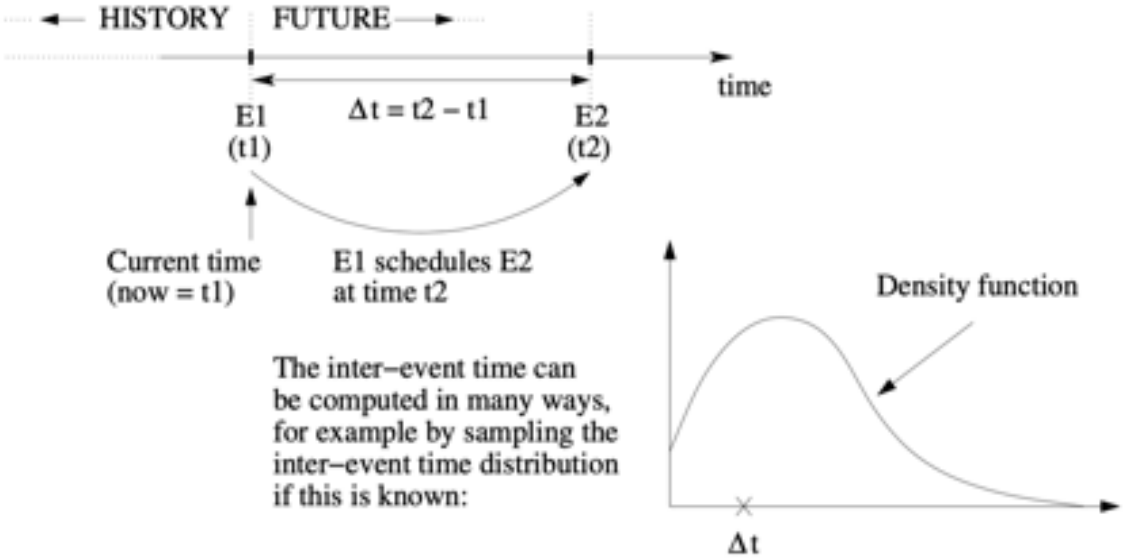
Evolving time:



The times between events are r.v.s with an associated distribution – inter-event times are samples from that distribution. We need to be able to sample these distributions.

Designing a simulation model:

1. Identify the *entities* in the system that have to be modelled
2. Identify the *model states* (program state variables) – these specify where each entity is and what it is doing
3. Identify the *event types*, recalling that each state transition is triggered by an event (note that some events may be parameterisable, e.g. “arrival at location a”)
4. For each *event*, specify i. how it changes the current state, ii. what new events need to be scheduled and what old events need to be cancelled (descheduled) when it fires
5. Add code to accumulate *measurements* whilst the simulation executes
6. Add code to *output results* when the program terminates, e.g. after T simulated time units, N occurrences of a specified event, etc.