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Subject: GTK theming a reality  
Posted by [mirek](#) on Sun, 26 Nov 2006 00:20:33 GMT  
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After a couple of weeks of pretty messy development, kick-off of GTK chameleon is now in main sources.

At the moment, it just reads system colors and font and "chameleонises" Button, Option and Switch, but obviously, even so little makes a huge difference...

Please test! And test with as many themes as possible...

BTW, you do not have to have GTK development headers installed to develop with U++ - GTK is loaded at runtime. Actually, it does not have to be even present either - in that case, U++ default theme is used (after an attempt to read KDE colors and font...)

Mirek

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Subject: Re: GTK theming a reality  
Posted by [fallingdutch](#) on Sun, 26 Nov 2006 17:30:34 GMT  
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great work, Mirek!

it really looks much better!

Bas

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Subject: Re: GTK theming a reality  
Posted by [mirek](#) on Sun, 26 Nov 2006 20:33:19 GMT  
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ScrollBar theming ("chameleonization") in GTK is now finished as well.

We really start to look native

Mirek

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Subject: Re: GTK theming a reality  
Posted by [masu](#) on Sun, 26 Nov 2006 21:01:15 GMT  
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Hi,

we have the problem of upper and lower case includes once again.  
Had to change include definitions of DLIHEADER from draw/\*.dli to Draw/\*.dli in Draw.h and DrawX11.cpp since my directory is uppercase.

Matthias

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Subject: Re: GTK theming a reality  
Posted by [mirek](#) on Sun, 26 Nov 2006 21:07:01 GMT  
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Sorry, already fixed... (I hope).

I know this is stupid problem, but for me it is very convenient (almost the only possibility) to share the disk partition with sources between Win and Linux.

Mirek

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Subject: Re: GTK theming a reality  
Posted by [masu](#) on Sun, 26 Nov 2006 21:20:52 GMT  
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No problm, if all problems would have been so simple to solve .

Another problem is missing implementation of CtrlFrame::OverPaint.  
I simply copied Ctrl::OverPaint (which seems to basically be a placeholder) and it worked.  
But after starting new ide, I get DLL not found, investigating ...

Matthias

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Subject: Re: GTK theming a reality  
Posted by [mirek](#) on Sun, 26 Nov 2006 22:05:20 GMT  
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Already fixed, just sync new version. A lot was done today.

Mirek

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Subject: Re: GTK theming a reality  
Posted by [masu](#) on Sun, 26 Nov 2006 22:27:50 GMT  
[View Forum Message](#) <> [Reply to Message](#)

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masu wrote on Sun, 26 November 2006 22:20 But after starting new ide, I get DLL not found, investigating ...  
I did not activate "use shared libs" for building .

Matthias

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Subject: Re: GTK theming a reality  
Posted by [masu](#) on Tue, 28 Nov 2006 12:56:05 GMT  
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I noticed in "Output mode ..." that three-state checkbox is also missing from within GTK.  
Are you going to emulate it somehow like in Win?

Matthias

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Subject: Re: GTK theming a reality  
Posted by [guido](#) on Wed, 29 Nov 2006 10:47:25 GMT  
[View Forum Message](#) <> [Reply to Message](#)

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luzr wrote on Sun, 26 November 2006 01:20 After a couple of weeks of pretty messy development, kick-off of GTK chameleon is now in main sources.

At the moment, it just reads system colors and font and "chameleonises" Button, Option and Switch, but obviously, even so little makes a huge difference...

Please test! And test with as many themes as possible...

BTW, you do not have to have GTK development headers installed to develop with U++ - GTK is loaded at runtime. Actually, it does not have to be even present either - in that case, U++ default theme is used (after an attempt to read KDE colors and font...)

Mirek

Congratulations!

Already working on icon theming?

Currently it shares a problem I got with Firefox 2.0 (1.5 was OK) in that application font is two points too big. I can make it smaller by increasing the Xserver DPI setting from 72 to 120, but than the other GTK apps have tiny fonts.  
Could you please tell me, how the font size is retrieved?

Guido

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Subject: Re: GTK theming a reality  
Posted by [mirek](#) on Wed, 29 Nov 2006 10:57:48 GMT  
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guido wrote on Wed, 29 November 2006 05:47

Congratulations!

Already working on icon theming?

That is the next step. Actually, there is not too many icons import now (only for message boxes and OK Cancel buttons).

Well, I can also import "common" icons for Cut/Copy/Paste, but maybe I will do so rather on "app demand". There is also a problem with icon size...

Quote:

Currently it shares a problem I got with Firefox 2.0 (1.5 was OK) in that application font is two points too big. I can make it smaller by increasing the Xserver DPI setting from 72 to 120, but than the other GTK apps have tiny fonts.

Could you please tell me, how the font size is retrieved?

Sure:

```
char *font_name = "";
GOBJ().g_object_get(GTK().gtk_settings_get_default(), "gtk-font-name", &font_name, NULL);

const char *q = strrchr(font_name, ' ');
if(q) {
    int h = atoi(q);
    String face(font_name, q);
    int ii = Font::FindFaceNameIndex(face);
    if(ii < 0)
        if(ToUpper(face[0]) == 'M')
            ii = Font::COURIER;
        else
            if(ToUpper(face[0]) == 'S' && ToUpper(face[1]) == 'e')
                ii = Font::ROMAN;
            else
                ii = Font::ARIAL;
    Draw::SetStdFont(Font(ii, h ? h * 96 / 72 : 13));
}
```

(in short, it expects  $h * 96 / 72$  converts retrieved point size to 96dpi screen pixels).

For me, font is exactly as big as in other gnome apps. But as you already noted, I tend to oversimplify things, maybe this simple height retrieval needs to take into account more factors?

Mirek

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Subject: Re: GTK theming a reality  
Posted by [guido](#) on Wed, 29 Nov 2006 19:12:32 GMT  
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luzr wrote on Wed, 29 November 2006 11:57

Sure:

```
char *font_name = "";
GOBJ().g_object_get(GTK().gtk_settings_get_default(), "gtk-font-name", &font_name, NULL);

const char *q = strrchr(font_name, ' ');
if(q) {
    int h = atoi(q);
    String face(font_name, q);
    int ii = Font::FindFaceNameIndex(face);
    if(ii < 0)
        if(ToUpper(face[0]) == 'M')
            ii = Font::COURIER;
        else
            if(ToUpper(face[0]) == 'S' && ToUpper(face[1]) == 'e')
                ii = Font::ROMAN;
            else
                ii = Font::ARIAL;
    Draw::SetStdFont(Font(ii, h ? h * 96 / 72 : 13));
}
```

(in short, it expects  $h * 96 / 72$  converts retrieved point size to 96dpi screen pixels).

For me, font is exactly as big as in other gnome apps. But as you already noted, I tend to oversimplify things, maybe this simple height retrieval needs to take into account more factors?

Mirek

From the GTK2 docs:  
""

The "gtk-xft-dpi" property

"gtk-xft-dpi"      gint      : Read / Write

Resolution for Xft, in 1024 \* dots/inch. -1 to use default value.

Allowed values: [-1,1048576]

Default value: -1

""

Maybe use that in your formula?

Guido

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Subject: Re: GTK theming a reality  
Posted by [mirek](#) on Wed, 29 Nov 2006 19:29:12 GMT  
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Will you try? I think should be relatively easy (CtrlLib/ChGtk.cpp)

Mirek

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Subject: Re: GTK theming a reality  
Posted by [guido](#) on Thu, 30 Nov 2006 19:52:10 GMT  
[View Forum Message](#) <> [Reply to Message](#)

luzr wrote on Wed, 29 November 2006 20:29Will you try? I think should be relatively easy  
(CtrlLib/ChGtk.cpp)

Mirek

Ok. Here my take:

```
char *font_name = "";
GOBJ().g_object_get(GTK().gtk_settings_get_default(), "gtk-font-name", &font_name, NULL);
int xdpi;
GOBJ().g_object_get(GTK().gtk_settings_get_default(), "gtk-xft-dpi", &xdpi, NULL);

int fontname = Font::ARIAL;
int fontheight = 13;
```

```
const char *q = strrchr(font_name, ' ');
if(q) {
    int h = atoi(q);
    if(h)
        fontheight = h;
    String face(font_name, q);
    if(Font::FindFaceNameIndex(face) < 0)
        if(ToUpper(face[0]) == 'M')
            fontname = Font::COURIER;
        else
            if(ToUpper(face[0]) == 'S' && ToUpper(face[1]) == 'e')
                fontname = Font::ROMAN;
    }

    Draw::SetStdFont(Font(fontname, (fontheight * xdpi) / (1024*72)));

    ChLookFn(GtkLookFn);
```

I looked at the GDK docs, and that's the math there.

Incidentally, I fixed a allocation bug, which I noticed GTK complain about, when starting a sample app from a terminal.

The last line, is the fixed one:

```
ChSet("ScrollBarOverThumb", m != GetGTK(w, 0, 0, "slider", GTK_SLIDER|GTK_VAL1, 16, 32));
GTK().gtk_widget_destroy(w);
GTK().gtk_object_sink(adj);
```

Add to gtk.dli:

```
FN(void, gtk_object_sink, (G_obj *widget))
```

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Subject: Re: GTK theming a reality  
Posted by [guido](#) on Thu, 30 Nov 2006 19:58:17 GMT  
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---

Addendum:

Should better be

```
int xdpi = 96*1024;
```

I suppose.

Guido

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Subject: Re: GTK theming a reality  
Posted by [masu](#) on Thu, 30 Nov 2006 20:04:04 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

guido wrote on Thu, 30 November 2006 20:58Addendum:

Should better be

```
int xdpi = 96*1024;
```

I suppose.

Guido

Why?

My dpi setting is 75, so this would not work.

Your first solution seems to be right.

Matthias

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Subject: Re: GTK theming a reality  
Posted by [mirek](#) on Thu, 30 Nov 2006 20:24:51 GMT  
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---

masu wrote on Thu, 30 November 2006 15:04guido wrote on Thu, 30 November 2006  
20:58Addendum:

Should better be

```
int xdpi = 96*1024;
```

I suppose.

Guido

Why?

My dpi setting is 75, so this would not work.

Your first solution seems to be right.

Matthias

I think Guido just assigns a default value so it does not crash if retrieval from gtk fails.

Mirek

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Subject: Re: GTK theming a reality  
Posted by [guido](#) on Thu, 30 Nov 2006 20:27:26 GMT

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masu wrote on Thu, 30 November 2006 21:04guido wrote on Thu, 30 November 2006 20:58Addendum:

Should better be

```
int xdpi = 96*1024;
```

I suppose.

Guido

Why?

My dpi setting is 75, so this would not work.

Your first solution seems to be right.

Matthias

Only used as default, in case Gtk doesn't return a dpi value (although I doubt that can happen). 96dpi is the GTK default anyway, according to the docs, and Mirek used it as default too.

Guido

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Subject: Re: GTK theming a reality  
Posted by [guido](#) on Thu, 30 Nov 2006 20:29:28 GMT  
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---

Mirek beat me to it  
Watching UEFA-Cup, that's my excuse

Guido

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Subject: Re: GTK theming a reality  
Posted by [masu](#) on Thu, 30 Nov 2006 20:37:37 GMT  
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---

Yes, now I see it .  
By the way, thanks Guido for fixing the other problem .

Matthias

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Subject: Re: GTK theming a reality  
Posted by [mirek](#) on Thu, 30 Nov 2006 20:46:01 GMT  
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(now in uppsrc, thanks guido).

Mirek

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Subject: Re: GTK theming a reality  
Posted by [mirek](#) on Thu, 30 Nov 2006 20:58:41 GMT  
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---

BTW, I am just trying to get icons, but there is strange problem:

I am getting only the sort of alpha channel (no colors and perhaps that alpha is one of channels).

Code fragments used are:

```
ImageDraw iw(cx + 2 * margin, cy + 2 * margin);
iw.DrawRect(0, 0, cx + 2 * margin, cy + 2 * margin, back);
static G_obj *cm = GDK().gdk_x11_colormap_foreign_new(
    GDK().gdkx_visual_get(XVisualIDFromVisual(Xvisual)), Xcolormap);
G_obj *gw = GDK().gdk_pixmap_foreign_new(iw.GetDrawable());
GDK().gdk_drawable_set_colormap(gw, cm);
```

(above is common for painting widget elements too, so there most likely is not problem).

```
G_obj *b = GTK().gtk_widget_render_icon(widget, detail, state, NULL);
GDK().gdk_draw_pixbuf(gw, NULL, b, 0, 0, 0, 0, -1, -1, shadow, 0, 0);
GOBJ().g_object_unref(b);
```

(I am iterating state and shadow using several values to investigate the issue, all of them are just alphas...)

Any ideas?

Mirek

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Subject: Re: GTK theming a reality  
Posted by [masu](#) on Thu, 30 Nov 2006 21:45:41 GMT  
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---

luzr wrote on Thu, 30 November 2006 21:58

```
G_obj *b = GTK().gtk_widget_render_icon(widget, detail, state, NULL);
GDK().gdk_draw_pixbuf(gw, NULL, b, 0, 0, 0, 0, -1, -1, shadow, 0, 0);
```

```
GOBJ().g_object_unref(b);
```

Looking into the API docs, it should be:

```
GdkPixbuf *b = GTK().gtk_widget_render_icon(widget, detail, state, NULL);
GDK().gdk_draw_pixbuf(gw, NULL, b, 0, 0, 0, 0, -1, -1, shadow, 0, 0);
GOBJ().g_object_unref(b);
```

and widget has to be != NULL, but I think this is the case. Otherwise one should call `gdk_drawable_set_colormap()` on b again.

Matthias

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Subject: Re: GTK theming a reality  
Posted by [mirek](#) on Thu, 30 Nov 2006 21:50:36 GMT  
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---

As I am basically redefining the whole interface in U++/.dli and I am using it in just single .cpp file, I have simplified it by "merging" all GTK/GDK/GOBJ pointer types into single one - G\_obj (defined in U++).

Mirek

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Subject: Re: GTK theming a reality  
Posted by [mirek](#) on Thu, 30 Nov 2006 21:54:32 GMT  
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masu wrote on Thu, 30 November 2006 16:45luzr wrote on Thu, 30 November 2006 21:58

```
G_obj *b = GTK().gtk_widget_render_icon(widget, detail, state, NULL);
GDK().gdk_draw_pixbuf(gw, NULL, b, 0, 0, 0, 0, -1, -1, shadow, 0, 0);
GOBJ().g_object_unref(b);
```

Looking into the API docs, it should be:

```
GdkPixbuf *b = GTK().gtk_widget_render_icon(widget, detail, state, NULL);
GDK().gdk_draw_pixbuf(gw, NULL, b, 0, 0, 0, 0, -1, -1, shadow, 0, 0);
GOBJ().g_object_unref(b);
```

Otherwise one should call `gdk_drawable_set_colormap()` on b again.

Matthias

Afaik, GdkPixbuf is not drawable...

Mirek

---

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Subject: Re: GTK theming a reality  
Posted by [masu](#) on Thu, 30 Nov 2006 22:07:48 GMT  
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---

luzr wrote on Thu, 30 November 2006 22:54Afaik, GdkPixbuf is not drawable...

Mirek  
Yes, you are right, as usual .

Matthias

---

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Subject: Re: GTK theming a reality  
Posted by [mirek](#) on Sat, 02 Dec 2006 09:38:14 GMT  
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---

When I set the font size to "8", the font is different in U++ and Ubuntu. Therefore I tried to alter the code to

```
Draw::SetStdFont(Font(fontname, (fontheight * xdpi + 512*72) / (1024*72)));
```

(rounding the value). This seems to work OK for me, please check with your platforms...

Mirek

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Subject: Re: GTK theming a reality  
Posted by [masu](#) on Sat, 02 Dec 2006 23:16:48 GMT  
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---

This is ok for on my system .  
BTW, what was the problem with the pixbuf.

Edit: Size is ok, but I always get default font Arial.

Matthias

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Subject: Re: GTK theming a reality  
Posted by [mirek](#) on Sun, 03 Dec 2006 11:44:10 GMT  
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masu wrote on Sat, 02 December 2006 18:16

BTW, what was the problem with the pixbuf.

"prototype" widget was set into "insensitive" state for some reason (most likely as result of fact that our hacking of GTK to make it display things for us is really very fragile). Therefore it returned "insensitive" map.

Quote:

Edit: Size is ok, but I always get default font Arial.

What font have you set? (Just name).

Mirek

---

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Subject: Re: GTK theming a reality  
Posted by [masu](#) on Sun, 03 Dec 2006 14:17:58 GMT  
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---

luzr wrote on Sun, 03 December 2006 12:44What font have you set? (Just name).  
It is simply called "Sans", but it does matter what font I choose, it is always Arial in theIDE even after restarting theIDE.

Matthias

---

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Subject: Re: GTK theming a reality  
Posted by [guido](#) on Sun, 03 Dec 2006 15:37:49 GMT  
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---

masu wrote on Sun, 03 December 2006 15:17luzr wrote on Sun, 03 December 2006 12:44What font have you set? (Just name).  
It is simply called "Sans", but it does matter what font I choose, it is always Arial in theIDE even after restarting theIDE.

Matthias

Indeed, going DejaVu Sans -> DejaVu Serif for the GTK default font has no effect on upp apps

Guido

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Subject: Re: GTK theming a reality  
Posted by [mirek](#) on Tue, 05 Dec 2006 18:56:59 GMT  
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---

Font name issue fixed.

Mirek

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Subject: Re: GTK theming a reality  
Posted by [iplayfast](#) on Tue, 05 Dec 2006 19:48:02 GMT  
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---

In Draw/Draw.h there are some case sensitive issues for Linux compiles.

```
#define DLIMODULE  GTK
#define DLIHEADER  <draw/gtk.dli>
#include <Core/dli_header.h>

#define DLIMODULE  GDK
#define DLIHEADER  <draw/gdk.dli>
#include <Core/dli_header.h>

#define DLIMODULE  GOBJ
#define DLIHEADER  <draw/gobj.dli>
#include <Core/dli_header.h>
```

should be

```
#define DLIMODULE  GTK
#define DLIHEADER  <Draw/gtk.dli>
#include <Core/dli_header.h>

#define DLIMODULE  GDK
#define DLIHEADER  <Draw/gdk.dli>
#include <Core/dli_header.h>

#define DLIMODULE  GOBJ
#define DLIHEADER  <Draw/gobj.dli>
#include <Core/dli_header.h>
```

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Subject: Re: GTK theming a reality  
Posted by [masu](#) on Tue, 05 Dec 2006 20:27:36 GMT  
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---

This should have already been resolved.  
Please see prior posts

[http://www.arilect.com/upp/forum/index.php?t=msg&&th=1707&goto=6769#msg\\_6769](http://www.arilect.com/upp/forum/index.php?t=msg&&th=1707&goto=6769#msg_6769)  
and  
[http://www.arilect.com/upp/forum/index.php?t=msg&&th=1707&goto=6771#msg\\_6771](http://www.arilect.com/upp/forum/index.php?t=msg&&th=1707&goto=6771#msg_6771)

Matthias

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Subject: Re: GTK theming a reality  
Posted by [iplayfast](#) on Tue, 05 Dec 2006 20:37:45 GMT  
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---

Well I downloaded last night from the dupp-developent 611-dev4 (from Nov 27) and this was the problem I ran into. It's easy to check for yourself.

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Subject: Re: GTK theming a reality  
Posted by [masu](#) on Tue, 05 Dec 2006 20:58:38 GMT  
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---

I see, then it was overlapped action.  
At least the uvs version is fixed .

Matthias

---

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Subject: Re: GTK theming a reality  
Posted by [masu](#) on Wed, 06 Dec 2006 22:02:20 GMT  
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---

luzr wrote on Tue, 05 December 2006 19:56Font name issue fixed.  
Thanks, looks very nice, now .

Matthias

---