Pacific Northwest National Laboratory

The Frontiers in Computational and Information Sciences Seminar Series presents

Operating System Resource Management

Speaker: Burton Smith

Technical Fellow, Microsoft Corporation

- Date: Monday, September 27, 2010
- Time: 2:00 – 3:00 pm
- Location: ETB Columbia River Room (1103)
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Resource management is the dynamic allocation and de-allocation by an operating system of processor cores, memory pages, and various types of bandwidth to computations that compete for those resources. The objective is to allocate resources so as to optimize responsiveness subject to the finite resources available. Historically, resource management solutions have been relatively unsystematic, and now the assumptions underlying the traditional strategies fail to hold. First, applications increasingly differ in their ability to exploit resources, especially processor cores. Second, application responsiveness is approximately two-valued for "Quality-Of-Service" (QOS) applications, depending on whether deadlines are met. Third, power and battery energy have become constrained. This talk will propose a scheme for addressing the operating system resource management problem.

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