16th IEEE Symposium on Mass Storage Systems

7th NASA Goddard Space Flight Center Conference on Mass Storage

March 15-18, 1999

San Diego Hyatt Islandia
1441 Quivira Road, San Diego, CA 92109
(619) 224-1234

Monday, March 15

8:30 - 4:30 Tutorial

This tutorial will inform attendees about emerging standards impacting storage system architectures. The day-long tutorial will cover:

- IEEE MMS: Interoperability and Sharing / Stewardship / Storage Area Networks
- Interconnectivity Protocols / Storage Area Networks
- Data access and management protocols

IBM sponsored barbecue for dinner

Tuesday: March 16

8:30 - 10:00 Announcements & Keynote
Chair: Ann Kerr (kerr@ucsd.edu)

- "High-End Computing and Society" (Andrew B. White Jr., Director, Delphi Project, Los Alamos National Laboratory)

10:30 - 12:00 Data Management Architecture Components
Chair, Sam Coleman, retired (scoleman@llnl.gov)

- "Massive-Scale Data Management using Standards-Based Solutions" (Jamie Shiers, CERN)
- "Performance Characteristics of Large and Long Fibre Channel Arbitrated Loops" (Thomas Ruwart, University of Minnesota)
- "A New File System Architecture for Network Attached Disks" (Jonathan Brassow, Grant Erickson, Erling Nygaard, Kenneth Preslan, Christopher Sabol, David Teigland, Matthew O'Keefe, University of Minnesota)

1:30 - 3:00 Storage System Applications
Chair, P C Hariharan, SES Inc. (chm_zpch@jhunix.hcf.jhu.edu)

- "Design of Storage Management System" (Bill Olsen and Gail Phipps, TRW)
- "The NOAA Virtual Data System: Improving Access to and Management of Federal Environmental Data" (John Kinsfather and Mark McClay, NOAA)
- "Satellite Imagery Archive System and its Usage Analysis at IIS, University of Tokyo" (Toshihro Nemoto, Masaru Kitsuregawa, University of Tokyo)

3:30 - 5:00 Striping Across Media
Chair, Jean-Jacques Bedet, Raytheon STX (bedet@clark.net)

- "Tape Group Parity Protection" (Theodore Johnson, AT&T Labs and Sunil Prabhakar, Purdue University)
- "Redundant Optical Storage System Using DVD-RAM Library" (Takaya Tanabe, Makoto Takayanagi, Hidetoshi Tatemichi, Tetsuya Ura, and Manabu Yamamoto, NTT Integrated Information and Energy Systems Laboratories)
- "Adaptive Disk Striping for Parallel Input/Output" (Huseyin Simitci, Daniel Reed, University of Illinois)

5:00 - 5:30 Two-minute Poster Madness
Chairs, Ethan Miller, University of Maryland Baltimore County (elm@cs.umbc.edu)

- "Proposed SCSI Device Locks, Version 0.9.3" (Matthew O'Keefe, Kenneth Preslan, Christopher Sabol, and Steven Soltis, University of Minnesota)
- "Designing a Self-Maintaining Storage System" (Satoshi Asami, Nisha Talagala, David Patterson, University of California, Berkeley)
- "Finding Coincident Data from Satellites" (John Berbert, GSFC; Ted Willard, Lou Reich, Joan Dunham, Sergey Nikhinson, Computer Sciences Corporation)
- "Some Parameters in the Design of Streaming Tape Drives" (Av Chinnaswamy, Quantum Corporation)
- "Clustered Multi-media NOD: Popularity-based Article Prefetching and Placement" (K.O, Jung, T.W. Choi, Y.K. Kang, S.H. Park, Ki-Dong Chung, and Y.J. Kim, Pusan National University, Korea)
- "Performance Benchmark Results for Automated Tape Library High Retrieval Rate Applications - Digital Check Image Retrievals" (John Gniewek, George Davidson, and Bowen Caldwell, IBM)
- Hiding HSM Systems from the User" (Hartmut Reuter, RZG)
- "Usage Patterns of a Web-Based Image Collection" (Nisha Talagala, Satoshi Asami, and David Patterson, University of California, Berkeley)

Reception and poster session

Wednesday, March 17

8:30 - 10:00 Invited Papers
Chair, Ben Kobler, NASA Goddard Space Flight Center (ben.kobler@gsfc.nasa.gov)

- "NSIC Magnetic Tape Systems and Technology Roadmap" (Jim Bain, Data Storage Systems Center, Carnegie Mellon University)
- "NIMA's Very Large Digital Libraries" (Joseph Stocks, National Imagery and Mapping Agency)

10:30 - 12:00 Modelling Storage Systems
Chair, Rodney Van Meter, Quantum Corporation (rdv@alumni.caltech.edu)

- "Analysis of HPSS Performance Based on Per-file Transfer Logs" (Wayne Schroeder, Richard Marciano, Joe Lopez, Mike Gleicher, George Kremenek, Chaitanya Baru, and Reagan Moore, NPACI/San Diego Supercomputer Center)
- "Low-Cost Access Time Model for a Serpentine Tape Drive" (Olav Sandstaa and Roger Midtstraum, Norwegian University of Science and Technology)
- "Improved Adaptive Replacement Algorithm for Disk-Caches in HSM Systems" (Ulrich Hahn, Werner Dilling, and Dietmar Kaletta, University Tubingen)

1:30 - 3:00 Storage Systems - Architecture and Performance
Chair, Merritt Jones, MITRE (merritt@mitre.org)

- "Eurostore - Initial Design and First Results" (Duncan Roweth, Patrick Fuhrmann, and Martin Gasthuber, DESY)
- "Configuring and Tuning Archival Storage Systems" (Michael Gleicher, Gleicher Enterprises, LLC; Reagan Moore, Joe Lopez, Charles Lofton, Wayne Schroeder, and George Kremenek, Npaci/San Diego Supercomputer Center)

3:30 - 5:00 Database/Archive Integration
Chair, Reagan Moore, NPACI/San Diego Supercomputer Center (moore@sdsc.edu)

- "Pursuit of a Scalable High Performance Multi-Petabyte Database" (Andrew Hanushevsky, Stanford Linear Accelerator Center and Marcia Nowark, CERN)
- "Collection-Based Persistent Archives" (Arcot Rajasekar, Richard Marciano, and Reagan Moore, NPACI/San Diego Supercomputer Center)
- "Managing Databases with Binary Large Objects" (Michael Shapiro and Ethan Miller, University of Maryland Baltimore County)

Vendor sponsored hospitality suites

Thursday, March 18

8:30 - 10:00 Roundtable
Chair, Richard Watson, Lawrence Livermore National Laboratory (dwatson@llnl.gov)

- Emerging Removable Media Products

10:30 - 12:00 Vendor Presentations
Chair, Paul Rutherford, ADIC (pgr@emass.com)

(15 minutes per speaker)

- "Compaq Enterprise Backup Solution (CEBS): An Architectural Perspective" (Gene Freeman, Compaq)
- "An Analysis of the Relationships Between Command Network Activity and Data Transfer Performance in a Storage Area Network-based File System using 3rd Party Data Transfer Mechanisms" (Robert Farkaly)
- "CentraVision File System" (Peter Lawthers, Prestant Technology, Inc.)
- "Leveraging the Intelligent Storage Infrastructure for National Data Consolidation, Distribution and Sharing" (Scott Sherman, EMC)

- "Celestra Architecture for Serverless Backups" (Don Trimmer)
- "Digital Asset Management" (Frank Jones)

Afternoon

- Sea World Tour

Last updated 13 Mar 1999 by [Ethan Miller](#) ([elm@umbc.edu](#))