

What will the Grid and terascale computing bring to PSE?

신동일*
명지대학교
(dongil@mju.ac.kr*)

Cyberinfrastructure will fuel 21st century scientific discovery, and Grid and supercomputing will play a central role in that future. The Grid and terascale computing system will bring unheralded power to scientists, engineers and industrial researchers allowing them to study a wide range of issues from biotechnology and medicine to real-time weather forecasting and engineering. Increased computational power, harnessed most effectively using the Grid, will bring with it opportunities to further push forward the scope of high performance modeling and simulation within science and engineering, combining compute and visualization capabilities ever more seamlessly. The growing opportunities to pursue integrative or systems approaches to scientific and engineering studies emphasize the importance of multiscale modeling and simulation in biology, materials and energy-related research. PSE should build its own vision and be ready to utilize the cyberinfrastructure that will give a broad range of researchers access to high-performance computing, high-bandwidth networks, very large data stores, and sophisticated tools for knowledge discovery.