SAND2008-0187P

Ultravis Team Meeting

ParaView Progress

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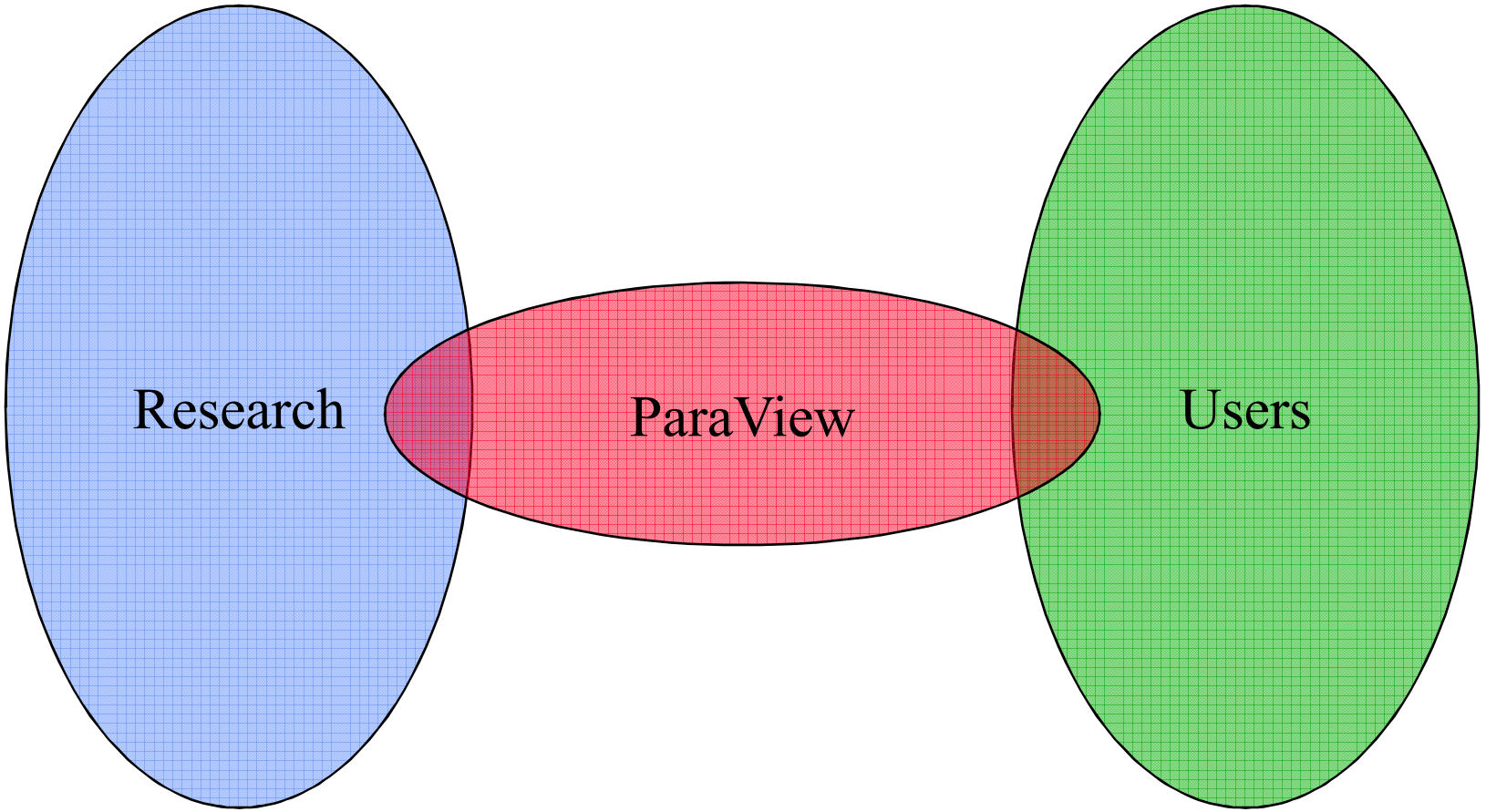
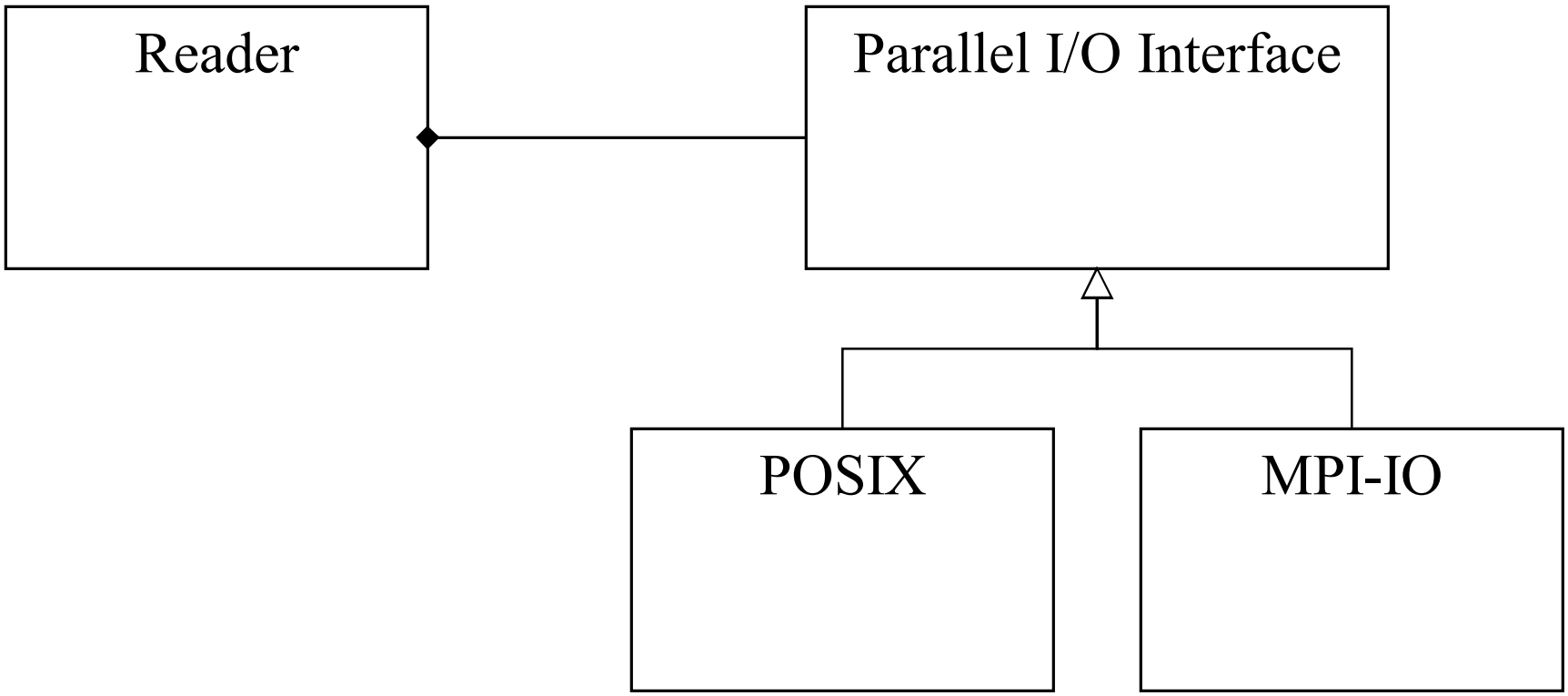
Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

ParaView's Role in Ultravis

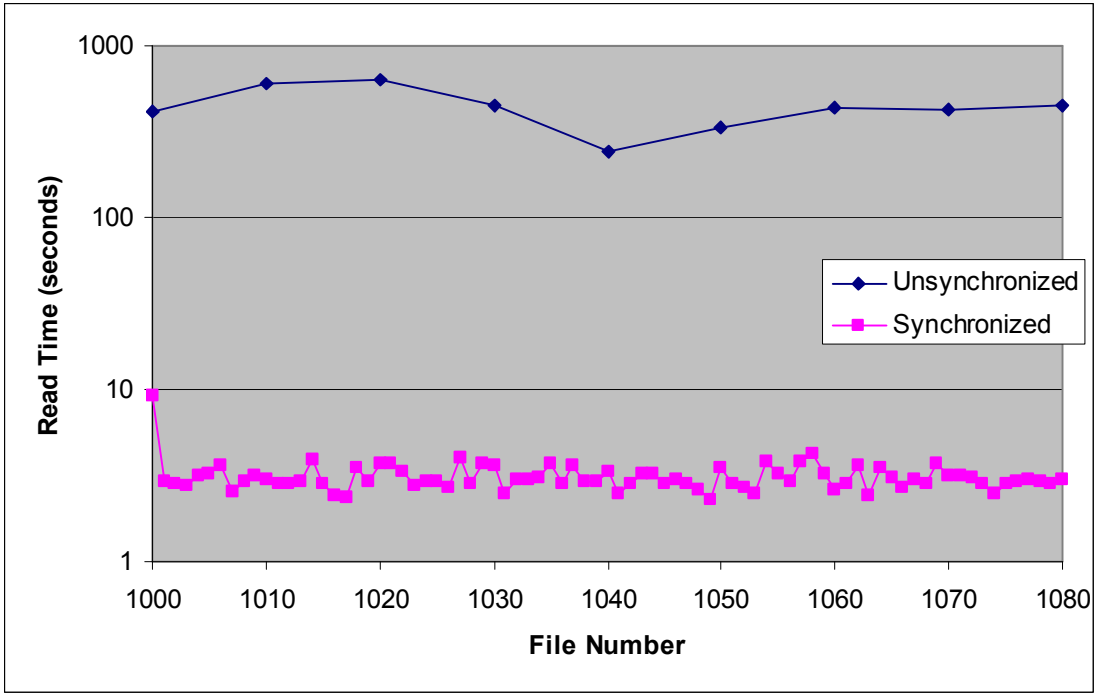


Current Work: Parallel I/O



Current Work: Parallel I/O

Unsynchronized (POSIX) vs. synchronized (MPI-I/O) reads.
1200x1200x224 floats on 64 processes



Unsynchronized read rate:
2.8 MB/sec

Synchronized read rate:
393 MB/sec

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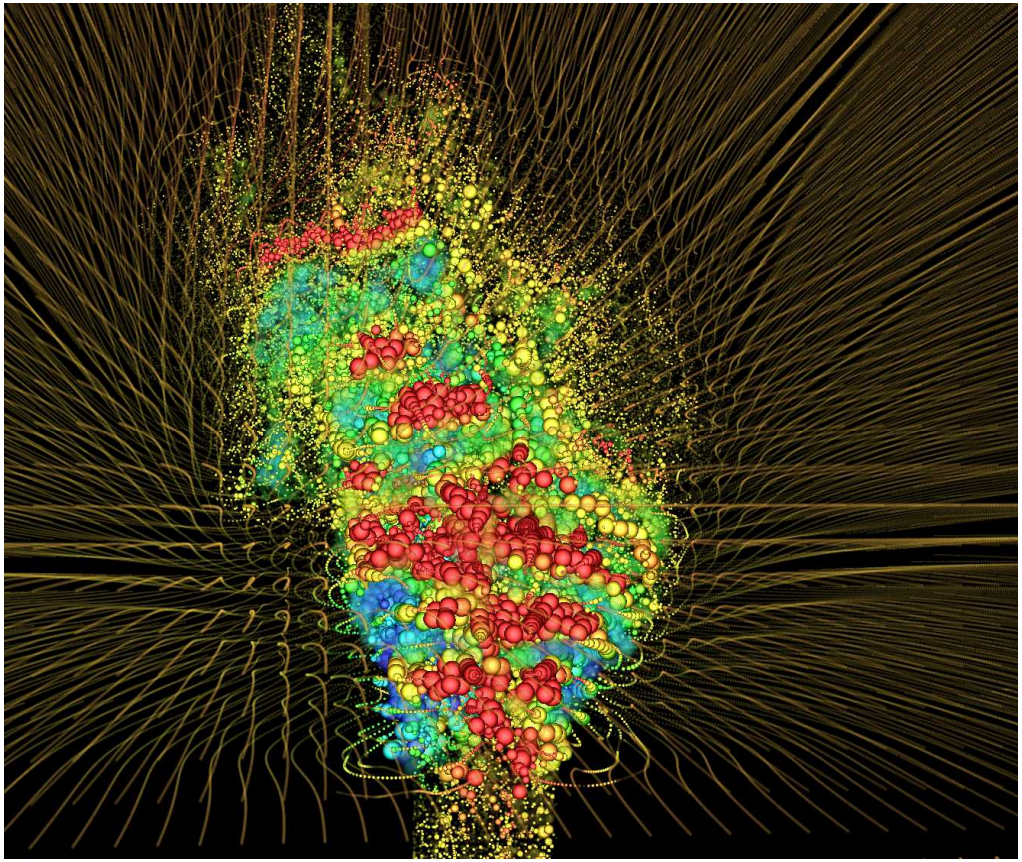
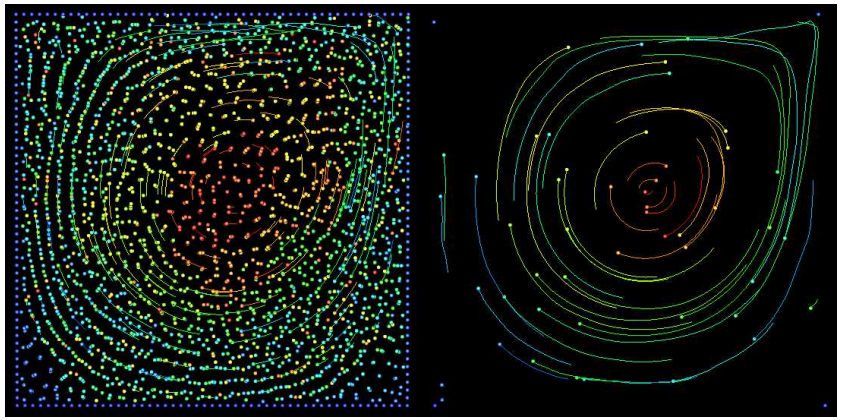
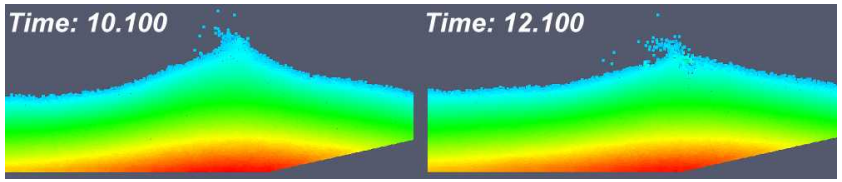
Current Work: Time Support



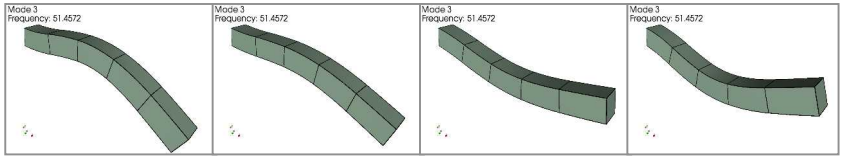
Particle Tracing



Motion Trails



Temporal Comparisons



Mode Shapes

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Upcoming Work

- New Architectures
  - Multi-core, GPGPU, Cell
- Repartitioning
  - Cell grouping
  - Ghost cell creation
- In-situ Visualization
  - Lightweight, adaptive, scalable, stable

Collaborations

- Petascale Data Storage Institute, Lee Ward
- Modeling the Earth System, Mark Taylor
- Going with the Flow, Peter Lichtner
- Combinatorial Scientific Computing and Petascale Simulations (CSCAPES) Institute, Karen Devine, Erik Bowman

- SLAC, Greg Schussman