

User Interface - Bug #3305

broken widget references management

06/28/2017 12:36 PM - Ovidiu Maxiniuc

Status:	New	Start date:	
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:		Estimated time:	0.00 hour
Target version:		case_num:	
billable:	No		
vendor_id:	GCD		
Description			

History

#1 - 06/28/2017 12:48 PM - Ovidiu Maxiniuc

While testing a medium-large GUI application I noticed that at some time (I was not able to pinpoint the exact trigger), a lot of messages like these get printed into console log:

```
WARNING: Unable to get the screen buffer for frame ID: 673. The frame with given ID is missing in widget registry.  
try.
```

```
Jun 28, 2017 1:15:14 PM com.goldencode.p2j.ui.chui.ThinClient getScreenBuffer
```

I did a short investigation and I see that on client side, `WidgetRegistry.widgetList` container does not reflect the widgets shown on the screen. Apparently there are some widgets that are not listed there, while a lot of other got left behind. Statistically, at some point, ~1500 widgets were stored, while only a couple of tens were really on screen. Of the grand total, about 660 were `ScrollBarGuiButtons`, 330 `ScrollBarGuiImpl`, 240 `ButtonGuiImpl`, 170 `ScrollPaneGuiImpl`. Other widgets I could spot in the list with less occurrences (<30): `MenuItemGuiImpl`, `BrowseColumnGuiImpl`.

Of course, the reason for the messages, if not the fact that the widgets don't get removed, it's exactly the reverse, but for the moment, I am thinking that these might be related.

A little help for the person who will further investigate this, I used the following piece of code for dumping `WidgetRegistry.widgetList`:

```
if (debug)
{
    Map<Class, Integer> map = new HashMap<>();
    for (Map.Entry<WidgetId, Widget<O>> wid : widgetList.entrySet())
    {
        Class<? extends Widget> c = wid.getValue().getClass();
        Integer cnt = map.get(c);
        if (cnt == null)
        {
            cnt = 1;
        }
        else
        {
            cnt = cnt + 1;
        }
        map.put(c, cnt);
    }
    System.out.println("WidgetRegistry.widgetList dump (" + widgetList.size() + " -> " + map.size() + ")");
};

for (Map.Entry<Class, Integer> iter : map.entrySet())
{
    System.out.println(iter.getKey() + "\t" + iter.getValue());
}
System.out.println("WidgetRegistry.widgetList dump ended.");
}
```

As a side note, I think that for widgetList and generally, all places where WidgetId is used as key for a map, the indexing key used should be replaced with int/Integer. I think that the autoboxing of Java5 is a better solution than having to create temporary new WidgetId objects for accessing these maps.