Subject: [Linux] Upp application can block all mouse events
Posted by Zbych on Wed, 21 May 2014 12:08:50 GMT
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Hi,

When Upp GUI application is not responding to events, it blocks mouse events sent to other GUI programs (gnome menu or unity dash can not be open with mouse click)

Here is sample code:

CursorTest.lay:

```
LAYOUT(CursorTestLayout, 200, 100)
 ITEM(Button, button, SetLabel(t_("Test")).HCenterPosZ(84, 2).VCenterPosZ(32, -2))
END_LAYOUT
```

CursorTest.cpp:

```
#include <CtrlLib/CtrlLib.h>

using namespace Upp;

#define LAYOUTFILE <CursorTest/CursorTest.lay>
#include <CtrlCore/lay.h>

class CursorTest : public WithCursorTestLayout<TopWindow> {
 void Test()  { Sleep(10000);}

public:
 typedef CursorTest CLASSNAME;
 CursorTest()
 {
  CtrlLayout(*this, "Cursor Test");
  button.WhenAction = THISBACK(Test);
 };
};

GUI_APP_MAIN
{
 CursorTest().Run();
}
```

I made test in Ubuntu 12.04 and Debian 6 (both GTK and X11 backends). In both systems mouse events were blocked.

Does anyone know why all other applications can not receive mouse events?

Subject: Re: [Linux] Upp application can block all mouse events
Posted by slashupp on Thu, 21 Jul 2016 17:31:01 GMT
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Confirms that gui "hangs" for sleep period.
You are using WhenAction for Callback on the button
Everything works fine if you use WhenPush

Example:

```
#include <CtrlLib/CtrlLib.h>
using namespace Upp;

struct SleepTest : public TopWindow
{
 typedef SleepTest CLASSNAME;

 Button button;

 void Test()
 {
 Sleep(10000); //calls Util.cpp - Sleep()
 }

 SleepTest()
 {
  Title("Sleep Test").CenterScreen().Sizeable();
  SetRect(0,0,200,200);

  Add(button.SetLabel(t_("Test")).HCenterPosZ(84, 2).VCenterPosZ(32, -2));
  //button.WhenAction = THISBACK(Test); --- hogs the gui for sleep-time - Alt-D in debug still
works
  button.WhenPush = THISBACK(Test); //this is fine
 };

 virtual ~SleepTest(){}
};

GUI_APP_MAIN
{
 SleepTest().Run();
}
```

I don't know what WhenAction does internally to hog the gui so - mirek?
I guess some kind of thread-lockup with X that leave X waiting?

Subject: Re: [Linux] Upp application can block all mouse events
Posted by Zbych on Thu, 21 Jul 2016 20:53:55 GMT
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slashupp wrote on Thu, 21 July 2016 19:31
I guess some kind of thread-lockup with X that leave X waiting?

No, it is not a bug, the lock is made on purpose (I don't remember exact X11 function name, maybe XGrabPointer).
The question is: is it really necessary?

Subject: Re: [Linux] Upp application can block all mouse events
Posted by mirek on Fri, 22 Jul 2016 05:22:53 GMT
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This is an inherent problem of X11.

Thing is, GUI logic requires mouse grab here and there (e.g. if DropList is dropped). If application freezes while holding the grab, then whole X11 becomes unresponsive.

In Windows, which has equivalent to grab, situation is is solved by additional API logic (see Remarks):

https://msdn.microsoft.com/en-us/library/windows/desktop/ms6 46262(v=vs.85).aspx

Unfortunately, nothing like that ever happened in X11.