

# **Industry Associations produce increased customer confidence with HP contributions**

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# Overview

- Customer confidence and IT
  
- IT Industry Associations and how they benefit customers
  - using example of Storage Networking Industry Assn
  
- HP contributions to IT industry associations

# Customer confidence and IT

*with the IT marketplace today*

- Customer confidence – a function of:
  - their 20:20 hindsight from the past
  - their understanding of future projected market events
  
- PAST:                    dominated by 1999-2000 experiences
  
- FUTURE:                hopefully will be encouraged by greater understanding of work being done through industry associations

# 1990 – 2000 experience

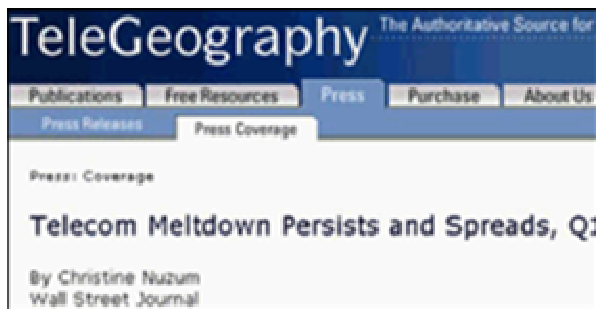
- Widespread marketing messages on the “instant gain” possible with IT investments
- Wide array of technologies being promoted
- Absolute absence of risk considerations
- An atmosphere of a perceived need to pull the trigger or lose strategic opportunity
- Eventual burst of dot-com bubble left many far more cautious in the face of similar appeals

# Business realities today

Business environment is volatile and unpredictable

Intense competitive pressure

IT budgets constrained



# Current environment

- Widespread marketing messages on the “ROI gain” possible with IT investments
- Wide array of technologies being promoted
- Risk avoidance paramount in customer thinking
- Obsession with reining in IT costs
- Absent a clear view of industry cooperation to address these concerns – a nasty adversarial marketplace environment

# IT industry associations

- Largely focused on:

## customer realizable benefits

- standards
- interoperability
- ease of systems integration, use, & management
- best practices for ensuring systems availability

## supplier realizable benefits

- meeting customer requirements
- increased consumption of products
- partner integration
- internal efficiencies

# HP background with standards

- Recognized leader in industry standards, having earned a positive image for our public advocacy and effective support for open standards
- Over 500 HP people participating in about 750 standards committees within about 150 industry standards organizations
- HP participants hold influential leadership positions in many key standards organizations



# The storage marketplace sends out many messages

hubs  
directors  
switches



V<sup>3</sup> SAN initiative



SAN

Fibre Channel



SANITI

Too many choices  
Changing vendor strategies  
Piece-parts solutions  
Vendor lock-in



STOREEDGE

Seascope

AutoIS

DAFS  
Mammoth

HSM

CIFS



NAS

DAS

NFS



Storage ONE

FibreAlliance

Near field recording



OpenReady

*as an example of how industry cooperation can work*

- Works to make storage networking technologies
  - - easier to understand
  - - simpler to implement
  - - easier to manage
- Providing vendor neutral recommendations for storage networking use, such that they are recognized as valued assets to the business process

# SNIA: making technologies easier to understand



SNIA Technology Center, Colorado Springs, CO

Center For Storage Technology Excellence

*Colorado Springs, Colorado*

# SNIA: making technologies easier to understand(2)

- SNIA Technology Center provides:
  - Timely information and education
  - Hands-on laboratory experience with multi-vendor configurations
  - Affordable Classes and Facilities
  - Industry Wide End User Events
  - Central location, affordable travel
- This SNIA facility is made possible through HP
  - 14,000 ft.<sup>2</sup> Multi-Purpose Facility
- SNIA facility is immediately adjacent to one of HP's storage engineering plants

# SNIA: making technologies easier to understand(3)



- Vendor neutral education provided at other venues:
  - Basic to advance tutorials (Storage Networking World)
  - Storage networking workshops
  - Storage technologies dictionary (SNIA web site)
  - Distinct technology focused groups, e.g.
    - IP Storage Forum
    - Storage Security Industry Forum
    - Storage Management Forum
  - End user customer advisory groups

# SNIA: making technologies easier to understand (4)



Tutorials available:

Backup and Recovery of Storage Networks

Business Continuity

Data Sharing

High Availability

Fibre Channel SAN Infrastructure Design

IP Storage

SCSI

Metro Networks

NAS

Networking for Storage Professionals

User Experiences

Virtualization

# SNIA: storage networks, simpler to implement

- Customers receive sound advice regarding homogeneous network configurations from their vendor
- Heterogeneous network configurations are more challenging
- SNIA has vendor collaboration groups, producing:
  - reference multi-vendor configurations  
e.g. Supported Solutions Forum
  - interface standards that will simplify interoperability  
e.g. Storage Management Initiative

# Supported Solutions Forum



■ Mission:

- To drive tested and certified multi-vendor storage solutions and to provide a single point of contact for field support for their certified Open SAN Supported Solutions

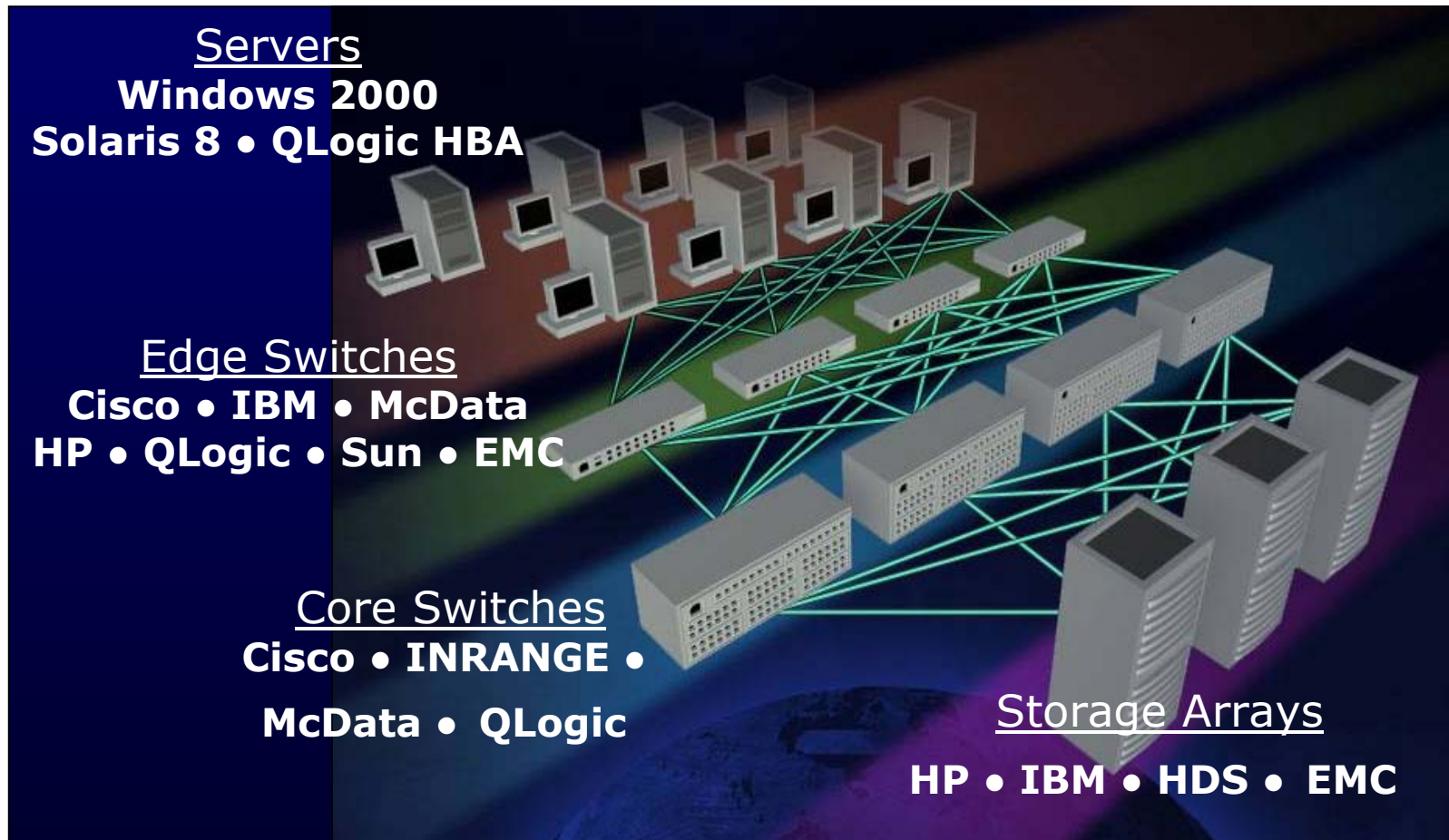
Membership: 21 major storage and networking firms

Founding	HP	IBM	EMC
Members:	Brocade	McData	Hitachi



# Supported Solutions Forum(2)

Typical and most recent SSF project:

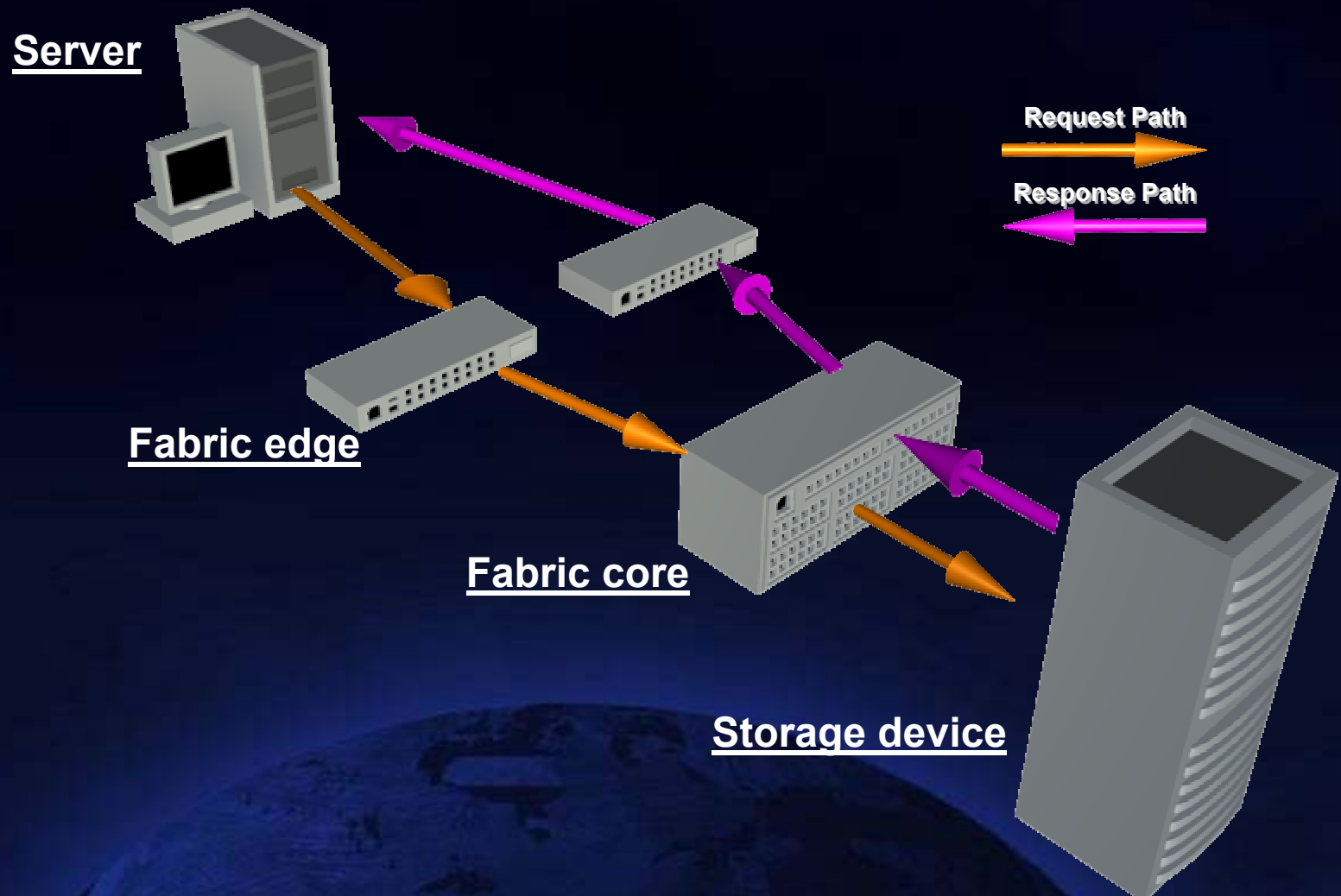


# Supported Solutions Forum(3)

- Customer benefits:
  - Peace of mind -- they do multi-vendor SAN testing, so clients can do their job
    - SSF tested solution ensures a neutral-party approval of interoperable solution that will work
  - Simplifies SAN management
    - Single point of contact for 24x7 problem resolution
  - Reduces time to implementation
    - SSF Open SAN solutions ensure tested interoperability, in complete, working, and supported solutions
    - Takes guesswork out of selection and management of existing infrastructure re: interoperability
  - Reduces cost with ‘proven, real’ solutions
    - Eliminates cost/time associated with ‘trial & error’ method

# Supported Solutions Forum(4)

*Interoperability is about the matter in the middle*



# SNIA: storage networks, easier to manage

- For several years, technical groups within SNIA have
  - worked on Disk resource management issues
  - defined standard interfaces for management of disk storage facilities
  - created guidelines for implementing well managed solutions



# SNIA: storage networks, easier to manage(2)

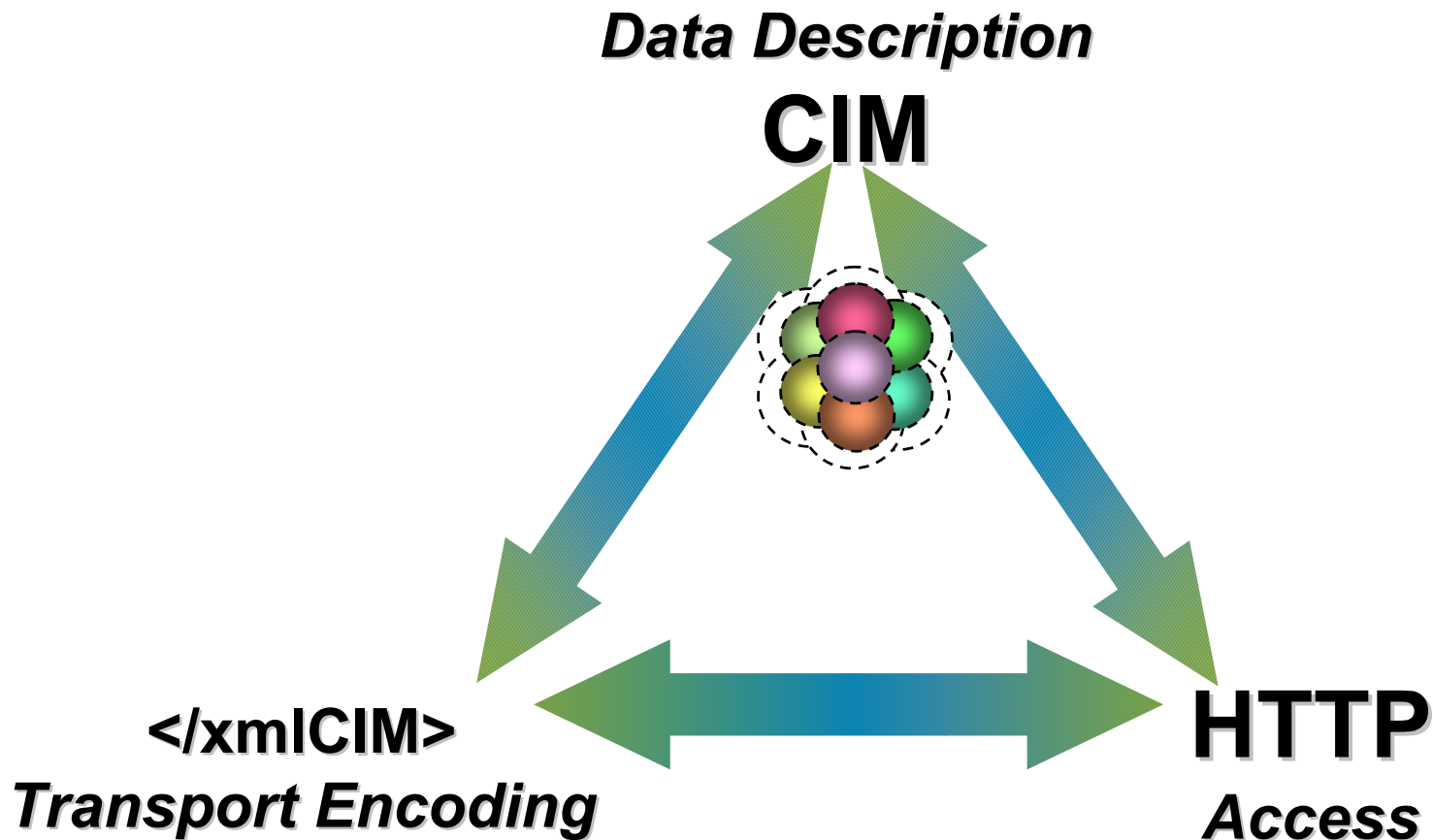
- SNIA's **Storage Management Initiative** objectives:
  - to unify the storage industry on an interoperable, “open”, and highly functional interface for network storage management
  - to bring together SNIA disparate resources, including:
    - education, interoperability, technical work groups, marketing, conferences and technology center
  - to deliver a storage management specification on a timeline that is respected by the marketplace

# SNIA: storage networks, easier to manage(3)

- Storage Management Initiative (SMI) customer benefits:
  - Better multi-vendor SAN management
    - Improved storage network interoperability
    - Improved storage network manageability
  - Reduced cost and complexity of SAN management
    - 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

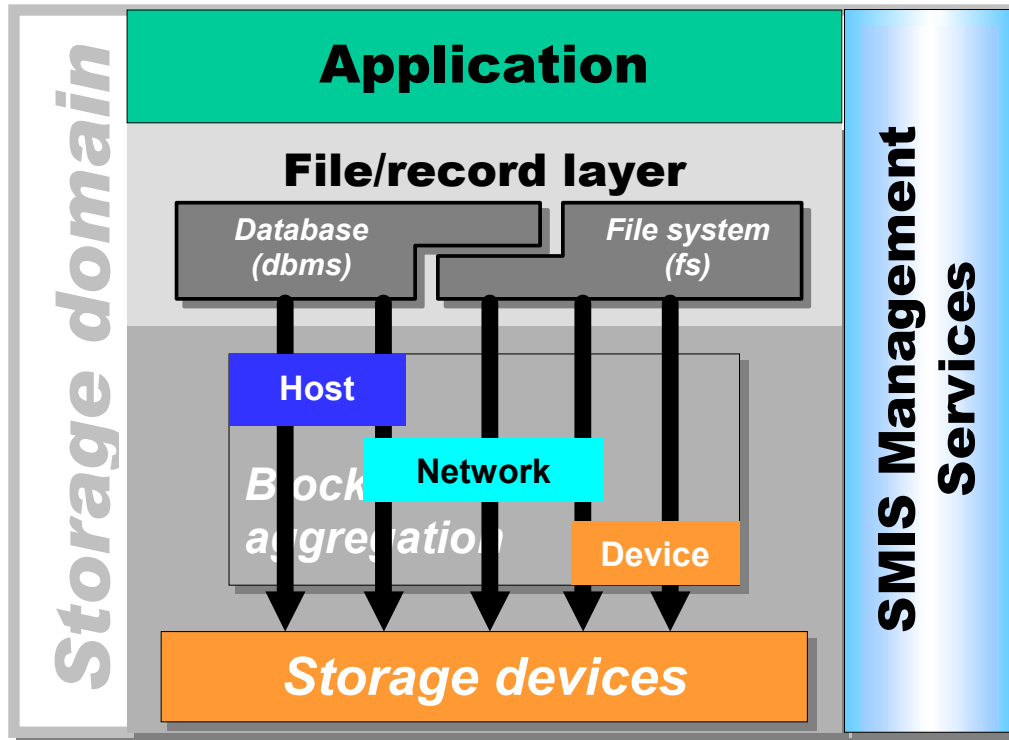
# SNIA: storage networks, easier to manage(4)

- SMI Builds off of Web-Based Enterprise Management



# SNIA: storage networks, easier to manage(5)

- The SMI Specification extends CIM / WBEM



Single interoperable transport

- Rigorous object model
- Durable names
- Automated discovery
- Resource locking



# SNIA: storage networks, easier to manage(6)

- Distinguishing which products are conforming to the SMI Specification will be aided by:



## SNIA Interoperability Conformance Test Program

- Independent testing
- Conforming products carry visible conformance mark

# SNIA: storage networks, easier to manage(7)

- Preparing the marketplace for adoption of the SMI Specification has been the responsibility of SNIA's Storage Management Forum (SMF)



## SMF Accountabilities

- Specification definition
  - Conformance testing and certification against the specification
  - Promotion of specification in Asia, Hong Kong, Australia, Europe, and North America
- 
- HP holds the Vice Chair of SNIA's SMF

# SNIA: storage networks, easier to manage(8)

*HP announces the first SMI-S based developers program*

■ The HP SMI-S Developers Program is a specific program for partners to gain access to HP SMI-S based management interfaces.

## SMI-S Developers Program

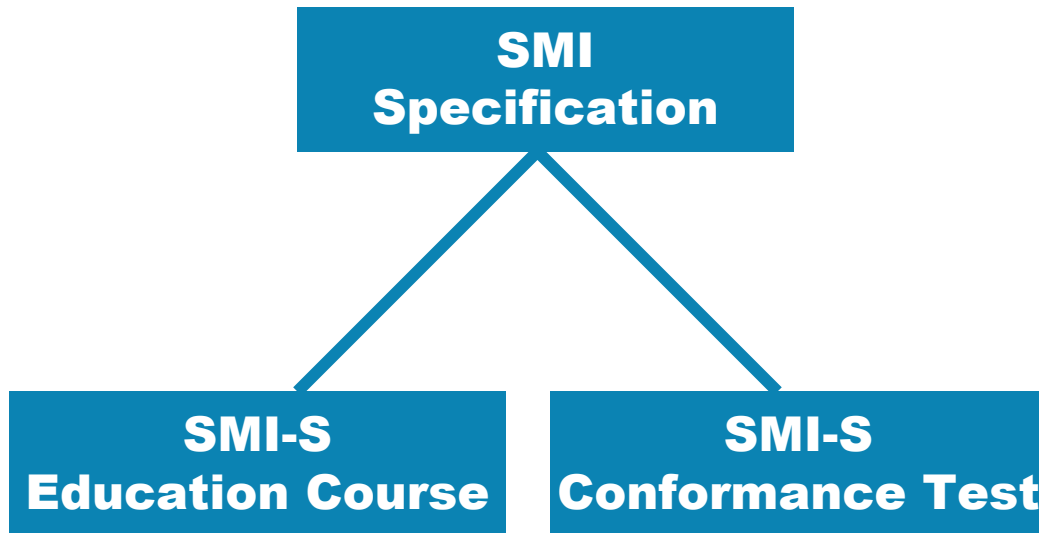
Services and resources facilitating the development of SMI-S compliant applications to manage specified HP storage devices

<http://www.hp.com/go/devsmi-s>

- Facilitate partner development and availability of open standards compliant applications
- Provide the development, support and marketing services required to accelerate the availability of SMI-S compliant technologies with HP storage systems

# SNIA: storage networks, easier to manage(9)

*planning for ready market acceptance of  
SNIA's SMI-Specification*



- SMI-Specification will be supported by complimenting education and conformance testing programs.

- Such a go-to-market “triad” by SNIA could become the future model for subsequent introductions of standards into the marketplace.

# SNIA: storage networks, recognized as valued assets

- In order for storage networks to be viewed as valued assets to the business process:
  - Business customers need to see and understand
    - key cost and performance drivers related to storage
    - vendor neutral guidelines for what technology is most appropriate for specific applications
    - a storage technology road map that references other IT component road maps
    - a view of IT technology that is continuous and converging towards preserving value in legacy assets

# SNIA: storage networks, recognized as valued assets (2)



- SNIA Technical Council
  - Composed of leading technology experts from competing SNIA firms
  - Collaborating to drive storage technology leadership
  - Studying technology to identify **key drivers/trends**
  - Setting and extending the direction for SNIA shared storage model
  - Creating **“high level” industry road map**
  
- HP holds the Vice Chair of SNIA’s Technical Council

# SNIA: storage networks, recognized as valued assets (3)



- Customer benefits:
  - Vendor neutral view of today and tomorrow's shared storage model
  - SNIA's shared storage model holds industry in proximate alignment
  - Shared storage model still allows vendors to innovate in areas consistent with the model
    - Eliminates time consuming need for individual technology research prior to every client expansion
    - Unbiased product and technical analysis guides
    - Objective and more credible technology roadmaps
    - Technology forecasts for arrival of interoperability in various real world environments

# SNIA: storage networks, recognized as valued assets (4)



## ■ Vendor benefits:

- Achieve interoperability with all providers at a much lower development cost, and...
  - Provide technology development roadmaps steeped in/driven by end-user need
  - Reduce need for customized development
  - Decrease compliance testing timeline and costs
  - Accelerate time to market – via qualification to industry interface standard vs. interface re-development
  - Allocate saved resources to additional technology development



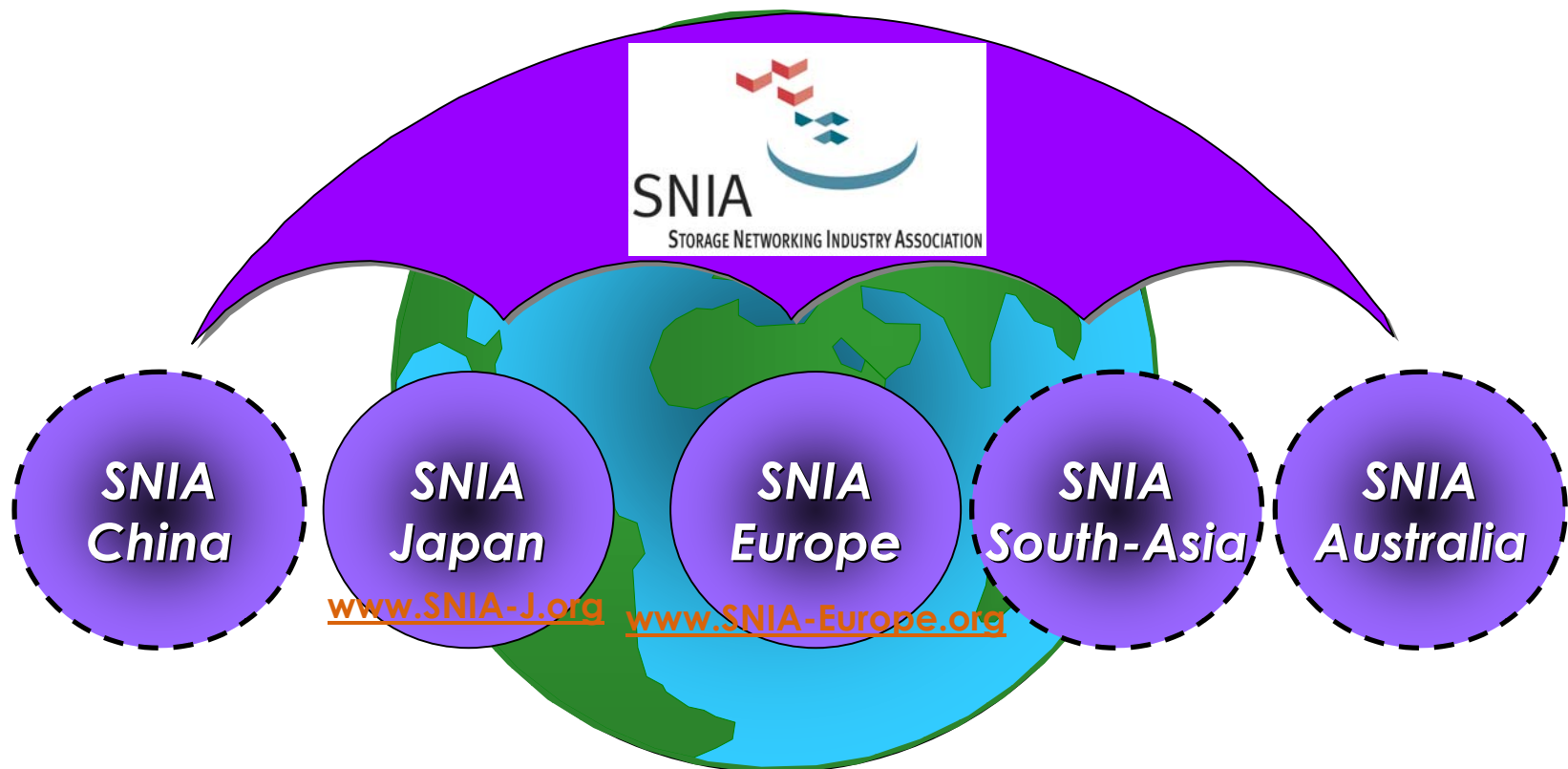
# SNIA's additional activities

In addition to the activities presented earlier, SNIA also conducts as vendor neutral activities:

- Advanced studies into storage security issues
- Advanced studies into the usage of IP storage technologies
- Collaborative efforts to define standards and best practices for “information lifecycle management,” also descriptive of data protection methods
- Advanced studies into object based storage devices
- Advanced studies into network attached storage
- Advanced studies into IO traces, tools and analysis

# SNIA increasingly global effect

- SNIA today is largely a North American activity
- But global interest in network storage has created regional affiliates



# HP contributes to IT industry associations



- IT Industry associations are Relevant to HP's business strategy – examples:
  1. Best return on IT
    - The World Wide Web Consortium (W3C) is extending its XML standard into a suite of web services standards bringing the economic benefits of the modular, e-services based approach to software originally pioneered by HP.
  2. Focused innovation
    - The International Imaging Industry Association (I3A) is creating cross-over technology standards which merge photography and digital imaging, thereby accelerating the growth of the digital imaging and printing market in which HP is an acknowledged leader.

# Standards organizations are relevant to HP technical priorities



## 1. Mobility

- The Open Mobile Alliance (OMA) is accelerating the growth of the mobile applications market by consolidating and integrating the work on such standards as the Wireless Applications Protocol (WAP) and Multimedia Messaging Service (MMS).

## 2. Security

- The Trusted Computing Group (TCG) was co-founded by HP to provide standards for end-to-end hardware and software security. This is of particular importance to HP because of our breadth of product offerings and our emphasis on complete solutions.

## 3. New Rich Media

- The InterNational Committee for Information Technology Standards (INCITS) is responsible for the JPEG and MPEG standards which are among the key building blocks for the new ecosystem around rich media, a new world which will particularly benefit HP because of our combined strengths in computing, imaging, and consumer electronics.

# HP OpenView management standards strategy

- Enable value-add OV features by facilitating collection of lower-level management information
  - Promote / develop standards for the import of device / systems / applications / services instrumentation and notifications
  - Interface standards include protocols, information schemas and APIs
- Export selected OV management information using standard message mechanisms
- Meet customer checklist standards requirements for target market segments

# HP Strategy for network services

- Promote standardized instrumentation in network devices to enable common network management interfaces to multi-vendor equipment suppliers. Minimize required proprietary implementations.
  - Support appropriate IETF and IEEE level 2/3 media and IP standards.
  - Monitor emerging standards: IPV6 MIB, VLAN Discovery / Multiple Spanning Trees/ Rapid Spanning Tree Convergence, MPLS Routing Control, 802.11 Wireless, Dynamic DNS, and SNMP V3.
- Applicable Standards Bodies  
IETF, IEEE, 3GPP, DMTF
- Product Compliance to Management Standards  
NNM: SNMP V2 (V3 via SNMPR), Concise MIB, Layer 3 MIBS  
MIB2, Multi-Cast

# HP Strategy for operations management

- Continue to expand the breadth of areas addressed in operations management by mining key sources of management information including those based on industry standards. Of interest is alarms, configuration and status for systems and applications
- Applicable Standards Bodies
  - SNMP (Traps, config/status info, performance data)
  - DMTF CIM (systems instrumentation, some application data)
- Standards Participation
  - DMTF Board
- Product Compliance to Management Standards
  - OVO 7.0: SNMP, WMI access to CIM

# HP Strategy for transaction performance management



- Enable transaction response analysis through standardized application and middleware interfaces.
  - Decompose a transaction end to end using component metrics preferably supplied through standard mechanisms.
  - Enlist middleware suppliers to instrument J2EE and .NET services with standards-based API calls.
  - Facilitate adoption of ARM by end users, object servers, and application providers.
  
- Applicable Standards Bodies
  - Open Group (TOG) – ARM Specification, JCP – JMX/J2EE extensions, IETF SNMP MIB (RMON and Host Resources/RFC 1514), W3C – SOAP/WSI extensions



# HP Strategy for transaction performance management (2)



- Standards Participation

TOG ARM WG, JCP JSR 77/138/149

- Product Compliance to Management Standards

- OV Perf Agent (OVPA) – ARM 2.0
- Web Transaction Observer (WTO 3) – internal use of ARM
- OV Internet Services (OVIS) stores data in ARM2 format if OVPA present
- SPIs (Websphere, WebLogic) – JMX
- OV Transaction Analyzer (OVTA) uses ARM 3 internally
- OV Performance Insight for Networks (OVPI)– SNMP

- Meet telecom service provider “must” requirements for product support of management standards.
  - Support management standard requirements for the following segments:
    - mobile      ● transport/broadband      ● voice switching
    - IP services      ● element/network management systems
  - Focus on management standards required for service provisioning and service assurance in telecom networks.

## Applicable Standards Bodies

- ITU-T/ISO, IETF, 3GPP, TMForum (NGOSS), JCP (OSSJ)

## Standards participation

- Co-lead TMF NGOSS Architecture Team
- Monitor: 3GPP (Fault/Config), TMF (Wireless Measurement Svc Team)

# HP Strategy for web services management



- Enable common widespread instrumentation and control of applications and business integration environments by establishing a defacto standard for web services management .
  - Establish OMI as a basis for an OASIS standard in management protocol.
  - Enlist support of management platform vendors and middleware vendors by creating a partner enablement kit.
- Applicable Standards Bodies (under development)
  - ASIS Management Protocol, DMTF Application Server, W3C Web Services Architecture. W3C WS Management Task Force
- Standards Participation
  - OASIS MPTC, W3C WS Arch WG/Mgmt TF

# HP Strategy for service desk management

- Use the industry standard process model to provide out of the box processes.
  - Meet customer requirements for industry standard best practices
  - Provide product to enable HPC certification, “ITIL Certified Consultant”

## Applicable Standards Bodies

- CCTA – IT Infrastructure Library (ITIL), itSMF -ITIL Qualified Standards

## Standards Participation

- itSMF – USA

## Product Compliance to Mgmt Standards

- Service Desk 4.0, 4.5: support IT Infrastructure Library (ITIL) process model and processes

# Summary

- Customer confidence was stretched following the 1999-2000 dot.com experience
- Customers searching for:
  - credible, independent, fundamental information
  - objective frameworks to evaluate with
  - standards and interoperability
- IT Industry Associations are delivering on these needs
- HP has contributed notably to such IT industry associations



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