An up-to-date overview of free software and its makers

PROJECTS ON THE MOVE

The world of free software is fast and furious, and a project celebrating its 10th birthday is considered part of the establishment. This year, Krita [1] (Figure 1) joins that illustrious group of programs reaching double figures.

The Krita graphics program celebrates its 10th birthday and a successful jump to KOffice 2.0, while the Mistelix DVD creator gets ready to grow up. **BY CARSTEN SCHNOBER AND HOLGER HILDEBRAND**

Birthday Boy

Krita is a pixel-based graphics program with a feature set that many free applications in the field lack. One of the application's unique selling points is its handling of color spaces. Krita uses the legacy RGB color model, the CMYK model preferred by professional printers (Figure 2), Y'CbCr, which is used for color encoding of digital videos, and L*a*b*.

Serious amateur photographers will also appreciate that Krita can read digital images directly from cameras in raw format and convert the original material to other image formats. Python and Ruby interfaces support the automation of recurring tasks. The DCOP interface handles communications in the KDE3 desktop; as of Krita 2.0, the D-Bus equivalent in KDE4 takes over this task. If you are still missing a function, despite Krita's huge feature set, you can easily write your own plugin thanks to the modular program design.

Krita took quite a while to develop. After a wild and woolly adolescence, the first fully usable version of the program was released in 2005. That release became a full member of the KOf-

fice family [2]. Krita also made the jump to KOffice version 2.0 and will be included with future versions of KDE4, unlike other KOffice family members that are still working hard to keep up.

The most important applications in KOffice are still alive and kicking, including KWord, KSpread, and KPresenter, which handle the classic tasks of word processing, spreadsheet, and presentations, respectively. The other applications are Karbon, another (vector-based) graphics program, and KPlato, the project management tool.

KDE Office

Some Krita functions are available in other KOffice components thanks to improved cooperation between the family members. In the future, these programs will be able to use Krita color models and channels of up to 32 bits.

Improved integration of individual KOffice programs removed the need to maintain the chart creation tool KChart. This functionality is now available to KOffice users in the form of a plugin. KOffice 2.1 will be the first release in the Version 2 series meant for end users. The developers do not

recommend KOffice 2.0 for daily use because some KOffice programs lack the functionality present in version 1.6: The developers simply didn't have enough time to rewrite everything before the KDE4 release date, although they do intend to catch up before KOffice 2.1 is released.
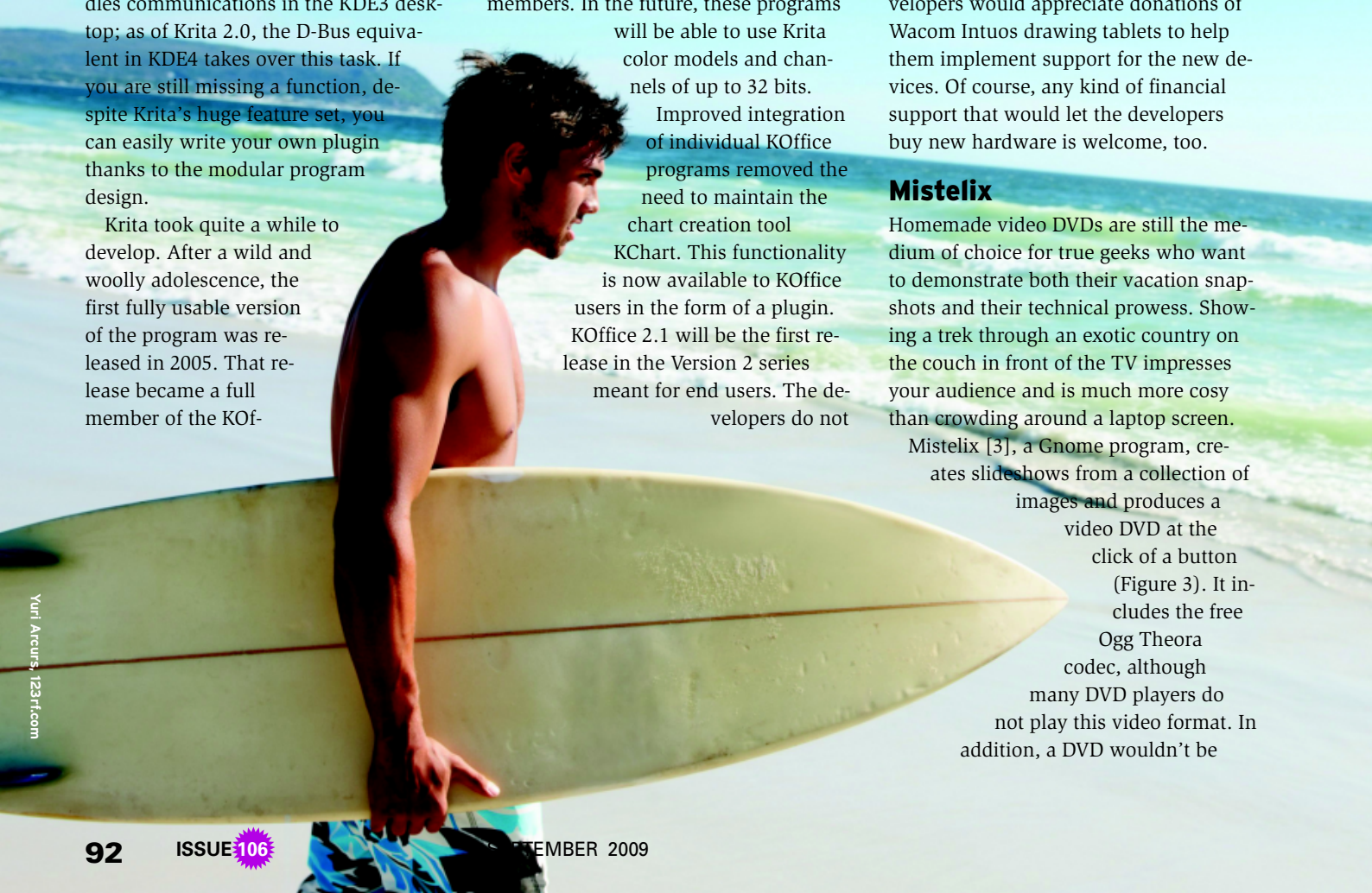
Kivio is another chart creator. In contrast to KChart, which uses numeric input, Kivio lets the user draw charts freehand. Because the project lacks a maintainer, it is uncertain whether Kivio will make the move to KOffice 2.0.

If you are interested in contributing to the development of Krita, you can check out the to-do list in the source code package. If you want to contribute, but do not have programming skills, the developers would appreciate donations of Wacom Intuos drawing tablets to help them implement support for the new devices. Of course, any kind of financial support that would let the developers buy new hardware is welcome, too.

Mistelix

Homemade video DVDs are still the medium of choice for true geeks who want to demonstrate both their vacation snapshots and their technical prowess. Showing a trek through an exotic country on the couch in front of the TV impresses your audience and is much more cosy than crowding around a laptop screen.

Mistelix [3], a Gnome program, creates slideshows from a collection of images and produces a video DVD at the click of a button (Figure 3). It includes the free Ogg Theora codec, although many DVD players do not play this video format. In addition, a DVD wouldn't be
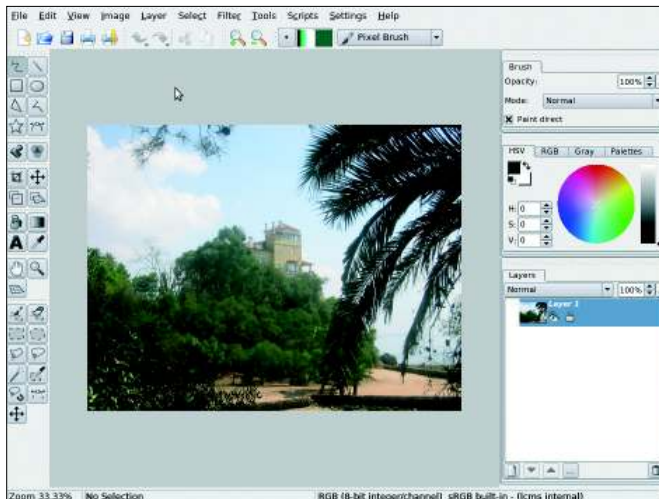
Figure 1: The KDE drawing program Krita celebrates its 10th birthday this year.

Figure 3: Mistelix organizes your photo collections and creates video DVDs with your snapshots.

complete without a menu and a sound track; a click of the button adds both via the Mistelix interface. If you prefer not to add live commentary while viewing, you can add subtitles to the video.

Besides creating DVDs of still images, Mistelix can integrate existing videos. Again, you can combine the material to suit your own needs and then select what you want to play via the DVD menu. The current version 0.2 only supports the MPEG format for original video material; Mistelix does not have a function for auto-converting other formats as of this writing.

Collaboration

The Mistelix programmers didn't bother reinventing the wheel; the software relies on a number of familiar, external background helpers, such as GStreamer. This means you can use any multimedia format the framework supports. These formats will differ from system to system and depend on the GStreamer components you have installed. MP3 might not be included because of software patents,

Figure 2: Krita supports a variety of color spaces, including RGB and CMYK.

so if you want to integrate MP3-formatted audio files as your backing track, you need to install the Fluendo MP3 plugin for GStreamer so that Mistelix can handle the task.

Under the hood, Mistelix uses the command-line-based DVDAuthor [4] set of tool to create output files. In addition, Mistelix relies on FFmpeg [5] to create the matching video formats. If you decide to use the Theora format instead of the standard DVD format, make sure you have the matching Theora codec in place. If a required helper is missing, Mistelix will warn you (Figure 4). This prevents unnecessary waiting and frustration; after all, creating and converting MPEG compressed videos can take some time, even if you have a fast machine.

Mistelix does not have a burning function as of this writing. Instead, it creates a subdirectory named *dvd* with the required files. The following command line creates the image file *dvd.iso*

```
mkisofs -dvd-video -udf -o dvd.iso dvd
```

which you can burn to disc with your preferred burning software.

Star Gazing

Mistelix developers are looking to release version 0.3 of the program in July of this year. Although the team has not disclosed the new features yet, the long-term roadmap lists a number of tangible targets, including support for more formats. In the future, Mistelix will be able to export to both Flash and Moonlight formats (Moonlight is the Linux imple-
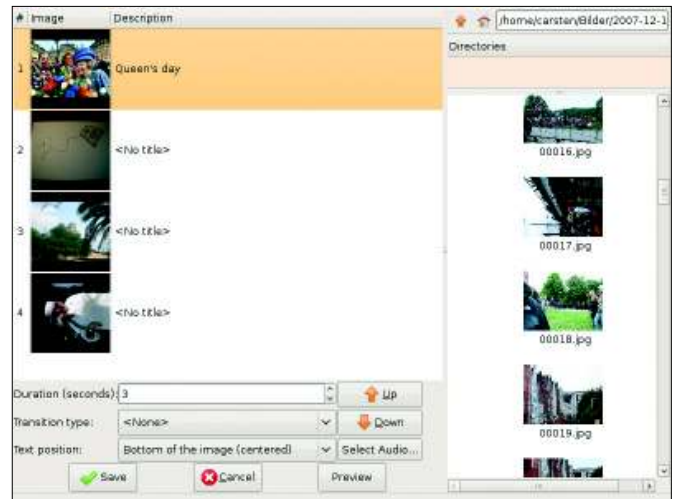
mentation of Microsoft's Silverlight). The roadmap also includes DVD chapters, subtitles, and Blu-ray support.

Programmers interested in lending a hand will find ideas on how to implement new features on the project homepage, along with the expected level of difficulty. This lets new contributors decide how to help. As with other projects, classic bug fixing is another way to help the developers.

Thus far, Mistelix is only available for Unix-style systems, although this could change in the near future. The program is written in Mono and C# and thus is fairly easy to port to Windows systems. Although the developers do not intend to port Mistelix themselves, the free software adage applies: Any volunteers? ■
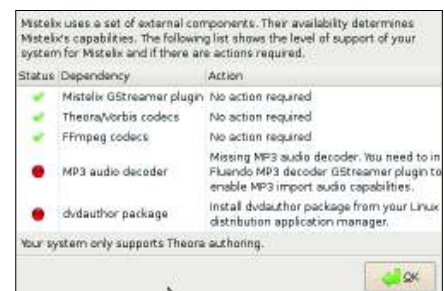

Figure 4: Mistelix depends on external helpers and checks for the required components.
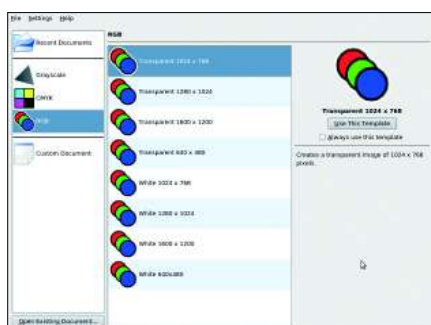
INFO

[1] Krita: *http://www.koffice.org/krita*

[2] KOffice: *http://www.koffice.org*

[3] Mistelix: *http://www.mistelix.org*

[4] DVDAuthor: *http://dvdauthor.sourceforge.net*

[5] FFmpeg: *http://www.ffmpeg.org*