, Parallel SCSI and iSCSI ports;
- Tape transport administration - including inter-library port management;
- Tape library partitioning - including virtual library port management;
- FC performance management - including fabric path management;
- FC switch management - including firmware, firmware repository and configuration management;

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## Analyst Briefing: May You Live In Interesting Times

By Jon Collins, Principal Analyst, Macehiter Ward-Dutton, [www.mwdadvisors.com](http://www.mwdadvisors.com)



It is no wonder that the Chinese have a curse based on the word “interesting”, because such times invariably lead to uncertainty. Change can lead us to places that we recognise once we are there, and once we have the hindsight to look back down the road, see where we have come from and evaluate the mistakes. Looking forwards however, it can be difficult to see through the fog.

These are indeed interesting times, for IT as well as business. Global IT spending is not increasing, if anything, it is still shrinking by a few percentage points a year; however some IT vendors are reporting their best recent quarters since the downturn. While it would be unwise to read too much into this, we can surmise that, despite the still-tightening belts, there are things organisations

are still prepared to spend their money on.

Neither is it always possible to spot the changes that are causing the times to become interesting. What we do know is that, following the Millennium and such resource-intensive activities of Y2K and the Euro, interest turned from trying to keep up with the e-neighbours to cutting back on unnecessary technology. The drive was towards efficiency, towards consolidation of existing IT assets, servers and storage. Marketing messages such as “on-demand IT” and the “adaptive infrastructure” were based on the premise that technology could be treated as a largely static pool of resource, whose delivery could then be adjusted to suit the requirements of the day.

Things have moved on. Today we have compliance, which may be a business requirement at heart, but

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## Spotlight on: Storage Management Initiative

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- FC management - including extender management;
- In-band discovery;
- Operating system management - including disk partitioning and SCSI multipath management

### Provisioning and trending

- Virtualisation management;
- Host volume management;
- Policy-based array management.

### Security

- Scalability;
- Authorisation;
- Role-based access control;
- 3rd party authentication;
- Credential management;
- Identity management;
- Resource ownership.

### Compliance and cost management

- Distributed Policy

### Event management

- Tape library;
- Alert events.

### Data protection

- Tape Transport

In addition a new Technical Working Group (TWG) focused on Management Frameworks (MF) was created towards the end of 2006 to develop and define standards for MF common components. This group works to define and develop standards for enterprise-level services necessary for the management of storage providers and clients as well as related infrastructure. To date SMI-S has been widely adopted as a storage resource management standard and has laid the foundation for

management software to be able to be written to one set of interfaces defined by an SMI-S profile for each type of device. At the same time, in data centre operations, there is still the challenge to have multiple storage management applications utilise, act-upon, and exchange common data. The MF TWG planned standards enables a modular, interoperable management environment based upon common components and web services.

The MF TWG aims to create standards that specify interoperable uses of the interfaces provided by MF services. The proposed activities to be covered by the MF TWG include:

- Reference architecture – decomposition of the framework into specific components and services for creation of standard interfaces intended to support enterprise management functionality;
- Framework data model – focused on an infrastructure for mapping SMI-S information models to data models accessible via interoperable services;
- Discovery components – a core service for discovering SMI-S agents via Service Location Protocol (SLP) and the discovery of web services-based management interfaces and framework services;
- Event systems – a core service focused on establishing interfaces for managing indication information from SMI-S agents and supporting correlation;
- User interface infrastructure – focussed on establishing interfaces for infrastructure to be used in user interfaces. This includes support for browser based and command line interfaces to application functionality;
- Aggregation interface core services – core services for grouping resources and reporting aggregate information on them.

The MF TWG has been founded by more than ten industry vendors including Brocade, Dell, EMC, Fujitsu, HP, HDS, Hitachi Ltd., IBM, Intel, Network Appliance, Patni Computer Systems, Sun, Symantec, and WBEM Solutions.

For more information on the new MF TWG, please visit [www.snia.org/tech\\_activities/workgroups](http://www.snia.org/tech_activities/workgroups).

## Education: The Power of XAM

By Christina Casten, Chair, XAM Committee, [ccasten@snia-dmf.org](mailto:ccasten@snia-dmf.org)



In late 2005, the Storage Networking Industry Association (SNIA) voted to accept a contributed technical specification called the *eXtensible Access Method* (XAM) as a starting point for development of a standard interface and interoperability between applications and object storage devices characterised as

CAS, Content Aware Storage systems. The XAM specification is profoundly important for the future of information-based management. Here's why.

- Tape transport administration - including inter-library port management;
- Standard metadata semantics empower automation of Information Lifecycle Management- (ILM) based practices such as retention, archive, discovery, integrity, authentication, availability, protection, and secure-deletion. Standard metadata also resolves issues with Grid technology and even long-term archive;
- Metadata is essential for the automation of ILM practices to reduce operating costs and improve the ability to conform to compliance, legal discovery, and reduce security risks.

The alternative to life without XAM is not pretty. The ever growing chaos and complexity of owning and managing trillions of data objects is insurmountable with conventional approaches based on discrete, and often competing, management processes. Even the promise of ILM is incomplete without a robust metadata standard. When complete, XAM will have a positive impact on all types of information systems.

### XAM – How it Works

The XAM Interface specification defines a standard interface (access) method between “Consumers” (application and management software) and “Providers” (storage systems) to manage information. XAM annotates objects with metadata providing for the management of information at a semantic level. This coupling allows external ILM-based policy services to make intelligent decisions about the management of objects without referring back to the application and without impacting the application.

As an interface, XAM abstracts the access method from the storage. This supports the mobility of information independent from the storage to allow longevity, distribution, and management of information. The XAM Interface is intended to achieve interoperability, storage transparency, and automation for Information Lifecycle Management-based practices, long-term records retention, and information assurance (security).

In contrast, existing applications and CAS products use unique, incompatible access and management methodologies (e.g. naming, retention, expiration and placement of content) which require that each application's interface be modified, often extensively, to operate with any particular storage platform. No provisions are made for information sharing between different applications. No standards exist for movement of content between different CAS-type storage platforms. And, unlike file systems, XAM tags information with metadata and provides a technology independent namespace, allowing software to interpret the content independent of the application.

To better understand the power of XAM-based standard metadata semantics consider the illustration on the next page. What is the difference between specialised grocery stores with shelves stocked with unlabeled cans versus the second scenario of standardised labelling.

### Impact of XAM on ILM

One of the major areas of impact for XAM technology will be on the adoption and implementation of ILM practices. For example, XAM provides an object-oriented location and storage technology-independent approach to information storage. By tying information to a globally unique name (a positive characteristic of object storage methods), ILM-based practices can efficiently manage the information without application concern for a specific physical location of

that information or technology it resides on. XAM also raises metadata – contextual information about the information being stored – to the same level of importance as the information itself. By bundling information and metadata together, applications can more effectively implement ILM and share information. And, XAM

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## The Power of XAM

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metadata allows other ILM-based policy services to make intelligent decisions about the management of objects without referring back to the application – the ultimate in automating ILM-practices.

ILM-based practices begin with the collaborative process of information classification then move to a step of assigning service requirements and setting policies called data classification. Business requirements get translated into IT infrastructure operating policies. An example is long term retention. The business requirements may be dictated by a regulatory constraint or a legal risk. In either case, the information of the business that has that requirement placed on it, demands it be managed to meet those requirements over its lifecycle in a cost efficient manner. Yet, how will you assure long term readability – longer than the life of the storage systems themselves? When implemented, XAM compliant applications, storage systems, and ILM practices will make adhering to business requirements much easier. By abstracting the physical aspects of storage and giving information objects metadata, the underlining storage infrastructure can independently age and run the course of its product lifecycles independent of the stored information. ILM-based practices will utilise the XAM-based architecture to instrument and automate migration and provide a consistent view of the managed information and all of its attributes. This capability is extremely important as the adaptive datacentre will also be able to age and retire physical assets while preserving the various services through other abstractions for the different

types of resources.

## Status of XAM Development

Recognising the industry demand and importance of these benefits, more than 95 individual members from 34 companies representing storage vendors, application providers, end users and academic leaders are contributing to the XAM development effort within SNIA's Fixed Content Aware Storage Technical Work Group (FCAS TWG). The current plan is to publish the initial version of the specification in late 2006 and begin demonstrating XAM-based implementations at Storage Networking World 2007. As customers, utilising applications and storage systems, you will benefit immensely from XAM. You can help this process along by asking your vendors now for XAM support. Put pressure on them to deliver. That will keep them engaged in the standards development process and in achieving interoperability. For more information on the development of XAM please visit [www.snia-dmf.org/xam](http://www.snia-dmf.org/xam)

## SNIA and the DMF

The Storage Networking Industry Association's (SNIA) Data Management Forum (DMF) is a cooperative initiative of IT professionals, integrators and vendors working to define, implement, qualify and teach improved and reliable methods for the protection, retention and management of electronic data and information. The Data Management Forum hosts three initiatives focused on data protection, information lifecycle management

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## Without Standards and Cross-Application Access



- Which is the corn?  
**Go to the corn store or Open the can.**
- What does it cost?  
**Ask the clerk.**
- How many calories?  
**Ask the vendor**
- How does the store automatically manage inventory? **It can't**

## With Metadata Standards & Interoperability



Adding Labels fixes many of these problems

## Myths Uncovered

By Rostislav Jirkal, Chair, SNIA Europe Czech & Slovak Committee, [Czech-SlovakChair@snia.org](mailto:Czech-SlovakChair@snia.org)



Companies are always searching for new markets and new niches to enter; this is a normal law in the business world and the IT sector is no stranger to it. The Western European IT market has seen growth of 2 % per year and yet its shareholders are expecting a much higher performance. Organisations are hoping for greater potential and many are looking at Central and Eastern Europe to find it. However, there are several myths linked to this region and I would like to bring your attention to some of these.

### The significance of Poland in Central Europe

Population-wise Poland is one of the biggest countries in Central Europe; its is home to 39 million inhabitants compared to 26 million for the Czech Republic, Hungary and Slovakia combined (Czech Republic – 10.5m, Hungary – 10.3m, Slovakia – 5.4m). But what does the Polish IT market look like? When it comes to servers for example the turnover in the Czech Republic is approximately 180 million US dollars per year, while Poland, which boasts nearly four times the number of people, has a turnover of 260 million US dollars, less than twice its smaller neighbour. And this pattern is repeated in the other IT sectors.

### A huge Russian market

Although Russia offers great potential, compared to

other Central European countries it offers a far less secure market and investments in this country do not necessarily lead to significant returns. Again while Russia counts 150 million inhabitants its IT market in 2004 was worth 11.2 billion US dollars; the rest of Central Europe, smaller yet more stable, was worth almost 9 billion US dollars. In addition it should be remembered that Russia is not a member of the European Union and hence it does not benefit from protection of investments.

### Growth in Central Europe is slowing down

After a time of market growth in Central Europe in the first half of the nineties and its subsequent consolidation in the second half of that decade this growth slowed-down between 2000 and 2003 and was followed by another period of stabilization. Today few would expect a double-figured year-on-year growth in these markets and this might indeed seem to be the case. The average growth of the IT market is between 7% and 9%. But if we look closely at specific segments, the storage software industry in the Czech Republic in 2005 showed a year-on-year increase of 16 % and many expect an average year-on-year increase of 18% by 2009.

There are more myths about the technology and storage markets in Central Europe but I believe the above conveys the point. What I would like to suggest is that you do not rely on initial impressions but that you analyze real data to correctly understand the situation. This will then enable you to make the right decision.

### The Power of XAM

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(ILM), and long term archive and compliance. Within the long-term archive initiative is a special interest group working to conduct market development for XAM. Overall, the DMF organisation operates as a market development and educational service for the SNIA. It is currently spearheading two technical working groups within SNIA, hosts the “Enterprise Information World” Conference, participates world-wide in events and conferences speaking on these topics, produces and delivers tutorials and best practices training materials, and is the authority in the broad field of data and information

lifecycle management. Participation is open to individuals and member companies at [www.snia-dmf.org](http://www.snia-dmf.org).

### SNIA Europe and the DMI

The Data Management Initiative (DMI) committee works in conjunction with the US Data Management Forum to educate the market about three key areas of data management: Data Protection, ILM and Long Term Archive and Compliance Storage Initiative (LTACSI). For further information on the DMI please email Per Sedihn, Chair, at [DMI-Europe-Chair@snia.org](mailto:DMI-Europe-Chair@snia.org)

## Standards Update

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- PDF/A alone does not guarantee preservation. PDF/A alone does not guarantee exact replication of source material;
- The intent of PDF/A is not to claim that PDF-based solutions are the best way to preserve electronic documents
- But once you have decided to use a PDF-based approach, PDF/A defines an archival profile of PDF that is more amenable to long-term preservation.

And, most of us thought "PDF" was a 'standard' format and that was all we had to do? Guess again. It is not that easy.

The three preservation mantras of the archivist community<sup>4</sup> migration, encapsulation, and emulation also apply to the IT domain. Migrating has two dimensions, physical and logical. The United State's National Archives and Records Administration (NARA) offers these rules for physical migration: First, use the most current storage technology, then

- ...if on disk, MIGRATE every 3 years
- ...if on tape, MIGRATE every 5 years

So, what do you do if you have a very large repository like NARA's? How painful and costly is it to migrate a petabyte per year? And, that is just the physical side. What about the logical? How are you going to guarantee that you can interpret the information in the long term? This is where methods such as emulation, encapsulation, rehosting, translating to 'more standard' formats such as images, PDF/A, or XML are in use, but not the end-all. The only thing you can guarantee is that the original application will not be around. Logical and physical migration are only two dimensions of the problem. The list of challenges is long and includes many technology and operations factors. Perhaps foremost on the operations side is the subtle but critical need to find value in the archives. After all, if there is no value, there is no budget, and who can afford to pay attention. In the end, it may be like compliance or legal risk; it is the price of failure that will be the motivator?

These dilemmas and challenges are well recognised by the archive communities. A classic statement exists in the ISO standard "Open Archival Information Systems"<sup>5</sup> (OAIS) which says:

*"The fast changing nature of the computer industry and the ephemeral nature of electronic data storage media ARE AT ODDS with the key purpose of an Open Archival Information System: to preserve information over a long period of time. No matter how well an Open Archival Information System maintains its current holdings, it will eventually NEED TO MIGRATE much of its holdings to different media and/or to a different hardware or software environment to keep them accessible."*

Based on the work done by the 100 Year Archive Task Force, we need to make another very important point about the operational challenges of long-term digital information retention. We are experiencing extraordinary changes in the industry driven by factors such as regulatory compliance and legal and security risks. The survey confirms that retention periods are increasing. What is the impact? Here is an example. In most organisations e-mail has turned into a vital business record and individual e-mail messages are now the target for legal discovery.

Consider the storage consequence and other IT issues this overwhelming volume creates. Without new automation methods, how can larger organisations manually process, classify, retain, dispose (securely delete), and manage millions of individual records a day? This is just a single manifestation of the crisis. It really is a different world now. It will take a new approach to solve these large-scale problems.

### Recommendations

Instead of continuing to operate with two different domains (specifically RIM vs. IT), each with different operating requirements and methods, it is time the interests and needs of both communities come together and move ahead with a single purpose and single approach. How do we do that? It begins with collaboration and then setting in place a process called information classification followed by implementation of Information Lifecycle Management (ILM) practices aimed at automating the IT infrastructure so that it will meet the business requirements for the information were trying to preserve. The RIM community has a key part of the expertise IT needs. Let's use it. To quote one respondent to the recent survey:

*"Remember that IT doesn't own the information. RIM, Legal, Business units and IT all have a part to play in the decisions*

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## Standards Update

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*applied to business records and should be sitting down at the table together."*

These challenges must be addressed and standards and best practices developed consistent with the operating practice we call ILM. This is the charter of the Storage Networking Industry Association's (SNIA's) 100 Year Archive Task Force. The Task Force is an open multi-agency organisation actively soliciting participation. You can participate and access it through [www.snia-dmf.org/100year](http://www.snia-dmf.org/100year).

In summary, long term digital information retention is approaching a crisis. We are talking about the amalgamation and collection of information for which businesses and organisations are being held legally accountable. Is it not correct that the "archival" problem has expanded beyond the notion of "retaining records," to retaining "all relevant digital information" that is important to the business for periods of time specific to that information's lifecycle?

The problem of long-term digital information retention is soon going to be a multi-petabyte problem in many organisations. It is not a problem that will be solved by casting it into the basement of IT practices. Rather, it requires a new and comprehensive systems engineering and automation approach otherwise it will overwhelm

us. Let's face it, storage systems were not designed for this purpose. If we can solve the system problem then everyone benefits. The paradox as we see it today is that this isn't just a technology problem, it is also an organisational problem, requiring new information-based management practices which begin with collaboration and information classification.

### Notes:

<sup>1</sup>A summary of the SNIA's Data Management Forum 100 Year Archive Task Force Requirements Survey is available online at [www.snia-dmf.org](http://www.snia-dmf.org).

<sup>2</sup> PDF – refers to the Adobe Portable Document Format (PDF), PDF/A refers to the "Archive" version.

<sup>3</sup> PDF/A, The Development of a Digital Preservation Standard, Abrams, Fanning, Helander, Sullivan – Aug 2005.

<sup>4</sup>See the Reference Model for an Open Archival Information System (OAIS) and other archiving standards.

<sup>5</sup>ISO 14721:2003, Reference Model for an Open Archival Information System (OAIS).

<sup>6</sup> "Collaboration: The New Standard of Excellence", a SNIA-ARMA joint publication, October, 2006 and "Collaborate or Die!" by Michael Peterson, Nov. 2006. Both available at [www.snia-dmf.org](http://www.snia-dmf.org).

<sup>7</sup> "Managing Data and Storage Resources in Support of Information Lifecycle Management", Gelb, St.Pierre, Yoder, SNIA ILM-TWG, July 2006 and other relevant documents available at [www.snia-dmf.org](http://www.snia-dmf.org).

## Industry Events 2007

**February 7**  
SNIA Europe Academy  
Dubai

**February 27**  
SNIA Europe Academy  
Zurich

**March 15 - 21**  
CeBIT  
Hannover

**March 21 - 22**  
Storage Expo Belgium  
Groot-Bijgaarden

**March 28 - 29**  
Business Continuity  
London

**April 19 - 21**  
Storage Networking World - Spring  
San Diego

**April 25**  
IDC Storage Roadshow 2007  
Moscow

**May 8**  
SNIA Europe Academy  
Copenhagen

**May 9**  
SNIA Europe Academy  
Stockholm

**May 10**  
SNIA Europe Academy  
Oslo

**May 15**  
SNIA Europe Academy  
Moscow

**May 17**  
IDC's Future of the Data Centre Conference  
London

**October 29 - 31**  
SNW Europe  
Frankfurt

Full event calendar with weblinks on:  
<http://www.snia-europe.org>

## **May You Live In Interesting Times**

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which is gaining disproportionate attention by the vendor community, as it has been one of the few technology areas that organisations would actually fund. Compliance is a US phenomenon, as the rest of the world is already well-versed in regulation and bureaucracy; it has, nonetheless, served to catalyse the rejuvenation of what was a stagnating IT industry. It has, just as importantly, given organisations reason to consider what their IT is for in the first place.

Something changed in 2006. At the start of the year, in surveys and in conversations with CIOs and business executives, IT was still being seen as an island, a separately-managed engine whose running costs were to be kept down. Efficiency – reducing overall spend – was still the order of the day. IT was introspective, self-concerned, being delivered and managed in the traditional way, disconnected from the business.

Towards the end of the year however, things were subtly different. Somehow there were more connections with the business, and the nature of the conversations had changed. Consider risk management for example. IT security has always been about risk management, though from an IT perspective – threats have been considered in terms of the likelihood of damage or breach to systems, to information. More and more, we are seeing the nature of the risk management conversation changing, however: its scope is broadening to cover business risks; or, to put it another way, the scope of business risk management is broadening to accommodate IT risks.

Of course these are broad generalisations: some organisations will have seen the light years ago, and others (in the minority, we hope) will be destined for continued darkness. The trend is there, however. What we are seeing is an increased desire for the business to participate in IT decision-making, not as technologists, but in a way that presents the business side of the story. More than that, organisations are increasing their expectations on IT – from an emphasis on efficiency, they are looking to how IT can help them to innovate, to reach new markets, to provide new services.

How does this affect how we need to think about IT infrastructure – or more specifically, storage? I have already mentioned one area, risk management, where organisations are looking to broaden their understand-

ing of risk. Even this is only part of the story. Risk management is one part of the investment-based approach that organisations are starting to adopt with respect to their IT. This is no “let’s understand our IT investments better, by putting them into a spreadsheet or a portfolio management tool,” approach. Rather, organisations are starting to think about their IT investments in much the same way as fund managers – splitting them into categories according to risk, and managing them according to shorter and longer term return.

We only need to think about this for a short while to realise what a long way storage companies still have to go. This time last year, vendors were just about working out that information security and data protection (a.k.a. backups) needed to work together, which is why we saw the Symantec/Veritas tie-up, the creation of EMC’s security division and other industry moves. Vendors are starting to get a handle on the fact that this is all about risk management, and perhaps at some point they will link this to investment management. It is taking time.

Second, we have the consolidation of a number of technology areas into what is becoming called information management. For a number of years now, organisations have wanted a single view on, and a single management approach for all of their information assets. This demand has been exacerbated by the phenomenal growth of email as a business tool: few would deny the business criticality of email today, but equally, many would question the suitability of the repositories on desktops and servers to manage the amount of unstructured content – files – that is being generated as a result.

As organisations are becoming increasingly demanding, they still understand that they rely on IT companies to provide them with the services they need. Organisations are prepared to partner with IT vendors, to share their plans and aspirations and to put in place a relationship that will benefit both sides. This is a long term play: CIOs are telling us that sometimes, they are spending less money with the companies they choose as partners, than they have in the past. For IT companies that are dependent on quarterly revenues, it takes a lot of guts to break with the desire to keep the momentum of sales figures (and sales remuneration, on the ground) in the perhaps-shaky knowledge that the relationship may result in a more sustainable future income.

From a technological perspective, such partnerships can

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## **May You Live in Interesting Times**

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only work if the IT companies are focused on offering solutions, rather than products. Nowhere is this more true than in the storage industry, as storage itself can never offer anything approaching a solution; equally, no storage company has the monopoly on the technologies required.

A stark example is identity management. This is not the place to talk about storage virtualisation, which has existed in many guises for a number of years – but the goal of virtualisation has always been to offer a dynamically configurable storage pool. Gradually, storage companies are realising that this can only be possible with a solid understanding of identity, without which it would be impossible to implement a workable storage allocation policy.

Without identity management, there can be no “on-demand” storage, to pick a phrase. Many storage vendors have now worked this out: EMC is just about there with its “information infrastructure” strategy, and HDS and HP are catching up (Sun could be there, if it wanted to be, by the way); meanwhile, management tools vendors (CA included) are incorporating identity management as a mainstay of their tools offerings.

This is just one example of how the understanding of the storage community is maturing. Another example is metadata management, without which it is impossible to understand the value of information – or at least, to transmit or act on that understanding. Without metadata management that works across structured (database) and unstructured (file) data, there can be no true information lifecycle management for example – indeed there can be no true information management at all.

Relating to metadata management, this time a year ago, the SNIA launched a bold initiative, to define a standard it refers to as the eXtensible Access Method, XAM.

A couple of months before that I was in trouble with the SNIA for being slow to act, so I shall applaud the association for taking this initiative. All initiatives have a sell-by date however. Perhaps one of the frustrations with any standards-based organisation is that, by the time standards have been defined, the world has already moved on. Many years ago I was training people in X.400 messaging, and perhaps I am still smarting from the experience but I am very aware of the fact that no standard is guaranteed to be adopted.

What is going to drive standards adoption, is exactly the same thing that is going to help IT companies partner with their customers, and help the organisations themselves move from efficiency to innovation. And that is, to consider IT in the context of the business and deliver it accordingly. I have given some examples here of areas that need to be treated – business risk management, information management and identity management. I will add another area, specifically because there is no vendor that yet has it covered – and that is consolidated management of policy, across business processes, information management and security/compliance. You heard it here first.

No organisation can cover everything, which is why it becomes even more important to look to partnering as an approach to solving real business problems and enabling IT to offer real value. It is up to all parties to work together on this: the SNIA cannot act alone, any more than any one vendor can forget its own place in the IT ecosystem. Yes, its still going to take time, but organisations are more likely to work with IT companies that can demonstrate they do understand the bigger picture, and that they share the same goals as their customers.

In this shrinking market, it is those IT companies that deliver on these relationships better than their competition, that deserve to win in the long term.



## Regional Focus: Germany

Stefan Ehmann, Chair, SNIA Europe Germany Committee, [Germanychair@snia.org](mailto:Germanychair@snia.org)



Terms such as virtualisation, e-mail archiving, SMIS and ILM are part of our day-to-day life. IT and the storage industry in particular is a myriad of terminologies and different and at times competitive technologies. Over ten years ago, the SNIA launched as a neutral institution with the aim of providing educational content. And every day we are reminded of how necessary this is. On the one hand, different interest groups have different interpretations of the same term – a good example is ILM. On the other hand, the vendors' own discussions and technical explanations are usually biased and emotional. Take the ongoing Fibre Channel vs. iSCSI discussion for example. As a global organisation, the SNIA carries out valuable work such as defining terminology, technical material and education programmes.

As part of this global network, we, the SNIA Europe German Committee, are one of the interfaces to the organisation as a whole. On a regional level, it is our job to be a competent and knowledgeable point of contact for local end users, channel partners and the press.

As is the case with regional committees, it is our aim to carry out the valuable work of the SNIA and SNIA Europe in our individual countries. We develop, adapt and customise the most important information from the rest of the SNIA network and make it available to interested companies and people in our region.

And what does this look like in practice? We are in permanent contact with end users and channel partners. We use a variety of communication platforms, carry out successful work in the press and speak at a wide range of IT events.

This dialogue is extremely important. To this end, we work with many German IT and storage associations. For example, we have developed a very close and successful partnership in particular with the Bitkom and we have already organised three successful "Info Days" together. At these events, every participant gets comprehensive and neutral information about new storage technologies. But it is not just technical topics – by working with management consultants and advisors we are able to offer information on legal and organisational aspects too.

The success of this concept proves that this mixture of information is useful for the end user. We will continue to expand this idea going forward; for example we will introduce webcasts to further extend our outreach within Germany.

In the last two years as chair of the German committee, I have been able to play a significant role in all these activities. Everyone in the committee carries out their work on a voluntary basis and invests a lot of time and energy in their active support and participation. I have rarely experienced such a motivated and committed team. I look forward to being part of the future of the SNIA Europe.



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