SNIA Closing Remarks

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BY Developers FOR Developers
APRIL 24, AUSTIN, TX

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Chair, SNIA

A SNIA Event

Changing Data Landscape

- AI has changed data
  - Trade-offs have shifted between I/O speed and processor/accelerator costs
  - Performance tolerances have reduced the margin for error
- Scale has changed data
  - Scale-out AI clusters that reach 1M endpoints affect everything from power to management
- Workload-specific access patterns have changed data
  - Moving processing close to data instead of moving data close to processing
  - Parallel vs Serial processing means different memory access requirements
  - Data variety has exploded; structured, unstructured, and semi-structured
- Performance/Metrics value has changed data
  - Storage I/O performance characteristics need up-to-date tools and measurement
- Processing variety and location has changed data
  - Storage functionality and services have moved to non-traditional locations (e.g., DPUs, GPUs)

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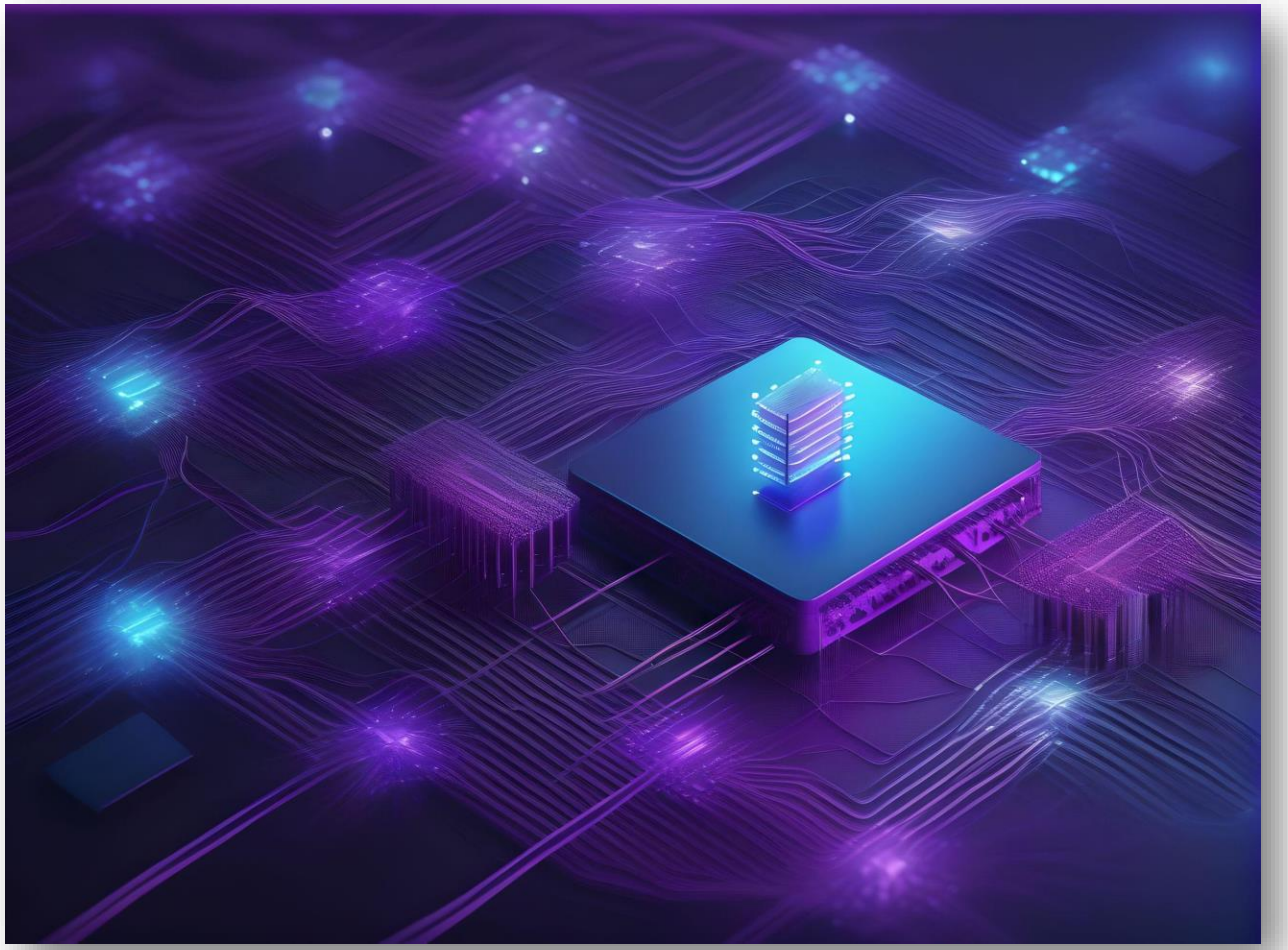
Current Workstreams

- Current workstreams addressing existing problems
  - SDXI – Industry-Standard Data Movement Engine
  - Computational Storage/In-Data Processing: Reducing data movement for AI/ML workloads
  - IOTTA (Input/Output Traces, Tools, and Analysis) – Empirical data/metrics to better understand actual operation and performance characteristics
  - Swordfish™ - Extensions to Redfish™ management standards being adopted in other industry standards organizations
  - DNA Data Storage – Long-term storage data capability
  - Green Storage Initiative/Emerald™ Program – Energy Efficiency standards that assist in containing power considerations in large-scale deployments

Potential Workstreams



- AI-Driven Data Storage
  - Development of new standards specifically designed for AI-driven data
  - Address unique requirements of AI, such as scalability, performance, data variety, model complexity and evolution, cost-effectiveness, and power containment
- Best Practices for AI Data Management
  - Create guidelines for data pre-processing, locality, and post-processing
  - Continue evolution of data security and privacy
- Guide AI-Friendly Data Policies
  - Include working with policymakers, regulators, and other industry associations

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Industry-Wide Collaboration – It's a ***Big*** Problem!

Industry Alliances

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