2023 ANNUAL MEMBERS MEETING

October 26, 2023

8AM Pacific / 11AM Eastern – Teleconference
(See Next Page for Dial-in and Zoom Instructions)

Conference Call Dial-in and Zoom Info

https://www.snia.org/annualmeeting

Link will start Zoom meeting – afterwards, redirects to copy of the presentation materials

Teleconference/Zoom coordinates:

Zoom Meeting ID: 840 6026 3148 Passcode: 10262023

https://snia.org/annualmeeting

One tap mobile

+17207072699,,84060263148#,,,,*10262023# US (Denver)

+13462487799,,84060263148#,,,,*10262023# US (Houston)

Find your local number: https://us06web.zoom.us/u/kbBwn4WOw6

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Zoom Format – Attendee Guidance

- Enter Name (Company) on your Zoom Login/Attendee Info

- Everyone will be on Mute, except the Moderator/Speaker

- You can <u>unmute yourself if you would like to say something</u>

    - Voting Member Company Primary/Alternate representatives, please identify yourself when joining

- <u>Remain on Mute</u> when not speaking

- Use the <u>Chat Icon</u> to text message the group or a particular person

- Use <u>Raised Hand</u> function under "Reactions" icon
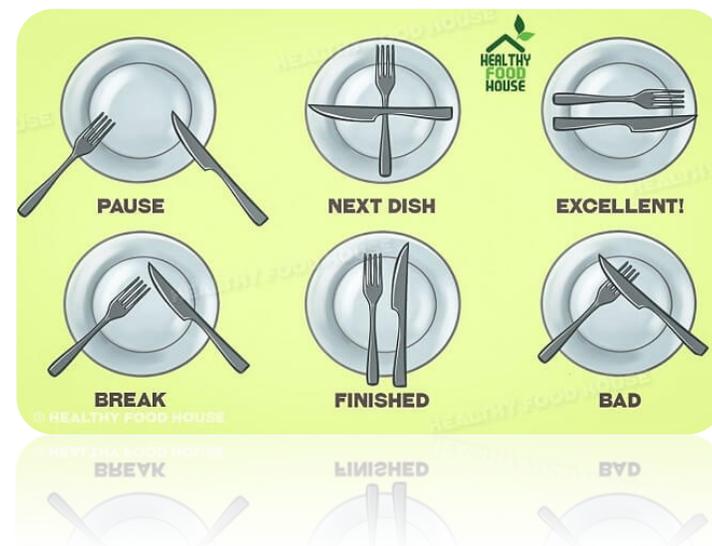
2023 Annual Members Meeting Agenda

- Greetings and Roll Call – Michael Meleedy, COO

- FY2022: Annual Report published

  - Motion to Approve 2022 Meeting Minutes – Chris Lionetti, SNIA Secretary

  - Fiscal Report (2022 Annual Report) – Michael Meleedy, COO

- FY2023: SNIA update and achievements to date – Michael Meleedy, COO

- FY2024: What's ahead for SNIA – J Metz, Ph.D, SNIA Chair

- Discussion and Q&A – Members and SNIA Board Members

- Announcement of the Board and Technical Council Election Results – Michael Meleedy, COO

- Adjourn

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Roll Call and Approval of 2022 Minutes

- Roll Call of Voting Member Companies

- Primary Representatives of Voting Member Companies

  - Please identify yourselves during Roll Call

- If you work for a Voting Member Company and do not hear your primary representative, please identify yourself during roll call

  - Proxy representation is Accepted at Annual Members Meeting

- Vote to approve 2022 Meeting Minutes will take place upon quorum being met

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Roll Call 2023:
Roster of Voting Companies and Primary/Voting Representatives

- Leah Schoeb, AMD
- Alexandre Romana, ARM
- David Peterson, Broadcom
- Sean McGee, Cisco Systems
- Bill Elliott, Dell Inc.
- Roger Bertschmann, Eideticom
- Makoto Sasaki, Fujitsu Limited
- Chris Lionetti, Curtis Ballard, HPE
- Tim Lofink, Hitachi Vantara
- Shanfu Li, Huawei Technologies
- Roger Hathorn, IBM
- Artanis Wang, Inspur

- Richelle Ahlvers, Intel Corporation
- Koichi Nagai, Kioxia Corporation
- Wang Zhenhao, MacroSAN Technology Co.
- John Maroney, Micron Technology
- Chris Lueth, NetApp
- Dan Kogan, Pure Storage
- Bill Martin, Samsung
- Qiu Xuemei, Sichuan Huafeng Enterprise Group Co.
- Myron Loewen, Solidigm
- Daniel Chadash, Twist Bioscience
- Dave Landsman, Western Digital

Quorum is 12 of 23
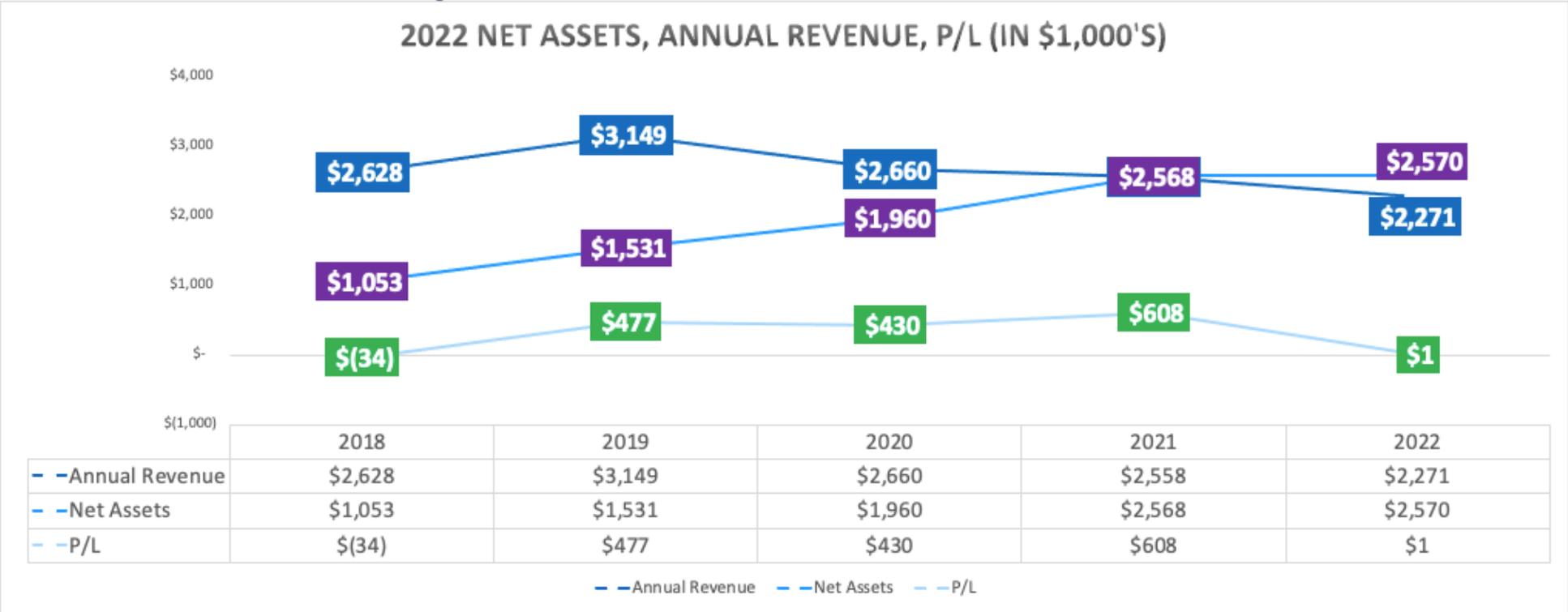
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SNIA FY2022 Annual Report
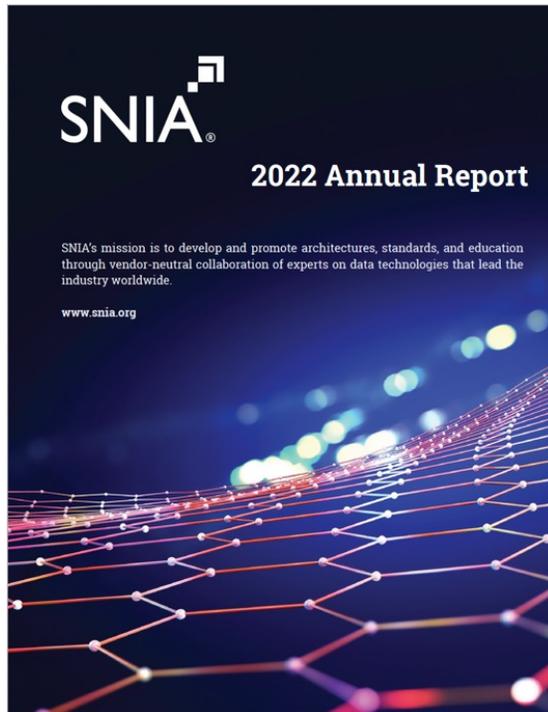
Motion: Approve 2022 SNIA Annual Member Meeting Minutes

FY2022 annual report posted on SNIA website:
(https://www.snia.org/about/corporate_info/documents)

https://www.snia.org/sites/default/files/corp-docs/AnnualReport22.pdf

SNIA Fiscal Report: 2022

2022 NET ASSETS, ANNUAL REVENUE, P/L (IN $1,000'S)

	2018	2019	2020	2021	2022
– – Annual Revenue	$2,628	$3,149	$2,660	$2,558	$2,271
– – Net Assets	$1,053	$1,531	$1,960	$2,568	$2,570
– – P/L	$(34)	$477	$430	$608	$1

– – Annual Revenue   – – Net Assets   – – P/L

Note: P/L numbers include allowances for bad debt, depreciation and vacation accrual. For details, refer to our 2022 annual report at: http://snia.org/about/corporate_info/documents

FY2023

SNIA – Identifying Core Value

- Founded 25 years ago
  - Data solutions via networks was called "storage networking"
  - Data solutions evolved to "Storage" media, systems, and management
  - Data solutions now encompass complete lifecycle
  - DATA is now front and center; "Storage" is too limiting a term and often misinterpreted
- Modern understanding of "Data" captures SNIA's essence
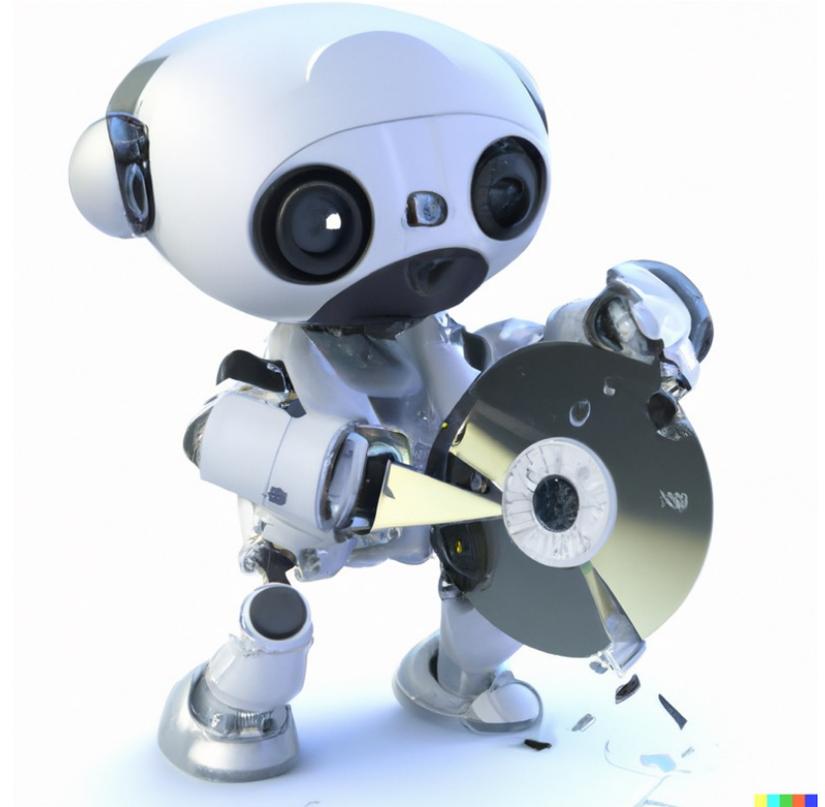
"Storage" means different things to different people

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SNIA Vision and Mission
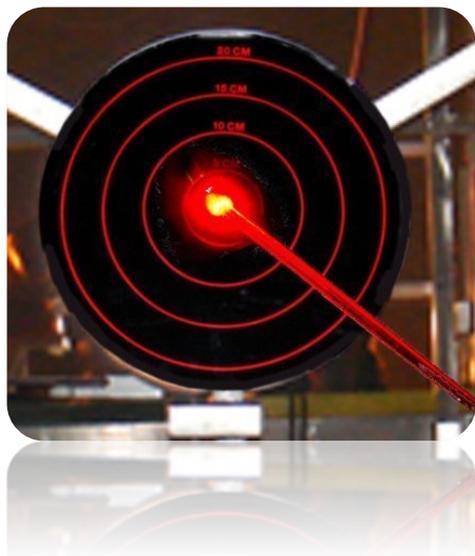
Vision Statement

- Be the global experts and trusted authority for technologies related to handling and optimizing data.

Mission Statement

- Develop and promote architectures, standards, and education through vendor-neutral collaboration of experts on data technologies that lead the industry worldwide.

SNIA Focus for 2023

- Technical Focus and Marketing Initiatives
  - Updated Specifications, Standards
- SNIA Internal Efficiency
  - Root out inefficiencies, provide guidance for consistency and simplify processes
- Membership
  - Focus on retention and member satisfaction with SNIA programs
  - Bring new work/groups into SNIA
- Alliances and Partnerships
  - Strengthen and grow existing Strategic Alliances
  - Proactively engage in new mutually beneficial alliances
  - Foster new areas of collaboration
- Execute online education objectives
  - Strong webinar agenda; outside-in analyst engagements
  - Expand podcast program
- Balanced Budget

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2023 Achievements – Technical Publications

ACHIEVEMENT UNLOCKED
1000G- Create Offspring
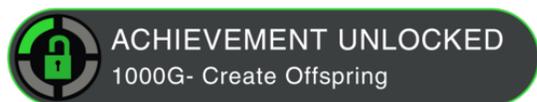
SNIA Standards

- Computational Storage API v1.0
- Zoned Storage Models v1.0
- Swordfish Scalable Storage Management API Specification v1.2.5
- Persistent Memory (PM) Performance Test Specification (PTS) v1.0

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2023 Achievements – SNIA ISO Standards

- **ISO/IEC 5965:2023**
  - Information technology — Swordfish Scalable Storage Management API Specification
- **ISO/IEC DIS 20648**
  - Information technology — TLS specification for storage systems
    - Currently addressing comments received during ISO ballot
- **2023 Achievements – Public Review Drafts**
  - CDMI Extensions and Profiles

https://www.snia.org/publicreview

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2023 Achievements – SFF TA TWG

- Published 4 new specifications:
  - SFF-TA-1033:   Internal High-Speed Cable / Modular Connector System
  - SFF-TA-1031:   SFP2 Cage, Connector, & Module Specification
  - SFF-TA-1027:   QSFP2 Connector, Cage, & Module Specification
  - SFF-8612: MiniLink 4/8X Shielded Connector

- Revised/updated 6 additional specifications:
  - SFF-TA-1016: Internal Unshielded High Speed Connector System
  - SFF-TA-1009: Enterprise and Datacenter Standard Form Factor Pin and Signal Specification (EDSFF)
  - SFF-TA-1002: Protocol Agnostic Multi-Lane High Speed Connector
  - SFF-8636: Management Interface for 4-lane Modules and Cables
  - SFF-8614: Mini Multilane 4/8X Shielded Cage/Connector (HDsh)
  - SFF-8402: SFP+ 1X Pluggable Transceiver Solutions

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2023 Achievements – Membership

- Membership
  - 83 core members
  - 20 Educational Institution members
  - 21 non-core Regional Affiliate Members

- Voting membership: 23

- Technology Affiliates
  - 76 SFF TA TWG members
  - 42 DNA Data Storage Alliance members

Communications – Steering the Conversation

- Internal Efforts
  - Growing entries into our communications database
    - Ensuring messaging, feedback, vision, mission are all aligned
  - Completed Quarterly "All Chairs" sessions
    - Expanding in 2024 to 'anyone who wants to attend'
  - Marketing Platform re-alignment
    - Consolidation of PoCs, Ease of Engagement
  - Architectural Definition on a new SNIA.ORG
    - To be rolled out in late 2024

- External Efforts
  - SNIA is now just SNIA – Re-branding efforts
  - DATA Experts – Getting the word out
  - Video Interview Support – Highlights in the Org
  - Podcast platform growth, definition, release

- Feedback Desired - commsteer-chair@snia.org

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Education – A SNIA Priority

- **Storage Developer Conference (SDC)**
  - Annual conference BY Developers FOR Developers
  - SDC'23: Over 100 sessions, plus networking Birds-of-a-Feather
- **Educational Webinars Covering a Wide Range of Topics**
  - Live vendor-neutral webinars by Forums, Initiatives and Committees
- **Resources**
  - SNIA Educational Library
    - A single repository of all SNIA educational content
    - Over 3,000 assets
  - SNIA Dictionary
    - Concise and clear definitions of more than 2,000 technology terms
    - Ongoing major review and revision – input welcome
  - "What Is" pages
    - Expanded descriptions of key technologies

2023 Achievements – Events and Regions
Raising SNIA industry leadership profile

Events

- 2023 SNIA Members Preview (January - Virtual)
- SNIA Swordfish Hands-on lab (March - Virtual)
- Compute + Memory + Storage Summit (April - Virtual)
- Technical Symposium (July, Hillsboro, OR)
- SMB3 IO Lab (September – Fremont, CA)
- Storage Developer Conference (September, Fremont, CA)

Regions

- SNIA Japan - Regional Affiliate
  - Ongoing technical storage seminars, end user surveys and industry engagements executed virtually
- SNIA India - Regional Affiliate
  - Sustained Meet-up program; multiple webcasts

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2023 Alliances
Raising SNIA industry leadership profile

- **New Alliances in process**
  - JEDEC
  - PCI SIG
  - Universal Chiplet Interconnect Express (UCIe)

- **Existing Alliances being refreshed**
 - CXL
  - DMTF / NVM Express / SNIA
  - NVM Express

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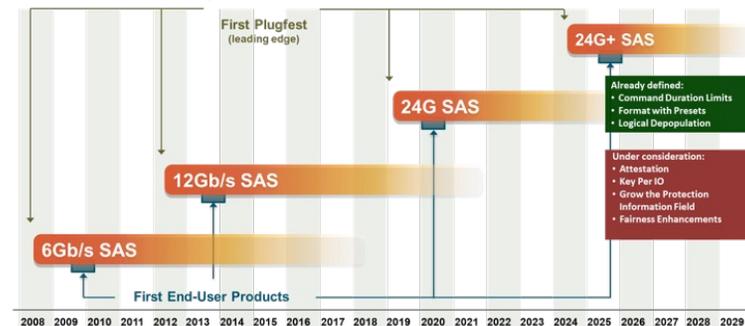# Alliances

SNIA SCSI Trade Association Forum

- Originally established in 1996 as the SCSI Trade Association.

- Joined SNIA in March 2023 to leverage SNIA's vast resources and market reach to keep pace with SAS growth.

- STA's mission is to "*Promote the understanding and use of Serial Attached SCSI (SAS) technology and influence the evolution of SCSI standards to meet future industry needs.*"

- Key STA Activities Include:
    - Strong interaction with the T10 Technical Committee of INCITS, which develops SCSI and SAS standards
    - Develop, maintain and publish the SAS Roadmap
    - Identify SAS marketing requirements
    - Organize and hold SAS Plugfests
    - Outbound marketing and communication to Members, developers, press, analysts and the public

Worldwide Enterprise Storage Capacity Shipments (2022-2027)
SAS-enabled storage remains the majority
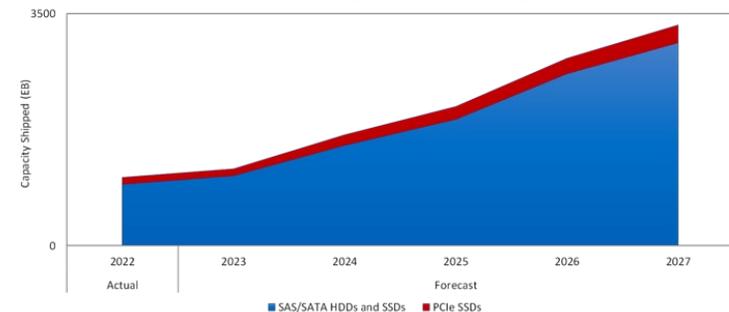
Source: TRENDFOCUS Cloud, Hyperscale, and Enterprise Storage Service. CQ4 2022 Quarterly Update and Long-Term Forecast, March 2023

SAS Technology Roadmap

SNIA SCSI Trade Association Forum

Members:

Amphenol®

BROADCOM®

(intel)

KIOXIA

SEAGATE

MICROCHIP

molex

TOSHIBA

SAMSUNG

BizLink

ConnPro INDUSTRIES INC.

TE

TELEDYNE LECROY
Everywhere you look

<STA> ™
SCSI Trade Association
A SNIA FORUM

www.snia.org/sta-forum

https://members.snia.org/wg/STA_Forum/workgroup
(STA Members Area)

Cameron Brett, KIOXIA, STA Chair

sta-board-chair@snia.org

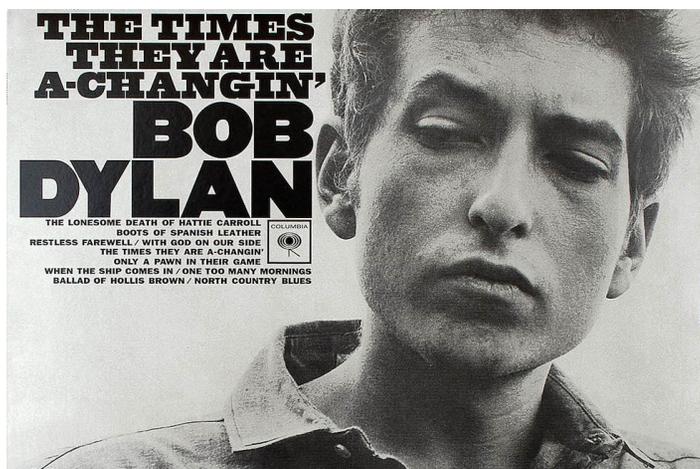Membership information:
E-mail: membership@snia.org

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FY2024

Growth and Development

PARTICIPATION EXPECTED

The Times, They Are A-Changin'

- **~25 years ago**
  - California banned smoking in bars and clubs
  - ICANN was formed
  - John Glenn flew on Discovery (STS-95)
    - First HD broadcast of live TV
  - Google founded; Google's first "Google Doodle" appeared
  - First MP3 player was released in Japan (SaeHan Information Systems)
  - Final episode of Seinfeld
  - *ER* was the most popular TV show
  - Bill Clinton was impeached; Augusto Pinochet was arrested
- **In storage**
  - USB Implementers Forum publishes USB Mass Storage Class; standardizes USB-based storage
  - NOR revenues exceeded $2B; transition to NAND begins
  - ~750 million Flash chips ship
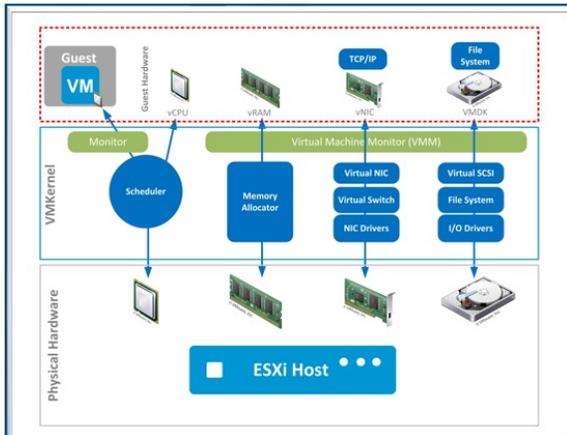 - 1G Fibre Channel is standardized; 1G Optical Ethernet debuts
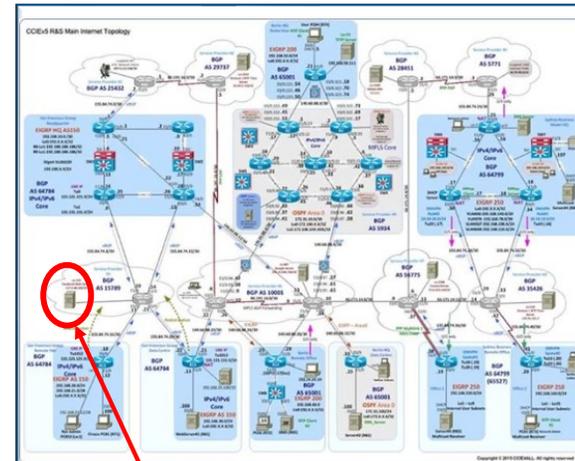
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"Storage"

What my parents think storage is
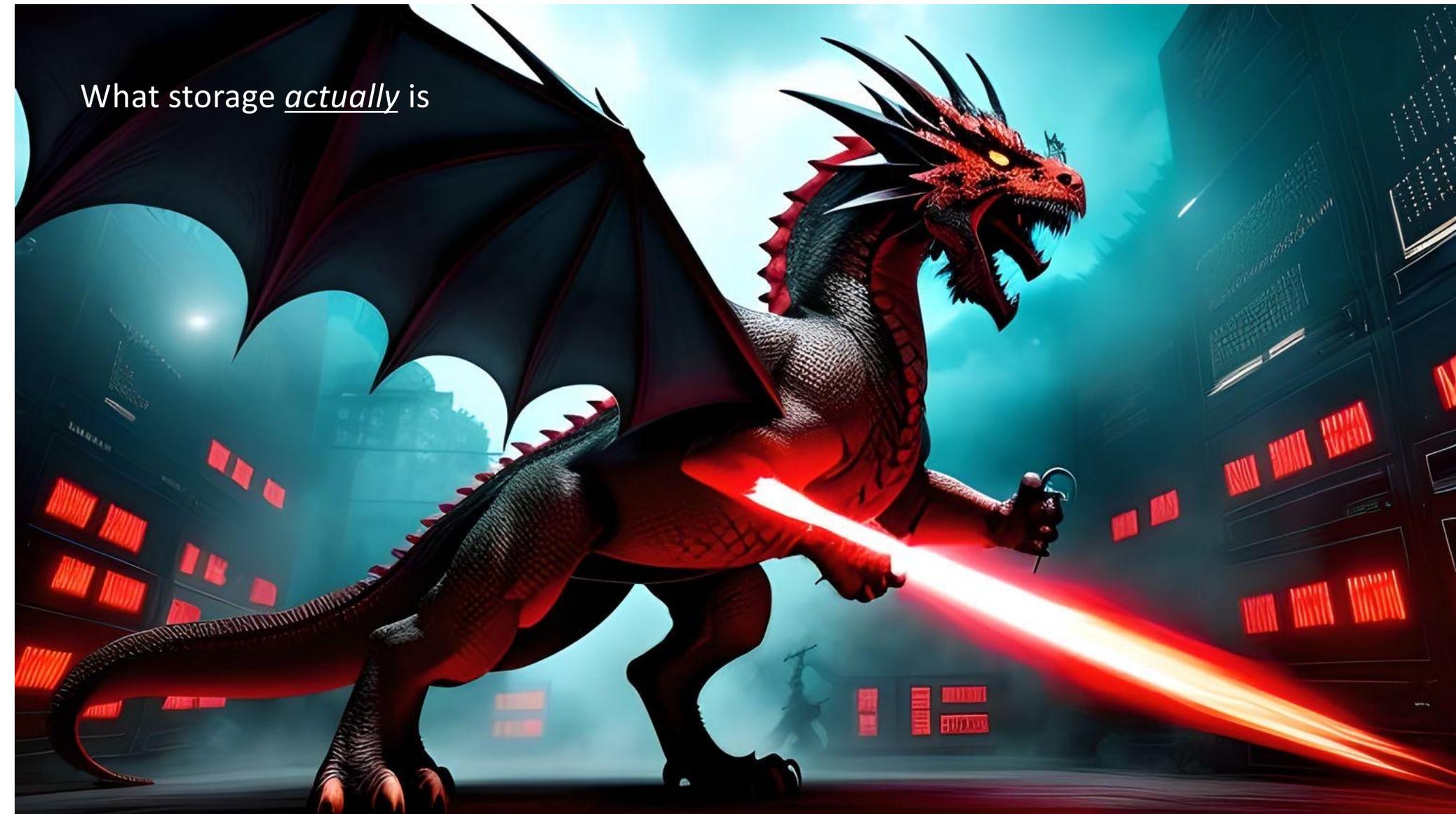

What software people think storage is

What compute people think storage is

What networking people think storage is

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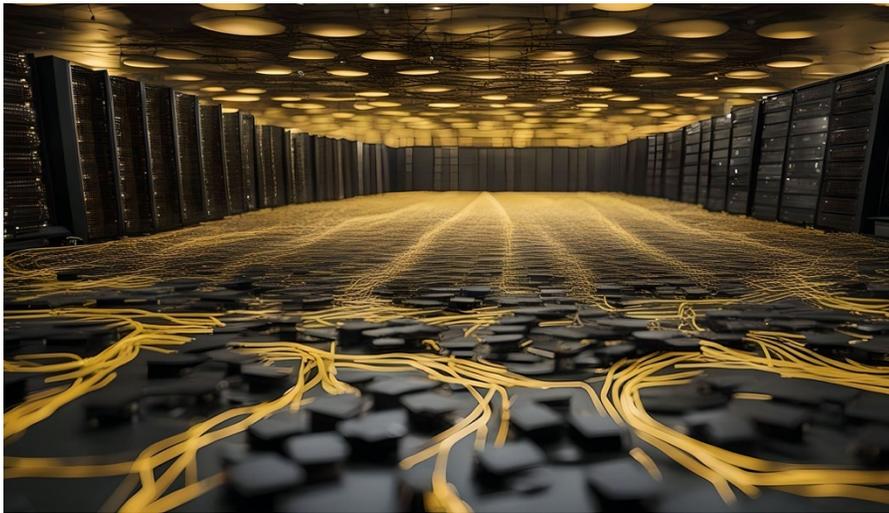What storage *actually* is

What does "Storage" mean?

- "Storage" means:
  - Capacity
- It also means:
  - Protection
  - Management
  - Transport
  - Performance
  - Memory handling
  - Locality
  - Abstraction
  - Longevity
  - Retrieval

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Storage *is* Data. Data *is* Storage

- "Storage" is a *system that goes beyond media and capacity*

- Demographics are not the same as they were 25 years ago
  - Fewer "storage" companies
  - Explosive growth in "data" companies
  - What's the difference?
    - A *lot* of duplication of effort because of terminology confusion!

2024 Priority 0: SNIA Industry, Technical Outreach

Aggressively pursue stronger technical alliances

Example goals:

Ultra Ethernet Consortium

New Storage WG

OCP

Open-Source Security (HW, SW, FW)

IEEE

Ethernet-Attached SSDs

CXL and NVMe

Memory pooling, DMA, management

Security
FIDO
ETSI (EU)
TCG

OPI — Management
SODA (LF)
DMTF

Power — Lot 9 (EU)
Green Grid
SMI Forum

SNIA
OCP

Storage Protocols — Linux Found. (LF)
OFA
CNCF
UEC
PCI-SIG
NVMe
ISO

INCITS
IETF

JEDEC Memory
SFF (SNIA)
Hardware

IEEE

Transport Protocols
USB
CXL
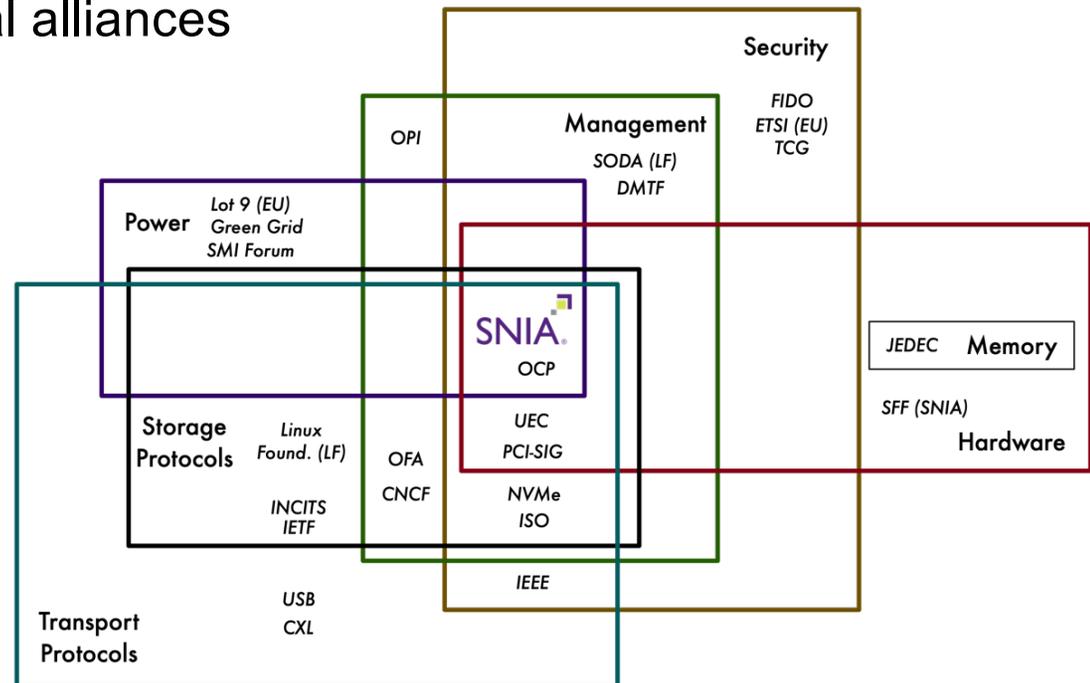
Pursue joint hackathons, plugfests, integration of SNIA technology with other standards work

*not to scale

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Beyond 2024

- Increase value of SNIA membership through broad technology adoption of initiatives

- Address current, modern needs in industry
  - e.g., AI, HPC, DL

- Drive innovation that has pre-determined 'landing' zones

- Accelerate response times by incubating new ideas with wide relevance and appeal

- Ensure both internal and external "touch points" for new projects

Discussion and Q&A

- What are your thoughts?
- Give us your feedback on the org, technical work streams, the industry, and the trends

Board of Directors and Technical Council

Elections 2023-2024

2023-2024 Elected SNIA Board of Directors

- Richelle Ahlvers – Intel *
- Peter Corbett – Dell *
- John Geldman – KIOXIA **
- Roger Hathorn – IBM *
- Jonathan Hinkle – Micron **
- Dave Landsman - Western Digital **
- Chris Lionetti – HPE **
- David McIntyre – Samsung **
- J Metz – AMD **
- George Pamboris – NetApp *
- Scott Shadley – Solidigm *
- Board Advisors:
    - Michael Meleedy – SNIA Chief Operating Officer
    - 2023-2024 Technical Council Chair(s) (TBD)

* Directors elected to a new 2-year term. ** Directors serving year-2 of elected or appointed term.
Three (3) At-large Seats and Five (5) Advisor Seats on Board of Directors may be appointed by the SNIA Board.

2023-2024 Elected SNIA Technical Council

- Curtis Ballard – HPE **
- Anthony Constantine – Intel Corporation *
- Shyam Iyer – Dell **
- Fred Knight – KIOXIA **
- Bill Martin – Samsung *
- Jason Molgaard – Solidigm *
- David Peterson – Broadcom ***
- Leah Schoeb – AMD *
- TC Advisors:
    - Arnold Jones, SNIA, TC Managing Director

* Members elected to a new 2-Year Term as Voting Members. ** Serving Year-2 of Term in elected seat. *** Elected to a new 1-Year Term. Three (3) Voting Seats and 14 Advisor Seats may additionally be appointed by the SNIA Board.

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SNIA Staff and Contractors

(as of October 1, 2023)

- **Chief Operating Officer**: Michael Meleedy

- **Operations and Business Services**
  - Kelli Martin, Business Services Coordinator
  - *Andee Wilcott, Web Manager (Contractor)*

- **Marketing**
  - *Kristin Hauser (Contractor)*
  - *Diane Marsili (Contractor)*

- **Membership Services and BizDev**
  - Erin Weiner, Membership Services Manager

- **Technology**
  - Arnold Jones, Technical Council Managing Director

- **SNIA Emerald**
  - *Dave Thiel, Program Director (Contractor)*

- **SMI Management and Program Support**
  - Tom Mancuso, Senior Technical Operations Manager

- **CMSI Management and Program Support**
  - *Marty Foltyn, CMSI Marketing (Contractor)*

- **STA Forum Management and Program Support**
  - *Alice Tate, STA Forum Marketing (Contractor)*

Note: SNIA has Contractor Agreements with additional industry and subject matter experts in various functions and Forums and Initiatives (F&Is)

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2024 – SNIA Events

- 2024 SNIA Members Preview │ January 17, 2024
  - https://www.snia.org/preview

- SDC India │ March 2024
  - https://www.snia.org/sdcindia

- Compute + Memory + Storage Summit │ April/May 2024
  - https://www.snia.org/pm-summit

- STA Forum Plugfest │ Q2, 2024
  - https://www.scsita.org

- Persistent Memory Hackathons
  - https://www.snia.org/pmhackathon

- SNIA Technical Symposium | April 23-26, 2024
  - https://www.snia.org/events/technicalsymposia

- SDC North America | Sept. 23-26, 2024
  - https://www.storagedeveloper.org

- SNIA Technical Symposium | October 22-24, 2024

  - https://www.snia.org/events/technicalsymposia

Mark Your Calendars!

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Acknowledgement

- We could not do the work of SNIA without our dedicated volunteers. You are consistently the greatest asset for the organization and industry!

- Feedback on how we are doing and new initiatives to start/consider is always encouraged

- The support of all SNIA member companies, SNIA staff and contractors is deeply appreciated

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Questions

Your Feedback is encouraged and always appreciated.

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Thank you

We look forward to your active participation
in SNIA throughout the upcoming year.

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Backup

Newsletters, Education, Social Media

- SNIA Matters Newsletter – subscribe: https://www.snia.org/news_events/news/snia_matters
- SNIA Education - https://www.snia.org/educational-library (searchable)
- SNIA Dictionary - https://www.snia.org/dictionary searchable dictionary
- SNIA on YouTube - https://www.youtube.com/user/SNIAVideo
  Hundreds of Technology-focused presentations are available for free
- SNIA Webcasts on BrightTalk – view upcoming and on-demand webcasts at https://www.brighttalk.com/channel/663/snia-webcasts
- SNIA Podcasts - https://www.snia.org/events/storage-developer/podcasts
- SNIA Mailing Lists - https://www.snia.org/subscribe
- SNIA on Storage Blog - http://sniablog.org
- SNIA Standards: https://www.snia.org/standards
- SNIA on Twitter - https://twitter.com/SNIA
- SNIA on LinkedIn - https://www.linkedin.com/company/snia/
- SNIA on Facebook - https://www.facebook.com/SNIA.ORG

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SNIA Gold Deck

SNIA Introductory and Overview Presentation

https://www.snia.org/sites/default/files/about/introduction-to-snia.pdf

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SNIA Educational Resources

SNIA's library of recent presentations, videos, tutorials, white papers, and more are now accessible through our Educational Library.

The SNIAVideo YouTube channel features hundreds of videos covering a vast array of storage topics. From Persistent Memory to Cloud, Data Management to Power Efficiency-- plus coverage from our global events--our channel offers news, education and insights for all levels of storage professionals.

The SNIA Dictionary, which contains terms and definitions related to storage and other information technologies, is the storage networking industry's most comprehensive effort to arrive at a common body of terminology for the technologies it represents.

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The Real Value of SNIA Membership

INFLUENCE

✓ Influence storage technologies important to the marketplace
✓ Amplify your vendor storage expertise and reputation
✓ Participate in the development of international standards

COLLABORATE

✓ Participate in multi-vendor interoperability activities
✓ Gain insight into disruptive industry trends
✓ Form strategic alliance partnerships
✓ Develop relationships throughout the industry

LEAD THE INDUSTRY

✓ Educate on all things storage
✓ Drive standards development and adoption
✓ Align strategic business objectives with worldwide standards

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