



IOTTA TWG

2022 Review and 2023 Plans

Presented by Geoff Kuenning (IOTTA TWG Co-Chair)

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IOTTA TWG 2022 Accomplishments

- Input/Output Traces, Tools, and Analysis (IOTTA) Technical Work Group
- Primary focus:
 - Create/maintain worldwide repository for storage-related I/O trace files, associated tools, and other related information
 - Trace types: Block I/O, System Call, Key-Value Stores, Static Snapshots, and others
 - Repository website: iota.snia.org
 - Additional information: iota.snia.org/faqs/aboutIOTTATWG/
- Recent Work:
 - New 'Reliability' section added to the IOTTA Repository website
 - Includes ongoing Backblaze drive reliability data
 - IOTTA Repository website improvements (e.g., search box, off-site links)

IOTTA TWG Work Items

- Continued support of the repository
 - Posting of new traces
 - Solicitation of additional traces
- SNIA IOTTA GitHub Project
 - SNIA IOTTA Open-Source software tools
 - SNIA Open Source Liaison (multi-vendor collaborative group)
 - Open to both SNIA and non-SNIA members
- SNIA Compute, Memory, and Storage Initiative (CMSI) collaboration
 - Stay abreast of CMSI related activities (e.g., Performance Test Specifications)

IOTTA TWG Membership as of January 2023

- TWG roster includes 57 members
- Company affiliations include:
 - Broadcom, Cisco, Dell, FADU, Hitachi, HPE, Huawei, Inspur, Intel, Kioxia, Lenovo, Marvell, Micron, NetApp, Phison, Samsung, Seagate, Solidigm, Western Digital, Yangtze Memory Technologies
- Education Institutions:
 - Harvey Mudd College (HMC)
 - Stony Brook University
- Additional support from Ulsan National Institute of Science and Technology (UNIST) and NetApp

IOTTA TWG Participation

- Industry Impact of the IOTTA Repository:
 - Provides a *common facility* through which a *broad community* can avail themselves of a variety of storage-related I/O traces (especially *contemporary* I/O traces)
 - “One-Stop Shop” with currently over 626 [citations](#) in research publications
- All repository content available for free download and unrestricted use:
 - Storage research and development communities in both academia and industry
 - General public
- Why you should join and participate in the IOTTA TWG
 - Help improve the IOTTA Repository, including vote on future directions
 - Monitor upcoming changes to the repository (e.g., the addition of new traces)
- Contact chairs for additional information:
 - Co-Chairs: Geoff Kuenning (HMC), Tom West (hyperI/O LLC)
 - Contact at: iottatwgchair@snia.org