KDE Themes Workshop, Part 3

ON THE EMPEROR'S NEW CLOTHES

BY HAGEN HÖPFNER

KDE's ability to alter its appearance rapidly by means of so-called themes is probably fairly well-known by now. This series describes how to create your own themes.

Theme: *The word theme describes a pot-pourri of different audio-visual elements. These all relate to a common theme in terms of content. A rock group fan could combine a digitised photo of his/her favourite band as a background image with parts of their music as acoustic signals into a theme.*

Desktop Environment: *Under Linux there are several graphical desktop environments in existence (the best-known being CDE, KDE, GNOME). Unlike pure window managers, with which desktop environments are often falsely equated, these usually provide additional functionalities such as drag & drop, session management and a panel bar.*

.wav-Format: *WAV stands for Wave. It is an uncompressed and thus very memory-hungry form of audio data storage.*

It is highly likely that before this last part of the series comes out, the first stable version of the **Desktop Environment** KDE 2 will appear. This article is intended to complete the trilogy on KDE **Themes**. Themes for KDE 1.1.2 can also be used under KDE 2. This will be discussed briefly at the end of this article. First we shall concern ourselves with the last three items on our to-do list.

• Start list
• Background image
• Icons
• Window-buttons
• Window-title bars
• Window-frames
• **System sounds**
• **Colour schemes**
• **KFM settings**

We shall be expanding the file already used in the first two parts in the individual steps, eclipse.themerc (see Listing 1).

And so it goes ...

At this point I would like to refer again to the central significance of the KDE Design manager

kthememgr and the file eclipse.themerc. This knowledge is fundamental to the complete series of articles. If your knowledge of these crucial points has already faded somewhat, it's best to reacquaint yourself with the two previous parts before continuing.

Wired for sound

In order to be able to build system sounds into our themes, a basic theoretical prior knowledge of sound processing is helpful. Acoustic signals serve as the background for events on the Desktop. To do this, KDE uses audio files in **.wav format**. Sometimes files from the Windows(r) world differ from those of (other) operating systems. WAV files under Windows can display a reversed bit arrangement. If one wishes to use such files under Linux, they have to be converted by means of *sox windowsfile.wav linuxfile.wav*.

Audio files can be obtained from a wide variety of sources (Audio-CD, self-recording etc). For recording the sounds, the KDE tool *krecord* (see Figure 1) can be used. If you want to record sounds with this program, this is how to do it:

1. Start from *krecord* by clicking on the corresponding entry in the sub-item Multimedia on the Start menu
2. Start the recording by a left click on the "Record button" (red spot)
3. Record
4. End recording by a left click on the "Stop button" (black rectangle)
5. Call up the memory dialog by a left click on the diskette symbol
6. Define the name of the file
7. Store the data in a .wav file by left-clicking the OK button.

The raw material (which we have now recorded) must be reprocessed. The KDE tool *kwave* is used for this purpose (see Figure 2). It's a good idea to experiment a little with this tool.

Once our sounds have now been reprocessed as necessary, we must enter them into our configuration file (cf. lines 064 to 094 in Listing 1). The individual parameters of this section [Sounds] can be found in Table 1.

By the way, the system sounds in this sample theme were played direct by guitar. For those interested: The chord which sounds when the log-out dialog is called up is a Dm9 (in guitar notation (x x 7 7 6 0)).


Fig. 1: krecord is suitable for recording sounds

Colourful adjustments

Many things are simpler than one thinks. So KDE offers a good, dialog-driven colour selection. Figure 3 shows this dialog, which can be found in the start menu under settings/desktop/colours.

In the above section, the elements of the

Table 1: Sounds	
Section title	[Sounds]
Activate the system sounds	ConfigInstallCmd=enableSounds
Start the audio server	ConfigActivateCmd=kwmcom syssnd_restart
Audiofile for activating first virtual desktop	Desktop1=file name
Audiofile for activating second virtual desktop	Desktop2=file name
Audiofile for activating third virtual desktop	Desktop3=file name
Audiofile for activating fourth virtual desktop	Desktop4=file name
Audiofile for activating fifth virtual desktops	Desktop5=file name
Audiofile for activating sixth virtual desktop	Desktop6=file name
Audiofile for activating seventh virtual desktop	Desktop7=file name
Audiofile for activating eighth virtual desktop	Desktop8=file name
Audiofile for log-out from KDE	Logout=file name
Audiofile for message before log out	LogoutMessage=file name
Audiofile for starting KDE	Startup=file name
Audiofile for activating a window	WindowActivate=file name
Audiofile for closing a window	WindowClose=file name
Audiofile for deiconifying a window	WindowDeIconify=file name
Audiofile for iconifying a window	WindowIconify=file name
Audiofile for maximising a window	WindowMaximize=file name
Audiofile for end when moving a window	WindowMoveEnd=file name
Audiofile for start of moving a window	WindowMoveStart=file name
Audiofile for opening a window	WindowOpen=file name
Audiofile for end of resizing a window	WindowResizeEnd=file name
Audiofile for start of resizing a window	WindowResizeStart=file name
Audiofile for shading down a window	WindowShadeDown=file name
Audiofile for shading up a window	WindowShadeUp=file name
Audiofile for sticking on a window	WindowSticky=file name
Audiofile for ending a dialogue window	WindowTransDelete=file name
Audiofile for opening a dialogue window	WindowTransNew=file name
Audiofile for restoring original size of a window	WindowUnMaximize=file name
Audiofile for unsticking a window	WindowUnSticky=file name

SOFTWARE   WORKSHOP: KDE THEMES
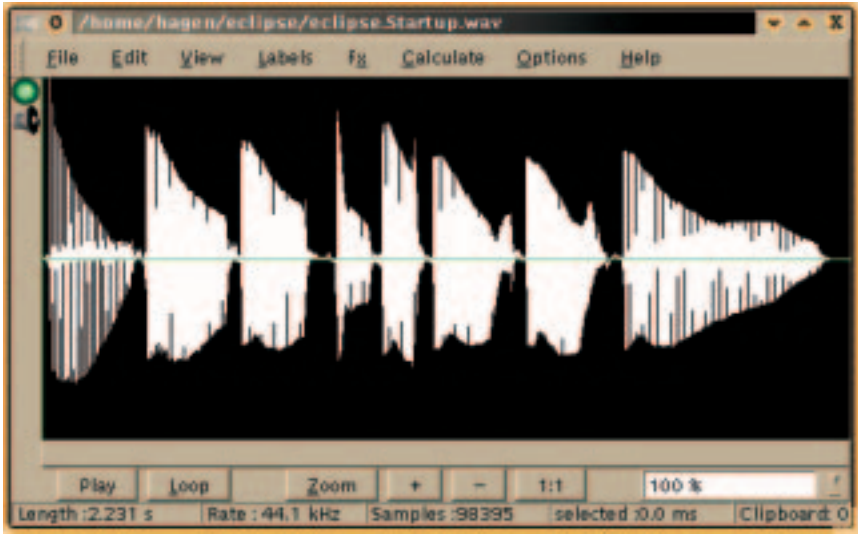
[top]
Fig. 2: kwave is a
tool for reprocessing sound
recordings

[right]
Fig. 3: Colour
scheme dialog

Comment: *Comments serve*
exclusively as information for
those who have to deal in
more detail with the content
of a file. They are introduced
by specific symbols and
ignored during the execution
or processing of this file.
Under Linux/Unix the hash sign
(#) is normally used.
KFM: //KFM stands for K File
Manager and is the standard
file manager in KDE 1.x.
Drag and Drop: Drag and
Drop refers to the dragging of
an icon object from one
application into another. The
target application is given a
file, which can then be opened
automatically by the latter.

surface can be selected. To do so, select these in a dialog, which appears after clicking on the button with the current colour. If all colours have been set, one can store one's own colour scheme using the Add button. As shown in Figure 4, by clicking on this button a dialog appears. Here one can enter the name of the colour scheme. The colour scheme is stored and the little name dialog closed by simply clicking on the OK button. A click on the OK button of the colour scheme dialog and our colour scheme is accepted.

How do we get this colour scheme into our file eclipse.themerc (cf.: lines 095-109 in Listing 1)? This is very simple. In the directory in which the colour scheme data are stored (~/.kde/share/apps/kdisplay/color-schemes), the file eclipse.kcsrc can be found. We simply attach the content of this file (cf. Listing 2) to our eclipse.themerc. I have deleted the **Comment** (line with the symbol # at the beginning) in List 1.

For the sake of an overview, Table 2 describes the entries in the section [Colours].

The simplest way to create a theme consistent with this article is to copy out by hand the few lines from Listing 1 into the eclipse.themerc.

KFM-settings

If KDE was "only" a window manager and thus "only" concerned with displaying windows, this last point would be superfluous. But KDE is more than just a window manager. It is the basis for a variety of programs for almost every domain of application. KDE programs usually work together better using **Drag and Drop** than is usually the case with X11 applications. You can search the file system by

Table 2: Colours

Section title	[Colours]
Text colour for normal text	foregroundColour
Text colour for selected text	selectForeground=Colour
Second colour for the Title bar of active windows (colour shade)	activeBlend=Colour
Colour for text selection	selectBackground=Colour
Colour for the title bar of inactive windows	inactiveBackground=Colour
Name of the colour scheme	name=eclipse
Contrast	contrast=Contrast value
Background colour	background=Colour
Colour for the title bar of active windows	activeBackground=Colour
Second Colour for the title bar of inactive windows (colour shade)	inactiveBlend=Colour
Text colour for text in inactive windows	inactiveForeground=Colour
Text colour of the menu item clicked on	activeForeground=Colour
Text colour of menu entries	windowForeground=Colour
Colour of menus	windowBackground=Colour

Table 3: File Manager

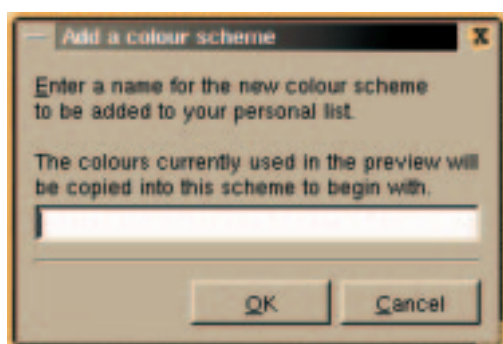|	
Section title	[File Manager]
Backgroundfile	backgroundImage=file name
Standard background colour for HTML view	htmlBackground=Colour
Standard Text colour for HTML view	htmlForeground=Colour
Standard colour for Links in HTML view	htmlLinks=Colour
Standard colour for links already visited in HTML view	htmlFollowedLinks=Colour

Fig. 4: Naming the colour scheme

going into the Personal Directory in the Start menu. We'll now customize this window to our theme. Table 3 contains the necessary details on possible parameters.

The corresponding entries in eclipse.themerc can be found from line 110 onwards in Listing 1. Figures 5 and 6 clarify the distinction between a "themed" file browser and one without special adaptations.

Since background images have already been covered in the first part of this series, you should refer to the explanations there. The question of finding the desired colour entries has also already been dealt with in detail.

So far, so good

This concludes the series on creating one's own KDE themes. Figure 7 shows us once more, how our KDE looks with the eclipse theme.

Entering the theme in KDE.THEMES.ORG

KDE.THEMES.ORG is an Internet collection (see Figure 8) of KDE themes.

Since this series of articles has, hopefully, laid the foundation for the development of many thousands of themes, I will not deny you this last point. This is how to proceed:
1. Register as a user at *http://www.themes.org/ newuser.phtml* (Figure 9)
2. You will be sent an ID by e-mail.
3. Log in with the ID and your chosen user name
4. Enter the new theme (cf. Figure 10) stating the following information:
- Theme Name: Name of theme
- Theme Category: Heading under which the theme should be classified. The following headings can be chosen: Animals, Animation, Art, Cartoons, Computers, Engine, Fantasy, Holiday, Misc, Movies, Music, Nature, Operating Sys, People, Pixmap, Places, Plain, Products, Science Fiction, Sports, Uncategorized, Vehicles, Video Games, and Web Sites.
- Theme Description: description of theme
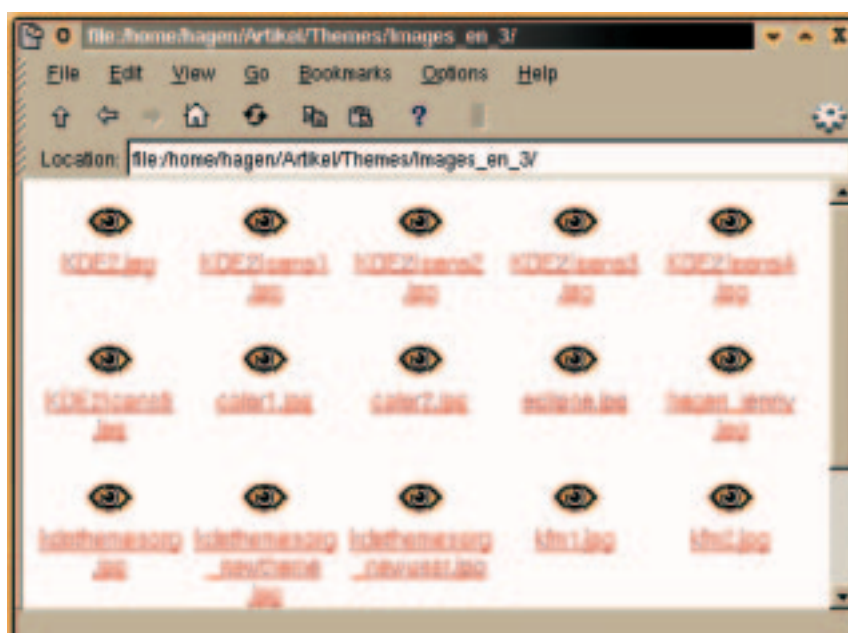- Screenshot File: screen shot of the display with the theme (see Info on shooting screen shots)

Fig. 5: KFM without theme adaptations

Fig. 6: KFM with theme adaptations

- Theme File (xxx): **TAR-Archiv** of the theme packed with gzip.
5. Press the Submit button and ...
6. ... send an e-mail to everyone you know, telling them a brand new, really wild theme is now available for downloading.

Info: Shooting screenshots

To shoot screen shots one can use, what else, e.g. "The Gimp". This is how to proceed:
1. Start "The Gimp"
2. Start the screenshot dialogue via file/get/screen shot...
3. Select record entire screen
4. Click on the Record button
5. Save the file as a .jpg file

TAR-Archiv: *tar is a program which was originally intended to perform data back-ups on a tape drive. But in addition it also offers the option of archiving a number of files combined into a single one. In this procedure no data compression is performed. To save space, such archives are usually still compressed using gzip or b2zip.*

Fig. 7: KDE 1.1.2 with our eclipse theme

Deleting themes

Sadly, *kthememgr* is unable to delete themes cleanly. Hence the individual images have to be deleted by hand before changing the theme. This is done by means of the 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 keeps a copy of the files. If the theme is reused they are available again.

KDE 1.1.2 Themes and KDE 2

If it has not already happened by the time this issue of is published, then it will certainly happen in the foreseeable future: KDE 2 will supersede KDE 1.1.2. At the time of writing, I'm already using the truly stable KDE Version 1.92 (Beta 3). This version now also supports **Widget** themes, which you may already know from **GTK** toolkit. Since this widget

support was not yet available in KDE 1.1.2 and the options arising as the result are enormous, let's leave this to one side for the moment.

Sadly I do not yet know of any additional tools for transferring complete themes simply. Therefore we'll go the manual route.

integrating the background image

In order to integrate our background image in KDE 2, this is what to do:

1. Call up the background-dialog via the start list and following sub-items: settings/display image/desktop/Background
2. Change to the register card Background image
3. Activate joint background and deactivate more
4. Select mode and set Scaled
5. Using the Select button and following dialog, change to the eclipse directory and select our background file bg.jpg
6. By clicking on the OK button accept the changes. And our solar eclipse is now "shining" in the background.

Using the colour scheme

If the directory ~/.kde2/share/apps/kdisplay/color-schemes is not yet available, we shall create it with the command mkdir ~/.kde2/share/apps/kdisplay/color-schemes. Now we can copy our already existing file, shown in Listing 2, eclipse.kcsrc into this directory. To activate the colour scheme, this is how to proceed:

1. Call up the colour scheme dialogue via the Start list and following sub-items: settings/displayimage/Colours
2. Select the eclipse colour scheme in the list
3. Click on the OK button to accept the changes

If you now look at the links on your desktop, you will notice that they are shown with black text. As this is hard to read, we shall change this colour as follows:

1. Call up the corresponding dialog via the Start list and the following sub-items: settings/displaysimage/desktop/general
2. Change to the register card display image
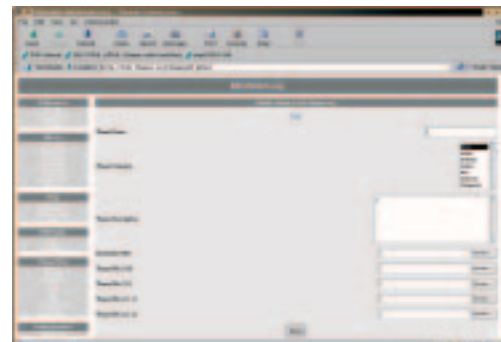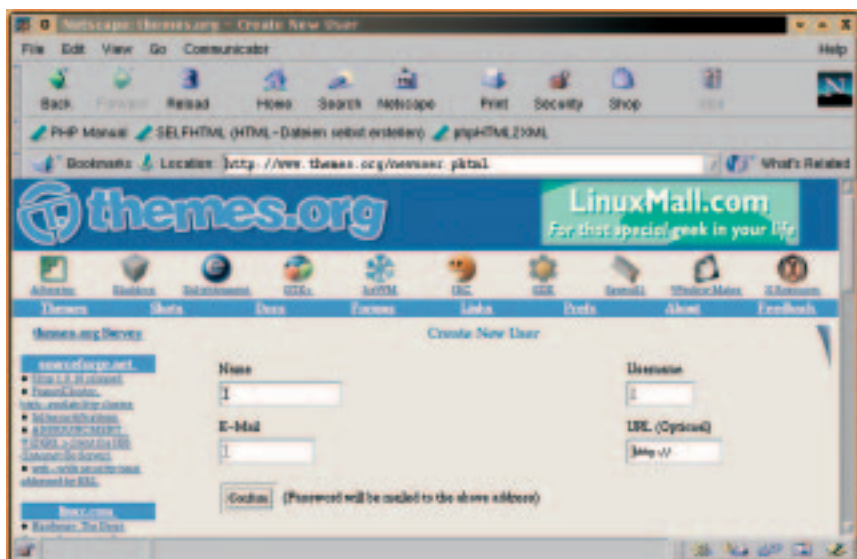3. Set colour for normal text as "White"

[top]
Fig. 8: KDE.THEMES.ORG – Starting page

[below]
Fig. 9: KDE.THEMES.ORG - Make new user

Fig. 10: KDE.THEMES.ORG - Enter new theme

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 wit⏎
h 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=action.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
```

```
064 [Sounds]
065 ConfigInstallCmd=enableSounds
066 ConfigActivateCmd=kwmcom syssnd_restart
067 Desktop1=eclipse.switchdesk.wav
068 Desktop2=eclipse.switchdesk.wav
069 Desktop3=eclipse.switchdesk.wav
070 Desktop4=eclipse.switchdesk.wav
071 Desktop5=eclipse.switchdesk.wav
072 Desktop6=eclipse.switchdesk.wav
073 Desktop7=eclipse.switchdesk.wav
074 Desktop8=eclipse.switchdesk.wav
075 Logout=
076 LogoutMessage=eclipse.LogoutMessage.wav
077 Startup=eclipse.Startup.wav
078 WindowActivate=
079 WindowClose=eclipse.WindowClose.wav
080 WindowDeIconify=eclipse.WindowDeIconi⏎
fy.wav
081 WindowIconify=eclipse.WindowIconify.wav
082 WindowMaximize=eclipse.WindowMaximize.wav
083 WindowMoveEnd=
084 WindowMoveStart=
085 WindowOpen=eclipse.WindowOpen.wav
086 WindowResizeEnd=
087 WindowResizeStart=
088 WindowShadeDown=eclipse.WindowShadeDo⏎
wn.wav
089 WindowShadeUp=eclipse.WindowShadeUp.wav
090 WindowSticky=eclipse.WindowSticky.wav
091 WindowTransDelete=
092 WindowTransNew=
093 WindowUnMaximize=eclipse.WindowUnMaximi⏎
ze.wav
094 WindowUnSticky=eclipse.WindowUnSticky.wav
095 [Colors]
096 foreground=0,0,0
097 selectForeground=255,255,255
098 activeBlend=0,0,0
099 selectBackground=164,151,132
100 inactiveBackground=0,0,0
101 name=eclipse
102 contrast=5
103 background=180,167,145
104 activeBackground=122,112,94
105 inactiveBlend=213,197,172
106 inactiveForeground=175,180,159
107 activeForeground=255,255,255
108 windowForeground=0,0,0
109 windowBackground=255,255,255
110 [File Manager]
111 backgroundImage=eclipse_konsole.jpg
112 htmlBackground=239,226,196
113 htmlForeground=0,0,0
114 htmlLinks=0,0,0
115 htmlFollowedLinks=122,112,94
```

Listing 2: eclipse.kcsrc

```
# KDE Config File
[Color Scheme]
foreground=0,0,0
selectForeground=255,255,255
activeBlend=0,0,0
selectBackground=164,151,132
inactiveBackground=0,0,0
name=eclipse
contrast=5
background=180,167,145
activeBackground=122,112,94
inactiveBlend=213,197,172
inactiveForeground=175,180,159
activeForeground=255,255,255
windowForeground=0,0,0
windowBackground=255,255,255
```

Info

*[1] KDE Homepage:
http://www.kde.org
[2] The sample theme
"eclipse":
http://kde.themes.org/themes.
phtml?cattype=inc=trad=0=1=
eclipse
[3] KDE Themes Homepage:
http://kde.themes.org
[4] The Gimp Homepage:
http://www.gimp.org
[5] KDE
Designmanager:ftp://ftp.kde.o
rg/pub/kde/unstable/apps/the
mes/kthememanager-1.0.0-
src.tar.gz
[6] Mosfet's widget theme
HOWTO:http://www.mosfet.or
g/widgettheme-tutorial/
[7] sox Homepage:
http://home.sprynet.com/~cba
gwell/sox.html
[8] krecord Homepage:
http://me.in-
berlin.de/~kraxel/krecord.html
[9] kwave Homepage:
http://fs.spinfo.uni-
koeln.de/~kwave/*

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The author

*Hagen Höpfner is studying
computing at the Otto-von-
Guericke University in
Magdeburg. In his spare time
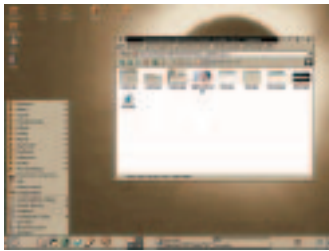he is an enthusiastic family
man and plays the guitar in a
rock band
(http://www.gutefrage.de).*

Fig. 17. KDE 2 "with eclipse theme"

Widget: The word Widget refers to all graphical elements which occur in programs, buttons, input boxes etc.
GTK: The Gimp ToolKit, originally created in the frame of the development of our dearly beloved image processing program Gimp, is a sort of program library containing prefabricated program parts and programming templates. GTK has been massively expanded (GTK+) and forms the basis, like Qt in the KDE world, for GNOME applications.

4. Click on the OK button to accept the changes. The whole thing is seen at its best when using the standard widget theme. In particular, this does not impose any pixmaps on the widgets.

... and the icons

Manual rearrangement is just as much work as creating icons. Nevertheless it is possible. Hence it is explained here by the example of the 3.5" diskette icon.

1. Right click on the corresponding icon
2. Left click on Properties
3. A dialog box opens, in which both icons for the mounted drive (see Figure 11), or the unmounted drive (see Figure 12) can be selected.
4. By left clicking on the icon illustrated there the dialog box in Figure 13 opens.
5. After selecting Other Symbols and left-clicking on the browse button a dialog box appears in which the requisite symbol can be selected. (Figure 14)
6. If the symbol has been selected, a left-click on OK takes you into a further dialogue box (Figure 15).
7. All that's left is selection of icons by a simple left-click on them and confirmation of the change by a left-click on the OK button. These steps should now be performed for all the icons to be changed – or else you could wait until *kthememgr* is ported onto KDE 2.

Start menu

The icons in the start menu are selected in the Menu editor (Figure 16), which can be found in the Start menu under System/Menu/Editor. The procedure is similar to that for normal icons and needs no further explanation.

So much for KDE 2

It's OK, but it's still too awkward. At this point we must settle for the hope that *kthememgr* will yet be ported onto KDE 2 and leave it up to the individual to decide whether he/she really wants to perform all settings by hand.

Figure 17 shows how KDE 1.92 looks when the settings just mentioned have been done and KDE has been restarted.

So that's about it

You should now have a bit of an insight into the workings of your KDE. It is hoped that the tips and tricks will be useful to you when you come to develop your own themes. Who knows, maybe these instructions will even be used to create themes for other desktop environments and/or window managers.   ■
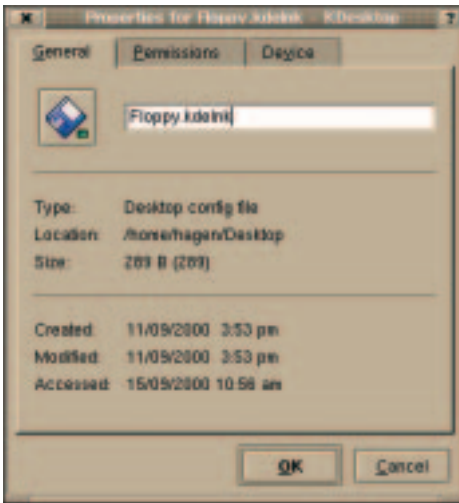

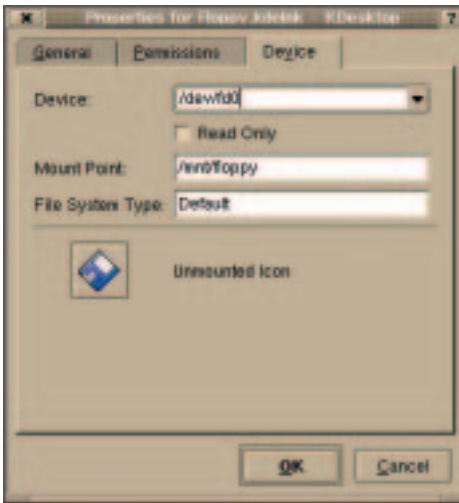**Fig. 11. KDE 2 – Icon selection dialog for mounted drive**

Fig. 12. KDE 2 – Icon selection dialog for unmounted drive
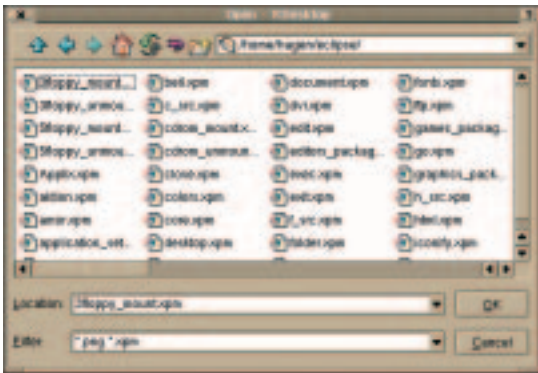

Fig. 13. KDE 2 – Drive symbols

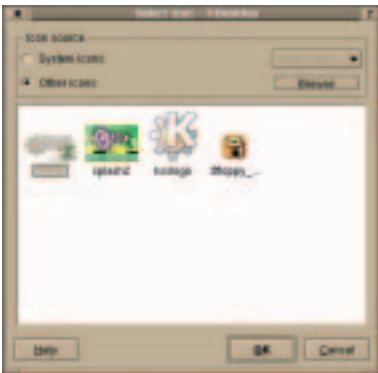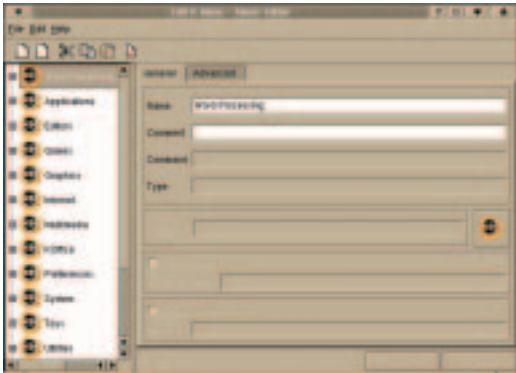**Fig. 14. KDE 2 – Searching for desired symbol**

Fig. 15. KDE 2 – Other Symbols

Fig. 16. KDE 2 – Menu Editor