

Installing Multimedia Codecs and Drivers

Matthew Helmke

Ubuntu 8.10 comes standard with free and open software. This includes community developed drivers for hardware, where the source code for the software is available to be downloaded, viewed, and distributed legally. You can even modify it legally, if you know how, as long as you either do not distribute your changes, or you license your work in the same manner as the work you are using. This software works with most hardware, and also includes the ability to play and view some media types.

There are a couple of issues with doing things this way; you may not have access to all of the features of some hardware while using the free and open drivers, and some of the most commonly used sound and video files require codecs, coder and decoder software which translates between binary data and sound or pictures, that are not free to be legally distributed with the operating system. Don't let this frighten you. There are usually drivers and codecs available that will give you full functionality, and which can be easily installed. The issue with these is primarily philosophical, in the sense that the source code for them may not be viewed nor modified, and in some cases, the distribution of

them is of questionable legality for anyone other than the company that has written them.

Hardware Drivers

Some companies, like Intel, are choosing to re-release the specifications for their hardware or even writing and releasing drivers themselves as free or open source software, in both cases inviting users to participate in the process of writing or improving them. This is wonderful, and development of drivers for this hardware tends to go quickly and the software tends to be very good. Most of the time, you won't notice anything except that the hardware just works, because the device drivers are included in the free and open source Linux kernel.

Some hardware has special features that the production company does not wish to make known, often because no one else has the exact same technology and they are hoping to protect a perceived advantage over their competitors. This is especially true in the realm of the more advanced video cards made by ATI/AMD and NVIDIA, but this restriction is not limited to that hardware.

Often these hardware manufacturers will release their own drivers for their hardware. When they do so, it will be made available in binary format, which means that it will run on your computer, under a set of conditions set by the manufacturer, but that you may not examine the source code to know what it contains or how it works. Some consider this a security risk. Others object because they cannot fix, adapt, or build on the software. Still others just want to play the latest 3D game or use another piece of equipment which requires a restricted driver, and they don't consider those things particularly important to them, or they can't afford to lose functionality that is available only in the binary, restricted drivers. For those in the third category, Ubuntu makes it easy to install

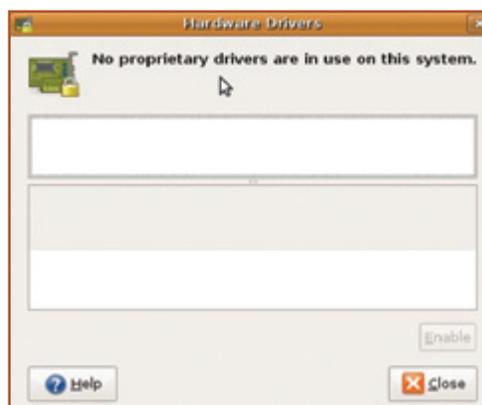


Figure 1. Hardware drivers dialog, with no proprietary drivers needed

third-party, restricted drivers for the most common devices, when the manufacturer has allowed their binary driver to be distributed.

To check whether you have hardware that requires or could benefit from using an available restricted driver, simply open *System* → *Administration* → *Hardware Drivers*. Many of you will see a message saying *No proprietary drivers are in use on this system*, with the implication that none are available or needed. If so, you are all set. If you find something listed, and you want to use it, highlight the driver you wish to install in the list and click *Enable*. A reboot may be required to complete the process.

You can use the same menu option at any time to check whether you have any installed, or to remove drivers.

For many people, specifically those who have ATI or NVIDIA video cards, using these drivers is necessary for the best possible experience using the Desktop Effects offered by Compiz and described elsewhere in this magazine. One caveat; if you use these drivers, you may occasionally find bugs or problems that the Ubuntu developers are not able to help with, because of the closed nature of the software.

Playing Music and Video

While Ubuntu does an excellent job playing free media formats, like ogg files, but it does not come with the ability to play patent encumbered formats like mp3, mpg and flash. This is easily added to the default setup. There is some question as to how legal this is in some parts of the world, however in most places it is known to be fine. If you are not sure, you may want to research the legal and licensing issues for your part of the world. Ubuntu makes it very easy to add the codecs.

For businesses, corporations, or individuals who are concerned about legal issues in their part of the world, you may now buy the codecs to be able to play mp3s, Microsoft media formats, and DVDs from their partner and sponsor, Canonical in

the company's web store at <https://shop.canonical.com/>. This will give you the ability to play everything but flash, which may be done by itself by installing the *flashplugin-nonfree* package using *apt-get*, *Synaptic*, or your favorite package manager.

For people comfortable with the ambiguity of not really knowing whether using the codecs is legal or not, or for the majority of people who live in places where it is okay, there is an easy method to install everything you want. That is what the rest of this section will cover.

Open *Applications* → *Add/Remove...* and in the center of the dialog box that opens, tell it to show *All available applications*. Highlight the box next to the package *Ubuntu restricted extras*, and *Apply Changes* at the bottom right to download and enable support for many media formats, commonly used and free to distribute Microsoft fonts like Times New Roman, Sun Microsystems Java Runtime Environment, the Flash plugin for your web browser and media players, and more.

To enable playback of encrypted DVDs, such as you might buy or rent, requires a little more work, as the patents and restrictions are more intense. The most certain way to be completely legal is to buy the software from the Canonical web store. However, in much of the world, this is not an issue at all, and so there are

a couple of methods available to enable this feature at no cost.

The easiest method is to install the VLC music player, which is in the Ubuntu repositories and may be installed using *apt-get* or *Synaptic* with the package *vlc*. However, this will limit you to only watching DVDs using this program.

For those living in non-patent-encumbered parts of the world, there is a community developed and maintained, non-official repository of software available called *Medibuntu*, which stands for (Multimedia, Entertainment & Distractions In Ubuntu) and contains packages that cannot be included into the Ubuntu distribution for legal reasons (copyright, license, patent, etc). To use it, you will need to add it to your software sources by opening a terminal at *Applications* → *Accessories* → *Terminal*, and entering the following at the command prompt.

```
sudo wget http://www.medibuntu.
org/sources.list.d/
intrepid.list -O /etc/apt/
sources.list.d/medibuntu.
list
```

and your password. When the command is complete, follow it with

```
sudo apt-get update && sudo
apt-get install
medibuntu-keyring && sudo
apt-get update
```

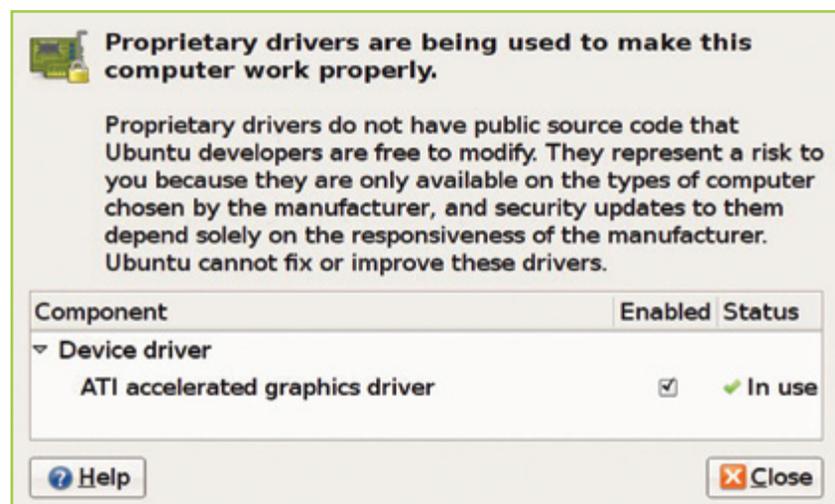


Figure 2. Using the ATI accelerated graphics driver

You may be asked to accept this package even though it cannot be authenticated. This is normal. If you want to use the software provided by Medibuntu, type yes and enter.

Now, you are able to add any of the packages made available from Medibuntu using apt-get, Synaptic, or your favorite package manager. To enable dvd playback, you will need the package called *libdvdcss2*. You may find out more about Medibuntu and their other offerings at their website at <http://www.medibuntu.org/>.

One more option

People reading an article in a magazine like this are the proactive sort. We like to figure out what needs to be done in advance and do it. Not everyone is like that. For the rest of the world, there is another option. In the past, Linux users might try to play an unsupported file type and nothing would happen. They would then have to spend time reading documentation, scouring the web for information or advice, and some would just give up.

In Ubuntu 8.10, when you try to play a media file type that is not currently supported, a dialog box will come up asking if you would like to search for an appropriate codec, such as when I tried to play a free test pattern MP4 from http://www.archive.org/details/IMB_SF_R30_C9 in Totem Movie Player.

If you agree, a search will be launched. If a suitable codec is found, a dialog box will appear listing the codec. When you check the box next to the codec, you may be asked to confirm that you wish to do install it, with a comment that some codecs are of questionable legality in some places. If you are sure, click *Confirm* and you will then be able to click *Install*.

Conclusion

It is becoming more and more difficult to find things that can not be done in Linux. Ubuntu 8.10 makes it easier than ever to find and install proprietary drivers for some of the most popular hardware as well as enable the ability to enjoy multimedia. This was a reason once given by many people for not using this operating system, despite all of its other benefits, and I am thrilled to see it is no longer a valid one. ■

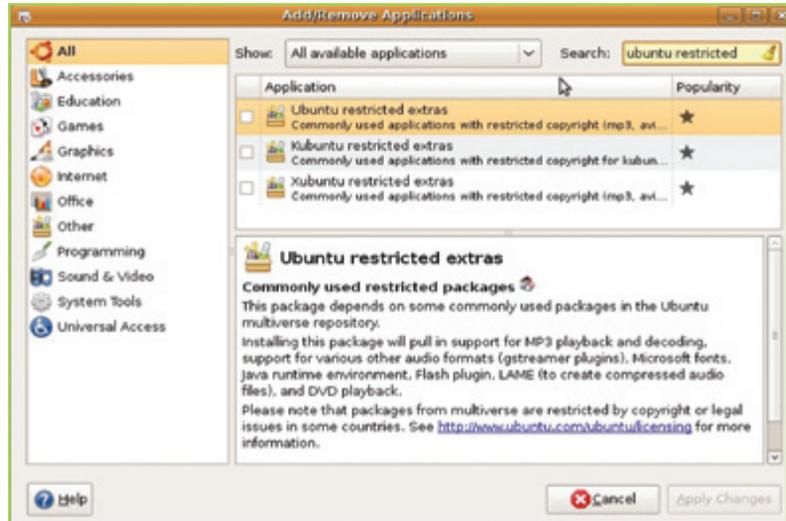


Figure 3. Add/Remove restricted formats

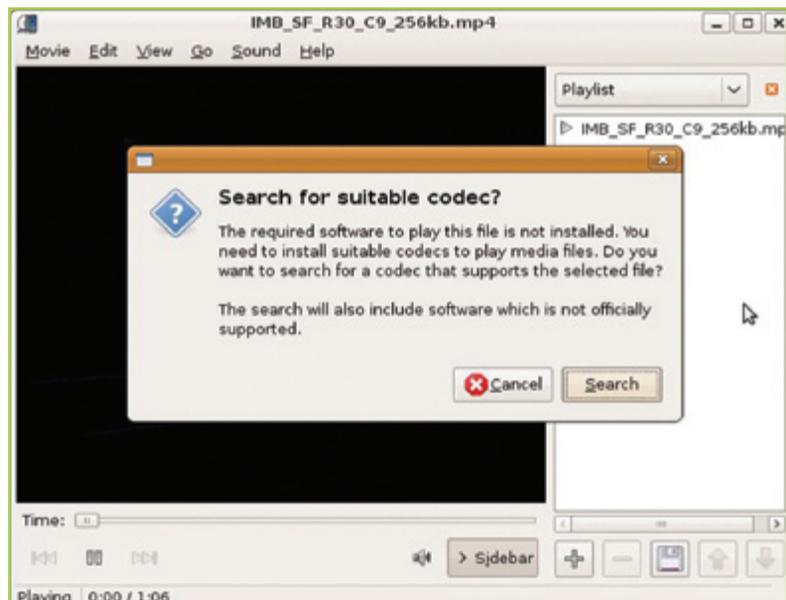


Figure 4. Search for a suitable codec?



Figure 5. Install