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

PROJECTS ON THE MOVE

If you want to convert a bunch of audio files into another format and prefer to steer clear of the command line, the Gnac graphical tool might do the trick. Also, the Gourmet Recipe Manager helps out in the kitchen.

BY CARSTEN SCHNOBER

People with a good sense of hearing often cringe when forced to listen to MP3-compressed music files, and this is understandable: MP3 is a lossy compression method. Converting an audio file to MP3 format can save up to 90 percent disk space, but it will affect the quality. Although the MP3 format theoretically only loses sound components that are inaudible to the human ear, you might still miss them if you listen carefully.

Of course, there are many alternatives to MP3. AAC and Vorbis files save more disk space while giving you the same or superior audio quality. Vorbis has the additional advantage, compared with MP3 and AAC, of being patent free.

Today, many portable audio players support the Vorbis file format. The Xiph.org foundation [1], which developed the Vorbis format, also has a lossy compression method for voice recordings dubbed Speex. If you prefer to avoid quality loss of any kind, a loss-free compression approach like Flac will fit the bill perfectly.

Audio formats thus exist for almost any application you can imagine. But choosing from one of these formats can pose a problem for users. How do you convert your painstakingly digitized CD collection to the right format?

Legacy Approach

If you are an old hand at converting audio files on Linux, you are probably familiar with SoX [2]. According to its makers, SoX is the Swiss Army knife of audio processing. It not only converts files between various formats, it also normalizes parameters such as the bit rate and the number of audio channels.

The latest release of the legacy audio tool, version 14.1.0, has a number of new effects: *Splice*, *Remix*, *Norm*, *Delay*, *Contrast*, *Rate*, *Spectrogram*, and *Gain*. The first two merge whole files or individual audio channels. *Delay* does just that to the output for individual channels. *Norm* normalizes the volume for various recordings, and *Gain* increases it. The spectrogram effect tells SoX to create a PNG-formatted image file to represent the sound spectrum.

The best thing about SoX is its multiplatform capability. The software will read and write audio files on Linux, Windows, Mac OS, and most Unix derivates. The lack of a GUI can be an obstacle for music fans with little computer experience. If you prefer to avoid typing options at the command line, you might
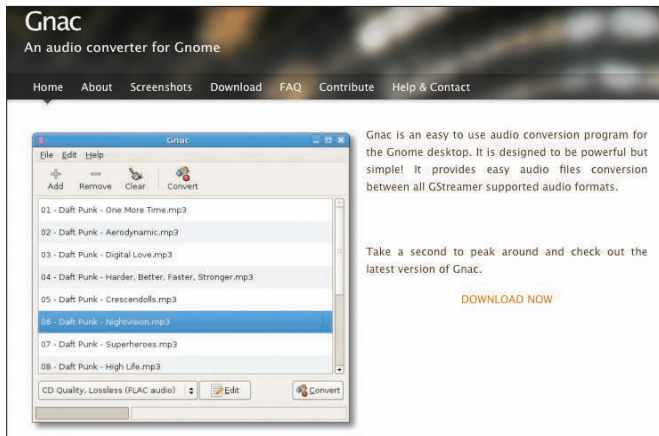
Figure 1: Gnac uses GStreamer and its plugins to read and create MP3, Vorbis, and other formats.

lose your patience with SoX fairly quickly. Of course, there is an upside to command-line programs: SoX is excellent for scripting. In fact, a simple script with the required SoX parameters is all it takes to convert any number of files.

Next Generation

Are you looking for an easy-to-use tool that will convert any number of files to a freely selectable audio format at a single pass? French programmers Alexandre Roux, Benoît Dupasquier, and David Joaquim launched the Gnac [3] project (Figure 1) to fit the gap.

Gnac stands for GNome Audio Converter, a nod to the desktop environment on which the software was built. It not only uses the gtk graphics toolkit, it also relies on the GStreamer multimedia framework [4] for (de)coding various audio formats, and although gtk is desktop-independent, it is mainly used by the Gnome desktop.

As you might guess, Gnac's feature set depends on your GStreamer installation and plugins. Many distributions omit MP3 support by default to avoid patent issues; if your distribution is one of them, Gnac will not support the MP3 format on your machine.

The fairly spartan Gnac GUI is also very intuitive. The *Add* button pops up a dialog box in which you can browse files and directories. Your selection is added to a list in the main section of the window, and clicking *Convert* then starts the conversion process.

At the bottom of the screen, the software gives you a selection list of available audio profiles. The *Edit* button lets you edit an existing profile or add a new

one. You can also modify the arguments that Gnac passes in to GStreamer.

When you right-click one of the entries in the file list, a drop-down menu that is used for accessing the metadata appears. If you click an MP3 file, Gnac shows you the ID3 tags, which tell you the track name, artist, and other track details. As of this writing, Gnac can't actually edit ID3 tags, nor will the program migrate the information to the target format.

Because scripting abilities are missing, Gnac is not a full replacement for the wonder tool, SoX. But if you do need to convert a large number of audio files as quickly as possible, Gnac will let you do so without having to study the man page. As a new project, Gnac still suffers from some growing pains, ranging from functionless menu items to frequent crashes.

Version 0.1 shows clear evidence of a structured design, and the Gnac team already has a development roadmap firmly in place. The next version will include enhancements to the GUI, with features such as the ability to convert metadata, automatic normalization, seamless integration with the Gnome file manager, Nautilus, and extensions for other multimedia formats – such as videos – to follow in quick succession.

The Gnac developers could use some help with these ambitious targets, and they invite other programmers to give them a hand. Help could be anything from taking part in constructive discussions on the developer mailing list to writing patches. In addition to programmers, the project is looking for translators and graphic artists to give the program a face.

Kitchen Projects

Exchanging recipes was a common way of using Usenet well before the invention of web forums. Television cooking programs continue to thrive, and free software users are always looking for a cool

way to exchange recipes on their favorite operating system. The Gourmet Recipe Manager [5] offers users a feature-rich management system for recipes.

First, you must populate the database with recipes, either manually or by importing existing recipes. Gourmet supports various formats and also understands the language used by the proprietary Meal-Master recipe-management tool. On top of this, it can parse recipes from pages such as Epicurious [6] and Recipezaar [7].

The program has its own XML format that allows Gourmet users to exchange tips, although the program will also interpret simple text files with a little help from the user.

The search mask in the main window lets users browse existing recipes based on various criteria. Besides searching by name, you can look for food from a specific region or search by ingredients.

The recipe card contains the recipe and a list of ingredients. The latest version of Gourmet also has a *Nutritional Information* tab. The program retrieves the data for its nutrition calculations from a public database run by the United States Department of Agriculture.

The recipe manager will also help you with your shopping. It won't carry your bags, but clicking the *Shop* button in a recipe card will give you a list of the required ingredients organized in categories such as *Vegetables*, *Meat*, *Bread*, and so forth. Gourmet will print the list or create a PDF file.

Gourmet doesn't automatically assume that your refrigerator is empty. In fact, it gives users a field in which they can enter the content of their refrigerators, and automatically removes extra ingredients from the shopping list. Happy listening, and happy cooking! ■

INFO
[1] Xiph.org: *http://www.xiph.org*
[2] SoX: *http://sox.sourceforge.net*
[3] Gnac: *http://gnac.sourceforge.net*
[4] GStreamer: *http://gstreamer.freedesktop.org*
[5] Gourmet Recipe Manager: *http://grecipe-manager.sourceforge.net*
[6] Epicurious: *http://www.epicurious.com*
[7] Recipezaar: *http://www.recipezaar.com*