

## Kepler - Bug #4194

### Kepler should have the Continous and Modal domains

06/27/2009 09:55 AM - Christopher Brooks

<b>Status:</b>	Resolved	<b>Start date:</b>	06/27/2009
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>	Christopher Brooks	<b>% Done:</b>	0%
<b>Category:</b>	general	<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>	2.0.0	<b>Spent time:</b>	0.00 hour
<b>Bugzilla-Id:</b>	4194		

#### Description

In Ptolemy II 8.0, we are upgrading the ct domain to the continuous domain and the fsm domain to the modal domain.

Ptolemy II will continue to have the ct and fsm domains, but we want new work to use the continuous and modal domains.

Thus, Kepler should have icons for the Continuous Director.  
Also File -> New should bring up the Modal director.

The older ct and fsm facilities could be:

- 1) removed from the Kepler UI
- or
- 2) Placed in a "Classic" folder in the menu and actor library
- or
- 3) Left where they are.

#### History

##### #1 - 01/13/2010 04:36 PM - Christopher Brooks

I can at least get the Continuous domain in place for 2.0.0.

I was looking at how to do this, and I've not yet found the docs about how to add actors to the set of actors that are shipped with Kepler. One question is: how to I get a new LSID.  
I can take a look at this soon.

BTW - There appears to be no way to make a Modal Model in Kepler.  
Modal Models would be very useful to scientists building models, see

Finite State Machines and Modal Models in Ptolemy II  
Edward A. Lee  
EECS Department  
University of California, Berkeley  
Technical Report No. UCB/EECS-2009-151  
November 1, 2009  
<http://www.eecs.berkeley.edu/Pubs/TechRpts/2009/EECS-2009-151.pdf>

This report describes the usage and semantics of finite-state machines (FSMs) and modal models in Ptolemy II. FSMs are actors whose behavior is described using a finite set of states and transitions between the states. The transitions between the states are enabled by guards, which are boolean-valued expressions that can reference inputs to the actor and parameters in scope. The transitions can produce outputs and can update the value of parameters in scope. Modal models extend FSMs by allowing states to have refinements, which are hierarchical Ptolemy II models. The refinements may themselves be FSMs, modal models, or any composite actor containing a director compatible with the domain in which the modal model is being used. This report describes the operational semantics, the practical usage, and the semantics of time in modal models.

##### #2 - 01/26/2010 05:37 PM - Christopher Brooks

Done! The Continuous actors are available. It is possible to create a Modal model.

See

<https://kepler-project.org/developers/reference/updating-the-kepler-directors-and-actors>

and

<http://mercury.nceas.ucsb.edu/kepler/pipermail/kepler-dev/2010-January/017125.html>

**#3 - 03/27/2013 02:25 PM - Redmine Admin**

Original Bugzilla ID was 4194