

Event Ordering

October 20, 2026

Should the simulation clock t be in $\mathcal{S}$?

Can we allow two different events e_i and e_j to have the same **activation times** ($e_i.at = e_j.at$)? Or are activation times required to be distinct?

If we allow non-distinct activation times, in what order are simultaneously occurring events processed?

Should the simulation clock t be in $\mathcal{S}$?

No, there is no simulation clock in the real world so it is not a part of the Conceptual Model or Specification Model, so how could it get into $\mathcal{S}$?

Another insight: Every event updates t , the simulation clock — but **meta events** cannot alter $\mathcal{S}$ by definition. So $t \notin \mathcal{S}$.

You're allowed to have other variables important to your simulation or its run-time, they just aren't in $\mathcal{S}$

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It can be difficult to reason out that this might never happen even for simple simulations, so we better figure out a way to **not be concerned** that it might happen. . .

If we allow non-distinct activation times, in what order are simultaneously occurring events processed?

In practice our events are actually objects containing an event time, at , and an enumerated event $type$, we then determine priority with tiered comparisons.