Subject: Re: Ptolemy II perfomance
Posted by Sergey Linev on Tue, 25 May 2004 10:47:46 GMT
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Dear Krzysztof

You are very precisely describe algorithm, how my simple model is working. I use decreasing of time interval to avoid buffering inside TimedDelay actors.

In my view, this is main difference of Ptolemy and SystemC. Ptolemy guarantee sequnce, in which actors will be fired (activated) when several messages (tokens) have similar time stamp. Contrary to Ptolemy in SystemC any message with same time stamp can be processed first. Therefore, in Ptolemy model, when I have chain of TimedDelay actors with the same delay is working perfectly, while in SystemC such model frequently lost data, if you do not place buffer inside.

Channels are not explicitly required in SystemC. Generally, one can use standard methods to connect input and output ports. I introduce my own channel just to have flexibility to put some functionality in it like delays, paket loss, data corruption and so on.

In all my measurements I just count number of transactions over token channels and estimate its rate over physical time. For instance, my simple model with 10 delay actors makes output:

Create 10 delay actors
Execute done in 12 sec
Number of transactions = 10999955
Rate = 916663 trans/sec

This means, that during 12 second of physical computer time I perform 10999955 transactions over all channel, which are created in model. To count them, I just increment static member in my TokenChannel class.