How To: Create KDE Themes, Part 2

GIVING KDE A MAKEOVER

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KDE gives you the ability to customise its appearance very quickly using "Themes." In this series we show you how you can create your own themes.

Theme: A Theme is a collection of multimedia elements which have a common theme as regards content. For example, if you are the fan of a rock group, you could use a digitised photo of the band as a background image and extracts from their songs as system sounds, creating a Theme.

In the first part of this trilogy we tackled the start panel, the background images and the icons. Let's take a look at the things covered in this series of articles:

- Start panel
- Background image
- Icons
- **window-buttons**
- **window-title bars**
- **window-frames**
- System sounds
- Colour schemes
- KFM-settings

This second part of the Workshop concerns the design of the window. To make it easier for you to get on board, we are not starting a new listing. At this point, we will simply expand Listing 1 (already discussed in Part 1). So don't be surprised when at the end of this article you discover an *eclipse.themerc*, which covers the first two parts.

And so it goes ...

… one more time. In the first part we took a look at the central KDE Design manager *kthememgr* and went into the meaning of the file *eclipse.themerc*. This knowledge is the basis of the entire series of articles and so applies for the following steps. If you are a little hazy on these key points it may be a good idea to refresh your memory by referring to last month's article before continuing.

New buttons for new clothes

… and for new windows too. In order to define new window buttons, we shall add two more sections to our *eclipse.themerc*. The first one defines which images are to be used and the second defines how they should be arranged.

The corresponding parameters for defining the images can be found in Table 1 (lines 041 to 047 in Listing 1). This section also includes details concerning the appearance of the title bar. "Title bar", by the way, is taken to mean the part of a window which displays the name of the window. The possible parameters for this are also shown in Table 1.

Since KDE supports colour shading by default, no title background images are specified in our *eclipse* theme. Impatient readers will have to wait until the third part of this series to find out how to do this.

The arrangement of the window buttons is defined in the section *[window button layout]*. This

Table 1: Images for window buttons

Section designator	[window title bar]
image for button to close window	CloseButton=filename
image for button to enlarge window to maximum	MaximizeButton=filename
image for button to restore the original size of the window	MaximizeDownButton=filename
image for button to minimize the window	MinimizeButton=filename
image for button to attach window	StickyButton=filename
image for button to cancel the attachment of the window	StickyDownButton=filename
title-background image for the active window	TitlePixmapActive=filename
title-background image for non-active window	TitlePixmapInactive=filename
Should the title pixmap be used behind the title text?	PixmapUnderTitleText=yes / no
Should the title bar of the active window be shown shaded?	TitleFrameShaded=yes / no
Alignment of the text in the title bar	TitleAlignment=left / middle / right

is where you must assign specific functions to the five possible buttons. The following function designators are available for this purpose:

- Menu: A click on this type of button opens a menu containing various functions that can be applied to the window. (e.g. moving the window to another **virtual desktop**.)
- Sticky: A click on this type of button attaches the window, so that it is visible on all virtual desktops.
- Off: This switches off a button.
- Close: A click on this type of button closes the corresponding window.
- Maximize: A click on this type of button enlarges the window to its maximum extent.
- Iconify: A click on this type of button has the effect that the window is no longer displayed on the current desktop. It can be made visible again either by using the key combination *Alt+Tab* or by a click on the entry in the **taskbar**.

The corresponding section in our *eclipse.themerc* (lines 048 to 054 in Listing 1) has the structure shown in Table 2.

In principle, it is possible to create the small images in the same way as the icons from part 1, so we won't go into detail again at this point. Using Firetext plugins for *The Gimp* can save a lot of pixel work if you want to have corresponding fire images. For the image in the title bar of windows you can "burn" the appropriate symbol using this tool:

- The menu button is occupied in KDE applications by a mini-image of the large icon.
- CloseButton: A large "X" is especially suitable for this.
- MaximizeButton: Enlargements are as a rule illustrated by means of pointed images facing upwards (e.g. an arrow), so for this we will simply use the "Exponent" symbol "^".
- MaximizeDownButton: Since this button restores the original size of a window, an underscore "_" can be used for this. I found this looked too straight and so opted for the tilde "~".
- MinimizeButton: For this button you can rotate the "maximize" button by 180 degrees.
- StickyButton: A capital "O" can be used for attaching …
- StickyDownButton: … and a small one for releasing.

The size of the window image should not exceed 20x20 pixels.

You can admire the effects of the changes made in this section in Figures 1 and 2.

New coat of paint

As you may have guessed, there is also a section devoted to window frames (lines 055 to 063 in Listing 1) in the configuration file. You can see the corresponding inputs in Table 3.

The Firetext plug-in of *Gimp* can also provide valuable assistance in creating individual frame fragments. You should be able to handle this tool blindfolded by now. So here are just a few more tips which are handy when creating window frames.
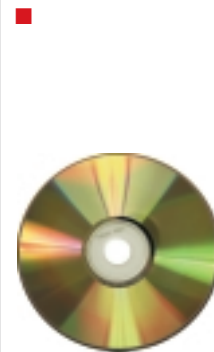
A window frame consists (as can be seen from Table 3) of eight parts. Let's start with the simpler ones and do the straight pieces. Always bear in mind that KDE lines these individual pieces up in a row until this row, together with the corners, covers the full width or height of the window. If the straight pieces are too long, this will make the frame bigger than the window. To prevent this, we will select a width of 1 pixel for the pieces that run longitudinally. For the right and left border the height will then be 1 pixel.

We create a line which is "on fire" by processing the underline "_" character with the Firetext plug-in of *Gimp*, and after zooming, cut out a piece 1 pixel wide. To ensure that the border at the end only shows "flames" on the outside, you should make sure that when cutting out, you take only the bottom half. Figure 3 shows how this border part could look.

[top]
Fig. 1: Title bar in the Standard KDE Look
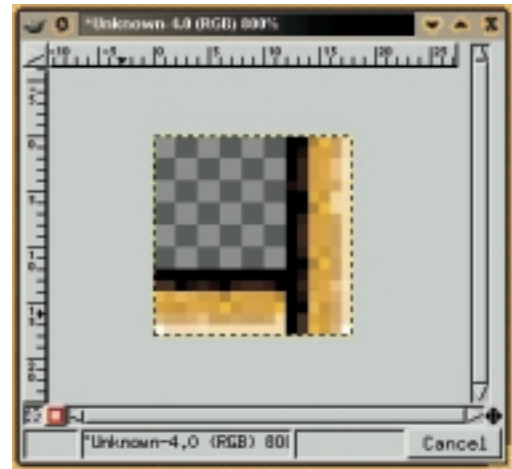
[bottom]
Fig. 2: Title bar with theme

Table 2: function definition of window buttons

Section designator	[window Button Layout]
first window button from left	ButtonA=function
second window button from left	ButtonB=function
third window button from left	ButtonC=function
first window button from right	ButtonD=function
second window button from right	ButtonE=function
third window button from right	ButtonF=function

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[left]
Fig. 3: Bottom border part enlarged 1300%
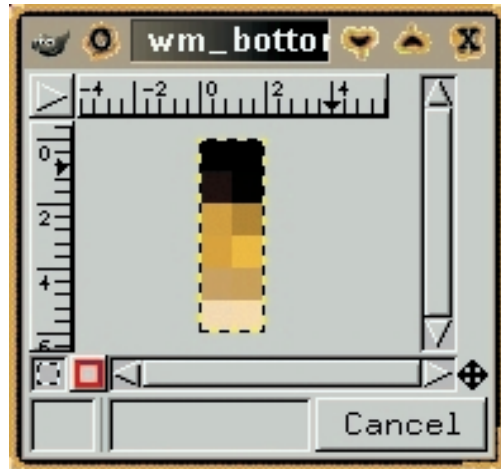
[right]
Fig. 4: Right bottom corner (Intermediate step 1) 800% enlarged

Infos
KDE Homepage:
http://www.kde.org/

The sample theme "eclipse":
http://kde.themes.org/themes. phtml?cattype=inc=trad=0=1= eclipse
KDE Themes Homepage:
http://kde.themes.org
The Gimp Homepage:
http://www.gimp.org
KDE Designmanager:
ftp://ftp.kde.org/pub/kde/unst able/apps/themes/kthememan ager-1.0.0-src.tar.gz

The other straight border pieces are simply created by rotation. You can find this function in *Gimp* as follows:
• Right click in the image
• *Image/Transforms/Rotate*
We thus create, by means of successive rotation by 90 degrees, the remaining straight border pieces.

Let's take a look at the corners. To create the right bottom corner, which is shown in Figure 7, we shall cut out a somewhat larger piece from our burning underline "_" (again, only half!). We copy this (*Ctrl+C*), create a new transparent file (*Ctrl+N*) and paste it to this (*Ctrl+V*). Now the copy is rotated in such a way that the "flames" are shown outside on the right. The result is two parts which simply have to be placed together.

Newly created images assume as standard size the values (width and height) of the image which is now in the **buffer**. Again, we copy one of the two parts into the buffer (*Ctrl+C*) and create a new transparent file (*Ctrl+N*). When doing so, we set the enlargement of the image to be created in both the x and the y direction as the higher of the two values entered. Now the copy is pasted into the new file and moved to the appropriate border. The same is done with the other part. The result of these efforts can be seen in Figure 4.

The remaining corners can be created simply by cutting out the bottom right corner part from the newly-created bottom right corner. By means of rotation, you can turn it into the parts that are still needed. As an example of this, take a look at the bottom left border corner in Figure 8.

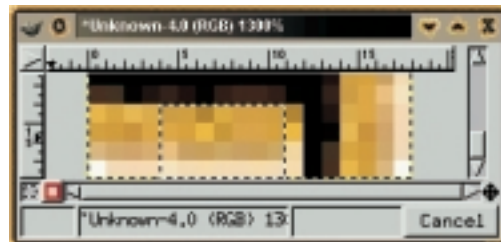**Fig. 5: Right bottom corner (Intermediate step 2) 1300% enlarged**

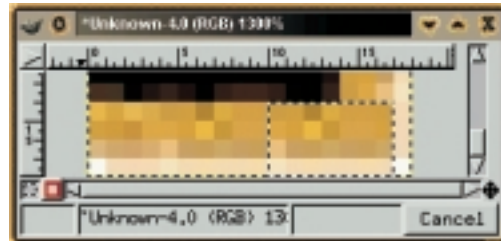**Fig. 6: Right bottom corner (Intermediate step 3) 1300% enlarged**

Fig. 7: Right bottom corner 1000% enlarged

Fig. 8: Left bottom corner 1000% enlarged

Table 3: window frames	
Section designator	[window border]
image for top window border	shapePixmapTop=filename
image for bottom window border	shapePixmapBottom=filename
image for left window border	shapePixmapLeft=filename
image for right window border	shapePixmapRight=filename
image for top left window corner	shapePixmapTopLeft=filename
image for top right window corner	shapePixmapTopRight=filename
image for bottom left window corner	shapePixmapBottomLeft=filename
image for bottom right window corner	shapePixmapBottomRight=filename

Listing 1: eclipse.themerc

```
001 [General]
002 name=eclipse
003 author=Hagen Hoepfner
004 email=Hagen.Hoepfner<\@>gmx.de
005 description=A dark sun for KDE (made with
 gimp and its
Firetext-plugin)
006 version=0.3

007 [Display]
008 CommonDesktop=true
009 Wallpaper0=bg.jpg
010 WallpaperMode0=Scaled

011 [Panel]
012 background=panel.xpm

013 [Icons]
014 PanelGo=go.xpm:mini-go.xpm
015 PanelExit=exit.xpm
016 PanelKey=key.xpm
017 Home=kfm_home.xpm
018 Trash=kfm_trash.xpm
019 TrashFull=kfm_fulltrash.xpm

020 [Extra Icons]
021 Extra1=kfind.xpm
022 Extra2=image.xpm
023 Extra3=sound.xpm
024 Extra4=aktion.xpm
025 Extra5=kwrite.xpm
026 Extra6=folder.xpm
027 Extra7=kcontrol.xpm
028 Extra8=kdehelp.xpm
029 Extra9=kmail.xpm
030 Extra10=kfm_refresh.xpm
031 Extra11=folder_open.xpm
032 Extra12=3floppy_mount.xpm
033 Extra13=3floppy_unmount.xpm
034 Extra14=5floppy_mount.xpm
035 Extra15=5floppy_unmount.xpm
036 Extra16=core.xpm
037 Extra17=document.xpm
038 Extra18=input_devices_settings.xpm
039 Extra19=kab.xpm
040 Extra20=kvt.xpm

041 [window titlebar]
042 CloseButton=close.xpm
043 MaximizeButton=maximize.xpm
044 MaximizeDownButton=maximizedown.xpm
045 MinimizeButton=iconify.xpm
046 StickyButton=pinup.xpm
047 StickyDownButton=pindown.xpm

048 [window button layout]
049 ButtonA=Menu
050 ButtonB=Sticky
051 ButtonC=Off
052 ButtonD=Close
053 ButtonE=Maximize
054 ButtonF=Iconify
055 [window border]
056 shapePixmapTop=wm_top.xpm
057 shapePixmapBottom=wm_bottom.xpm
058 shapePixmapLeft=wm_left.xpm
059 shapePixmapRight=wm_right.xpm
060 shapePixmapTopLeft=wm_topleft.xpm
061 shapePixmapTopRight=wm_topright.xpm
062 shapePixmapBottomLeft=wm_bottomleft.xpm
063 shapePixmapBottomRight=wm_bottomright.xpm
```
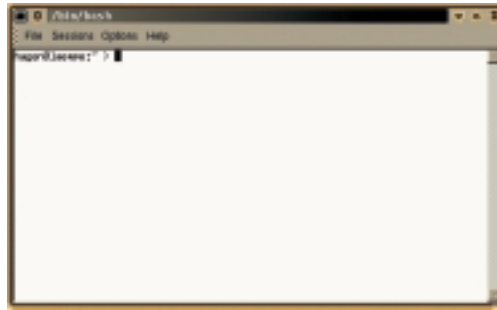

Fig. 9: window in the Standard-KDE-Look

Fig. 10: window with theme

End of window-cleaning

What have we achieved so far? We have now adapted new images to our windows, tidied up the window frame and altered the title bar of the window, even if the latter is not yet complete. You can clearly see the differences if you have a look at Figures 9 and 10.

Well, all right, we did cheat a little. We'll find out later how to change the colour scheme. We changed the colour scheme because our image and our frame did not look too brilliant with the standard colours.

Now all we have to do is combine the *eclipse/* directory using:

```
tar cvf eclipse.tar eclipse/
```

into a **tar archive**, and then compress this using

```
gzip eclipse.tar
```

Admire what has been achieved so far. To do this we start *kthememgr*, remove the old *eclipse* entry and add our new package. Now just click on *OK* and be amazed.

Removing themes

Unfortunately *kthememgr* is unable to delete themes cleanly. For this reason, the individual images must be deleted manually before changing the theme. This is done by running three commands:

```
rm ~/.kde/share/icons/* -rf
rm ~/.kde/share/apps/kwm/pics/*
rm ~/.kde/share/apps/kpanel/pics/* -rf
```

Don't worry, the Design manager retains a copy of the files, so that they are still available if you want to use a theme again. ■

Buffer: The buffer is used when copying within a program. If a text or an image is copied with Ctrl+C, the copy will first be placed in the buffer and can then be pasted from this into another file using Ctrl+V.

tar archive: tar is a program which was originally designed to allow backups to be made to a tape drive. But it can also be used to combine several files into one. No data compression is used during this process, however. In order to save space, such archives are usually compressed in a following step using gzip or b2zip.