

Working Session 3: Transition Strategy; Gaps

- 6) In the history of HPC, solutions have often been machine-dependent, if not machine specific (e.g., languages, directives, and other quirks).
 - a) What are some architecture-specific solutions for transitioning current solvers to the extreme scale? What are their respective strengths and weaknesses?
 - b) What are some possible architecture-independent solutions for transitioning current solvers to the extreme scale? What are their respective strengths and weaknesses?

- 7) We will transition from today's solvers to the extreme-scale algorithms and software needed for these 100 PF systems and architectures of the future.
 - a) What classes of solvers can be evolved to million-way parallelism? What are the major challenges to this evolution? What is the urgency for this evolution (0-3 yrs, 3-5 yrs, 5-10 yrs)?
 - b) What classes of solvers are likely to need a revolutionary change? How do we prepare the science community for these revolutionary changes? What is the urgency for this evolution (0-3 yrs, 3-5 yrs, 5-10 yrs)?

- 8) Are there any additional issues that you believe are important and relevant to extreme-scale solvers but haven't been addressed thus far at the workshop?