

Kepler - Bug #5694

Dragging from a port results in a NPE

08/23/2012 02:45 PM - Christopher Brooks

Status:	Resolved	Start date:	08/23/2012
Priority:	Immediate	Due date:	
Assignee:	Daniel Crawl	% Done:	0%
Category:	interface	Estimated time:	0.00 hour
Target version:	2.4.0	Spent time:	0.00 hour
Bugzilla-Id:	5694		
Description			
Dan wrote: --start-- The problem is related to the change listener in org.kepler.moml.NamedObjId. When the workflow is changed, this listener fires off additional change requests in changeExecuted(). When I comment out the additional change requests, I don't get errors or weird behavior with the grab handle. Also, if the requests are made in the Swing thread, everything works. It's not clear to me if this actually fixes the problem or why it's necessary after r64430...Hopefully this helps you track down the problem. --end-- On 8/21/12 4:24 PM, Christopher Brooks wrote: The problem seems to be fairly complex. There are two changes, r64418 to diva BasicGraphHandle where we check for null and r64430 where there are a bunch of changes to ptolemy outside of diva. I agree that the change to BasicGraphHandle would seem to be a good idea. However, if it is present and r64430 is present, then the blue grab handles don't work well in Kepler and Ptolemy. When I drag a connection around it does not have a blue grab handle at the end. A blue grab handle appears at the upper left. I do get NPEs, but the behavior seems to be better. Another issue is that I believe that Kepler uses diva.jar, so the change to BasicGraphHandle was not present until I updated diva.jar. I'm not sure about a fix to this, the bug is fairly mysterious. I can take a look, but it may take a day or two. _Christopher Edward writes: Rolling back this change will cause more null pointer exceptions. If the "return" below is not executed, you <i>will</i> get a NPE. <pre>if (_site.getFigure() null _site.getFigure().getParent() null) { // Cannot relocate. return; }</pre> Edward			

On 8/21/12 12:42 AM, Christopher Brooks wrote:

Hi Derik,
I think this change:
2012-08-18 17:08 eal

- [r64430] /trunk/ptolemy/actor/Manager.java,
/trunk/ptolemy/actor/lib/hoc/LifeCycleManager.java,
/trunk/ptolemy/kernel/undo/RedoChangeRequest.java,
/trunk/ptolemy/kernel/undo/UndoChangeRequest.java,
/trunk/ptolemy/kernel/util/Changeable.java,
/trunk/ptolemy/kernel/util/NamedObj.java,
/trunk/ptolemy/moml/MoMLParser.java: Fixed long standing deadlock
that occurs while editing models while they run

is what is causing the stack trace like [1] below.

I'll take a further look tomorrow.

This change is fairly important in that it solves a long standing
issue, so we need
to fix the bug as opposed to just reverting.

_Christopher

On 8/20/12 6:44 PM, Derik Barseghian wrote:

Hey Christopher,
I updated my local copy of kepler to use ptll r64449 but I'm still
getting errors like [1] below, wild dragging behavior, and remaining
dots.
I haven't seen any rogue floating upper-left endpoints yet though.
Derik

On Aug 20, 2012, at 6:14 PM, Christopher
Brooks<cxh@eecs.berkeley.edu> wrote:

Hi Derik,

It seems like it is Edward's change:

2012-08-18 06:22 eal

- [r64418] /trunk/diva/canvas/interactor/BasicGrabHandle.java:
Prevent null pointer exception that can happen while editing a
model while it is running by checking the Figure of Site for the
connector being dragged.

The change is:

```
[dhcp-39-161:~/ptll] cxh% svn diff -r64417:64418
diva/canvas/interactor/BasicGrabHandle.java
Index: diva/canvas/interactor/BasicGrabHandle.java
=====
--- diva/canvas/interactor/BasicGrabHandle.java (revision 64417)
+++ diva/canvas/interactor/BasicGrabHandle.java (revision 64418)
@ -87,6 +87,10 @
// Be sure to take into account that the transformContext
// of the
// site and the context of the grab handle may be different.
TransformContext tc = getTransformContext();
if (_site.getFigure() null ||
    _site.getFigure().getParent() null) {
+     // Cannot relocate.
+     return;
+ }
```

```
Point2D p = _site.getPoint(tc);
double x = p.getX();
double y = p.getY();
```

I rolled back r64418 and updated diva.jar

_Christopher

On 8/20/12 3:28 PM, Derik Barseghian wrote:

Hey Christopher,
Dan and I are getting an error¹ when trying to drag a relation from a port today in Kepler.
I'm also seeing a few other issues that seem to happen after the above. I got an NPE² from a click, have strange actor-drag behavior (actor drags wildly / shoots off in one direction), and sometimes dots are left over on canvas at the point where I clicked on the port. Also when I'm dragging out a relation I also notice in the upper left corner of canvas a blue 'port endpoint' square (generally only noticeable in the overview section in the lower left). See attached screenshot to see dots and blue square.
Derik

[1]

```
java.lang.NullPointerException
at
diva.canvas.TransformContext.getTransform(TransformContext.java:161)
at diva.canvas.AbstractSite.getPoint(AbstractSite.java:82)
at
diva.canvas.connector.BasicManhattanRouter.routeManhattan(BasicManhattanRouter.java:87)

at
diva.canvas.connector.BasicManhattanRouter.route(BasicManhattanRouter.java:68)

at
diva.canvas.connector.ManhattanConnector.route(ManhattanConnector.java:121)

at
ptolemy.vergil.actor.KielerLayoutConnector.route(KielerLayoutConnector.java:214)

at
diva.canvas.connector.AbstractConnector.reroute(AbstractConnector.java:285)

at
diva.canvas.connector.AbstractConnector.tailMoved(AbstractConnector.java:406)

at
diva.canvas.connector.AbstractConnector.setTailSite(AbstractConnector.java:398)

at
ptolemy.vergil.actor.ActorEditorGraphController$LinkCreator.mousePressed(ActorEditorGraphController.java:676)

at
diva.canvas.interactor.CompositeInteractor.mousePressed(CompositeInteractor.java:199)

at diva.canvas.FigureLayer.dispatchEventUpTree(FigureLayer.java:551)
at diva.canvas.FigureLayer.grabPointer(FigureLayer.java:319)
at diva.canvas.FigureLayer.processLayerEvent(FigureLayer.java:673)
at diva.canvas.FigureLayer.dispatchEvent(FigureLayer.java:203)
at diva.canvas.CanvasPane.processLayerEvent(CanvasPane.java:280)
at diva.canvas.CanvasPane.dispatchEvent(CanvasPane.java:89)
at diva.canvas.JCanvas.internalProcessMouseEvent(JCanvas.java:520)
at diva.canvas.JCanvas.processMouseEvent(JCanvas.java:474)
at java.awt.Component.processEvent(Component.java:6140)
at java.awt.Container.processEvent(Container.java:2083)
```

```
at java.awt.Component.dispatchEventImpl(Component.java:4737)
at java.awt.Container.dispatchEventImpl(Container.java:2141)
at java.awt.Component.dispatchEvent(Component.java:4565)
at
java.awt.LightweightDispatcher.retargetMouseEvent(Container.java:4619)
at
java.awt.LightweightDispatcher.processMouseEvent(Container.java:4277)
at java.awt.LightweightDispatcher.dispatchEvent(Container.java:4210)
at java.awt.Container.dispatchEventImpl(Container.java:2127)
at java.awt.Window.dispatchEventImpl(Window.java:2482)
at java.awt.Component.dispatchEvent(Component.java:4565)
at java.awt.EventQueue.dispatchEventImpl(EventQueue.java:684)
at java.awt.EventQueue.access$000(EventQueue.java:85)
at java.awt.EventQueue$1.run(EventQueue.java:643)
at java.awt.EventQueue$1.run(EventQueue.java:641)
at java.security.AccessController.doPrivileged(Native Method)
at
java.security.AccessControlContext$1.doIntersectionPrivilege(AccessControlContext.java:87)

at
java.security.AccessControlContext$1.doIntersectionPrivilege(AccessControlContext.java:98)

at java.awt.EventQueue$2.run(EventQueue.java:657)
at java.awt.EventQueue$2.run(EventQueue.java:655)
at java.security.AccessController.doPrivileged(Native Method)
at
java.security.AccessControlContext$1.doIntersectionPrivilege(AccessControlContext.java:87)

at java.awt.EventQueue.dispatchEvent(EventQueue.java:654)
at
java.awt.EventDispatchThread.pumpOneEventForFilters(EventDispatchThread.java:296)

at
java.awt.EventDispatchThread.pumpEventsForFilter(EventDispatchThread.java:211)

at
java.awt.EventDispatchThread.pumpEventsForHierarchy(EventDispatchThread.java:201)

at
java.awt.EventDispatchThread.pumpEvents(EventDispatchThread.java:196)
at
java.awt.EventDispatchThread.pumpEvents(EventDispatchThread.java:188)
at java.awt.EventDispatchThread.run(EventDispatchThread.java:122)

[2]
[run] Exception in thread "AWT-EventQueue-0"
java.lang.NullPointerException
[run]
at
diva.canvas.TransformContext.getTransform(TransformContext.java:161)
[run]
at diva.canvas.AbstractSite.getPoint(AbstractSite.java:82)
[run]
at
diva.canvas.interactor.BasicGrabHandle.relocate(BasicGrabHandle.java:94)

[run]
at
diva.canvas.interactor.Manipulator.relocateGrabHandles(Manipulator.java:191)

[run]
at
diva.canvas.interactor.Manipulator.repaint(Manipulator.java:211)
[run]
at
diva.canvas.interactor.Manipulator.repaint(Manipulator.java:175)
[run]
```

```
at
diva.canvas.AbstractFigure.repaint(AbstractFigure.java:236)
[run]
at
diva.canvas.AbstractFigure.repaint(AbstractFigure.java:224)
[run]
at
diva.canvas.FigureDecorator.setChild(FigureDecorator.java:190)
[run]
at
diva.canvas.connector.ConnectorManipulator.setChild(ConnectorManipulator.java:215)

[run]
at diva.canvas.FigureLayer.decorate(FigureLayer.java:180)
[run]
at
diva.canvas.interactor.BasicSelectionRenderer.renderSelected(BasicSelectionRenderer.java:119)

[run]
at
diva.canvas.interactor.BasicSelectionModel.renderSelected(BasicSelectionModel.java:271)

[run]
at
diva.canvas.interactor.BasicSelectionModel.addSelection(BasicSelectionModel.java:101)

[run]
at
diva.canvas.interactor.SelectionInteractor.mousePressed(SelectionInteractor.java:172)

[run]
at
diva.canvas.FigureLayer.dispatchEventUpTree(FigureLayer.java:551)
[run]
at diva.canvas.FigureLayer.grabPointer(FigureLayer.java:319)
[run]
at
diva.canvas.FigureLayer.processLayerEvent(FigureLayer.java:673)
[run]
at
diva.canvas.FigureLayer.dispatchEvent(FigureLayer.java:203)
[run]
at
diva.canvas.CanvasPane.processLayerEvent(CanvasPane.java:280)
[run]
at diva.canvas.CanvasPane.dispatchEvent(CanvasPane.java:89)
[run]
at
diva.canvas.JCanvas.internalProcessMouseEvent(JCanvas.java:520)
[run]
at diva.canvas.JCanvas.processMouseEvent(JCanvas.java:474)
[run]
at java.awt.Component.processEvent(Component.java:6140)
[run]
at java.awt.Container.processEvent(Container.java:2083)
[run]
at java.awt.Component.dispatchEventImpl(Component.java:4737)
[run]
at java.awt.Container.dispatchEventImpl(Container.java:2141)
[run]
at java.awt.Component.dispatchEvent(Component.java:4565)
[run]
at
java.awt.LightweightDispatcher.retargetMouseEvent(Container.java:4619)
[run]
at
java.awt.LightweightDispatcher.processMouseEvent(Container.java:4277)
```

```
[run]
at
java.awt.LightweightDispatcher.dispatchEvent(Container.java:4210)
[run]
at java.awt.Container.dispatchEventImpl(Container.java:2127)
[run]
at java.awt.Window.dispatchEventImpl(Window.java:2482)
[run]
at java.awt.Component.dispatchEvent(Component.java:4565)
[run]
at java.awt.EventQueue.dispatchEventImpl(EventQueue.java:684)
[run]
at java.awt.EventQueue.access$000(EventQueue.java:85)
[run]
at java.awt.EventQueue$1.run(EventQueue.java:643)
[run]
at java.awt.EventQueue$1.run(EventQueue.java:641)
[run]
at java.security.AccessController.doPrivileged(Native Method)
[run]
at
java.security.AccessControlContext$1.doIntersectionPrivilege(AccessControlContext.java:87)

[run]
at
java.security.AccessControlContext$1.doIntersectionPrivilege(AccessControlContext.java:98)

[run]
at java.awt.EventQueue$2.run(EventQueue.java:657)
[run]
at java.awt.EventQueue$2.run(EventQueue.java:655)
[run]
at java.security.AccessController.doPrivileged(Native Method)
[run]
at
java.security.AccessControlContext$1.doIntersectionPrivilege(AccessControlContext.java:87)

[run]
at java.awt.EventQueue.dispatchEvent(EventQueue.java:654)
[run]
at
java.awt.EventDispatchThread.pumpOneEventForFilters(EventDispatchThread.java:296)

[run]
at
java.awt.EventDispatchThread.pumpEventsForFilter(EventDispatchThread.java:211)

[run]
at
java.awt.EventDispatchThread.pumpEventsForHierarchy(EventDispatchThread.java:201)

[run]
at
java.awt.EventDispatchThread.pumpEvents(EventDispatchThread.java:196)
[run]
at
java.awt.EventDispatchThread.pumpEvents(EventDispatchThread.java:188)
[run]
at
java.awt.EventDispatchThread.run(EventDispatchThread.java:122)
```

History

#1 - 08/23/2012 03:01 PM - Christopher Brooks

We can't seem to replicate this bug locally right now.

Edward checked in a fix that might help with the NPE.

I'm going to reassign this to Derik so that he can try to replicate it.

If the bug is replicatable, please include really detailed instructions about how to replicate it and a screen shot.

#2 - 08/23/2012 03:17 PM - Derik Barseghian

I think Dan's comment was referring to a change he made at r30498. After that change I haven't been able to replicate either.

I didn't test extensively. Leaving open for a little more testing...

#3 - 08/23/2012 04:20 PM - Daniel Crowl

Christopher, to reproduce this revert r30498 and connect two ports.

The problem is caused by the updates in r64430 to how change requests are processed, not the updates to diva. Either the change listener in NamedObjId is doing something wrong, e.g., issuing more change requests in changeExecuted(), or the updates in r64430 introduce a bug that NamedObjId triggers.

#4 - 08/23/2012 06:33 PM - Derik Barseghian

There's a new issue on trunk related to NamedObjId: if I drag out a String Constant and configure it with a new value, I get a ClassCastException.

```
[run] Exception occurred during event dispatching:
[run] java.lang.ClassCastException: org.kepler.moml.NamedObjId$1 cannot be cast to org.kepler.moml.NamedObjId
[run] at org.kepler.workflow.WorkflowManager.changeExecuted(WorkflowManager.java:195)
[run] at ptolemy.kernel.util.ChangeRequest.execute(ChangeRequest.java:202)
[run] at ptolemy.kernel.util.NamedObj._executeChangeRequests(NamedObj.java:2558)
[run] at ptolemy.kernel.util.NamedObj.requestChange(NamedObj.java:1774)
[run] at ptolemy.actor.CompositeActor.requestChange(CompositeActor.java:1951)
[run] at ptolemy.kernel.util.NamedObj.requestChange(NamedObj.java:1749)
[run] at org.kepler.moml.NamedObjId$1.run(NamedObjId.java:801)
[run] at java.awt.event.InvocationEvent.dispatch(InvocationEvent.java:209)
[run] at java.awt.EventQueue.dispatchEventImpl(EventQueue.java:641)
[run] at java.awt.EventQueue.access$000(EventQueue.java:84)
[run] at java.awt.EventQueue$1.run(EventQueue.java:602)
[run] at java.awt.EventQueue$1.run(EventQueue.java:600)
[run] at java.security.AccessController.doPrivileged(Native Method)
[run] at java.security.AccessControlContext$1.doIntersectionPrivilege(AccessControlContext.java:87)
[run] at java.awt.EventQueue.dispatchEvent(EventQueue.java:611)
[run] at java.awt.EventDispatchThread.pumpOneEventForFilters(EventDispatchThread.java:269)
[run] at java.awt.EventDispatchThread.pumpEventsForFilter(EventDispatchThread.java:184)
[run] at java.awt.EventDispatchThread.pumpEventsForFilter(EventDispatchThread.java:178)
[run] at java.awt.Dialog$1.run(Dialog.java:1046)
[run] at java.awt.Dialog$3.run(Dialog.java:1098)
[run] at java.security.AccessController.doPrivileged(Native Method)
[run] at java.awt.Dialog.show(Dialog.java:1096)
[run] at java.awt.Component.show(Component.java:1584)
[run] at java.awt.Component.setVisible(Component.java:1536)
[run] at java.awt.Window.setVisible(Window.java:842)
[run] at java.awt.Dialog.setVisible(Dialog.java:986)
[run] at ptolemy.gui.ComponentDialog.<init>(ComponentDialog.java:209)
[run] at ptolemy.gui.ComponentDialog.<init>(ComponentDialog.java:122)
[run] at ptolemy.gui.ComponentDialog.<init>(ComponentDialog.java:101)
[run] at ptolemy.actor.gui.EditParametersDialog.<init>(EditParametersDialog.java:105)
[run] at ptolemy.actor.gui.EditParametersDialog.<init>(EditParametersDialog.java:93)
[run] at ptolemy.vergil.toolbox.ConfigureAction._openDialog(ConfigureAction.java:146)
[run] at ptolemy.vergil.toolbox.ConfigureAction.actionPerformed(ConfigureAction.java:99)
[run] at diva.canvas.interactor.ActionInteractor.mousePressed(ActionInteractor.java:74)
[run] at diva.canvas.interactor.CompositeInteractor.mousePressed(CompositeInteractor.java:199)
[run] at diva.canvas.interactor.SelectionInteractor.mousePressed(SelectionInteractor.java:202)
[run] at diva.canvas.FigureLayer.dispatchEventUpTree(FigureLayer.java:551)
[run] at diva.canvas.FigureLayer.grabPointer(FigureLayer.java:319)
[run] at diva.canvas.FigureLayer.processLayerEvent(FigureLayer.java:673)
[run] at diva.canvas.FigureLayer.dispatchEvent(FigureLayer.java:203)
[run] at diva.canvas.CanvasPane.processLayerEvent(CanvasPane.java:280)
```

```

[run] at diva.canvas.CanvasPane.dispatchEvent (CanvasPane.java:89)
[run] at diva.canvas.JCanvas.internalProcessMouseEvent (JCanvas.java:520)
[run] at diva.canvas.JCanvas.processMouseEvent (JCanvas.java:474)
[run] at java.awt.Component.processEvent (Component.java:6053)
[run] at java.awt.Container.processEvent (Container.java:2041)
[run] at java.awt.Component.dispatchEventImpl (Component.java:4651)
[run] at java.awt.Container.dispatchEventImpl (Container.java:2099)
[run] at java.awt.Component.dispatchEvent (Component.java:4481)
[run] at java.awt.LightweightDispatcher.retargetMouseEvent (Container.java:4577)
[run] at java.awt.LightweightDispatcher.processMouseEvent (Container.java:4235)
[run] at java.awt.LightweightDispatcher.dispatchEvent (Container.java:4168)
[run] at java.awt.Container.dispatchEventImpl (Container.java:2085)
[run] at java.awt.Window.dispatchEventImpl (Window.java:2478)
[run] at java.awt.Component.dispatchEvent (Component.java:4481)
[run] at java.awt.EventQueue.dispatchEventImpl (EventQueue.java:643)
[run] at java.awt.EventQueue.access$000 (EventQueue.java:84)
[run] at java.awt.EventQueue$1.run (EventQueue.java:602)
[run] at java.awt.EventQueue$1.run (EventQueue.java:600)
[run] at java.security.AccessController.doPrivileged (Native Method)
[run] at java.security.AccessControlContext$1.doIntersectionPrivilege (AccessControlContext.java:87)
[run] at java.security.AccessControlContext$1.doIntersectionPrivilege (AccessControlContext.java:98)
[run] at java.awt.EventQueue$2.run (EventQueue.java:616)
[run] at java.awt.EventQueue$2.run (EventQueue.java:614)
[run] at java.security.AccessController.doPrivileged (Native Method)
[run] at java.security.AccessControlContext$1.doIntersectionPrivilege (AccessControlContext.java:87)
[run] at java.awt.EventQueue.dispatchEvent (EventQueue.java:613)
[run] at java.awt.EventDispatchThread.pumpOneEventForFilters (EventDispatchThread.java:269)
[run] at java.awt.EventDispatchThread.pumpEventsForFilter (EventDispatchThread.java:184)
[run] at java.awt.EventDispatchThread.pumpEventsForHierarchy (EventDispatchThread.java:174)
[run] at java.awt.EventDispatchThread.pumpEvents (EventDispatchThread.java:169)
[run] at java.awt.EventDispatchThread.pumpEvents (EventDispatchThread.java:161)
[run] at java.awt.EventDispatchThread.run (EventDispatchThread.java:122)

```

#5 - 08/25/2012 12:43 AM - Derik Barseghian

Fixed this particular issue in reporting's WorkflowManager at r30536.

(In reply to comment [#4](#))

There's a new issue on trunk related to NamedObjId: if I drag out a String Constant and configure it with a new value, I get a ClassCastException.

```

[run] Exception occurred during event dispatching:
[run] java.lang.ClassCastException: org.kepler.moml.NamedObjId$1 cannot
be cast to org.kepler.moml.NamedObjId
[run] at
org.kepler.workflow.WorkflowManager.changeExecuted(WorkflowManager.java:195)

```

#6 - 09/07/2012 10:58 AM - Derik Barseghian

I fixed the issue in comment4.

I think Dan knows better the details on the original issue, which I think is no longer an issue. Assigning to him to close/leave open as he sees fit.

#7 - 03/27/2013 02:31 PM - Redmine Admin

Original Bugzilla ID was 5694

Files

ErrorDraggingFromAPort.png	70.4 KB	08/23/2012	Christopher Brooks
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