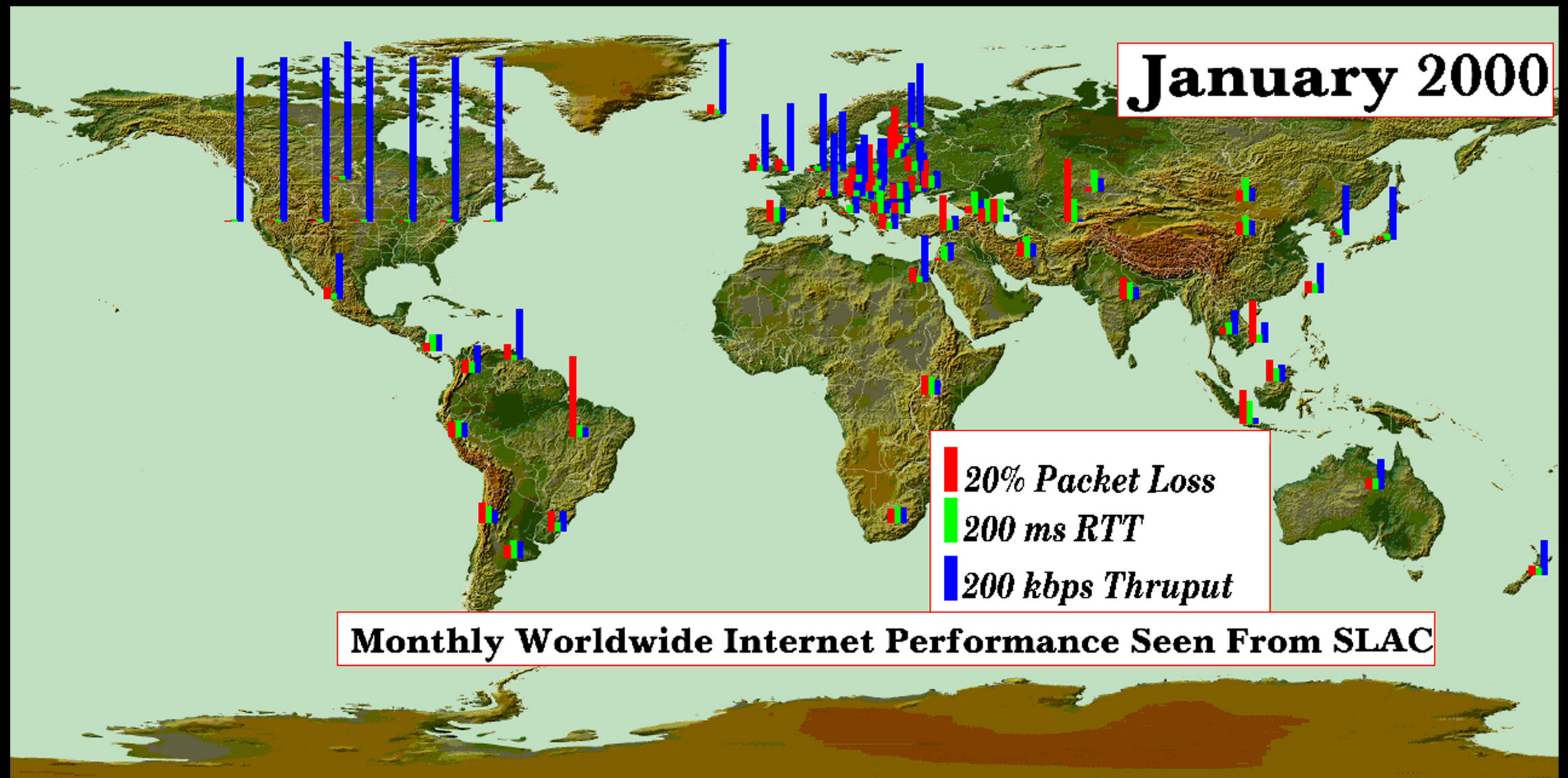


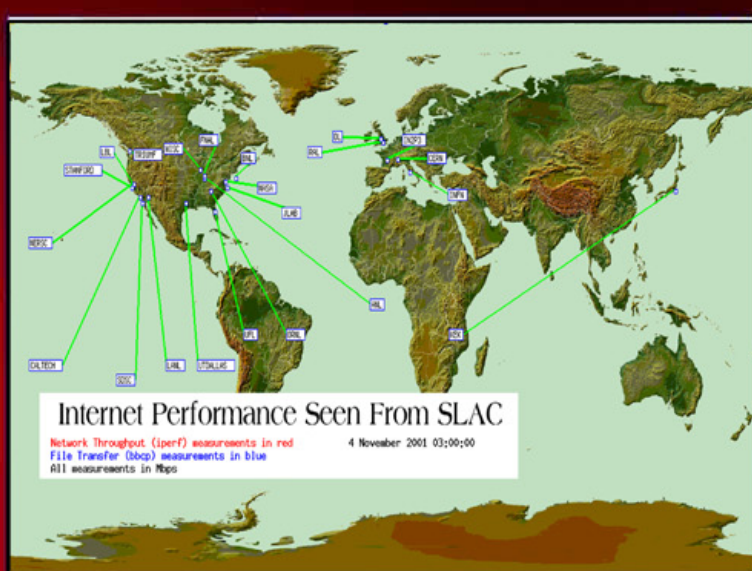
# Data Intensive Science



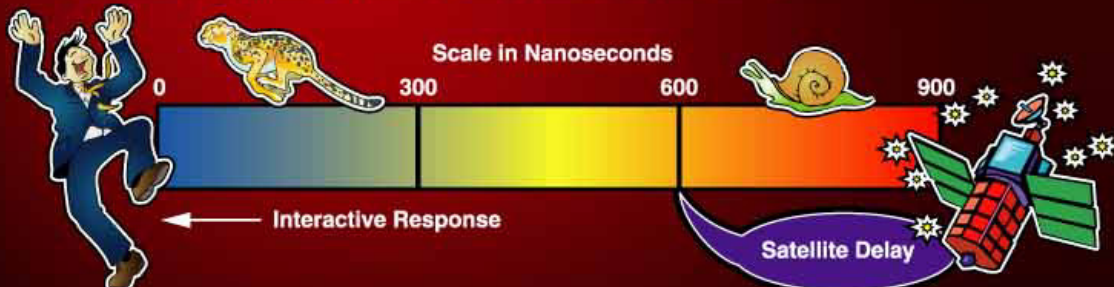
## MEASURING THE GRID

The Particle Physics Data Grid, and other scientific and commercial communities will increasingly require high performance networking beyond the cutting edge. Measurement is critical to understand emerging bottlenecks.

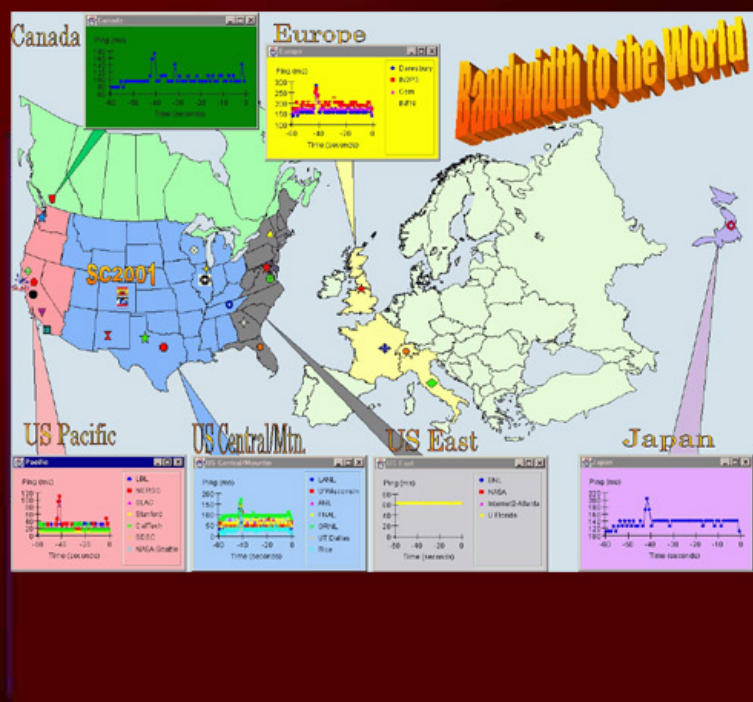
### Round Trip Times



Real-time plots of the packet round trip time (RTTs) from SC2001 to several regions of the world. RTTs depend on distance, bandwidth and router delays.



SLAC and Fermilab have been leading world-wide, continuous end-to-end performance measurements since 1995. The results are published freely on the web. Internet performance measurements from SLAC for the last 22 months are projected above.



The DOE funded Internet End-to-End Performance Monitoring (IEPM) project:

- Measures world-wide performance for a wide community of interest
- Graphically records both long-term Internet performance improvements and short-

### Throughput



Throughput varies with round trip time, bandwidth, loss and other parameters. Use the mouse to select the sites or parameters to see the effects on throughput.

For further information please visit <http://www-iepm.slac.stanford.edu/>  
Or send email to [iepm@slac.stanford.edu](mailto:iepm@slac.stanford.edu)