

# Internal simulation clock

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The internal simulation clock in Magic Model Analyst allows you to use a new simulation clock that can increase its simulation time based on time Events and duration in a model. The following properties in the **Timing** group in the [Simulation Configuration](#) Specification window enable you to specify necessary options in the internal simulation clock

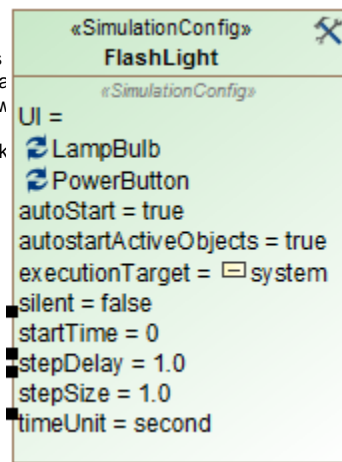
- **Start Time**  
An integer value applies for starting the simulation clock.
- **Step Size**  
A decimal value applies for increasing the simulation time. This value, as 1.0 by default unless specified, is used together with **Start Time**.
- **Step Delay**  
A decimal value applies for delaying each time step in the simulation clock.
- **End Time**  
An integer value applies for stopping the simulation clock.
- **Number Of Steps**  
An integer value together with **Start Time** and **End Time**, to calculate **Step Size** (if not specified) for the simulation clock.

**Note**  
To enable the internal simulation clock, **startTime** must be specified as the Trigger, along with **stepSize**, which is 1.0 by default unless specified. The [FlashLight.mdzip](#), [StopWatch.mdzip](#), [CruiseControl.mdzip](#), and [CoffeeMachine.mdzip](#) built-in sample projects apply the internal simulation clock.

## Simulation time in the console log

Magic Model Analyst's clock display in the console log has instead of the current date and time. The simulation clock will be used for all simulations. The current date and time will

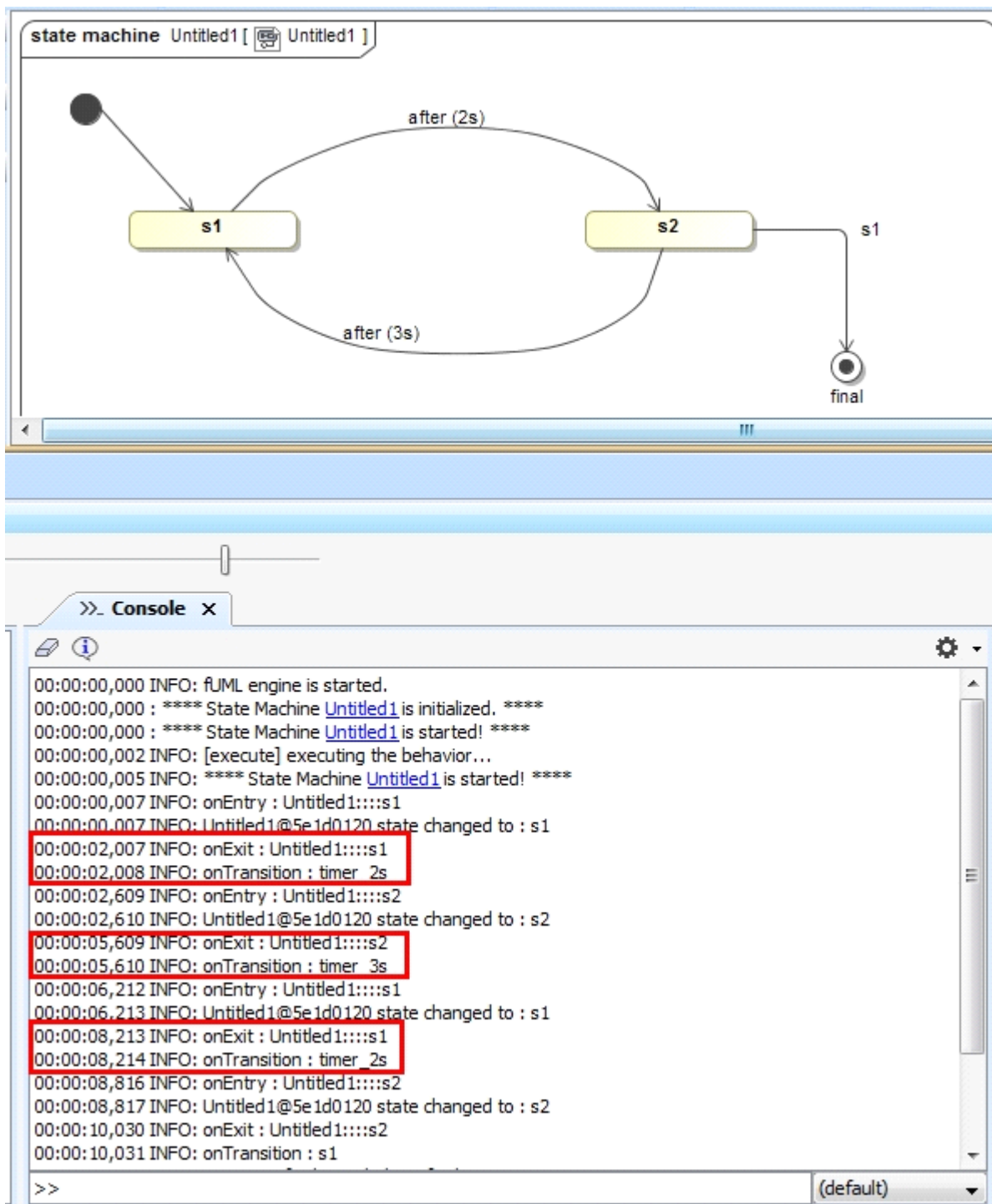
From the following State Machine diagram, **s1** (State 1) takes see the simulation time in the following **Console** log.



FlashLight SimulationConfig.

simulation console will display the simulation time in format of "HH:MM:SS,Milisecond". The simulation time on console log.

and **s2** takes three seconds to go to **s1** again. You can



The simulation Console log showing the simulation time.

#### Related page

- [Model-based clock](#)