Subject: Touchscreen on raspberry: problem with events
Posted by Giorgio on Wed, 09 Aug 2017 14:16:19 GMT
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Hi there,
I am porting an application developed with U++ on Windows to a raspberry platform. The raspberry is a Pi 3 Model B, with the latest noobs/raspbian as operating system. The raspberry has attached a EloTouch touch screen, recognized by the kernel as a Amtel maXTouch Digitzer (probably elotouch just rebrand Amtel touchscreen). The driver used is the evdev driver.

The porting of the application was really quick: less than 20 lines of codes changed and the application was up and running on the raspberry. I tested the application with mouse and keyboard and it works as expected. Problems come in with the touch screen.

For some reason, my application does not recognize correctly the "tap". I had this problem both with buttons (more details here) and with Switch control (more details here). I guess that the problem is how upp treats the event (below there are more information on this, that I collected using evtest utility; basically, mouse uses BTN_LEFT event for the click, while the touch screen uses BTN_TOUCH for the tap). This is what works and what does not work in my application:
-Tap/click: it works only with WhenPush or WhenAction callbacks, not with the built-in event (e.g. standard Ok and Cancel buttons do not work, but if I explicitly set the WhenPush callback they work as described here)
-Double click/tap: it works (e.g. double clicking/taping on a row of a SqlArray control gets in edit mode)
-Right click emulation: it does not work (keeping pressed should triggers the right click emulation, but if I keep pressing on a SqlArray row it does not show the "Modify record..." pop up, as it happens if I right click with the mouse)
-multi-touch: not tested

On the OS all the above events (click/tap, double click/tap, right click emulation, multi touch) are treated correctly, so I guess that the problem is on U+++ side.

As I said, I guess is a problem related to the events: I tried to have a look to CtrLib/Switch.cpp and CtrLib/Switch.cpp, but I am not skilled enough to understand if they can be somehow fixed.

I think I cannot solve by myself those problems, so any help will be appreciated.
Thanks,
Gio

More information on the mouse and touch click event:

```
pi@raspberrypi:~ $ sudo evtest /dev/input/event2
Input driver version is 1.0.1
Input device ID: bus 0x3 vendor 0x192f product 0x416 version 0x111
Input device name: "USB Optical Mouse"
Supported events:
  Event type 0 (EV_SYN)
  Event type 1 (EV_KEY)
```

```
    Event code 272 (BTN_LEFT)
    Event code 273 (BTN_RIGHT)
    Event code 274 (BTN_MIDDLE)
  Event type 2 (EV_REL)
    Event code 0 (REL_X)
    Event code 1 (REL_Y)
    Event code 6 (REL_HWHEEL)
    Event code 8 (REL_WHEEL)
  Event type 4 (EV_MSC)
    Event code 4 (MSC_SCAN)
Properties:
Testing ... (interrupt to exit)




Event: time 1502281968.518936, ---------- EV_SYN ------------
Event: time 1502281968.646926, type 4 (EV_MSC), code 4 (MSC_SCAN), value 90001
Event: time 1502281968.646926, type 1 (EV_KEY), code 272 (BTN_LEFT), value 0
Event: time 1502281968.646926, ---------- EV_SYN ------------




pi@raspberrypi:~ $ sudo evtest /dev/input/event3
Input driver version is 1.0.1
Input device ID: bus 0x3 vendor 0x3eb product 0x8a6e version 0x111
Input device name: "Atmel Atmel maXTouch Digitizer"
Supported events:
  Event type 0 (EV_SYN)
  Event type 1 (EV_KEY)
    Event code 330 (BTN_TOUCH)
  Event type 3 (EV_ABS)
    Event code 0 (ABS_X)
      Value   1078
      Min        0
      Max     4095
      Resolution      12
    Event code 1 (ABS_Y)
      Value   3218
      Min        0
      Max     4095
      Resolution      15
    Event code 47 (ABS_MT_SLOT)
      Value      0
      Min        0
```

```
    Max        9
  Event code 53 (ABS_MT_POSITION_X)
    Value      0
    Min        0
    Max     4095
    Resolution      12
  Event code 54 (ABS_MT_POSITION_Y)
    Value      0
    Min        0
    Max     4095
    Resolution      15
  Event code 57 (ABS_MT_TRACKING_ID)
    Value      0
    Min        0
    Max    65535
Properties:
  Property type 1 (INPUT_PROP_DIRECT)
Testing ... (interrupt to exit)



Event: time 1502282136.626462, ---------- EV_SYN ------------
Event: time 1502282136.703407, type 3 (EV_ABS), code 57 (ABS_MT_TRACKING_ID), value -1
Event: time 1502282136.703407, type 1 (EV_KEY), code 330 (BTN_TOUCH), value 0
Event: time 1502282136.703407, ---------- EV_SYN ------------
```

Subject: Re: Touchscreen on raspberry: problem with events
Posted by Klugier on Wed, 09 Aug 2017 16:10:22 GMT
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Hello,

First of all you need to check - how is "Event code 330 (BTN_TOUCH)" interpreted in GTK backend. It could be lost in transition or coverted to click. The "eventtest" command is not helpfull for us it only means that the touch event works on your device. Please check CtrlCore/GtkEvent.cpp and log events:

gboolean Ctrl::GtkEvent(GtkWidget *widget, GdkEvent *event, gpointer user_data)

You could also try to understand the logic of the whole file.

Debugging and understanding U++ should not be hard to expirienced developer. I started to fix some minor problems when I was after second year of computer science

I can not fully hep in this problem, beacuse I don't have any touch screen at the moment.

Sincerely,
Klugier

Subject: Re: Touchscreen on raspberry: problem with events
Posted by Giorgio on Thu, 10 Aug 2017 08:54:35 GMT
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Hi Klugier,
thank you for your support.

First of all, I am not 100% sure how the logging works. I activated the logs removing the // on the line #define LOG_EVENTS. Then I looked in all the files in /var/log/ (standard directory for logs in linux) and found nothing. I found a log file in ~/.upp/name_of_my_application/name_of_my_application.log but it contained only SQL log. At the end I noticed that gtk events were logged directly in the console the application was launched from.

Any way, that is what I found out:

Single tap on a Switch control: nothing logged

Single tap on a button where the WhenPush callback is defined:

GDK_PROPERTY_NOTIFYGDK_EXPOSEGDK_PROPERTY_NOTIFYGDK_PROPERTY
_NOTIFYGDK_PROPERTY_NOTIFYGDK_PROPERTY_NOTIFYGDK_PROPERTY_NO
TIFYGDK_VISIBILITY_NOTIFYGDK_VISIBILITY_NOTIFYGDK_FOCUS_CHAN
GEGDK_PROPERTY_NOTIFYGDK_VISIBILITY_NOTIFYGDK_VISIBILITY_NOT
IFYGDK_EXPOSEGDK_PROPERTY_NOTIFYGDK_FOCUS_CHANGEGDK_PROPERTY
_NOTIFYGDK_ENTER_NOTIFYGDK_MOTION_NOTIFYGDK_BUTTON_PRESSGDK_
PROPERTY_NOTIFYGDK_PROPERTY_NOTIFYGDK_EXPOSEGDK_EXPOSEGDK_MO
TION_NOTIFYGDK_BUTTON_RELEASEGDK_EXPOSEGDK_MOTION_NOTIFYGDK_
BUTTON_PRESSGDK_PROPERTY_NOTIFYGDK_EXPOSEGDK_EXPOSEGDK_MOTIO
N_NOTIFYGDK_BUTTON_RELEASEGDK_EXPOSEGDK_MOTION_NOTIFYGDK_BUT
TON_PRESSGDK_PROPERTY_NOTIFYGDK_EXPOSEGDK_EXPOSEGDK_MOTION_N
OTIFYGDK_BUTTON_RELEASEGDK_EXPOSEGDK_MOTION_NOTIFYGDK_BUTTON
_PRESSGDK_PROPERTY_NOTIFYGDK_EXPOSEGDK_EXPOSE

Single tap on a button where the WhenPush callback is not defined: nothing

Double tap:

GDK_EXPOSEGDK_PROPERTY_NOTIFYGDK_PROPERTY_NOTIFYGDK_PROPERTY
_NOTIFYGDK_PROPERTY_NOTIFYGDK_PROPERTY_NOTIFYGDK_PROPERTY_NO

TIFYGDK_EXPOSEGDK_EXPOSEGDK_VISIBILITY_NOTIFYGDK_VISIBILITY_
NOTIFYGDK_FOCUS_CHANGEGDK_EXPOSEGDK_PROPERTY_NOTIFYGDK_EXPOS
EGDK_EXPOSEGDK_VISIBILITY_NOTIFYGDK_VISIBILITY_NOTIFYGDK_EXP
OSEGDK_PROPERTY_NOTIFYGDK_PROPERTY_NOTIFYGDK_PROPERTY_NOTIFY
GDK_PROPERTY_NOTIFYGDK_PROPERTY_NOTIFYGDK_EXPOSEGDK_EXPOSEGD
K_FOCUS_CHANGEGDK_PROPERTY_NOTIFYGDK_EXPOSEGDK_EXPOSEGDK_EXP
OSEGDK_ENTER_NOTIFYGDK_EXPOSEGDK_MOTION_NOTIFYGDK_EXPOSEGDK_
PROPERTY_NOTIFYGDK_MOTION_NOTIFYGDK_BUTTON_PRESSGDK_PROPERTY
_NOTIFYGDK_EXPOSEGDK_MOTION_NOTIFYGDK_BUTTON_RELEASEGDK_EXPO
SEGDK_EXPOSEGDK_MOTION_NOTIFYGDK_MOTION_NOTIFYGDK_BUTTON_PRE
SSGDK_2BUTTON_PRESSGDK_PROPERTY_NOTIFYGDK_EXPOSEGDK_MOTION_N
OTIFYGDK_BUTTON_RELEASEGDK_EXPOSEGDK_EXPOSEGDK_EXPOSEGDK_EXP
OSEGDK_EXPOSEGDK_EXPOSEGDK_EXPOSEGDK_MOTION_NOTIFYGDK_EXPOSE
GDK_MOTION_NOTIFYGDK_BUTTON_PRESSGDK_PROPERTY_NOTIFYGDK_EXPO
SEGDK_MOTION_NOTIFYGDK_BUTTON_RELEASEGDK_EXPOSEGDK_EXPOSEGDK
_MOTION_NOTIFY

Any ideas?
Regards,
Gio

Subject: Re: Touchscreen on raspberry: problem with events
Posted by Giorgio on Thu, 10 Aug 2017 10:38:42 GMT
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Hi there,
I was wrong in my previous post. It seems like the logging has some "buffering" system, so events are not printed on console as soon as they happen, but only when the "buffer" is full. Taking that in mind (and waiting for the buffer to be full), I found out that if I makes a single tap, what is logged is something like:

" GDK_BUTTON_PRESSGDK_PROPERTY_NOTIFYGDK_EXPOSEGDK_EXPOSEGDK_P
ROPERTY_NOTIFYGDK_MOTION_NOTIFYGDK_BUTTON_RELEASE "

That makes sense, because the couple GDK_BUTTON_PRESS + GDK_BUTTON_RELEASE (and five events between them) is the same that is logged when I tap on a button, and when - for a button - I define a WhenPush callback the button works.

Now let's see what happens when I click the Switch control with the mouse (in this case the switch control works as expected):

GDK_BUTTON_PRESSGDK_PROPERTY_NOTIFYGDK_EXPOSEGDK_BUTTON_RELE ASE

We have the same couple GDK_BUTTON_PRESS + GDK_BUTTON_RELEASE, but between them there are just two other events (GDK_PROPERTY_NOTIFY and GDK_EXPOSE) while with a single tap here are 5 events between them (GDK_PROPERTY_NOTIFY, GDK_EXPOSE,

GDK_EXPOSE, GDK_PROPERTY_NOTIFY, GDK_MOTION_NOTIFY).

I think that the problem is that, but I have no idea how to fix it

Any suggestion from more experienced user is appreciated.
Thanks,
Gio

Subject: Re: Touchscreen on raspberry: problem with events
Posted by Klugier on Thu, 10 Aug 2017 12:17:56 GMT
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Hello,

For the next time - please write the events separate. Current version is hard to read, because you need to think when event starts and ends.

I do not think the event inside meters so much, we have the correct event order (GDK_BUTTON_PRESS and GDK_BUTTON_RELEASE) when user touch. All we need to know is they are handle correctly. You need to check Switch control code to make sure they are propagate correctly. You could also log the all switch events that happens for example:

```
void Switch::MouseMove(Point p, dword keyflags) {
    Cout() << "Switch::MouseMove(): ";
    ...
}

// Add log for the rest of events and try to understand the logic...
void Switch::LeftDown(Point p, dword keyflags) { ... }
void Switch::LeftUp(Point p, dword keyflags) { ... }
void Switch::MouseLeave() { ... }
```

In my opinion " pushindex = -1;" when mouse leave the area could be a problem. This is the highly probably, because tap can move mouse somewhere else and leave the switch area. Please check this clue - you will need to play with Switch event handling a little bit.

For logging you just simply use Cout() and launch your app in terminal. Just like this:

```
Cout() << "My message!" << "\n";
```

You could use upp more advenced logging mechanism, however I think Cout() should be sufficient for our needs.

Sincerely,

Klugier

Subject: Re: Touchscreen on raspberry: problem with events
Posted by Giorgio on Thu, 10 Aug 2017 14:22:37 GMT
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Ok, I found the problem and a verrrrrrrrrrrrrrry nasty solution.

This is the cycle of gtk events and Switch methods with a real mouse:
GDK_BUTTON_PRESS
GDK_PROPERTY_NOTIFY
Switch::MouseMove: pushindex: 3 value: 002
Switch::LeftDown: pushindex: 3 value: 002
GDK_EXPOSE
GDK_BUTTON_RELEASE
Switch::LeftUp (before the outer if cycle): pushindex: 3 value: 002
Switch::LeftUp (inside the outer if cycle): pushindex: 3 value: 002
Switch::LeftUp (inside the inner if cycle): pushindex: 3 v: 005 value: 002
Switch::LeftUp: pushindex: -1 value: 005

And this is the cycle with the touch screen:

GDK_BUTTON_PRESS
GDK_PROPERTY_NOTIFY
Switch::MouseMove: pushindex: 3 value: 002
GDK_EXPOSE
Switch::MouseMove: pushindex: 3 value: 002
Switch::LeftDown: pushindex: 3 value: 002
GDK_EXPOSE
GDK_MOTION_NOTIFY
GDK_BUTTON_RELEASE
Switch::MouseMove: pushindex: -1 value: 002
GDK_EXPOSE
Switch::LeftUp (before the outer if cycle): pushindex: -1 value: 002
Switch::LeftUp: pushindex: -1 value: 002

With the real mouse the LeftUp method is called immediately after the LeftDown; with the touch screen there is a MouseMove method in between. This MouseMove method set pushindex to -1. Now let's go where the variable "value" (the variable containing the value of the selected case) is set: inside the LeftUp method.

This is the relevant code:

```
 if(pushindex >= 0 && pushindex < cs.GetCount()) {
  RefreshCase(GetIndex());
```

```
  const Value& v = cs[pushindex].value;
  if(v != value) {
   value = v;
   UpdateAction();
  }
  RefreshCase(pushindex);
 }
```

As you can see, the value is set only if pushindex >=0, but the MouseMove method has set it to -1.

Let's see what the MouseMove method does:

```
 int i = GetIndex(p);
 int a = -1;
 if(keyflags & K_MOUSELEFT)
  a = i;
 if(pushindex != a) {
  RefreshCase(pushindex);
  RefreshCase(a);
  pushindex = a;
 }
```

Honestly I don't understand what that code actually does; I tried to comment out the whole method and the application crashes, so I modified it as follows:

```
 int i = GetIndex(p);
// int a = -1;
 int a = pushindex;
 if(keyflags & K_MOUSELEFT)
  a = i;
 if(pushindex != a) {
  RefreshCase(pushindex);
  RefreshCase(a);
  pushindex = a;
 }
```

With this modification the Switch control works also with the touch screen and the application does not crash. Of course that code is there for some reason, so I am not so comfortable with my modification. I will try to reach out the person who wrote Switch.cpp to see how we can work out things in a way that the touch screen is supported. Thanks a lot Klugier for the support.
Regards,
Gio

Subject: Re: Touchscreen on raspberry: problem with events
Posted by Klugier on Thu, 10 Aug 2017 14:55:09 GMT
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Hello,

I am happy you found the origin of that problem by yourself. I believe it is not, so hard We need more people like you!!!

The patch must be accepted by Mirek - I will raise the ticket on redmine (Our bugtrack) to not forget your issue. Of course, it could take some time, so please be patient. Your current application might work with custom CtrlLib for now.

Sincerely,
Klugier

Subject: Re: Touchscreen on raspberry: problem with events
Posted by rafiwui on Thu, 10 Aug 2017 14:57:17 GMT
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Quote:I will try to reach out the person who wrote Switch.cpp to see how we can work out things in a way that the touch screen is supported
I guess it would be enough if there would be a very short time after a LeftDown in which MouseMove is ignored.

Subject: Re: Touchscreen on raspberry: problem with events
Posted by Giorgio on Thu, 10 Aug 2017 15:13:51 GMT
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Klugier wrote on Thu, 10 August 2017 16:55
I am happy you found the origin of that problem by yourself. I believe it is not, so hard

Actually it wasn't so hard, but without your suggestion I would have been lost.

Klugier wrote on Thu, 10 August 2017 16:55
We need more people like you!!!

Well, we need more people like you from the U++ team my little debugging effort is the least I can do to give back to the U++ community.

Klugier wrote on Thu, 10 August 2017 16:55
The patch must be accepted by Mirek - I will raise the ticket on redmine (Our bugtrack) to not

forget your issue. Of course, it could take some time, so please be patient. Your current application might work with custom CtrlLib for now.

No problem, the porting is just started...

Subject: Re: Touchscreen on raspberry: problem with events
Posted by mirek on Sun, 10 Sep 2017 14:31:19 GMT
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Giorgio wrote on Thu, 10 August 2017 17:13Klugier wrote on Thu, 10 August 2017 16:55
I am happy you found the origin of that problem by yourself. I believe it is not, so hard

Actually it wasn't so hard, but without your suggestion I would have been lost.

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Well, we need more people like you from the U++ team my little debugging effort is the least I can do to give back to the U++ community.

Klugier wrote on Thu, 10 August 2017 16:55
The patch must be accepted by Mirek - I will raise the ticket on redmine (Our bugtrack) to not forget your issue. Of course, it could take some time, so please be patient. Your current application might work with custom CtrlLib for now.

No problem, the porting is just started...

Hi,

I am sorry fot the late reply. It all seems weird - MouseMove there should not cause this kind of problem, unless it has some invalid Point IMO.

(You can check that by simulating with 'real mouse' - click on item, then move the mouse, then release).

Would it be possible to add DUMP(p) to MouseMove / LeftUp / LeftDown ?

Subject: Re: Touchscreen on raspberry: problem with events
Posted by Giorgio on Tue, 26 Sep 2017 13:23:13 GMT
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Hi Mirek,
I am sorry not giving you feedback, but I am currently on a different project. Anyway, this "touch screen project" is really important in my company and I will provide you with any information/test/debugging you require.
Regards,
Giorgio

Subject: Re: Touchscreen on raspberry: problem with events
Posted by mirek on Wed, 27 Sep 2017 09:42:08 GMT
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Giorgio wrote on Tue, 26 September 2017 15:23Hi Mirek,
I am sorry not giving you feedback, but I am currently on a different project. Anyway, this "touch screen project" is really important in my company and I will provide you with any information/test/debugging you require.
Regards,
Giorgio

Would it be possible to add DUMP(p) to Switch::MouseMove / Switch::LeftUp / Switch::LeftDown, do "wrong touch" and send me the log?

Mirek

Subject: Re: Touchscreen on raspberry: problem with events
Posted by Giorgio on Wed, 21 Feb 2018 10:54:01 GMT
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Hi Mirek,
sorry for the very late answer. The project of porting the application to a touch platform was put in hold by the Company I work for, only during these days I was finally able to resume it. Since the time when I reported the issue, there has been a change of the platform: we used a Raspbian on a Raspberry, now we moved to a Debian (latest, 9.3 stretch) on a standard PC. The touch screen is still an EloTouch. These are some details about drivers and configuration of the video:

00:02.0 VGA compatible controller: Intel Corporation Xeon E3-1200 v2/3rd Gen Core processor Graphics Controller (rev 09)
drm_kms_helper 155648 1 i915
drm 360448 8 i915,drm_kms_helper
/dev/fb0
/dev/dri/card0

/dev/dri/renderD128
/dev/dri/controlD64
BOOT_IMAGE=/boot/vmlinuz-4.9.0-4-amd64
root=UUID=98a2e6b5-fc24-44c8-92cb-52a8c17f70a9 ro quiet
/etc/modprobe.d/
direct rendering: Yes
server glx vendor string: SGI
client glx vendor string: Mesa Project and SGI
    Vendor: Intel Open Source Technology Center (0x8086)
OpenGL vendor string: Intel Open Source Technology Center
[58.105] (II) LoadModule: "glx"
[58.129] (II) LoadModule: "modesetting"
[58.135] (II) LoadModule: "fbdev"
[58.151] (II) LoadModule: "vesa"
[58.153] (II) LoadModule: "fbdevhw"
[58.164] (II) LoadModule: "glamoregl"
[58.250] (II) LoadModule: "fb"
[58.459] (II) LoadModule: "libinput"

I added the DUMP(p) as per suggestion, and this is the result with a single tap on a switch control (note: this with the standard version of Switch.cpp, not the one I modified as described in this thread):

p = [160, 138]
p = [160, 138]
p = [160, 138]
p = [160, 138]
p = [160, 138]

I hope this could help and tell me if I should run some further tests.
Regards,
Gio

Subject: Re: Touchscreen on raspberry: problem with events
Posted by mirek on Thu, 22 Feb 2018 06:45:04 GMT
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Giorgio wrote on Wed, 21 February 2018 11:54Hi Mirek,
sorry for the very late answer. The project of porting the application to a touch platform was put in hold by the Company I work for, only during these days I was finally able to resume it. Since the time when I reported the issue, there has been a change of the platform: we used a Raspbian on a Raspberry, now we moved to a Debian (latest, 9.3 stretch) on a standard PC. The touch screen is still an EloTouch. These are some details about drivers and configuration of the video:

00:02.0 VGA compatible controller: Intel Corporation Xeon E3-1200 v2/3rd Gen Core processor Graphics Controller (rev 09)

drm_kms_helper 155648 1 i915
drm 360448 8 i915,drm_kms_helper
/dev/fb0
/dev/dri/card0
/dev/dri/renderD128
/dev/dri/controlD64
BOOT_IMAGE=/boot/vmlinuz-4.9.0-4-amd64
root=UUID=98a2e6b5-fc24-44c8-92cb-52a8c17f70a9 ro quiet
/etc/modprobe.d/
direct rendering: Yes
server glx vendor string: SGI
client glx vendor string: Mesa Project and SGI
Vendor: Intel Open Source Technology Center (0x8086)
OpenGL vendor string: Intel Open Source Technology Center
[58.105] (II) LoadModule: "glx"
[58.129] (II) LoadModule: "modesetting"
[58.135] (II) LoadModule: "fbdev"
[58.151] (II) LoadModule: "vesa"
[58.153] (II) LoadModule: "fbdevhw"
[58.164] (II) LoadModule: "glamoregl"
[58.250] (II) LoadModule: "fb"
[58.459] (II) LoadModule: "libinput"

I added the DUMP(p) as per suggestion, and this is the result with a single tap on a switch control (note: this with the standard version of Switch.cpp, not the one I modified as described in this thread):

p = [160, 138]
p = [160, 138]
p = [160, 138]
p = [160, 138]
p = [160, 138]

I hope this could help and tell me if I should run some further tests.
Regards,
Gio

Eh, I hoped to get these DDUMPs together with previous your LOGs

GDK_BUTTON_PRESS
GDK_PROPERTY_NOTIFY
Switch::MouseMove: pushindex: 3 value: 002
GDK_EXPOSE
Switch::MouseMove: pushindex: 3 value: 002
Switch::LeftDown: pushindex: 3 value: 002
GDK_EXPOSE

GDK_MOTION_NOTIFY
GDK_BUTTON_RELEASE
Switch::MouseMove: pushindex: -1 value: 002
GDK_EXPOSE
Switch::LeftUp (before the outer if cycle): pushindex: -1 value: 002
Switch::LeftUp: pushindex: -1 value: 002

Subject: Re: Touchscreen on raspberry: problem with events
Posted by mirek on Thu, 22 Feb 2018 06:47:26 GMT
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Also, please add DDUMP(keyflags & K_MOUSELEFT);

Subject: Re: Touchscreen on raspberry: problem with events
Posted by Giorgio on Thu, 22 Feb 2018 17:56:41 GMT
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Hi Mirek,
this is the output after adding the DDUMP:

p = [158, 142]
keyflags & K_MOUSELEFT = 8388608
p = [158, 142]
keyflags & K_MOUSELEFT = 0
p = [158, 142]
keyflags & K_MOUSELEFT = 0
p = [158, 142]
keyflags & K_MOUSELEFT = 0
p = [158, 142]
keyflags & K_MOUSELEFT = 0

Aside of that, I dug up a little the issue. My first tests (some months ago) was made with a raspbian on a raspberry and, as far as I recalled, most of the controls had problems. Some days ago I started using a plain debian and the only thing that had problems was the Switch control. I made some test using a different window manager (matchbox) and I noticed that using that, also the buttons have problems (once pressed they do not release). So far, the best compatibility I found was with gdm (Gnome Desktop Manager), but may happen that other desktop manager have a total compatibility. By the way, the log attached was got using gdm.
Regards,
Gio

Subject: Re: Touchscreen on raspberry: problem with events
Posted by mirek on Thu, 22 Feb 2018 18:00:28 GMT
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Quote:this is the output after adding the DDUMP:

I was hoping to be able to tell apart Move/Down/Left, as in original (old) log.

If you cannot do that, could you please at least add LOG("MouseMove") etc... before these logs?

I really would like to be able to tell apart which is what.

That said, so far it all appears to lead to conclusion that mouse up/down flags are not valid for Move....

Subject: Re: Touchscreen on raspberry: problem with events
Posted by mirek on Fri, 23 Feb 2018 18:33:51 GMT
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I attempted a fix (based on idea that mouse flags in motion event cannot be trusted...), can you please check with the trunk?

Mirek

Subject: Re: Touchscreen on raspberry: problem with events
Posted by Giorgio on Mon, 26 Feb 2018 13:55:47 GMT
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Hi Mirek,
this is the log with LOG() of a single tap (using the latest stable version of upp):

MouseMove
p = [155, 136]
keyflags & K_MOUSELEFT = 8388608
MouseMove
p = [155, 136]
keyflags & K_MOUSELEFT = 0
MouseMove
p = [155, 136]
keyflags & K_MOUSELEFT = 0
LeftDown
p = [155, 136]
keyflags & K_MOUSELEFT = 0
LeftUp

p = [155, 136]
keyflags & K_MOUSELEFT = 0
MouseMove

I also tried the nightly build and now the switch control works, although it works only if I keep pressed a little bit the option. I performed also another kind of test. I installed matchbox window manager (all the previous tests were performed with gnome), and with that wm buttons works erratically (e.g. they remain pressed). According to my searches, gnome's wm (mutter) uses OpenGL compatible libraries (I did not find anything about matchbox). So my hypothesis is that upp used with linux box with a touch screen works well with OpenGL libraries, and not with every graphic library.
Regards,
Giorgio

Subject: Re: Touchscreen on raspberry: problem with events
Posted by mirek on Mon, 26 Feb 2018 15:20:41 GMT
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Giorgio wrote on Mon, 26 February 2018 14:55Hi Mirek,
this is the log with LOG() of a single tap (using the latest stable version of upp):

MouseMove
p = [155, 136]
keyflags & K_MOUSELEFT = 8388608
MouseMove
p = [155, 136]
keyflags & K_MOUSELEFT = 0
MouseMove
p = [155, 136]
keyflags & K_MOUSELEFT = 0
LeftDown
p = [155, 136]
keyflags & K_MOUSELEFT = 0
LeftUp
p = [155, 136]
keyflags & K_MOUSELEFT = 0
MouseMove

That does not make sense at all...

Would it be possible to do test, with logs in GtkEvent.cpp:

#include <CtrlCore/CtrlCore.h>

```
#ifdef GUI_GTK

namespace Upp {

#define LLOG(x)    // DLOG(rmsecs() << ' ' << x)
#define LOG_EVENTS



void Ctrl::AddEvent(gpointer user_data, int type, const Value& value, GdkEvent *event)
{
 if(Events.GetCount() > 50000)
  return;
 GEvent& e = Events.AddTail();
 e.windowid = (uint32)(uintptr_t)user_data;
 e.type = type;
 e.value = value;
 gint x, y;
 GdkModifierType mod;
 gdk_window_get_pointer(gdk_get_default_root_window(), &x, &y, &mod);
 e.mousepos = Point(x, y);
 e.state = mod;
 e.count = 1;
 e.event = NULL;
 if(event) {
  e.time = gdk_event_get_time(event);
  e.event = gdk_event_copy(event);
 }
 else {
  e.time = gtk_get_current_event_time();
  e.event = gtk_get_current_event();
 }
       DUMPHEX(mod);
}
```

Mirek

Subject: Re: Touchscreen on raspberry: problem with events
Posted by mirek on Tue, 27 Feb 2018 08:15:49 GMT
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I have tried to alter mouse flags code to reflect what have we learned so far. Can you retest with current trunk please? (Maybe backup Switch.cpp so that we can do those LOGs again)

Subject: Re: Touchscreen on raspberry: problem with events
Posted by Giorgio on Fri, 09 Mar 2018 17:34:25 GMT
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mirek wrote on Tue, 27 February 2018 09:15I have tried to alter mouse flags code to reflect what have we learned so far. Can you retest with current trunk please? (Maybe backup Switch.cpp so that we can do those LOGs again)

Hi Mirek,
I downloaded and compiled the latest nightly build (11829) and when I made a single touch over a Switch control and now the control works as expected.
Thank you for the fix!

Just for the records: I put in the source of with upp-11799 with following log line in Switch::MouseMove, Switch::LeftDown and SwitchLeftUp:

LOG("MouseMove");
DUMP(p);
DDUMP(keyflags & K_MOUSELEFT);

I modified also the GtkEvent.cpp modified as per you message.

With those modifications I get an error and the application does not start:

********** PANIC: Invalid memory access!

/usr/bin/xmessage
Error: Can't open display:
Segmentation fault

P.S. I am sorry I am not able to provide you with a prompt feedback, but programming is just 10% of my job, so I often have to take care of other assignments.

Subject: Re: Touchscreen on raspberry: problem with events
Posted by mirek on Fri, 09 Mar 2018 18:27:35 GMT
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Giorgio wrote on Fri, 09 March 2018 18:34mirek wrote on Tue, 27 February 2018 09:15I have tried to alter mouse flags code to reflect what have we learned so far. Can you retest with current trunk please? (Maybe backup Switch.cpp so that we can do those LOGs again)

Hi Mirek,
I downloaded and compiled the latest nightly build (11829) and when I made a single touch over a Switch control and now the control works as expected.
Thank you for the fix!

Thanks, means issue is solved, right? Just in time for 2018.1....

Mirek

Subject: Re: Touchscreen on raspberry: problem with events
Posted by Giorgio on Mon, 12 Mar 2018 08:42:49 GMT
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Yes, it is fixed, thank you again for the effort you put in this.
