PANEL

DISTRIBUTED SIMULATION

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Distributed simulation involves the simulation of some physical process in a distributed manner over a network of tightly coupled processors so that during execution different parts of the model execute in parallel. For discrete models this means that the internal support structure of the language/operating system must be altered to handle the control and synchronization of the distributed parts of the model. Simulated time has to be encoded and included with messages between the processors in order to facilitate this process.

The major issues in distributed simulation of discrete systems include the establishment of accurate and efficient communication protocols, the detection and resolution of deadlock among the processes, language and hardware architectures to support the distributed processing, and mechanisms for partitioning models for distributed simulation. A panel of leading researchers in this area will discuss their current work in distributed simulation. In particular we will consider:

What is the current status of work in distributed simulation?

What advantages does distributed simulation offer?

What are the current problems still requiring research?

What is the impact of this area on simulation?

In addition to response from the panel we hope to stimulate discussion among those attending the session.