

Simulation Software

1-28-2011

Opening Discussion

- Do you have any questions about the quiz?
- Minute essay comments
 - Will this work in Matlab?
 - Good languages for simulation.
 - Lack of OO in our simulations.
 - Stats in the ServerInfo object?
 - Making a multi-server from the single-server?
- What did we talk about last class?

Software Packages

- Simulation software packages have certain advantages and disadvantages compared to general purpose programming languages.
- Advantages
 - Less programming required, natural framework, easier to modify, better error detection
- Disadvantages
 - Learning curve, speed, flexibility, costs

General-Purpose vs. Application-Oriented

- Simulation languages and application-oriented simulators have merged over time.
- The main distinction now is one of flexibility.
- Event-driven languages

Process Approach

- Instead of thinking of the simulation as just events, you can think of it as processes.
- A process follows an entity through the system.
- A process has multiple entry and exit points for when the entity is waiting, generally on some queue.

OO Simulation

- OO programming was born from simulation.
- Tracking entities as objects and using the process style approach could have certain benefits to it in an OO based system.
- One advantage might be that we could reuse certain constructs more.

Minute Essay

- Have you had any thoughts about a potential project? Is the project you are considering well modeled with discrete events?
- Assignment #1 is due on Monday.