

# Maximising multimedia on the web

# BROWSER

# PLUG-INS

**Static, fixed, web pages are dead: it's now a world of streamed audio and video. So what does a Linux user need to make use of all this? Colin Murphy explains**

I'm personally quite happy with static Web pages. For the main part they're informative, always quick to load even if resources are in short supply, and they helped the Internet become what it is today. But not for much longer, or so it seems – you can't go near a site these days without being blinded by graphics, both fixed and moving, being shoved at you.

The technology is there to send out this information so out it goes, whether you want to receive it or not. This is all well and good for advertisers – the eye and ear-catching nature of these pyrotechnics are ideal for those intent on making you look at their wares just long enough for the name and product to slip into your sub-conscious – but this just made me all the keener to avoid it.

However, now, much more than ever, the information that you actually want is going to be found on Web sites that rely on you working your way through these flashy sites. Increasingly, the very thing you're looking for may be noisy or moving,

which means that you need to make sure that your Web browser can deal with these forms of data, with a little help from **plug-ins**.

## Plug-ins

There is a wide range of different plug-ins in use on the Internet today, but not all of them are available for Linux straight off. Much of the information out there in Internet land is provided in a proprietary format, which usually means that you need to pay someone to make full use of the data held in that format by buying a plug-in.

For example, you can listen to radio via the Internet: broadcasters provide their output as a stream of data, which gets pushed out over the network. For most Internet radio broadcasts, this information is sent in the proprietary Real Audio format. To be able to listen to the radio in this format you need to have access to a Real Audio plug-in. Luckily enough, there is a Real Audio plug-in Linux

## Java as a plug-in

Java is a platform independent object-oriented programming language, used for writing applets that are downloaded from the Internet by a client and run on the client's machine – usually by the browser.

The data that you download is run by the Java client, but inside the browser. Take a look at <http://www.magenet.com/~julie/java/rubik> to see some Java in action (see Figure 3).

You might find that you need to install Java yourself. There is an Open Source version of Java called Kaffe, which is supplied with most of the Linux distributions. However, most people seem to prefer to use the version provided by Blackdown Java.

Unless you plan on developing Java applications you will only need the Java Runtime Environment, or jre, a copy of which you'll find on the coverdisc.

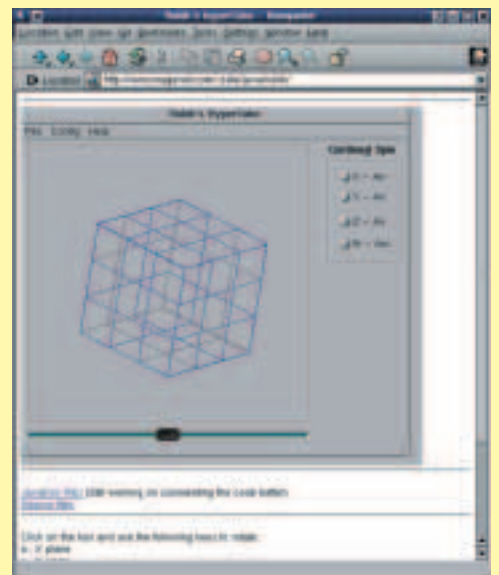


Figure 3: A Java-enabled Konqueror

**Plug-ins** Tools to enhance and extend the operation and functionality of an application. With Internet browsers, this enables you to use types of data not originally associated with Web pages. It usually frees you from the chore of having to download a chunk of data, only to then have to run it in some external application.

Users can use, which is maintained by the Linux community. However, because of its proprietary nature, you will only get the Real Audio plug-in included in a Linux Distribution if you get one of the more expensive boxed sets. This means it won't be set up by default if you're using a distribution you got from CheapBytes, for instance. You will have to go and download it yourself, which is not ideal.

## Ogg Vorbis

Luckily, work is in hand to produce non-proprietary audio streams, thanks to the developers of Ogg Vorbis. The challenge is now to get the broadcasters to use and accept this alternative streaming format. The BBC is currently running Ogg Vorbis trials, so with a little campaigning and persuasion, the dream of all of the BBC output being broadcast in a stream we can all appreciate might just become a reality. Take a look at <http://support.bbc.co.uk/ogg> and maybe even email [oggfeedback@bbc.co.uk](mailto:oggfeedback@bbc.co.uk).

The browser needs to be configured to make use of a plug-in, and this will often happen automatically during the installation. The Ogg Vorbis plug-in is included with most distributions these days, and so is likely to be configured for you. The Real Audio plug-in will configure itself automatically for Netscape during its installation, but you will need to take manual steps to get it to work with other browsers like Mozilla or Opera. Luckily these browsers have details in their documentation describing how this is done.

## xmms – the sound of a planet

One Linux program that uses plug-ins is xmms, the multimedia player that comes with most installations. You will most likely have called upon the services of xmms should you have selected any of the Ogg Vorbis links on the BBC Web site.

If your speaker system includes a sub-woofer, you can put it through its paces with the "tone" plug-in. With xmms running press Ctrl+L to open up the Location to play box and enter the location `tone://30`. This calls upon the Sine Wave generator plug-in and produces a 30Hz tone. Wait and see how long it takes for the neighbours to come and complain at full volume. The test is to see how far they come from.

## asp – Shockwave and Flash

Macromedia Flash files (they have a suffix .spl) are designed to deliver low-bandwidth animation and presentations. There is a browser plug-in for Linux, but this time it is only compatible with Netscape and Opera – there's no support for Konqueror.

You may also come across Shockwave files (with a suffix .swf), which luckily enough are dealt with by the same plug-in. It can be a bit confusing as the Macromedia site offers downloads for both formats, but then offers you the same file.

## DjVu – a world without paper?

This new world of information isn't only video and audio-based, according to the people at DjVu, 90 per cent of world information is on paper. Bringing this wealth of information to the Internet has had its problems. The high resolution needed to read a scanned-in document means that files sizes grow to beyond manageable proportions. The DjVu image compression technology developed at the AT&T Labs offers a solution to this problem. With DjVu, it seems that a 31Mb TIFF file can be reduced to just 70Kb. There's a browser plug-in for Linux – DjVuLibre – that enables you to view this information and manipulate it all in your browser.

When viewing a DjVu document in an enabled browser you are given a range of facilities to help you view it better. In Figure 1, an area of text has been highlighted, at the release of the mouse key the view from Figure 2 can be seen. The image isn't being reloaded, rather the browser is redisplaying it to our requirements. This plug-in is compatible with all of the browsers you're likely to use: Netscape, Mozilla, Konqueror and more.



Figure 1: Some text in DjVu format, with a region highlighted for enlargement

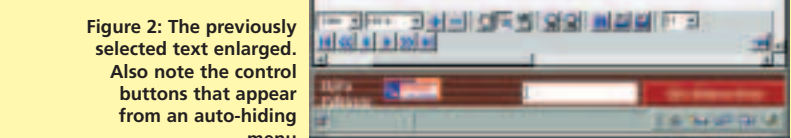


Figure 2: The previously selected text enlarged. Also note the control buttons that appear from an auto-hiding menu

## What's not available?

There are lots of different plug-ins, some are more use than others. But the only plug-in that we really miss out on is that for QuickTime, though even here there is a solution. A product call Crossover will enable you to use many of the Windows plug-ins, including QuickTime.

## Info

xmms	<a href="http://www.xmms.org">http://www.xmms.org</a>
Flash and Shockwave	<a href="http://www.macromedia.com/shockwave/download/alternates">http://www.macromedia.com/shockwave/download/alternates</a>
DjVu	<a href="http://djvu.sourceforge.net">http://djvu.sourceforge.net</a>
Blackdown JDK Linux	<a href="http://www.blackdown.org">http://www.blackdown.org</a>
Crossover	<a href="http://www.codeweavers.com/products/crossover">http://www.codeweavers.com/products/crossover</a>