

# Windows Essential Tools

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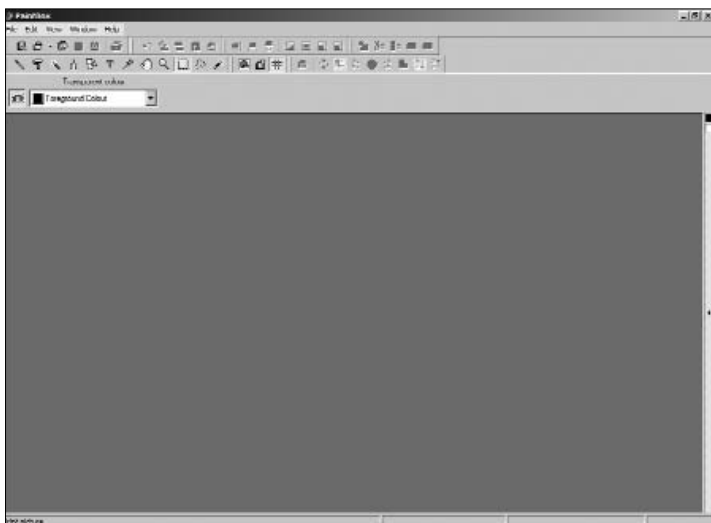
# Photo Editing



**W**e all shoot and exchange photos digitally. Photo editors help us rework images by using colour correction, composition, alterations and even adding text. While Adobe Photoshop remains the undisputed leader in this area, there are free tools that can do the same job as effectively. We say 'tools' because there isn't any one single tool that can do everything. A combination of tools is required. Here are some.

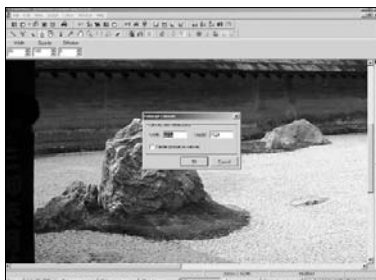
## PaintBox 2.2.6

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A clean interface with icon support makes the PaintBox easy to use

This is a light tool that is also very light on resources, and has some fairly advanced functions to go with an easy interface. Basic functions include flipping photos, creating mirror images, resizing, resampling, and even increasing the canvas space of the image.



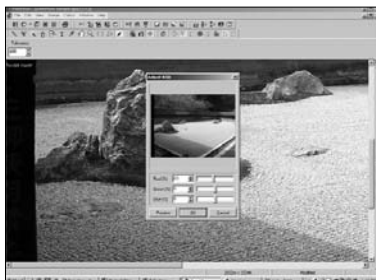
Making adjustments is simple

The more advanced functions in PaintBox allow brightness, gamma, colour, contrast, RGB greyscale and negative adjustments. We put the software to the test to see whether it was competent to carry out all the above tasks.

RGB adjustment on a photograph was good, and allowed changing of individual colours in addition to the overall colour range (RGB or CMYK). However, options like creating layers for adding effects or text are not available, and while this is a drawback, it is not restrictive for basic editing and enhancements.

Also, when it comes to resizing or resampling of images, there's not too much trouble since it is just a three-step activity.

Gamma changes to an image were also carried out true to the nature of gamma and while PaintBox is no Photoshop, there wasn't too much reason to complain.



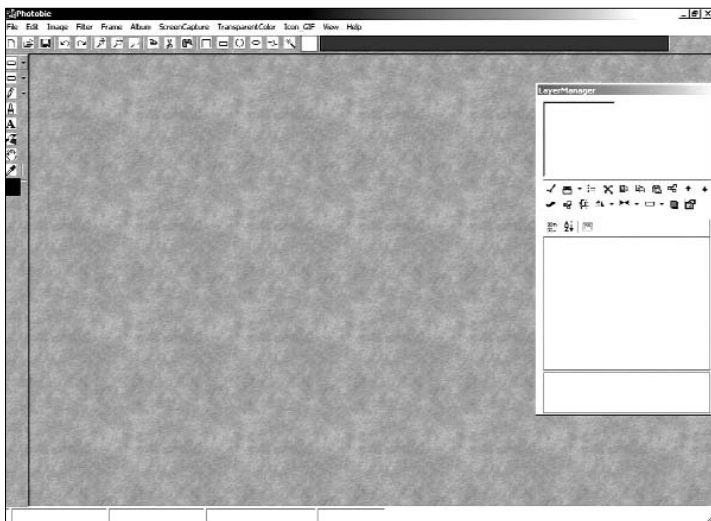
**Change individual colour channels**



**Recently used files are shown with icons**

# Photobie 1.9

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Icons and boxes make Photobie a cinch to learn

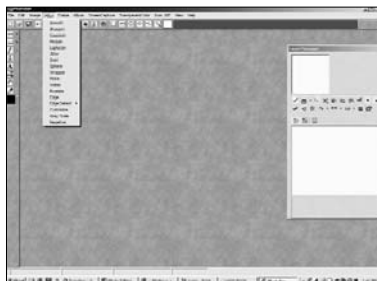
Photobie is an image editing software with some fairly advanced features. Unlike other free software, it allows you to do multi-layer image editing, advanced screen capture and photo frame editing—and you can view directories with just the images showing up.

Photobie is also a .NET windows application, and the .NET Framework 1.0 or higher needs to be installed before you can run it.

Among the free programs, this is one of the best available—a commendable fact, considering it's been (and is being) developed by Xuedong Chen, a PhD candidate in Boston. According to the Photobie site, “the developer intends to deliver Photobie as a free-ware and is willing to keep updating it with new useful features”. Noble indeed.

Some of the main features of Photobie include a hotkey setup that allows users to customise up to eight keys for instant

actions. Photobie also lets users capture any shape, and is not bound by the usual rectangles, circles or squares! You can also capture any screen to the image editor for instant editing in addition to capturing it to the clipboard.



Filter options are plenty

Keeping up with the growth of images on the Web, Photobie also has a specification that makes image output easier—users can predefine output image size for such usage making work faster. The exported images can be captured to a temporary bitmap image file and edited in another program if required.

Perhaps the most advanced of all free image editing software, Photobie lets users do some nifty multi-layer image editing. That means users can clone, copy, paste, delete, merge, move backward/forward, and set up layer transparent colour with RGB tolerance! Still think you need Photoshop?

It's not only advanced features, though. The software also has features for basic editing tasks, such as draw/fill any shapes, and it also writes text. The draw/fill is treated as a new layer so you can easily move and adjust it.

General image editing includes selecting shaped areas, copy, cut, paste, paste as new image, erase, zoom, resize, rotate, flip, adjust colour brightness/contrast/alpha/gamma/saturation... Adobe who?

Unlike Photoshop, most other image editing software allows for only one or two-step undo options. With Photobie, though, there is undo support for erase (unlimited step undo), resize, rotate, and colour adjustment.

### **File formats supported:**

BMP, TIF, PNG: 32-bit true colour image support

JPEG: Supports different quality compression

GIF: Supports both low-quality 256 colour compression and high-quality 256 colour compression (with transparency)

.ICO: Supports transparent icon files, supports true-colour 32-bit with multiple bitmaps in one icon file with dimensions as (64 x 64, 32 x 32, 16 x 16)

PHOTOBIE (.pob): Multi-layer file format for multi-layer image editing support.

All these features are well integrated. You could also use Word to create all sorts of 'Art' fonts and text and capture it to Photobie, then set the transparent colour to White for the new layer.

Here's a sample of how simple a task in Photobie can be:

### **To resize an Image/Layer:**

Click on the 'Image > Resize' menu item. You'll see a dialogue form asking for the image size in pixels. If you want the width and height bounded as the original image, you need to check the 'Bounds' checkbox. After you click OK, the image is resized. Done. Alternatively, you can use the 'Zoom In' or 'Zoom Out' buttons on the toolbar to resize the image without losing resolution.

### **To adjust the colour of an image/Layer:**

Click on the 'Image > Adjust colour' menu item. A colour adjust menu will pop up with the balance control panel. With the trace bar, you can adjust the contrast, gamma, alpha (transparency) and even the three RGB components specifically. As you adjust, the preview panel shows the exact effect on the original image.

Complicated as it may sound, multi-layer editing is not tough with Photobie. Here's what is required...

Select a layer: The simplest way is to double-click on the layer



on the image directly. In case others hide the layer, you need to select it from the list box of the 'Layer Manager'.

**Move the layer:** Select the current layer and click on the 'Hand' button in the toolbar on the left. You can then drag the layer to the destination position.

**Erase the layer:** Select the current layer and click on the 'Eraser' button in the toolbar on the left. You can then erase the layer by dragging the mouse or left-clicking. You can also apply unlimited Undo for erasing.

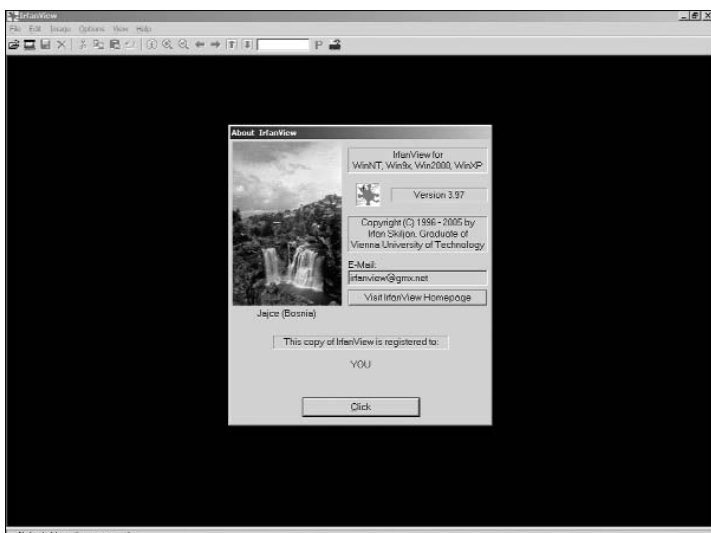
**Add a layer:** the new layer is generally added through paste, draw/fill shapes, write text. In fact, every draw/fill action starting from mouse down until mouse release is considered a new layer. This feature allows you flexible control over the last action.

### **Take A Look!**

Often, we invite someone over to show them the photos from our latest trip, but by the time the photos open, lunch break is over and it's almost tea-time! OK, it's not all that bad—but you get the idea. This is especially true when you try to open more than 10 photos at a time. Viewing photos using the Windows Media and Fax Viewer is not all that bad and the options available are pretty good, too. You can go back and forth and create a slideshow as well. But the problem is with the types of files you're trying to open.

The default viewer bundled with Windows XP can display JPEG, GIF and other common formats, but when it comes to some of the heavier (read better) formats such as TIFF or PSD, the viewer can't recognise the format. Fortunately, today there are free options available to solve this problem.

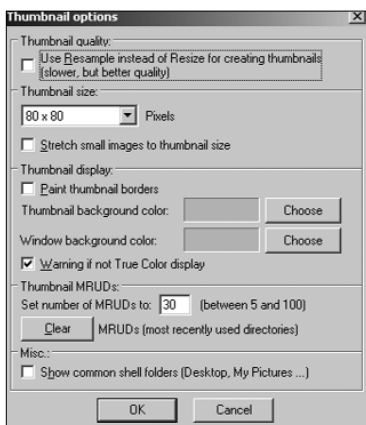
# IrfanView 3.97



The lightest photo viewing software

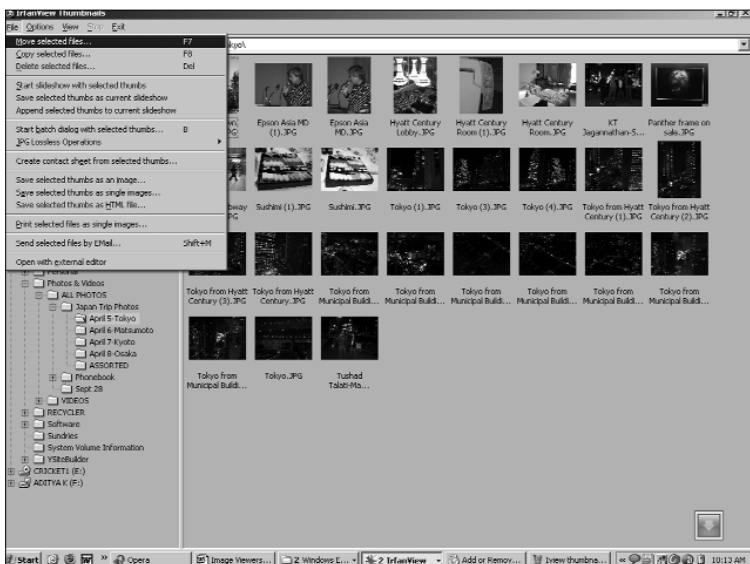
Developed by Irfan Skiljan—a student at the University of Vienna—in 1996, IrfanView has enjoyed some phenomenal success since then. One of the primary reasons is its ability to display virtually any type of file (including movie files) and do so in a light interface.

An installed copy of IrfanView is only 1.27 MB! The latest version also bundles with it a Thumbnail Viewer which, as is obvious, displays only thumbnails of your photos from a chosen folder.



You can decide the thumbnail sizes too





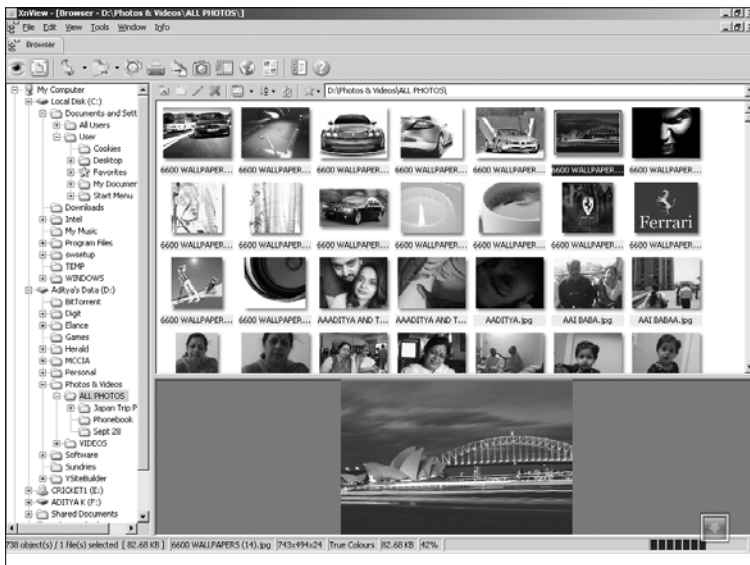
**You just need to get used to some shortcuts and the menus can well be left alone**

it's not possible to list them all here! But some of the more impressive ones are:

Slideshow, batch conversion, Acquiring from a TWAIN source, Batch acquire or scan, add text to photos, convert to greyscale, enhance colours, reduce red-eye, change colour palettes, and even capture screenshots. To be honest, this is just about 10 per cent of what it can do.

But the biggest advantage is the fact that IrfanView is the fastest viewer and can display almost all file types—forget all else!

# XnView 1.8



**Easily the most graphically intensive photo viewer**

With XnView you can quickly and easily view, process and convert image files. The program can read more than 400 different formats and then convert them to other formats such as GIF, BMP, JPG, PNG and even multi-page TIFF. XnView can also display video formats, many digital camera formats and even some relatively unknown formats such as Amiga IFF and Calamus.

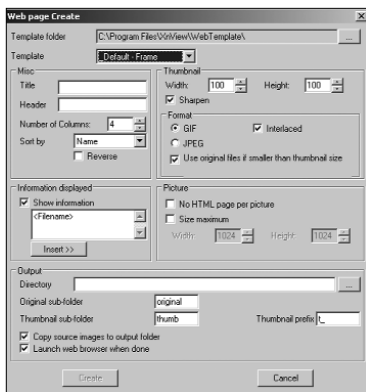
XnView operates in three different Modes: 'Basic', 'Browser' and 'View'. The mode in which the browser opens depends on whether there is no window, if there is a Browser window or a window with an opened, active image. The mode decides which functions are available in the menus and displays the relevant symbol.

## Modes

The Main Window is displayed when XnView starts up. This is the Basic/Default Mode, and XnView is in this mode until the Browser is opened and as long as no images are opened and active.

In the Browser Mode, you can display the file directory hierarchy, list of files and preview of images in the current directory. In the Image View Mode, the main window opens with an open image in the bottom part of the browser. An image can be opened using the Browser (by searching for files) or Direct Opening (through Windows Explorer).

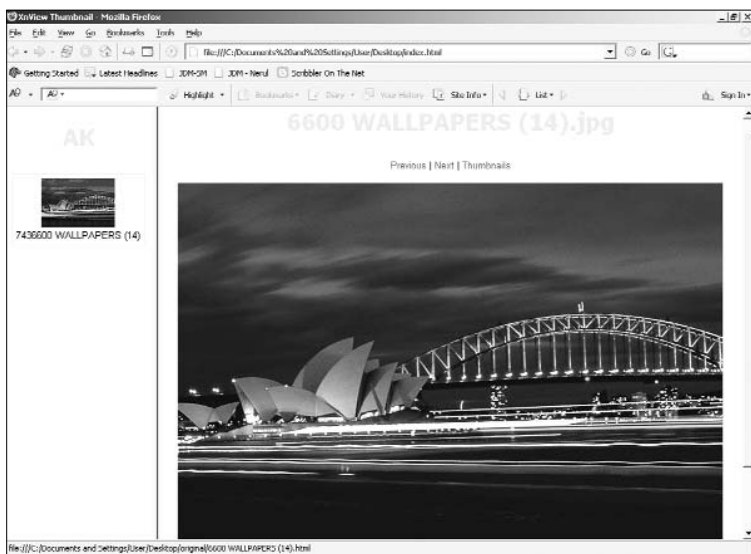
Additional information about the open image is displayed in the status bar at the bottom of the main window. The number of frames is also displayed in the status bar.



Create a web page of your photos easily

The Image viewer is similar to Windows Explorer. You simply navigate the directory structure as desired, and any image files found in a directory are displayed in thumbnail format. This lets you keep an overview of the images available, and at the same time lets you quickly view and select specific images. XnView can be run without installation and this makes it perfect to be used as a “photograph album on CD”, especially because it is free for personal use. XnView is also good for the presentations on a CD because it runs without the need for the software to be installed on the computer despite saving in a proprietary manner.

Apart from offering easy image viewing, XnView also offers more advanced features such as Web page creation, contact prints (images the size of negatives), multiple conversion (format and



**And this is how the web page looks. No fuss, easy to navigate**

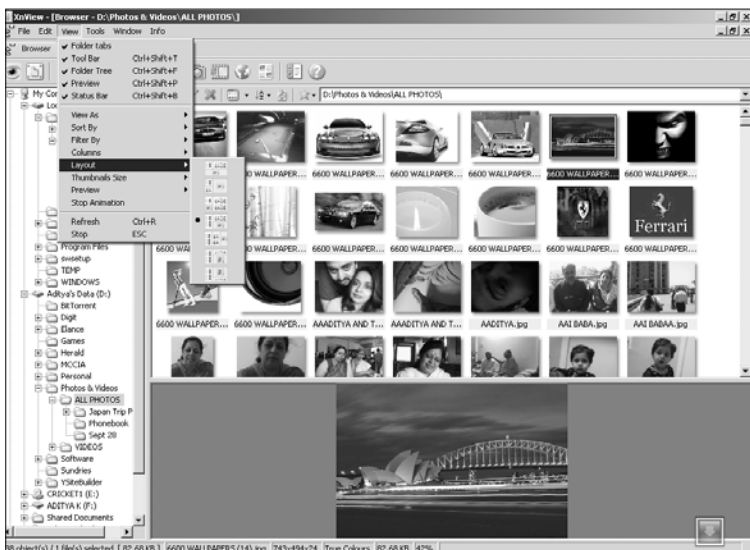
transformation), slide shows, screen capturing and TWAIN support for scanners and digital cameras.

Numerous image filters and effects for image processing are available. Connecting with other popular professional graphic programs, say, Adobe Photoshop, can be done using the 'Drag and Drop', 'Clipboard' or 'Open With' menu options. It's got it all!

XnView lets you create the optimal defaults according to your needs and preferences—for example, you can define templates according to which a Web page will be created directly from the application. Operations such as copying, moving, and creation of directories and files makes XnView the universal tool for viewing and browsing through graphics.

**Here's a list of the most important functions in XnView:**

- m a variety of picture formats. XnView can read over 400 different picture formats—GIF, TIF, JPG, PNG, BMP, IFF, IMG, WMF, ICO, ...



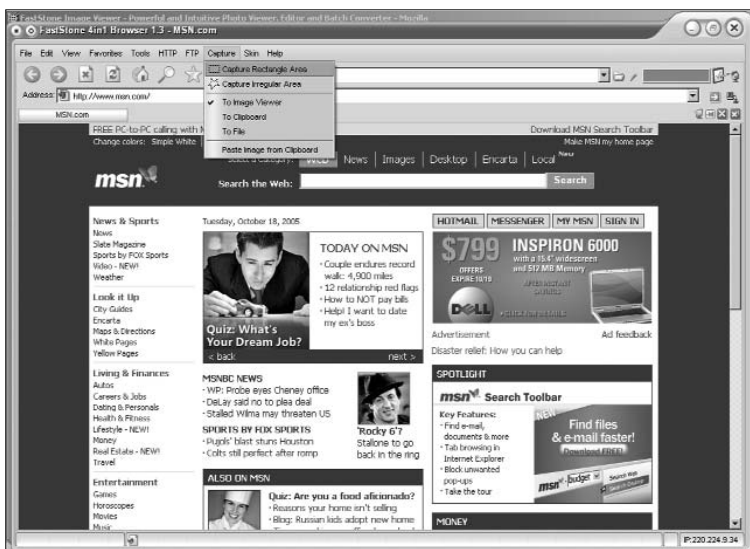
**Choose the layout of the main window for easy viewing**

- The XnView Browser is similar to Windows Explorer. It lets you navigate the directory structure, displaying all pictures in the current directory in thumbnail view.
- Standard file operations such as copying, moving and deletion of files can be performed.
- XnView can display pictures in configurable slideshows. You can also display pictures directly from CDs (self-starting slideshows from CD), resulting in an electronic photograph album.
- Various image filters and effects are available, e.g. sharpness, glass effect, colour exchange etc.
- Open and exchange pictures with other applications using Drag & Drop.
- XnView can convert a list of images from one format to another. In addition, it can also, during conversion, simultaneously apply one or more image filters and effects.
- Create contact sheets with thumbnails of pictures.
- Retrieve and display important image information such as size and colour density in a number of different ways.
- Supports scanners and digital cameras directly using the TWAIN protocol
- Create Web pages with images including navigation and preview.



- ₪ Play the most popular sound files including .mid, .rmi, .wav, and .mp3.
- ₪ Rotate or flip JPEGs with no loss of image quality.
- ₪ Join images horizontally or vertically to create panorama images.
- ₪ XnView is extremely flexible and allows a high degree of optimisation and default settings. This means it is easily tailored to individual needs and preferences.

## FastStone 4in1 Browser 1.3



This browser opens in Internet Explorer and also has a built in HTTP server

FastStone 4in1 Browser is a free multi-window Web browser with an inbuilt HTTP Server, a fully-functional FTP Client and a Drag & Drop image viewer. It enables you to surf the web, run a Web server, transfer files between your computer (client) and servers, clean IE records, and view and capture images from Web pages—all within one single application. It is fast, stable, skinnable and free!

The FastStone browser looks like a cross between Internet Explorer and Mozilla Firefox, but behaves more like IE. It also has inbuilt support for IE and can import from and export to IE seamlessly. This is especially useful if you are creating a Web site, since you can send images from here directly to IE for preview in a browser or even configure FastStone to display them so.

FastStone has a powerful inbuilt image viewer that enables users to capture any portion of the screen—a rectangle or an irreg-

ular area—to the image viewer, the clipboard or a file. It also allows users to drag and drop images from Web pages and view them within a magnified format and to resize, crop, rotate and save images in different formats.

One of the other major features of this browser is its ability to capture screenshots. It's a three-click process. Clicking on the 'computer' icon next to the address bar will pop up a menu that gives you the choice of the destination to which you want to save the screenshot (image viewer, clipboard or file). Once you've chosen the screen, it will be sent to the destination you chose.



**Capture your images from anywhere on the screen**



**Choose any shape you want and a zoomed in image is available at the bottom right on the screen**

# Image Managers

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Finding the right photograph from the proverbial pile can be a daunting task. Even the most meticulous of users eventually fall into the trap of leaving photos unlabelled and unsorted, leading to a meltdown of the entire system of easy-to-find photos.

But new technologies are available to make this task easier. Arguably the best software to complete this task of having photos sorted by date, time or any other criterion conceivable is Picasa 2.0 by Google.

## **Picasa 2.0**

The second coming of this now-popular tool by Google has been nothing short of revolutionary. But then, it's by Google!

## **Download and Installation**

It's a mere 3.16 MB download from [www.picasa.com](http://www.picasa.com), and the final installed size is just about 15.3 MB. Not too heavy on the resources, but as the number of photos in your collection increases, response times can worsen. You need not download it since we have provided this tool in our DVD this month.

Once the installation is complete, you will be asked whether you would like the program to scour your computer for images, or whether it should only look at the My Documents folder and the other 'My' folders. It is interesting to observe photographs being found and sorted—this itself is your reunion with some long-lost images!

## **UI and Usage**

Picasa has the most user-friendly and intuitive interface you could hope for. Light blue and a silvery-grey tone dominate the pages and this makes it very soothing. What this also does is present the user with the best possible background for viewing photos. The aforementioned silvery-grey background is, in fact, 18 per cent grey, which brings out the best of all colours from your photos.

The folder list. One click and all photos in the folder are visible

Like with all things Google, a search bar is mandatory!

The main options bar that lets you fetch photos from external devices as well

Easily identify the folder and also perform tasks using the drop down menu on the right



The Picture Tray where you 'Hold' photos to perform actions on

Print, blog or make collages... easy as pie

The Media Detector that runs in the background adding all photos it finds

The slider bar that lets you decide the size of the thumbnail you are viewing

One-click actions of holding or clearing photos, marking them etc is done here



Twelve options for even basic fixes makes Picasa more than an image manager

Navigation is easy thanks to the no-clutter layout, including a listing of 'Folders on Disk' on the left and a preview thumbnail—the size of which is configurable—on the right. A row of buttons on the top gives one-click access to importing photos from a digital camera, scanner or even removable media like a pen drive.

Other prominent buttons on the top include Slideshow, Timeline, Gift CD and Backup, the last being the most innovative and well thought out of all the features.

Sorting of photos happens as and when they are found, and by default, the photos are sorted by the date when they were taken. This information is normally pulled out from the EXIF data embedded into the image or the creation date in the case of artworks. Re-sorting these is possible, but our experience tells us that this is the best way to leave them.

Once your photos are sorted and available for viewing or edit-

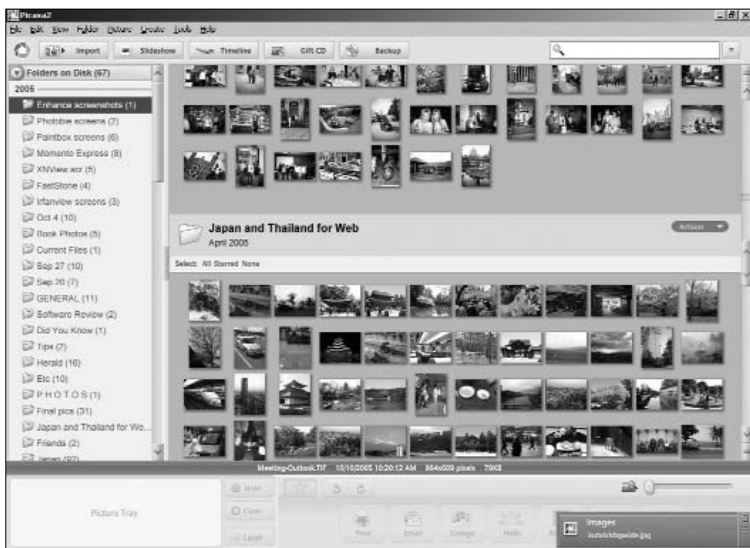
ing, you'll notice two distinct drop-down menus in the left panel. One is 'Images on Disk' and the other one is 'Other Stuff'. As the names suggest, the first one lists all folders on disk depending on the date of creation (note here that in this case, the date of creation of the folder is taken into account and then the oldest photo in that folder when sorting). 'Other stuff' normally contains photos that are either system images or images that the program cannot decipher and sort.

To make navigation even easier, you could assign labels to photographs. This can be done either individually or in batches. When you click on a photo in the preview mode, click 'Hold' in the lower panel and this will 'Hold' your photo in the tray. To remove them from the tray, just click 'Clear'. Clicking 'Clear' does not delete your photos; it just removes them from the tray. Why is the tray there at all? So you can perform actions on batches of photos.

Speaking of which, let's complete the labelling of photos, shall we? Once you have held any number of photos in the tray, click a



Choose the thumbnail size and you can view them this big...



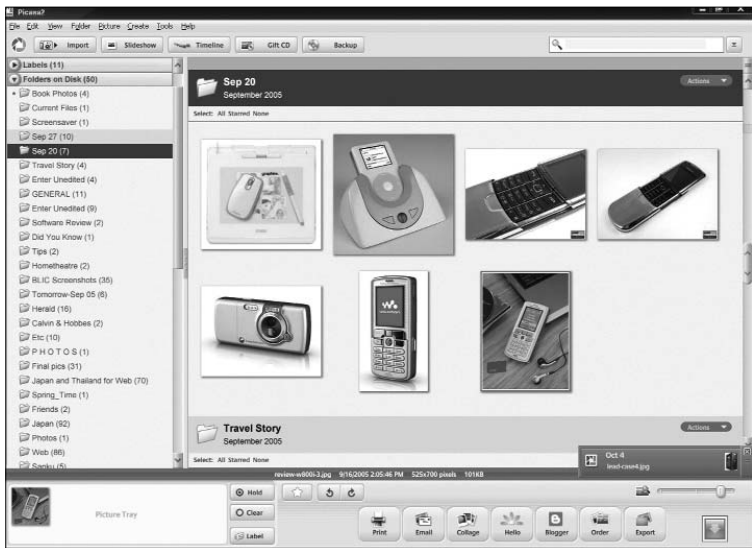
**Reducing the thumbnail size can accomodate a larger number of images on screen**

small button under the 'Clear' button that says 'Label', and create an appropriate label like "Office Party" or "Bungee Jumping" (or whatever!) and click. You're done. A new drop-down menu is formed in the left panel, and clicking on a label will show only those photos associated with that label. More photos can be added to this by just right-clicking on a photo and assigning that label to it. Seriously, it doesn't get any easier.

Once you have your photos in Picasa, it's no longer necessary for you to remember where they are stored on the hard drive. Hitting [Ctrl] + [Enter] opens up the folder where they are stored. Just in case you would like to attach them somewhere and couldn't remember!

Printing (singly or in batches) is also possible. This is another aspect where the tray comes in handy. If you were in the US, you could have also ordered a backup CD of select or all photos. Otherwise, you can still burn your own CDs for backup using Picasa itself.





**Folders and labels on the left make it easy to navigate through the photos**

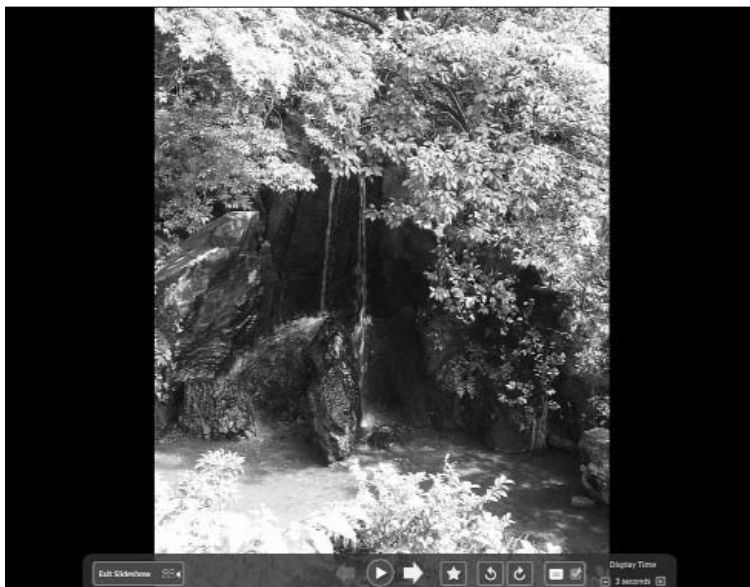
Blogging (if you are into it) is also possible. The program comes with two inbuilt buttons: Blogger and Hello. You'll need to install the Hello tool first, though, to upload to your Blogger blog. This can be a little cumbersome—it takes up a fair amount of time, and the Hello tool is a touch slow. But hey, the options are there.

### **Additional Features**

Given that this is image management software, there are some rather handy tweaks available which work better than most other quick fixes you could hope for. To access these, you need to double-click on any photo, which will take you to the fixing screen.

The image editing options in Picasa are divided into three parts: 'Basic Fixes', 'Tuning' and 'Effects'. Here's a look at all three.

'Basic Fixes' include Crop, Straighten, Red Eye, I'm Feeling Lucky (typical Google!), Auto Contrast, Auto Color and Fill Light. The fixes are all only the basic ones, but in a nutshell, these are the most essential ones you could want.



View a slideshow of images in a particular folder... one-click operation

‘Crop’ does just that and helps you compose an image better. ‘Straighten’ creates a grid over the photo, which lets you straighten any skewed photos and settle them on an axis.

The good thing about this is that it lets you just adjust a scrollbar for straightening the photo in either direction. ‘Auto Contrast’ and ‘Auto Color’ work pretty well too, but not with reasonably well-exposed photos. Photos with visibly poor exposure are the ones that get altered the most using either of these tools.

The ‘I’m Feeling Lucky’ button just adjusts the photo taking what it thinks would be the best settings. In short, this is the one-touch fix. We suggest you do it step-by-step or even manually.

The most impressive tool in this entire list, though, is the Red-Eye reduction. Since the dawn of time (or photography), red-eyes have been staring back at unsuspecting viewers making most peo-



Picasa also lets you 'tune' an image in six different ways

ple resemble hounds caught in the headlights. But no more!

Among all the tools we have seen, we are about to stick our neck out and say this is the easiest and among the more reliable ones to use. Once activated, you'll see a 'draw' kind of tool that lets you pull a square around the red-eye. That's it. That's all you have to do. The rest is done by the program. Now, we had quite a range of red-eyed photos, and we're thrilled to report that our success rate was about 98 per cent. Impressive.

Moving along, the Tuning option allows some more control over image attributes and lets you adjust 'Fill Light', 'Highlights', 'Shadows' and 'Colour Temperature', and also lets you pick a neutral colour. The most impressive of all these is the 'Fill Light' function, which will fill in light in any underexposed areas. Manual control is available here, and you can choose how much light you want 'filled in' into your photos.

'Effects' is more for playing around with your images, and we strongly suggest creating a backup before venturing into this.

Normally, you are allowed to go back only one step at a time (unlike in Photoshop where you can cancel a range of commands), and it's good practice to just wait and watch while your command takes effect—rather than go trigger happy and click all the available effect buttons!

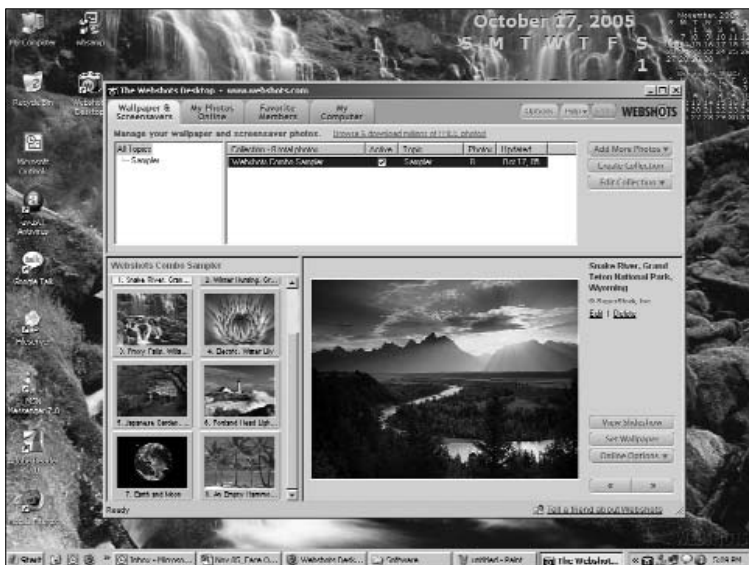
In all, there are 12 effects available, but the more useful of the lot were the 'Sharpen' and 'Warmify/Saturation' effects. Other effects included Sepia, B/W, Film Grain, Tint, Soft Focus, Glow and so on.

Some additional features include the creation of slideshows and screensavers from your collection itself. The screensaver option is especially fun since you can bunch together a group of photos and have it pop up every time your computer is inactive.

For a one-stop solution to your photo organisation worries, this is by far the best tool available. What makes it really, really good is the fact that it's free!

## Webshots 2.2

Created by CNET Networks, this popular tool has been around a long time. One of their main claims to fame is the fact that it can collect photos submitted on its Web site ([www.webshots.com](http://www.webshots.com)) and display them on your computer as screensavers or wallpapers.



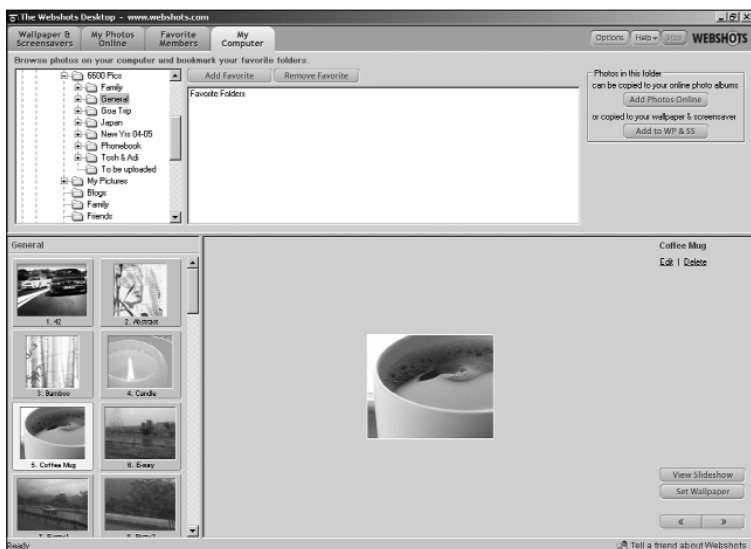
As soon as you install, Webshots takes over the desktop and places a wallpaper

### Download and Installation

A simple download gets you the installer, which then expands to 1.74 MB. Unlike with Picasa, though, Webshots does not scan your entire computer for photos to be added to the collection(s). This is something that has to be done manually after installation. Installation itself is simple and quick.

### UI And Usage

Webshots offers users a clean, four-window interface that is as easy to view as it is simple to use. The top left panel houses the file



**Images from your computer can be added to be set as wallpapers or for browsing**

browser, from where you can choose the folders on your computer to include photos from. The neighbouring right window on the top displays the folders and any photos in the main folder.

These are then displayed in thumbnail format in the lower left panel. Selecting any of the thumbnails brings up the bottom right—the fourth and final—pane into the picture, and shows the chosen image in all its glory!

Right next to this blown-up thumbnail are a few buttons: Edit, Delete, View Slideshow, Set Wallpaper, Online Options, and a navigator to choose the previous or next photo in the folder.

On the top are four tabs that let you make the most of this program itself. Wallpapers and Screensavers is the first, followed by 'My Online Photos', 'Favourite Members' and 'My Computer'. There is a big difference in the first and last tabs and their purpose in the program—you shouldn't make the mistake of confusing what tasks each of them do. We clarify this because



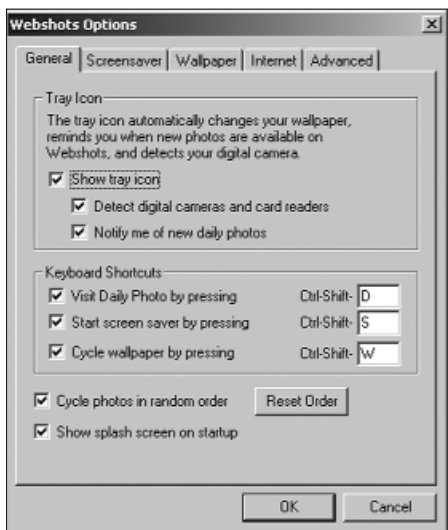
The main window where you can perform various actions on chosen images

sooner or later, you'd be tempted to do just that!

Let's look at each of the tabs one by one. The 'Wallpapers and Screensavers' tab lets you create various collections that will house chosen photos. This has to be created manually, and these are the photos that will keep changing as your screensaver and desktop images. Collections can be created based on topics and that's how they are displayed here as well. It's worth noting that the sizes of all panels are adjustable, and the photos also readjust to ensure proper display ratios.

The next tab, 'My Online Photos' lets you log on to the Webshots site and access a collection online (one that has been created from their repertoire of images) for viewing and usage on your computer. The third tab, 'My Favourite Members' is a direct connection to various members of the Webshots Web site that you may have marked as favourites. These could also be friends and this tab will display their recent (or all-time) collections.

The final tab is one of the good things about Webshots. As mentioned, it has the Explorer-type navigational range and this is its USP. Here, you can add favourite folders where you would normally add photos. Its good because then, you could just come here and check the new photos you have added.



Set the options for the behaviour of images and wallpapers and screensavers using Webshots

## Editing

This is one place where the software really loses out. For one, there are almost no editing tools available. The only things you can do are rotate the photo(s) clockwise or counter-clockwise. There are no provisions to change the exposure or even add a little brightness to the photograph.

## Wallpapers and Screensavers

To the first-timer, it would seem as if the only purpose of this software is to keep changing the wallpaper on your desktop and add new photos to your screensaver collection! This is only partly true. The other part that makes this software worthwhile is the possibility of automatic downloads from the Webshots site to your computer and then changing the wallpapers and screensavers!

On a more serious note, though, this can be fun. For one, you can forget about having the same old photo on your desktop everyday. Settings in Webshots allow you to change the desktop



every hour. So the next time you minimise all windows, be ready for a surprise! As your collection grows, though, it can be a little tough to manage it. It's very important that you label or categorise all photos as soon as they are added, lest you don't know where to find them.

# Audio Tools

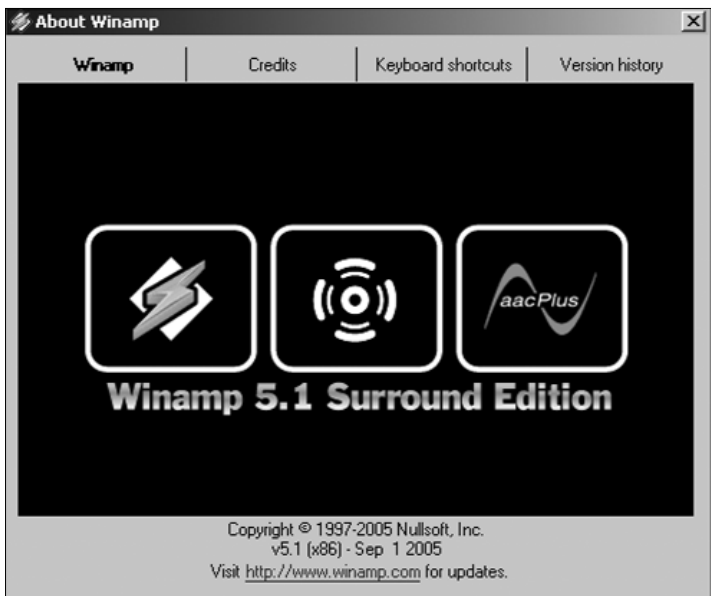


At every home, the desktop PC running Windows has one common user data on the hard drive — audio files. Not all of these files are copied or saved on the hard drive by users, but installed by default with the Operating System.

In this chapter we discuss everything audio. The players, encoders, et all that will enable you to take advantage of thesetools and “wow” your friends with your knowledge of digital audio.

## 2.1 Audio Players

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Winamp 5.1 - The latest version

An audio player in Windows is a very generic term that can be used to identify any tool that comes bundled by default with Windows such as the ubiquitous Media Player. However in this section, we will talk about more than just the Windows Media Player. Here, we talk about some of the best audio players around. So without further ado, let's get started.

### 2.1.1 Winamp

Ask any real music lover if he or she likes to listen to music on a PC? If the answer is yes, then they definitely use Winamp. Winamp has been around the PC music scene since the time MP3s came into being.



The complete look of Winamp 5.1 - Skin, Equaliser and Playlist

Winamp is the brainchild of Justin Frankel, an uber geek who was not satisfied with how MP3s sounded on PCs. In fact, there was no decent player that could even play MP3s properly at that time. Therefore, Justin went ahead, coded his own player, and named it Winamp. The rest is history.

Winamp was first shared amongst a few friends and from there the chain reaction started. Soon, Winamp was the most downloaded MP3 player on the Web and Justin and his friends started their company called Nullsoft, their mascot being the llama!

Winamp didn't become the most downloaded MP3 player just because it was the first one. Well, that was one of the reasons, but the other reason was its user interface. At first, it could only play MP3s but later on support for WMA was added. Today the latest version of Winamp can also play Ogg files and there are other free plug-ins available that lets it play other kinds of music files too.

The latest version of Winamp is 5.1, which you can download from <http://www.winamp.com/player/free.php/>. There are two versions that you can download-Free and Pro. There are some advantages in the Pro version that are absent in the free one (obviously) however there is no limitation on playing music.

During installation, you will get the option of whether you want to see Winamp in Classic Skin or the Default Skin. Depending on what you choose, the player will open using that skin.

In Winamp, the skin refers to the way it appears to the user. Think of a skin as wallpaper that you would change in Windows. Only making a skin for Winamp requires some skills since it has to be resized and adjusted according to the dimensions of the player.

Okay, enough of that... lets move on to the interesting part. As you can see, Winamp also features an equaliser and a play list window. The equaliser lets you adjust and listen to your music according to your preferences. The Playlist window lists the songs that you have chosen to play in the player.

When Winamp first made its debut, it was a very simple player with support for only MP3 playback. Its journey since those times has been an extremely interesting one. Today, Winamp can be considered as an all-in-one solution for your audio playback, ripping and decoding, recording and more in Windows. With user support and members active worldwide this player has countless plug-ins, skins and enhancements that you can use for whatever audio task that you have in mind.

Using Winamp is child's play, since if you have ever used a tape player you can easily identify with it. Buttons are easily accessible and the player is extremely manageable. If you don't like the equalizer window, do away with it. If you want an unobtrusive mode, check out the Winamp mini mode, where the player doesn't take more than a single line on your whole screen.

Winamp not only plays audio but also video. There is also a proprietary video format for Winamp which is the .nsv format. Winamp also plays streaming online radio using Shoutcast. You can also download music by popular and not so popular artists from the Winamp Web site.

Winamp is one of the most used players on the face of this earth, and the only thing that we can say is may the tribe increase. Amen!

## **Tips for Winamp**

### **1. Changing colours in Winamp**

Winamp 5 (for that matter, even 3) has an interesting feature. Instead of skinning Winamp, you can choose various colours for different moods. For this, first, click the "Config" button on the main Winamp window. When the multi-tabbed dialog box appears below, click the "Colour Themes" tab. Now, choose a new colour theme as you desire by double-clicking a theme. "Varsity" is good when listening to music from the yesteryears. If the night bug's bitten you, try the "City Night" colour.

When you are done, click the button with the small arrow pointed upwards next to the tabs. This closes the "Configuration Drawer".

### **2. Use your own font instead of the regular Winamp font in the playlist window**

Generally, the playlist font is determined by the current Winamp skin. All Winamp skins including the Modern and Classic skins have their own fonts, for that matter most skins downloadable over the Internet have their own fonts. So, if you don't like these fonts and want your own, here's what you do:

1. Right-click on the Winamp 5 title bar.
2. Choose "Options", then "Preferences".
3. When the "Preferences" dialog box appears, click "General Preferences".
4. Click "Playlist".

5. In the right pane, uncheck "Use skin or language pack font"
6. Next to the "Use font" pull-down, choose your desired font from the ones provided.
7. Click "Close" to close the dialog box.

### **3. Managing file associations in Winamp**

If you have used Winamp earlier or are using it for the first time, then there is no way that you could have ignored the fact that Winamp takes file associations of all media files. So if an MPEG file was earlier associated with Windows Media Player, it will now open in Winamp. Sometimes, it does that even if you have restored the file association and then restarted your computer. Here is what you need to do to get rid of this irritating problem.

1. Right-click on Winamp 5's title-bar and choose "Options", then "Preferences".
2. When the "Winamp Preferences" dialog box appears, click on "File Types".
3. Uncheck "Restore file associations at Winamp start-up".
4. Press "Close" to close the "Winamp Preferences" dialog box.

### **4. Turn on visualizations for every song played in Winamp.**

Visualizations are not enabled by default in Winamp and if you want to see the visualizations, you need to enable it every time you restart Winamp. Here's a way by which you won't need to.

1. Right-click on Winamp 5's title bar, choosing "Options" then "Preferences".
2. When the "Winamp Preferences" dialog box appears, click "Plug-ins".
3. Check "Auto execute visualization plug-in on playback".
4. Click "Close" to close the preferences dialog box.

### **2.1.2 Windows Media Player**

Windows Media Player was first introduced to the world in the fall of 1991, with the introduction of Windows 3.0 with Multimedia extensions. This happened after Creative Labs added

digital-audio sound capabilities to the PC platform with their Sound Blaster series of audio cards.

Since then, Windows Media Player has been a part and parcel of the Windows Operating System. When Windows Media Player was introduced, it featured support for only WAV and Audio CD, however today, you can listen to 5.1 and 7.1 surround sound with SRS WOW. Digital Rights Management (DRM) has also been implemented in Windows Media player helping users to rip music and also keep them secure. Windows Media Player started off as an audio player only but has evolved into what its name suggests, a true media player.

The current version of Windows Media Player (WMP) is 10, which is one of the best versions of WMP available to date. WMP 10 has native support for most video and audio formats, however some of the most popular formats such as DivX and XviD are still not supported, and you need to download and install these codecs to enable their support in WMP.

Installing Windows Media Player is extremely simple and you can download it from <http://www.microsoft.com/windows/windowsmedia/player/download/download.aspx/> the size being approximately 12 MB. We've made your life easier by adding it on our DVD! You will be asked a few questions during installation pertaining to customizing your player. Once the installation is done, here is what you will see.

### **2.1.3 Windows Media Player 10**

There are a lot of functionalities in Windows Media Player that are available by default which you can use. For instance, every time you insert an audio CD in the player and if you are connected to the Internet at the time, then WMP can retrieve data from the internet for your audio CD. This helps in cataloging information.



Similar to Winamp, Windows Media Player 10 also has equalizers and visualizations installed by default. However, these are not enabled in the typical installation and you will need to enable these (if you want to) when listening to music.

WMP 10 also has SRS WOW support by default, which can be enabled in addition to the equalizers present in WMP 10.

WMP10 also lets you listen to online radio stations and view the latest movie trailers. The new High Definition support in WMP 10 also lets you view HD trailers in its full glory, provided that you have a good broadband connection too.

Similar to Winamp, you can also download and install visualizations and extensions for WMP 10. Check out [www.wmplug-ins.com](http://www.wmplug-ins.com) for the latest and greatest on WMP10.

WMP10 has become an indispensable part of the digital audio revolution that hit PC's about 10 years ago. For most new users, WMP 10 represents digital media to them, and they are not looking for alternatives. WMP 10 has more than enough to satisfy them!

#### **2.1.4 Musicmatch Jukebox**

Musicmatch Jukebox has long been a major player in the digital audio player category, however it always came in third. Mostly because of its resource hogging nature and also because it has remained a shareware player from the beginning. Another factor is the limited enhancements that are available for the player. But these does not in any way make this player a lesser mortal.

Musicmatch Jukebox was one of the first players that let users on to the completely new world of online radio. Another first was the “try before you buy” shopping style of online music, which later became a rage with iTunes (their marketing strategy and pricing was much better). Something better than what iTunes offers is the sampling of what you are getting before you buy a

song. You can savour different genres of music for a little fee every month, which was possible only with this player earlier but is now available on most players.

### **2.1.5 Musicmatch Jukebox 10**

Musicmatch Jukebox was bought over by Yahoo! Inc in 2004 and is in version 10 currently. The free version of MusicMatch Jukebox does not offer you much in terms of features however the Plus or the paid version allows to rip CD's and also convert music from old tapes to MP3's.

Musicmatch Jukebox has its fair share of fan following, however with new players coming up every other day and older players getting a makeover of late; Musicmatch Jukebox does need to renew its looks.

In this section, we have seen some of the best players that are around for listening to your collection of music. In the next section, we will check out some of the best CD rippers that are available for converting your CD collection to your desired format on the PC.

## **2.2 Rippers**

Before you start playing your music, you need to have it on your hard drive. Of course, you can download it from the Internet (legally), or you can rip your existing collection of CD's and convert them to the format that you want. In this section, we will talk about two rippers that are not only freeware but also the best in the business.

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### **Exact Audio Copy (EAC)**

This is the best CD ripping and converting software on the planet, period. Exact Audio Copy is the brainchild of André Wiethoff, who is currently studying at the University of Dortmund and says that the reason he created EAC was that he

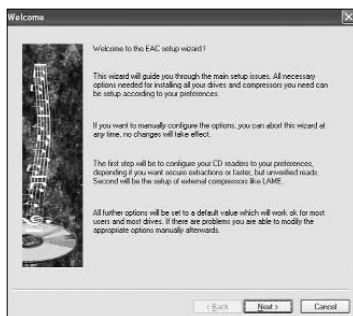
got fed up with all the other CD rippers available around. We couldn't agree more!

The best part of EAC is that it is cardware (freeware, in disguise actually!). All you need to do to register your copy of EAC is to send a card, a postage stamp addressed to André Wiethoff, and that's it, you're done!

EAC is in its beta stage at version 0.95 and is approximately a 1.5 MB download. Not too much of a bandwidth-hogger, this program! Installing EAC is pretty simple and easy to understand instructions are available during the installation process to help you.

EAC by itself is only able to rip music to WAV files. If you want to compress these WAV files using external decoders such as the LAME MP3 encoder or Ogg Vorbis, then you will need to download and install these software from the internet and configure it with LAME.

EAC comes with options to obtain CD information from freedb.org. Again you will



EAC version 0.95 installation window



Configuring your drive – Step 1



Configuring your drive – Step 2

need to configure the options in EAC. We will help you out with a small workshop on EAC, which will let you configure EAC and help you create quality rips from your CD.

## EAC Workshop

1. Download EAC from <http://www.exactaudio-copy.org/eac-0.95b3-cdr-dao.exe> and then install it. It's also on the Digit DVD.

2. Download LAME from [lame.sourceforge.net](http://lame.sourceforge.net). This will be a zip package (latest is 3.96.1 stable) and you will have to unzip it.

3. After installing EAC, run the program. This will take you to the first screen.

4. Next, you will see the option to choose the CD/DVD-ROM drives that you will be using for ripping the CD's.

5. On the next screen, you will be asked to choose between EAC providing you with accurate results or if speed is only concern. Error correction is one major factor here, since if speed is your only criteria, error correction when ripping CD's will be poor. Choose "I prefer



Configuring your drive – Step 3



Configuring your drive – Step 4



Configuring your drive – Step 5

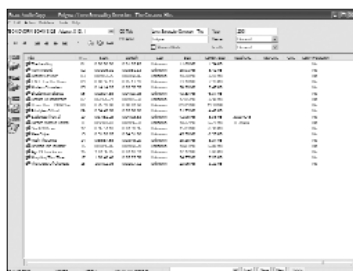
accurate results” only. This will help in getting good quality rips. Make sure that you have a audio CD inside the drive before you click on the next button.

6. The next screen will tell you about your drives capabilities.



Encoding using LAME - Step 1

7. Finally, EAC has your drive configured and ready, but wait there's more to go. We still need to configure the encoder in EAC. Click on Next to continue. In this workshop, we are using LAME, which is a free MP3 encoder. You can configure any other encoder such as PsyTel AAC encoder or Ogg or FLAC or APE, whatever you prefer. The steps though, remain the same.



Typical EAC interface

8. Click on Next to continue. This will make EAC search for the LAME.exe file which is the encoder executable needed for compressing the ripped WAV file to MP3.

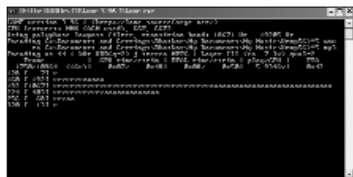
9. Once EAC locates the LAME encoder executable, you will see the following screen. Let the default options remain unchanged.



Encoding using LAME - Step 2

10. The above instructions are the most important in the setting

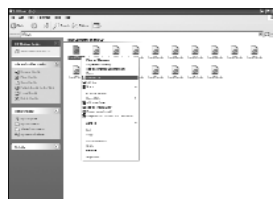
up EAC, once done, here is how you go about ripping a song. There are further options that you can use but are beyond the domain of this book. You will need to research and try these options. Remember, some of the options such as enabling Paranoid mode for reading CD's can damage your optical drive and in some cases the CD too.



Encoding progress as viewed on DOS

For this, insert a CD in the drive and start EAC. If you have the Freedb database options enabled, you will be able to see the CD information as shown in this image.

Say, if you want to rip just one song, click on the song that you want to rip and click on the MP3 button on the side bar. If you want to rip the whole CD, do not select any song, just click on the MP3 button. EAC will only prompt you to specify the location to save the songs to. Once that is done, you are good to go. This is what happens next.



Select the audio tracks that has to be converted

EAC has rocketed to popularity since the time it became available to the public. Nevertheless, what we have mentioned here is just the tip of the iceberg. There is a lot of customization that is possible with EAC, but if you are looking for a no-fuss, straight up Audio CD rip, then this next software will definitely interest you.

## **dBpowerAMP**

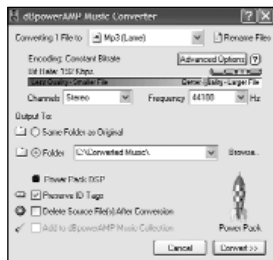
dBpowerAMP is one of the fastest rippers available. Unlike EAC, this software is meant for those users who just want to rip and listen, quality be damned! If you are one of them, then dBpowerAMP is the tool that you need. The download size of this software is a mere 1.9MB, and the installer has the LAME encoder bundled with it. So, you do not need to go online and hunt for LAME to download and install it.

Once you have downloaded the software (or in this case, located it on the DVD), installation is a quick and no-fuss process with minimal pain for you to go through.

The software integrates into the Windows shell and any music file that you right-click on now has an option of "Convert to", which when you click opens the main interface of dBpowerAMP.

Here's how the user interface looks. It may just seem a bit cluttered, but don't worry, we'll soon clear it up for you.

By default, dBpowerAMP can only encode ripped WAV files to MP3. However, if you want to encode in any other format, you will need to download and install the particular encoder that you want to convert the WAV file into such as FLAC or Ogg Vorbis. dBpowerAMP also has support for Windows Media 9, but no WM10 support. If you choose MP3 as your encoder, then you can see a slider that shows you the bitrate at which the desired song will be encoded in. If you want to change the encoding bitrate, then all you need to do is drag the slider and the bitrate is automatically set to what you want, the highest being 320 Kbps and the lowest being 32 Kbps. Choose the bitrate according to your

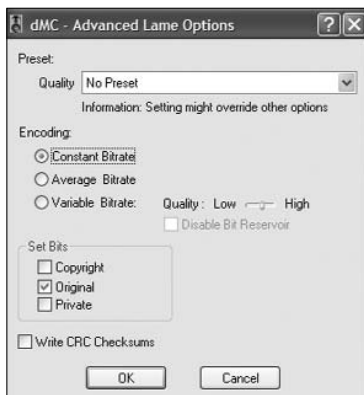


**Conversion using dBpowerAMP converter - Step 1**

preference. Most MP3s are encoded using 128 Kbps, so a setting of 192 Kbps ought to suffice for casual listeners. Use 320 Kbps if you want quality and don't care about disk space.

If you are the kind of user, who always wants to get inside the hood, then dBpowerAMP also offers you the advanced options, which lets you tweak the encoder settings according to your preference. For this, click on the Advanced Options button just above the above-mentioned slider. The screenshot will be more helpful.

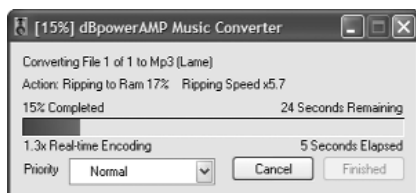
After you have set all the options, click on the OK button to apply the changes and then click on 'Convert' in the main window to start the ripping and encoding process.



**Conversion using dBpowerAMP - Step 2**

The two software mentioned above are the best freeware available on the Internet that you can use for ripping CD's. While EAC is for the discerning audiophile who wants quality

above everything else, never mind the hours of tweaking it requires to get EAC ready, dBpowerAMP is the ripper for users who want a fast and fuss-free solution.



**Conversion using dBpowerAMP - Step 3**

In the next section, we talk about programs that will help you doing everything with your audio files-edit, mix and more.



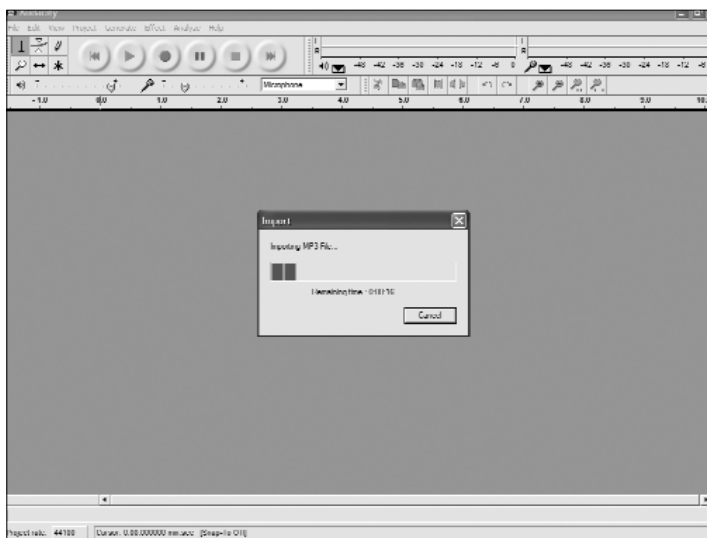
## Audio Production Tools

While ripping music from Audio CD's has become an everyday job for people, if you feel the need to get creative then you might want to consider your options. Software such as Cakewalk and Steinberg Cubase cost a bomb, and are out of reach for most computer users, the ones who need a good software for experimenting. Freeware software, which are of comparable quality and will let you do all your experimenting without pinching your pocket, are few and far in between. This section details two such software, which we are sure you will like.

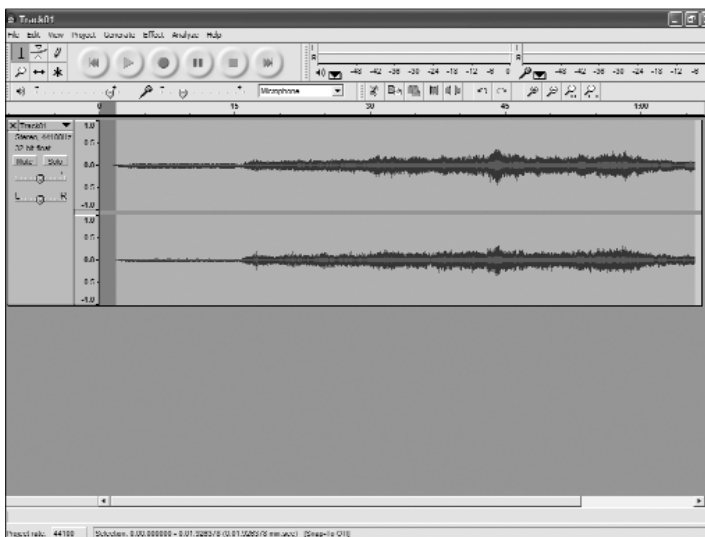
## Audacity

Audacity is one of the best freeware software available for audio production, and compares with some of the best, paid software around. Here is how you go about installing and using this software.

You can download Audacity from <http://audacity.sourceforge.net>



**Audacity freeware software for audio production**



### Working with Audacity

[.net/download/windows/](#). It's also provided on the DVD. Installing audacity is no big deal, and all you need to click on are the Next buttons (as usual) until the installation starts and finishes.

Audacity installs by default in **C:\Program Files\Audacity\**, unless you really need to change the path. This is the main folder. Inside this folder you will find another folder which is of much importance to us. This is the Plug-Ins folder. This is where you will keep all your plug-ins and use them as and when required by you. There are plenty of plug-ins available for Audacity and all you need to do is search the Net for some.

Here is the screen that you see when you run Audacity for the first time. For importing a file into Audacity, click on **File > Open** and then look for any audio file to import. Audacity can import WAV, MP3 and Ogg files.

If you are recording something then you need to use the microphone to record audio into Audacity. If you notice, the default selection in Audacity is the microphone. For recording, here's what you need to do.

Place your microphone close to your instrument. Make sure it isn't in your way while you're playing. To record, press the round red button, which is similar in almost all recording programs for computers.

You will not see the waveform while recording, but you will be able to monitor the amplitude. If it is getting close to the top and bottom of the panel, (1.0 and -1.0) lower the microphone volume using the slider with a microphone picture by it. If it is very thin, without getting near the "0.5 and -0.5" at the loudest points, you may need to raise the volume a little. When done, click on the square stop button. On playback the waveform will appear.

Once the recording is finished, click the Play button and it will play the music you just recorded. The next thing is to remove the blank space at the beginning and end of the recording. For now, trim to the approximate size (take care to not trim too much since you can set the start and end points more precisely with the 'Cut' tool later). Just place the mouse cursor right before the spot from where the music starts. Now holding the left mouse button down drag to the right, the waveform background will darken where you are dragging because you are selecting this area. When you get to the end of the music release the mouse button and go to Edit and click on it. Selecting 'trim' will remove the sections before and after the selected area.

Listen to the edited track so you know that you didn't cut it too short and if you did, don't worry, you can always undo what you did by clicking on 'Undo' under 'Edit' in the menu.

Now to save the music file, go to **File > Save project as**, or if you want to save it as a WAV file, '**Export as WAV**'. It will then let

you chose where to save it and name it.

Once you have saved it, you can now load it back into the program and fool around with it all you want without messing with the copy you saved. If you have pauses within the music that you want removed, listen carefully and watch as you play your file back, making note of just where you think you need to cut. Then, place the mouse cursor at the left side of the spot that you need to cut out and holding the left mouse button down drag to the right. The waveform background will darken where you are dragging because you are selecting this area. Let up on the mouse button when you think you have marked the right area. If you think you marked it wrong, just move the cursor anywhere outside the panel the waveform is in, and left click-this will erase what you marked so you can start over.

You can also add various effects and more to the recording that you made. You can also use VST and Nyquist plug-ins. All this for free! The only thing that you need to have is a good system that can provide the software the juice that it needs to run properly.

Have fun, and send us some of the audio you create!

# Video



Essential tools for videos today include players, codecs and video converters. With a number of independent software developers around most of these tools are available for free over the internet, these include powerful video editing and converting tools in addition to players such as the VLC media Player that can handle almost all the different file types. In this chapter we take a look at those tools that are a must have for any PC.

It's come to pass now - the computer is becoming the media hub of most urban households. The wide variety of open-platform architectures developed around the world has resulted in the spawning of a myriad of formats for storing and methods for manipulating data.

Entertainment has always been one of the catalysts of innovation in technology. Both software and hardware developments have focused on delivering content quicker and in a crisp fashion. The result is that you have an overwhelming number of tools and utilities for each task. Choosing the best among these is now also becoming a problem. Factors such as compatibility with your existing setup and ease of availability with regard to upgrades become important and defining.

Some video players, codecs, and converters are freely available on the Internet. Many of these are cross-platform. We review some of the best free software that can play your videos irrespective of file format and encode the files in a specific format, codec packs that can take on any video format you dish out, and finally, editing and movie processing software that help you make that perfect home video - or who knows: even a Hollywood blockbuster like <The Blair Witch Project>!

## 4.2 Video Players

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One of the essentials in any computer is a video player. With the large number of formats available, it has become difficult to go hunting for the codecs that will help play your video on your existing media players. You could keep downloading the codecs, yet newer ones keep sprouting. The need of the hour is open source, cross-platform players that support as many formats as possible, while being compact enough to be downloaded and easy to load.

The other important prerequisite is that the player interface be clean and intuitive. In addition to this, the player must also be



able to provide support subtitles; we all do love those foreign-language films, don't we? Other extras in a player such as support for DTS (Digital Theatre Systems, an audio format similar to Dolby Digital 5.1) and an MPEG splitter would always be welcome.

None of these should, however, come at the expense of size. So do we have players that fit the bill? The open source public license has made it easy to find players that will happily gobble up anything thrown at them. We've picked the choicest few for you. A couple of them are must-haves, and might easily replace your existing media player.

#### **4.2.1 VLC Media Player**

This player started life as the cross-platform client for the VideoLAN open source video streaming server solution. Since then it has matured into the versatile player of choice for almost everyone who knows his video from his audio. This robust, never-say-die player plays just about anything you throw at it. Sometimes, though, the video is a little garbled, but there is some video output - not just visualisations as in Windows Media Player.

All players - such as Real Alternative, Quick Time Alternative and Windows Media Player - would play your files if you loaded the necessary codecs; VLC, however, requires no codecs to be installed. It comes loaded with almost all of them, and with something or the other to decompress whatever you decide you want it to play. This doesn't mean that the player is bulky: at 7 MB, it's one of the smaller players! All this sounds good, but the best part is, the player is open-sourced under the GPL, so it's available for a number of OSes in addition to Windows such as different Linux distributions, Mac OS and BSD.

The player offers a one-stop solution, supporting playback of a whole slew of file types, including MPEG2, MPEG1, MPEG4 (XVid, DivX, 3ivx and libavcodec codecs), DV25 (25Mb Digital Video) and even, to a limited extent, WMV files, where it plays the start of the video and then gives up. In addition to these it serves its original function as a streaming-media server.

Firefox now has a plug-in for VLC that can be installed to play streaming media content from the Internet. Open source means the program gets updated very frequently; having to download the updates constantly can be an irritant!

The player has a number of features, such as widescreen viewing which makes watching DVDs a real pleasure. The latest version (VLC 0.8.2), on this month's DVD, supports DTS sound as well, so you can plug in 5.1-channel speakers to your system and create a theatre of your own.

One irritant is the error messages that keep popping up in the middle of the screen when frames are skipped. However, this is the default setting, and can be disabled. The other sour note is the limited capacity to play .wmv and .3gp files.

If you are looking for a one-stop media playing solution, and if you have a large number of media files in varied formats, VLC is "the only player you would ever need," as Download.com says.



### 4.2.2 QuickTime Alternative

QuickTime Alternative is a simple, low-maintenance multimedia player devoid of any ads or bells and whistles that have now become *de rigueur* in most free media players. At 10 MB, it's a very small download. This comes as a relief, since the official QuickTime Player from Apple, at 24 MB, has become an extremely bloated download and an even bigger installation. To add to this, the latest versions come loaded with iTunes, which just about adds to the bulk of the application. QuickTime Alternative makes it possible to play QuickTime files without having to install Apple's QuickTime Player, allowing you to use the player of your choice for multimedia playback. The open source Media Player Classic, not to be confused with Windows Media Player, is included in the download and is the default player.

This full-featured player has internal decoding support for DVD, MPEG-2, MP3, MP2, AAC, AC3 and DTS. It also has internal support for opening Matroska and Ogg containers. The player is chosen as the default player for those files associated with Quick Time Alternative.



The application is ultra slim and ad-free, and is designed to play all QuickTime media files, including MOV, QT, and 3GP files (the formats that most mobile phone clips are saved in) as well as streamed multimedia content and QuickTime content embedded in Web pages. The plug-in codecs for the latest versions of Internet Explorer, Netscape, Firefox, Opera and Mozilla, which are integrated into the player, serve this purpose well. For streaming video, you can also enable the Instant-On feature, which starts playing the video as soon as it starts loading. At lower Internet speeds, though, this results in frequent pauses during playback and reduces the quality of playback.

When paired with the Real Alternative player, you can play back almost any video file on your computer as the two together support nearly every major multimedia format. This includes MP3, MPEG, AVI, CD/DVD content, Windows Media (.wmv), RealAudio (.ra and .rpm), and RealMedia (.rm, .ram, .smil, and more) files.

The QuickTime Alternative installed without any trouble. A point to note here is that if you have another QuickTime version installed on your computer, you would have to uninstall it before installing QuickTime Alternative. This, of course, we did without hesitation.

Files loaded and played without delay, and playback was smooth. Even though the application is free, it offers all the necessary options and functions. These include the ability to bookmark favourite files, adjust volume in the window, track file progress, load subtitles, etc. The Options menu is loaded enough to give a novice cold feet. The player looks and feels like any regular bare-bones media player, but with its robust back-end and wide-ranging support, you'd not need to look elsewhere for video playback. If we had to ask for anything more it would be skin support: the Windows Classic look does get a little boring.

#### **4.2.3 RealPlayer Alternative**

Something of an "Attack of the Alternatives" you'd say, considering this back-to-back review of two alternative applications to two wide-

ly-used media players. However, before we get on to RealPlayer Alternative, let's take a look at the reason for the alternative: RealPlayer itself. This lumbering bulk of a player, once the preferred media player for many users, has taken a beating of late at the hands of users. The reason is simple - too many ads, and the sheer bulk of the player. Real Alternative, a free application from KL Software, allows you to play Real Media and other multimedia files without having to install RealPlayer or RealOne Player from Real Networks.

The size means a quick load on even slow machines (we ran it on a P III). This sleek and simple ad-free application is designed to play most media content, including the RealAudio (.ra and .rpm), RealMedia (.rm, .ram, .rmvb, .rpx, smi and .smil), RealText (.rt), and ReadPix (.rp) formats, as well as non-Real media content such as MP3, MPEG, .avi, QuickTime movies, and CD/DVD content. It also supports RealMedia content embedded in Web pages. However, RealMedia .smi and .smil files are not fully supported. Real Alternative uses Media Player Classic as the default player, just like Quick Time Alternative does. This nifty, bare-bones player makes the application even more appealing.

The application requires the latest version of DirectX - 9.0c - to be present before installation can proceed. Even when loaded with files one after the other the player does not pause for breath, playing each file smoothly. Considering the application is free, Real Alternative offers an impressive array of options and functions.

#### **4.2.4 Media Player Classic 6.4.8.4**

Media Player Classic is an extremely lightweight media player for Windows. It looks just like the good old Media Player 6.4; however, this player is a wolf in sheep's clothing - well, in a sense, if you think wolves are cool. It comes loaded with features that would put any of the biggies to shame. Media Player Classic was created under the GPL and is currently maintained by a programmer who goes by the name Gabest. Originally developed as a closed source player, Media Player Classic is now an open source application.

The player is capable of VCD, SVCD and DVD playback, without the need to install any additional software or codecs. It also has an inbuilt DVD player with real-time zoom (the video does not pause while zooming in). The player has inbuilt codecs for MPEG-2 video with support for subtitles, and codecs for LPCM, MP2, AC3 and DTS audio. It also contains an MPEG splitter that supports subtitles on SVCDs, and supports direct playback of VCDs and SVCDs using its VCD/SVCD/XCD reader. Although this player is based on the DirectShow architecture, if installed on your computer, it can also use the QuickTime and the RealPlayer architectures to play their native files - which means you can make it play any RealMedia and QuickTime file just by installing RealPlayer Alternative and QuickTime Alternative. In addition to these, Media Player Classic supports both the OGM and Matroska container formats.

If you think all this is cool and that things couldn't get better, Media Player Classic supports playback and recording of TV if a supported TV-Tuner is installed. Even with a number of free players coming up every day, Media Player Classic holds its own - it's a great replacement for the bulky Windows Media Player.

## 4.3 Video Codecs and Containers

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The need to transfer digital data across a network brought about the need for codecs. Put simply, ‘codec’ stands for ‘Compression-Decompression’, or ‘Coding-Decoding’. A video codec is a software module that enables the compression and decompression of digital video. As video technology progressed, storing and using video in digital format became feasible, and a variety of such technologies began to emerge. Video compression required customised compression techniques. Care had to be taken to ensure there was no loss of quality during compression. This led to the development of algorithms that compressed the software. Though different algorithms and methods have been devised to compress and decompress data, a few factors are considered cardinal rules. The compression algorithm should be robust enough to ensure minimal data loss and errors during compression. Ease of editing the file after compression and random access are a couple of other factors that need to be considered while designing a video codec.

With the number of codecs available growing every day, it has become necessary to bundle these into ‘packs’, or containers. Most of the codec packs available today support a multitude of codecs, and also have players and other video utility tools bundled along.

In addition to codecs we also have something known as container formats. A container is a file format that can store various types of data in it. This data is compressed in a uniform manner using a standard codec. Advanced container formats can therefore support audio, video, subtitles, and meta-data. They are also capable of storing the synchronisation information needed to play back the various data streams together, as in a typical video playback. Thus one of the essential differences between a codec pack and a container is that the latter acts as an envelope for different media streams. A few of the better known container formats are Apple’s QuickTime and Microsoft’s Advanced Streaming Format (ASF).

### 4.3.1 K-Lite Mega Codec Pack

The K-Lite Mega codec pack is exactly what you're looking for. It's the big daddy of all codec packs. This mega combination pack is a bundle that includes players, containers and also the K-Lite codec pack.

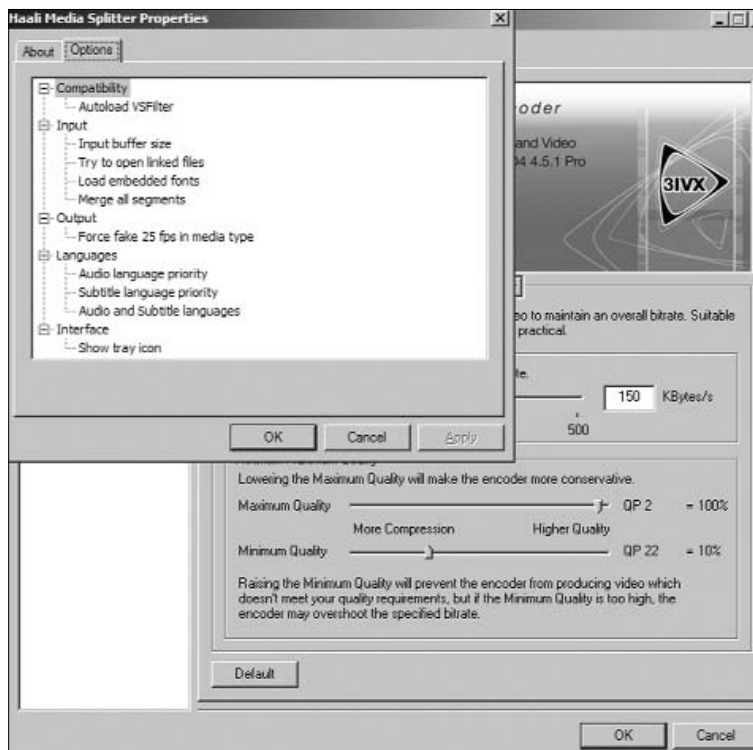
This free-to-use pack comes with more than just codecs. Its repertoire includes players and codec information tools. The best thing about the pack is that you can choose the applications you want to install. The one problem with this bundle is the problem of plenty: a lot of the codecs provided by the pack lie unused. The pack contains the following:

K-Lite Mega Codec Pack	
<b>Media Player Classic</b>	Video player similar in appearance to version 6.4 of the Windows Media Player, but not affiliated with Microsoft.
<b>BSPlayer</b>	A video player
<b>Real Alternative</b>	A player that allows you to play RealMedia files (usually .rm or .ram) without having to install the official RealPlayer.
<b>QuickTime Alternative</b>	A player that allows you to play QuickTime files (usually .mov) without having to install the official QuickTime player.
<b>Sherlock</b>	Tells you what codecs you have installed on your computer.
<b>GSpot Codec Information Appliance</b>	A tool that can tell you exactly which codecs are needed to play a certain video file.
<b>Numerous codecs</b>	The download has most of the codecs you will need, including the popular DivX and XVID.

### 4.3.2 Matroska

Matroska is an open standard audio/video container. The name Matroska is derived from the Russian Matryoshka dolls that are enveloped in larger, similarly-shaped dolls. It is an advanced container format and can support audio, video, subtitles, chapters, and metadata. In addition to these, it also contains the requisite information to play back these different data streams together. A typical Matroska video file is a .mkv file, and an audio file is a .mka file.

This container is based on EBML, or Extensible Binary Meta Language - a binary derivative of XML. This makes the container extensible with respect to future formats. Matroska files contain a



Containers include a number of Encoders such as the 3ivX

large number of different audio and video compression formats such as RealVideo, DivX video and XVID. If you have the latest Matroska Direct Show pack installed, even a Windows Media Player as old as version 6 can play a Matroska file.

The Matroska container is the most efficient of container packs. In addition to handling almost all available video formats and variable frame rates, it supports HTTP streaming and subtitles including embedded fonts.



## 4.4 Converters & Utilities

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The lack of proper standards means that once you transfer your video files to another computer, you would have to make sure you carry all the necessary codecs along. This cumbersome task is put paid to if you manage to convert all your video files into one standard format. It also means you would need only a single player and a single codec to play back all your files. Also, with newer playback devices such as the PSP available, it would be prudent to have an application that can convert your media files into a format that can be played back on these devices.

A tool like a converter can come in handy when you want to create a DVD-type file from a normal AVI file. <Most converters are not freeware or shareware, and are available only for a specific trial period. In keeping with the mandate of this book, that of not dishing out trial software or demos, we have reviewed only those that are available for free and that are devoid of adware and watermarks on the output.

In addition to converters, tools that identify the codecs required to play a particular file and that give a list of the codecs on your computer are also available. These tools are generally created by individual programmers, and are prone to bugs and crashes. But the good part is they're free and open source, and hence undergo constant changes and improvement.

### 4.4.1 The FilmMachine

An AVI to DVD or VCD converter is a handy tool when you need to convert and burn home videos. This would also do away with the need to store videos in a bulky format on your computer, and you can convert them just before burning it onto CD or DVD.

The FilmMachine is a lightweight, free-to-use converter. It converts AVI files to DVD or (S)VCD files, and the wizard makes the task a cakewalk. The application lets you load more than one AVI file at a time; however, the properties of the two files need to be the same. It comes loaded with the QuEnc 0.51 video encoder.

# Film Machine

The FilmMachine (Version: 1.5.0.13 beta)



# The FilmMachine

by

The Mask

Movie	Avi Filename(s)

Open/Add  
Avi files

Clear files  
from list

Move Avi  
up

Move Avi  
down

Help

Info

Options

Make a donation

Back

Next

Please donate so that I can continue the dev

The FilmMachine (Version: 1.5.0.13 beta)

Default output folder: C:\Program Files\The FilmMachine\Output

Output file type:  
☐ Mpeg 2 (DVD or SVCD) ☐ Mpeg 1 (VCD)

Encoders:  
☒ H264 Encoder ☐ Canopus ProCoder  
☐ Canopus Craft Enc ☐ QuickTime (beta)

Aspect ratio:  
☒ 4:3 ☐ 16:9

Audio method:  
☐ Copy video, keep aspect ratio ☐ Audio Downsample 87.5 kHz

Audio language:  
☐ Stereo Output ☐ Interleaved video

Language: English

Help Info Options Make a donation Back Next

Development of this program.

The FilmMachine (Version: 1.5.0.13 beta)

Video Bitrate Calculation  
 CD size: DVD (DVD-5 4.7 GB) Average video bitrate =  
 CD count: 1  
 Audio bitrate: 224 kbps 9576 kbps

DVD burning:  
☐ Don't burn DVD ☐ Don't create ISO image  
 Image file:   
 Burn speed:   
☐ Enable Underburn Protection  
 DVD recorder:

Help Info Options Make a donation Back Next

Please donate so that

The FilmMachine (Version: 1.5.0.13 beta)

Use subtitles ☒ Show subtitles as default

Kind of Subtitles:  
☐ Permanent subtitles ☐ Selectable subtitles

#	Subtitle Filename	Language
1		

Color Primary:  Vertical Margin:     
 Color Secondary:  Bottom Margin:  Shadow:   
 Color Tertiary:  Border:  Position:   
 Color Shadow:   Microsoft Sans Serif 25.0 Bold

Help Info Options Make a donation Back Next

that I can continue the development of this program.

The FilmMachine (Version: 1.5.0.13 beta)

Use subtitles ☒ Show subtitles as default

Kind of Subtitles:  
☐ Permanent subtitles ☐ Selectable subtitles

#	Subtitle Filename	Language
1		

The FilmMachine - Audio conversion  
 Color Primary: BeSweet dB v1.5b25 "SPECIAL" by DSPguru  
 Color Secondary: (http://DSPguru.Dave0.org)  
 Color Tertiary:  0%  
 Color Shadow:

Help Info Options Make a donation Back Next

that I can continue the development of this program.

The FilmMachine is a free to use video format converter. It's multiple features and easy-to-use interface, as shown above, make it a very popular format converter

Using the converter, you can manage output options such as the output format (MPEG-2 or MPEG-1) and aspect ratio (4:3 and 16:9). Then you can choose between three different settings for each aspect ratio. The first is 'Fullscreen' - this option resizes the video to 720 x 576 or 720 x 480 (or other resolutions if doing (S)VCD). Avoid using this option as it could lead to some deformation in the output. The second option is 'Add borders, keep aspect ratio', which adds horizontal or vertical borders to maintain aspect ratio. The third is 'Crop video, keep aspect ratio' - this crops the video so that there will be no borders, but the aspect ratio will be maintained. This can be used to give a picture-in-picture effect.

In addition to these features, you can also select the size of your CD or DVD, and the number of CDs you want to make. Normally you can make a VCD on one CD and a SVCD on two. You can also select an audio bitrate that The FilmMachine will use. The FilmMachine can also make permanent subtitles for your DVD or (S)VCD movies. You do this by selecting a subtitle format - .srt or .sub. The subtitles will be merged when you have more than one subtitle file. You also have the option to select the subtitle language.

#### **4.4.2 D.I.K.O**

DIKO is a one-click DivX/XVid to DVD/SVCD conversion tool. It encodes the required file using CinemaCraft Encoder 2.66 or 2.67, or using Nic's free encoder QuEnc; the latter comes bundled with the DIKO installation package. DIKO comes loaded with a number of features such as automatic bitrate calculation, conversion of audio, and automatic frame rate conversions including the audio and subtitles. The tool can execute frame rate conversions even with 5.1-channel audio. One of the most interesting aspects of this tool was subtitles for a 2-CD DivX movies can be joined on the fly. This means you can add subtitles to a movie as it is being converted from one format to the other.

The tool has inbuilt capabilities to check for errors and avoid bad-quality encoding. DIKO lets you add multiple file for conversions in the movie list. Both files must have the same properties,

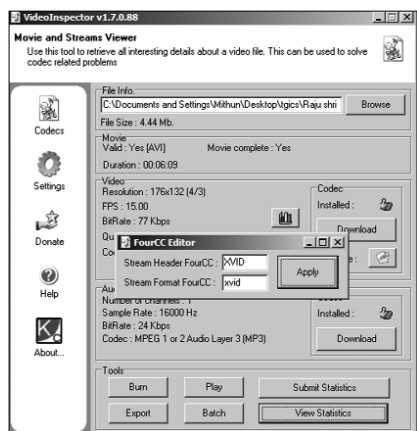
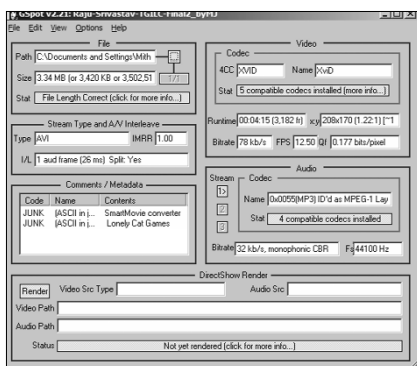
though. DIKO also assumes that if you're adding another file in the Movie File Box it is the second part of the earlier file.

The tool isn't exactly fast at conversion. A five-minute AVI clip took well over 15 minutes to be converted into DVD format. Converting it to an (S)VCD took around the same amount of time.

#### 4.4.3 Video Inspector & GSpot Codec Information

In most cases, when a player is unable to decode a file, it flashes a "codec required" message. You would have to hunt around to find the codec and then download it. If that's the case, it's time to put your file through the ringier: instead of converting it to a known format - or a format that is supported by your player - you could just get the details of the file and the codec required for playback.

Both Video Inspector and GSpot Codec Information fit the bill. These easy-to-use-and-configure tools give you all the details you'd need to know about your media files. They also give you the list of codecs, both audio as well as video, installed



Video Inspector lets you choose the codec for a file

on your computer. The information provided by the tools include the type of file, AVI or MOV etc., the duration of the file, the aspect ratio, the frame rate, bitrate, and the codec that is best suited for playback of that particular file. Video Inspector also gives you the option of changing the codec used for the particular file. So if one of your files is using a older version of the codec or a 'lesser' codec, Video Inspector gives you an option of replacing it with a better codec already installed on your computer or by downloading one from the Internet. Both GSpot and Video Inspector give you the option of downloading any required codec through their interface.

GSpot Codec information comes with its own player which is just about OK; Video Inspector, on the other hand, uses the file associations of a particular media file and selects the player accordingly. Though both the software afforded support for a large number of file formats such as .avi and .mov, they were unable to identify mobile phone content, i.e. 3gp files.

## 4.5 Editing and Modifying Software

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Ever wondered why any video that is shot badly is termed to be of ‘home video quality’? Well, it’s because most home videos are of very bad quality. It’s not just the way a video is shot, but also the way it is edited, and effects such as background music, use of ambient sound and visual effects that makes a video look good.

An unedited video is at best a collection of shots. To get the effect of a continuous movie, one of the most important things is to cut and chop at the right places, do away with unwanted footage and add some spunk to the required footage by means of special effects or audio tracks. Editing a video does require some amount of expertise in the handling of the software, and also in understanding the logical sequence of the shots you’ve taken and translate that idea while editing the video. Trying to edit your videos on the fly will only lead to poor output, especially if you’re a novice.

After shooting the footage for your video and compressing the file so it doesn’t eat up swathes of space on your hard disk, you would need an editing suite or footage processing tool to work the magic. Video editing software handles the editing of video sequences. This includes the ability to import and export video, cut and paste sections of a video clip, and add special effects and transitions. Newer versions of such software also include the ability to encode the video so you can create your own DVD. Editing software also allow editing of the audio clips that accompany the video. They also have the capability to sync the audio with the video.

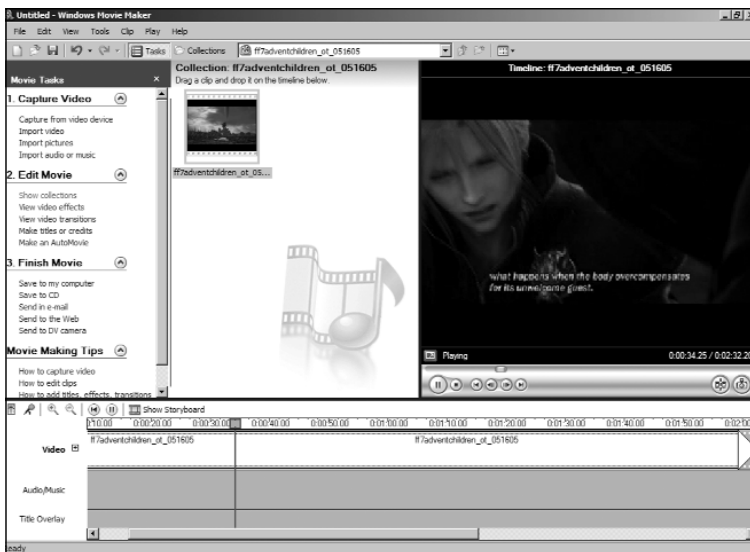
Editing is primarily done in two ways: linear editing, where the entire file is treated as one unit, and non-linear editing - where each frame can be treated as a separate object. All high-end editing suites are non-linear editors, as precision editing requires you to treat each frame separately. This also makes the process of adding special effects and extra audio tracks easier, since you determine the exact instant when an audio track should play or an effect should appear.

Editing software are resource-heavy applications. Most non-linear editors are not available for free; in fact, the high-end ones cost over \$1000 (Rs 44,000). Our search for free editing suites brought up a fair number of trial versions or versions that would stamp a watermark across your print.

#### 4.5.1 Windows Movie Maker 2.1

One of the best free, complete non-linear editing software available is Windows Movie Maker 2.1 (WMM2). This is not to say it is exemplary and has all the features of a professional editing suite, but it's just right for learning the ropes. The application comes bundled with Windows XP, or is available as a free download from the Microsoft Web site. This editing tool made its debut with Windows ME in 2000, and is now in its second version.

WMM2 features both the WMA 9 and WMV 9 compression features. The tool offers over 130 new ways of placing titles,



Windows Movie Maker is by far the easiest video editing tool around. The simple interface with an instruction menu at the side is perfect for editing those home videos

transitions, and effects. But the real killer in this tool is the AutoMovie feature, which takes the raw footage you feed it and creates an edited movie without any input from the user - ideal for those who are too lazy to edit their home videos, or for those last minute video presentations.

The user interface is similar to that of any other non-linear editing suite. It consists of a collections section where the video you imported for editing is stored as clips, a storyboard, and a timeline view that can be toggled. The preview screen also helps keep track of the editing you're doing.

WMM2 supports video captured both in digital and analogue format. 'Capture Video' in the tool's taskbar guides you through the entire video transfer process. We'd recommend, however, that you transfer your data onto the computer separately and compress it into one of the easily manipulated formats, such as MPEG. If you choose the default selection - "Best quality for playback on my computer" - the captured video will be stored as a WMV 9 video, which is a good compression format but has limited playback options, as most codec packs and players are yet to support this format.

When you capture or import a video, WMM2 creates a collection, which is essentially the raw footage. However, you can add other audio, video and images to this. Hence the term "Collection." Collection clips, naturally, are displayed in the centre "Collections" view. To start a project, you drag one or more of the clips to the storyboard or timeline pane. In 'Timeline' view, separate tracks for video, transitions, audio, audio/music, and title overlay give you a nice, graphical overview of the project. Once here, you can play around with effects such as video transitions, add titles or credits, or just sit back and let AutoMovie make your movie for you. AutoMovie can create a highlights movie with clean and simple cuts, fades, and titles. The feature also offers other exciting choices, such as a music video option, where you can select the background music and let the wizard edit the video to the length of the music, and add video transitions that go with the music.



## 4.5.2 Avid Free DV



**Avid Free DV gives the user a feel of professional editing suites**

If it's an editing suite it has to be Avid. Just as Adobe Photoshop is synonymous with image editing, when it comes to editing videos or movies, Avid is the tool of choice for most professionals. But the extremely powerful Avid Express Pro editing tool also requires a lot of patience to learn and master, and at \$1,645 (Rs 71,500) is expensive. So why are we talking about it as an essential Windows tool, when it is not freeware, and is strictly for professionals? The reason is Avid Free DV, a freeware with limited functionality, which includes basic video and audio editing capabilities, up to two streams of real-time effects and support for both Windows XP and Macintosh OS X. This tool, clearly intended to impress all those amateurs who think editing is just about cutting a frame from spot X and placing it in spot Y, and wean them towards the Avid professional editing software suites.

If all you've seen are user-friendly editing packs such as WMM2 and AVS Video Editor, Avid will overwhelm you. The

interface is a cool grey, with the normal division of the workspace into a composer pane, timeline and bin. What would really hit you hard is the complexity of the menu system, which is quite different from your conventional menus. The most notable feature is the missing 'View' tab. So if you want to change the layout, you'd have to do a bit of hunting around. The exhaustive Help file also gets to you at times.

This freeware offers 16 customisable real-time effects, drag and drop editing, three-point editing, basic compositing effects, filters and YUV rendering. The software also has a titling tool and an encoding tool that can encode files into the QuickTime (.mov) format. Input options include the DV FireWire option for quick transfer of data from your digital or analogue DV camera to the computer. Compared to the Professional and Express versions of the software, Avid Free DV seems like a very basic tool, but when up against the best free editing suites around - or even ones like AVS Video Editor - it comes out trumps.

After registering the software on the Web site, you become part of the Avid community, and can access their forums and online tutorials. The tool takes a bit of time to learn, but the results are worth the effort and time.

#### **4.5.3 VirtualDubMod**

VirtualDubMod is an open source video processing software. It was a result of a number of modifications to the original VirtualDub. These modifications were merged into one simple application to make life easy for people who got tired of needing several different modified VirtualDub executables. In an improvement over the earlier VirtualDub, VirtualDubMod offers basic Unicode support. However, this support is only available in Windows versions that handle it natively, such as Win2k and XP. The earlier versions of Windows did not handle this.

Unlike WMM2, VirtualDubMod is a linear processing software where the entire movie file is treated as one object - and not as a

series of clips or frames. This limits the effects you can add to your video and also hampers the precision with which you can cut your footage. But then this is not an editing tool but a processing and modifying tool much like Photoshop.

It features several advanced features while being able to use plugins to add different video processing techniques, and can process .avi files regardless of the codec as long as the video and audio codecs are installed. The user interface, as in any open source tool, is bare-bones, and the backend robust.

VirtualDubMod can handle a number of file types. An inbuilt feature also acts as a codec information tool giving you all the information regarding the file such as the codec used, bitrate, frame rate and length of the file in frames. It gives similar information regarding the audio stream. The tool has the capacity to handle multiple media streams. You can manage the available streams via the 'Stream list': a window appears and lists all streams currently open.

VirtualDubMod comes with a number of filters, including file size reduction and greyscale filters. And just like its predecessor, VirtualDubMod can create a video file from a series of bitmaps. You can create individual frames by using an image editing software such as Photoshop or GIMP, place them in sequential order, adjust the frame rate, and add a soundtrack - and you have an animation movie ready.

We did experience a few problems opening an .avi file, and the program couldn't handle newer file formats such as 3gp. But all said and done, this robust processing tool lets you work efficiently on most media formats, and can churn out near professional-quality videos.

# Internet



Browsing the Internet can be enjoyable if you have the right tools. At the same time, lack of correct tools can lead to more than just frustration... In this chapter, we bring you some of the essentials to enhance your online experience and make it more meaningful and productive. And yes, more fun!

## 5.1 Introduction

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The Web!

Since the beginning of third-generation systems, Internet has been an integral part of the computing experience. For many users today, the computer is nothing more than the Internet. One of the main reasons, though, for the rise of the Internet as *the* place to be has been a paradigm shift in our lifestyles, and the fact that e-commerce has become viable. While the technology that powers the Internet has essentially remained the same over this period of time, the distribution of information and the way it is looked at and used has changed dramatically.

In recent years, the availability of broadband has opened more avenues for the average computer user to make even more use of the medium. It is no longer restricted to being a place for leisure. It has also grown beyond the confines of being a place for a corporate presence. Today, everyone uses the Internet to retrieve information, find critical data, and even do research. In short, it has become *the* repository of information for the world, breaking geographic barriers as it simplifies communication across time zones.

As we've mentioned in earlier books in this series, a person's online presence today is as crucial as his social identity offline. As more and more communication happens via e-mail, VoIP and teleconferencing, the strength of the Internet in the modern world can be figured from the fact that among the top five growing industries in the world, Internet or bandwidth providers stand at number four. This, however, does not include mobile connectivity.

The Internet today sits below the WWW and the TCP/IP protocols. Invented by Robert Kahn and Vinton Cerf in 1983, TCP/IP ensured a stable platform for the growth of Internet technology.

The Internet was born as the ARPANET in 1969—an experimental concept in which various computers were connected together to share resources and information. In the ARPANET, several nodes were connected to a host computer and a terminal server. There was, however, no certain protocol through which these nodes communicated with each other; each node communicated on the principle of token sharing, where each node had a specific time allocated to send and receive data.

Though it failed as an experiment, it laid the foundation for the modern Internet. Today, each computer that is connected to the Internet through the World Wide Web has its own, unique numerical identity and follows the TCP/IP protocol for sending and receiving information.

Various tools are required to optimally utilise the potential of the Internet. Browsers are at the top of this category. They provide the platform for accessing the Internet for a day-to-day average user. E-mail clients, Download Managers and Internet Chat Clients are some of the other essentials to get on the information superhighway. In this chapter, we take a look at some essential tools that enable you to do just that.

## 5.2 Browsers

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It's fair to assume that for most computer users, browsers are the most important software. Their development was kickstarted when Windows launched a very user-friendly OS—Windows 95. For the first time, a computer system's usability expanded beyond the realm of expert users. The use of the Internet and the subsequent rise of the WWW and online culture meant that more and more people were using computers to access the Internet. Browsers, in more ways than one, provide a window to the Internet.

### Firefox 1.0.7

Firefox, developed by the Mozilla foundation, is one of the most complete Web browsers out there. Its claim to fame comes from the fact that it became the first browser in years to challenge the dominance of Internet Explorer as a browser.

One of the best things about Firefox is that it is ever-evolving in terms of technology. It uses the powerful GECKO engine, which ensures the best possible rendering of Web pages. It has superb support for all things dear to Web developers. Rendering is accurate and fast, and it offers advanced stylesheet support.

Another positive is that DOM support is available and accounted for. Firefox is being developed by the Mozilla Foundation, and the open-source nature of the code ensures that the best possible version is released to the common public, and its flaws, if and when discovered, are fixed within days, if not hours. This ensures a browser that is not only great in appearance, but is also secure, stable and efficient.

One of the advantages that Firefox has had is that it could learn from competitors and market leaders. It put this information to good use and developed a browser that doesn't contain many of the obvious vulnerabilities that IE has, such as ActiveX components, which can often install spyware on users' machines.

Although it's heavily derived from the Mozilla Suite, Firefox

holds its own identity through numerous extensions that are available through the Mozilla community. Extensions (add-ons to the basic browser) are available in large numbers, and can be downloaded depending on your personal preferences. This gives Firefox great flexibility.

A feature that made this browser a stand-out was tabbed browsing, though Opera users can smugly say they've had it for years! Instead of opening each link in a new page, they can be stacked in the same window, saving heaps of precious desktop space. Though the Mozilla Foundation never claims to have invented this, they have used it to good effect in their browsers.

Firefox is strong on the interface side—it is simple and neat. The buttons are graphically sharp and do not encroach upon screen space. It also has the ability to customise its appearance using skins (a new colour palette and look). So if the default appearance is not to your taste, you can easily install a new skin, which would have a different colour scheme and button design.

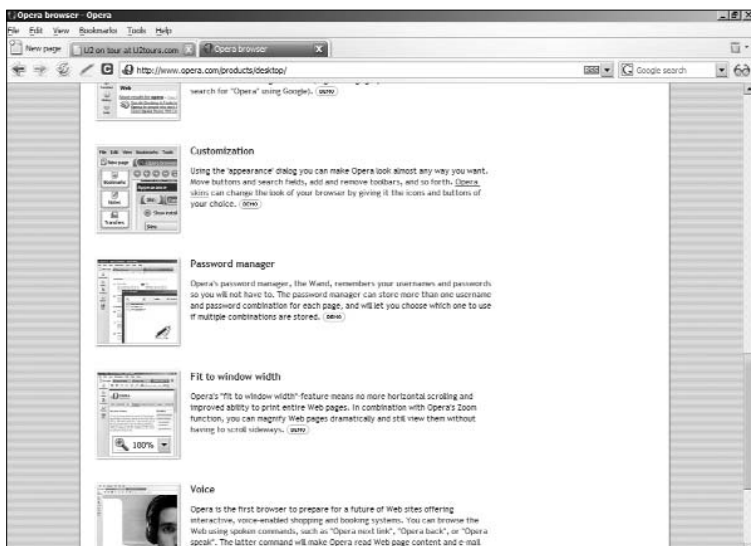
Overall, Firefox is a great browser. It's relatively secure and definitely fast. For advanced users, it's a treat because it can always be tweaked. However, to date, it remains CPU-hungry: if you have a relatively old system, it may slow down your computer.

## **Opera 8.5**

Opera quite comfortably lives up to its billing of “the fastest browser on Earth”. Opera software developers are the leaders in technological innovation in this field. They were first ones to introduce what is now called tabbed browsing, which has become a quintessential aspect of a browser.

This browser, currently in version 8.5, is a must-have for advanced users. The number of innovations and useful features that have been crammed into Opera is something that has to be seen to be believed. Its lean size of 4.5 MB is another wonder as it comes packed with a world-class e-mail client. It keeps your desktop unclut-





**Features such as mouse gestures are the best things since tabbed browsing**

tered thanks to its tabbed browsing features, which opens all web pages in dockable windows inside a single instance of the application. Simply put, this means different links are opened in the same main window and space is saved on your desktop.

As with Firefox, there are a range of tools to help you find information on the Internet easily. These include integrated search-enabled toolbars to instantaneous looking-up of selected words.

The two features that really stand out in Opera are mouse gestures and zooming into a page. Mouse gestures are extremely addictive features, and something that could be in every browser in the future. They enable you to go back and forth and open or close a page, and much more, using mouse movements. This means minimal use of the keyboard while you are on the Internet. The ease and convenience Opera provides has to be experienced—the tedious task of swapping to the keyboard when using the mouse is no longer required. The keyboard can be used only for typing—until they come up with a way to change that as well!

Another key feature is the page-zoom feature, which allows you to zoom in to the entire document, instead of just the text. The developer shortcuts to turn off stylesheets and images are also useful. In other browsers, you have to go through multiple menus or use bookmarks for this functionality.

One of the growing concern with browsers these days is vulnerabilities on the security front. Opera is one of the most secure browsers, and there haven't been any major security flaws in Opera's history. However, this makes it a bit weak on page display. Though rendering is excellent and the text never gets crooked regardless of the size of the window frame, sites with Flash, advanced HTML or Java content won't always be displayed correctly. This is being fixed, though, and later versions should have better displays for pages with such content.

Like Firefox, Opera is a clear winner on the interface and appearance side. It has both advanced and basic features well laid out throughout; the toolbars and keyboard shortcuts can be used effectively to perform most tasks. The only thing that holds back everyone from using Opera is the sheer number of features available!

### **Maxthon 1.2.4**

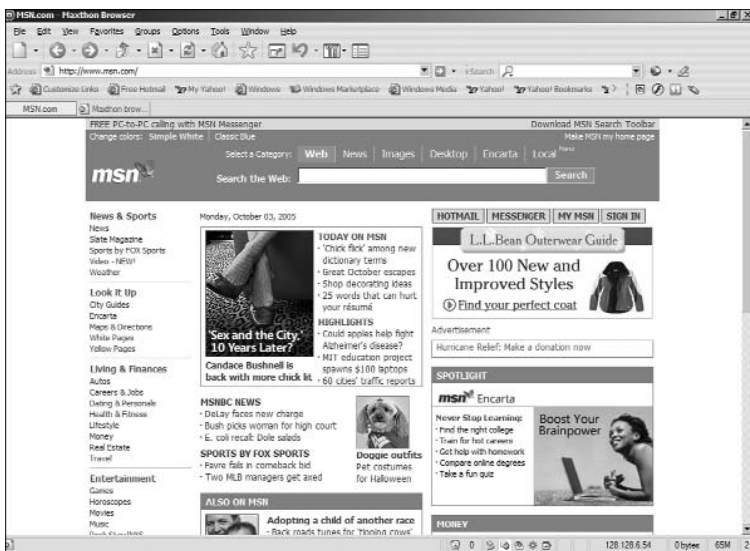
In early 2000, Internet Explorer 5 was the best browser in the world. It rendered pages pretty well, had a nice interface and was fast. IE6 was released soon after with a few, relatively minor fixes, and cemented IE's stranglehold on the Web browser market. However, this dominance made Microsoft complacent and today, IE6 is a below-average browser.

Unfortunately, most Web pages seem to like its Web engine as they do not display optimally on browsers such as Opera and Firefox. This is where the MyIE2 team has come to the rescue. They developed Maxthon, which is based entirely on the IE engine, but which comes with better integration of plug-ins, security fixes, and last but not least, tabbed browsing.

Maxthon supports HTML 4.01, XHTML 1.0, JavaScript, the DOM Level 1 and CSS-1, and unlike IE6, it does it without too many problems and maintains stability. However, like its parent software, a genuine attempt at CSS-2 support is sadly lacking, especially considering IE5 on the Mac has excellent support for it. The interface is still good and it's relatively speedy when rendering Web pages, but its lack of support for CSS specifications that were standardised in 1998 is a huge problem.

Some of the other negatives include the fact that it is prone to crashing just like IE6, but in this browser, security flaws inherent to IE6 have been fixed. These flaws have naturally been carried over from IE6, as Maxthon uses the same rendering code.

Maxthon has a very simple yet effective pop-up blocker, which reduces the annoyance of pop-up ads, which seem to have a strong affinity for IE! Overall, it's a good browser, but is not in the same league as Opera or Firefox. Strictly for those who prefer IE-like Web page rendering.



Fast, light and stable... Maxthon seems to have everything going for it

## 5.3 Download Managers

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A download manager is a must-have Internet tool if you're on a modem connection. Even for broadband users, it can be handy, as one never knows what can happen on the server side of the connection—and you don't want to waste your precious broadband connection downloading the same thing twice or more.

Download managers let you download files from a server in parts. They often work at the maximum available bandwidth, thus reducing the time taken for the download. They keep track of how much data has been downloaded, and if the download breaks, they restart from where the download broke.

Like with most things related to the Internet, choices are aplenty, and finding the right one can be quite a task!

### **Fresh Download 7.36**

Fresh Download Manager is one the most versatile and easy-to-use download managers. Installation is simple, and the interface is intuitive. It integrates with your default browser, and other browsers can be added just as easily.

A download doesn't have any limitations, but you can set up your own set of choices for what files are to be associated with a program. For example, when you click on an image while browsing, some download managers save it to the default folder. In Fresh Download, though, you can disable that so the picture is displayed in the browser only. What's more, this comes as freeware, so no annoying ad banners or sharing of bandwidth resources is required. Important buttons such as 'Add' and 'Options' are easy to locate, and even inside submenus, it's relatively easy to locate certain items, which are otherwise hard to locate in other, similar software we tested.

One of the more impressive feature of Fresh Download is the ability to accelerate downloads using both the FTP and HTTP protocols, pause-and-resume capability, recovery from dropped con-

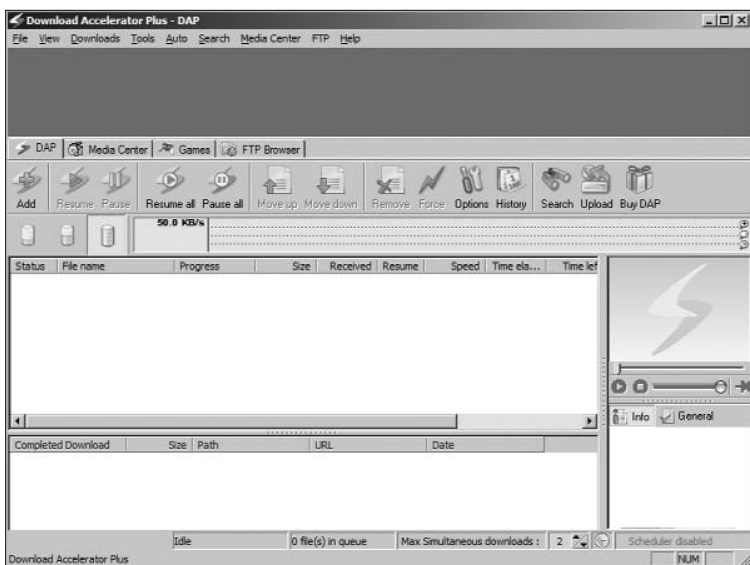
nections, and multiple connections with the ability to schedule your downloads. The software uses four connections per file to get the highest possible download speed.

## Download Accelerator Plus (DAP) 7.5

This is one of the oldest and most efficient download managers, and is still going strong. It significantly increases the speed of downloads over both broadband and modem connections. This is achieved by splitting files into four or more segments; each segment gets an equal amount of bandwidth, thereby increasing overall speed.

DAP claims to have more than 107 million registered users. The registered version comes at the cost of a small banner ad, which is relatively unobtrusive. The interface is not only clean for a download manager, but also helps you keep track of the downloaded chunks.

The default download folder can be changed to one of your choice without much trouble. The ease of use for almost each of



DAP is one of the most powerful download managers

its functionalities is also remarkable. Little details are well-documented, and there's the 'Always Resume' option—which automatically restarts a broken download and even looks for a mirror server based on the IP of the original server.

DAP is compatible with Internet Explorer, Firefox, Netscape, and almost any other browser. More than anything else, though, it enjoys industry-wide recognition from Norton, Ad-Aware, eTrust PestPatrol, Spyware Doctor, and McAfee. Ease of use and faster downloads make it the premier download management software.

### **Internet Download Accelerator (IDA) 4.3**

IDA claims to increase the speed of a download by a massive five hundred per cent, and we were not entirely disappointed with its claims! Further, it claims to be using “intellectual multi section download” technology, which uses better data transfer capabilities for faster downloads. Although its interface is cluttered, it's fine once you get used to it. It supports FTP, HTTP, and SHTTP, and handles firewalls, proxy servers, cookies, redirects, authorizations, and many platforms and servers.

One remarkable feature of IDA is the active visual cart technology, which significantly improves your downloading experience by giving you quick access to the most useful program features. It's like your Windows pane where the most-used programs are stacked on top of lesser-used ones. IDA reminds you of a broken download each time you start a fresh download.

## 5.4 E-Mail Clients

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E-Mail clients provide features that can take e-mailing beyond sending text messages or attaching pictures. Like with browsers, there are protocols that are used to send data via e-mail clients.

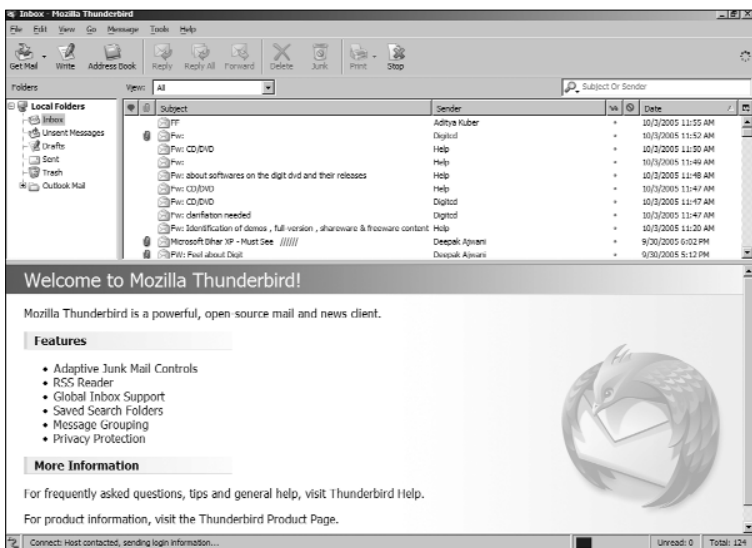
Today, with RSS feeds becoming more the rule than the exception in the case of news distribution, the role of an e-mail client will become more and more vital in arranging and sorting news e-mails. This is one area where an e-mail client scores heavily over Web-based e-mail: one can easily arrange folders, assign aliases, set up filters and spam blocks, and even block IPs. With Web-based e-mail, these features are limited by the service providers.

Most e-mail services support the POP3 and IMAP formats. They are two of the most popular protocols for sending e-mail. In POP3, the entire message is downloaded into the client from the server and then made available to be displayed. In IMAP, only the message stamp details, like the sender's mail ID, the date and time, and other such details are displayed, along with the initial portion of the message. Both protocols allow users to include binary attachments (MIME or other encoding) or HTML (normally found on Web pages) within their e-mails. They also convert URLs into clickable links, and this means graphic images, formatting, and even colour-coded text can be included in messages.

### **Mozilla Thunderbird 1.0.6**

Just the way Firefox challenged IE in the browser space, Thunderbird has challenged Microsoft Outlook in the e-mail client space. Despite the fact that it's not as well featured as Outlook, it is just as powerful for e-mailing.

At a modest 5 MB download, this is a light package compared to other e-mail clients. It comes in a portable format as well, meaning you can carry your Thunderbird on a USB device. The interface is neat, with well-laid out buttons. The entire flow of the GUI and text is streamlined. Like all Mozilla prod-



**Feature rich, fast and secure email client.**

ucts, it has room for add-ons and skins if the defaults do not appeal to your taste!

Coming to the interface itself, the main window can be customised in three ways. In the first, the folders are displayed on the left, e-mail headers in the centre top part of the screen, and mails at the bottom. In the second option, the folders are on the right, and only the e-mail list (without the message preview) is on the right. This is a two-column display as against the others which are three-column options. The third display has folders on the left, the e-mail headers in the centre, and the message display in the right part of the screen. This gives you the flexibility of deciding how you'd prefer to preview your mail.

The labels for marking e-mails are clear, and different colours can be used to mark message priorities. These colours can be changed to suit your preferences as well. The best part is, no matter how much you play around with the settings, the preview pane never looks clustered or overloaded.



Thunderbird supports both IMAP and POP3 competently. In POP3, it being the preferred format for most mail servers, you have the added feature of even encrypting the saved password. Although IMAP works fine, on slower machines, certain headers may not be displayed properly. This, however, is not entirely due to a shortfall of the client, but to the development stage of IMAP technology.

Overall, security features are impressive as you can set various modifications and filters. External PGP is also supported well. The inbuilt PGP, however, is not as strong as it could be, but then again, add-ons for it are available at the Mozilla Foundation site.

Creating spam filters is easy, but the rate of false acceptance and rejections would remain high during the first few days of use. This can be solved by adding a customised Bayesian filter. The integrated RSS feed reader is easy to set up and works just fine.

Overall, Thunderbird is a wonderful e-mail client. It does all the things an e-mail client should, and does so effectively. The e-mail experience Thunderbird offers is smooth, and there aren't any significant bugs... not bad for something still under development!

### **Pegasus Mail 4.12a**

Pegasus is one of the most powerful and efficient e-mail clients. It is feature-rich, but can be a bit tedious to get used to. That, however, should not discourage you from using it. Once you get familiar with it, it might well become your favourite e-mail client.

If you use your mail client for business purposes, this is just the right thing for you. It's light on your CPU, and the interface, while not as pretty as some of the other clients, is non-obtrusive.

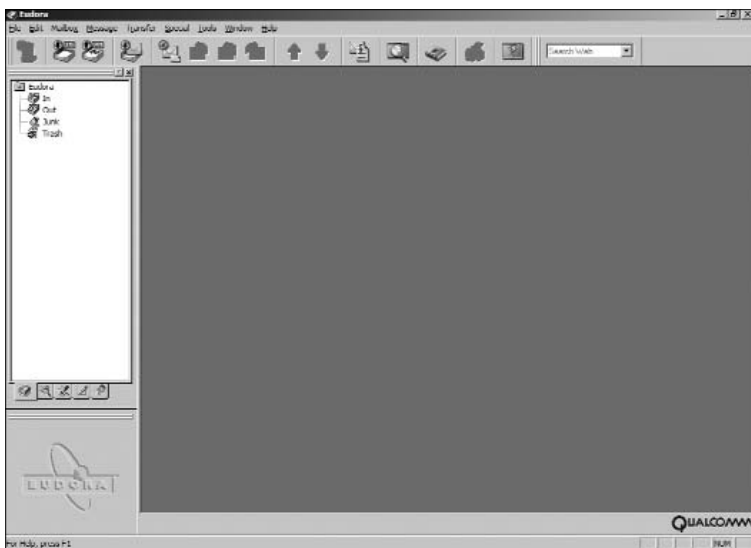
Pegasus handles multiple accounts better than any other free e-mail client. You can easily create templatised e-mails and

assign them to various aliases and use different sets for different accounts. So, say you have a business template; you can assign it your business alias, while your personal template can be assigned to other accounts. This feature is useful as it saves time, and also, by looking at the template, you know which alias you're using.

The junk mail filter is really at the state of the art, and the false acceptance or rejection rate is minimal. Pegasus is a must-have for users who like to control their software and modify it to suit their needs instead of learning the features of the software.

## Eudora 6.2

Eudora is one of the oldest e-mail clients, and is really robust. It is available in two modes—the light and full versions. The light mode, as the name suggests, doesn't have as many features as the full version. The full version is a shareware option where you purchase the software to get rid of the ad banners.



The well-laid-out interface and superb filters make Eudora a stand-out email client

Though the look-and-feel is simple and neat, the interface still hasn't caught up with the newer generation e-mail clients, and feels a bit outdated in terms of the GUI. It doesn't have as many customisable options as some of the other clients. But when it comes to e-mailing, it's as competitive as anything else out there.

Eudora's spam filter is also really good, and gives the option of filters, where undesired e-mails go directly to the trash. Most of the features are reliable and work as desired too. They are fast and do not consume too too much in terms of system resources. Some of the other useful features in Eudora include powerful filters, message labels, and a flexible template system for quick replies.

The most powerful feature, however, is its ability to search messages from archives. You can retrieve messages based on Name, Subject, Date, Labels, or by using a combination of them all. Most results are fairly accurate.

Eudora comes integrated with Spam Watch, a Bayesian filter, which is not hard to train. Eudora also keeps a track of spoofed URLs in phishing attempts. This is a pretty effective tool using a fairly advanced technology. Updates may be required for this to work. It keeps away from the fancy things that can come in an e-mail client, and instead, delivers more on the features.

## 5.5 Proxies And Internet Sharing

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Proxies are a great way of sharing Internet bandwidth. Multiple users can access the same Internet connection through one IP. This works wonderfully in a home environment setting where bandwidth is limited as are the number of users.

Proxy servers can dramatically increase speeds of these connections either by timesharing or by pre-allocating bandwidths. A proxy server keeps a temporary file of a previously visited site, and if that site is requested again, it provides the data from those temporary files. This optimises speed and saves resources.

Most proxy servers keep track of the most-visited Web sites and have a directory of access as well. Ideally, the proxy server should be on the same network as the users, which results in faster operation.

Proxy servers are a great way of controlling what type of information comes into and goes out of the network. Certain types of content can be easily blocked through a proxy connection as well. This not only ensures that only the most suitable content is accessed, but also saves on bandwidth by blocking out Flash or ActiveX content, which, in some cases, could be malicious.

### **WinProxy 5.2a**

Winproxy is one of the most efficient proxy servers and enables you to connect various computers connected together to the Internet simultaneously. It is pre-loaded with a firewall and NAT. It also features a stealth firewall, server Anti-Virus, site filtering, site caching, customisable alerting, user controls and even a VPN client. However, setting up the proxies can be a complex task, as creating accounts needs a few verifications which may require changing of network settings.

The interface is complex, but not as complex as some of the other software we tested in this category. However, managing proxies seems to be much easier than creating them. The admin

user has full control over individual account settings, and most tasks such as blocking of users or adding new ones can be done using the GUI only.

WinProxy works best in a small network. Should you require adding more than five computers to your network, it's better to go for a high-end proxy server such as Netscape Proxy Server or Microsoft Proxy Server.

Overall, WinProxy is easy to set up and maintain with excellent security settings, where the administrator has full control over content filtering through an intuitive GUI.

### **Proxy Workbench 1.2**

Proxy Workbench goes a bit further than your average proxy, and is ideal for networking enthusiasts and developers alike. This is one of the best proxy servers for those interested in the security side of things.

Using Proxy Workbench, one can actually keep track of what type of data is flowing through the network, including traffic from and to e-mail clients and Instant Messengers. It easily mediates between Web servers and Web browsers, and if a Web site poses a critical security threat, it can block the site through its effective port blocking. Its best feature, however, has to be the animated connection diagram that graphically represents the history of each socket connection and enables administrators to look into the finest of details. These graphical representations can be saved for further reviewing.

The interface is simple, and the common tasks of adding users and blocking (users or IPs) can be located and performed easily.

Though Proxy Workbench works efficiently even across a larger network, optimum performance comes with a smaller LAN of up to six or eight computers.

## **AnalogX Proxy 4.14**

This is among the simplest and better-organised proxy servers. It comes packed in only a 270 KB file, and the installation is also a breeze!

The interface is basic but has enough functionality should you need to set up a basic proxy server. The highlight of AnalogX Proxy is setting up user clients in your network. All you have to do is assign the machines in your LAN the master IP address and the default port for the server, and you're good to go! The rest can be configured and controlled via the interface. This is best suited for home users who share a connection.

If you have any problems, the Readme files that come pre-installed are helpful, and one would only require certain hints to find one's way through. Even if you don't have any experience with computers, this software should be easy for you to try setting up a proxy server. It supports the HTTP, HTTPS, POP3, SMTP, NNTP, FTP, and Socks4/4a and partial Socks5 (no UDP) protocols, and works great with Internet Explorer, Netscape, AOL, AOL Instant Messenger, and Microsoft Messenger, and comes with a pretty good inbuilt firewall.

## **Proxy+ 3.0**

Proxy+ 3.0 is another small but effective proxy server. Two main gripes against this are that the interface is nothing great, and the software is complex to figure out.

Once you are familiar with it (which can be a bit tedious), it does give the best sharing speed within a network. So, if you need to please all the users on the network and don't require strong controls, Proxy+ should be the ideal choice. Coming back to interface, most of the features, like Groups, are not usually required. Even setting up an e-mail server proxy is not required, as there are no controls to set up about which data goes where. This gives it added flexibility, and is a complete solution for most networking needs.

## 5.6 Instant Messengers

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Ever since they burst onto the scene, Instant Messengers (or IMs) have changed the way we communicate. Their cost-effectiveness meant that distance no longer played a part in immediate communication.

Before IMs, one either had to make expensive ISD calls or send e-mails (even snail mail at times). These were either too expensive or too time consuming (by today's standards).

With IMs, one can chat in real-time with anyone who has an Internet connection. With VoIP technology finally taking off at a mass level in the last few years, there is also the added incentive of voice chat.

What's more, all these can easily be easily integrated with video chat. All this takes place in real-time, and this means the fantasies of the '80s are becoming reality. This is now the most preferred way of communication for the younger demographic. Such has been the impact of IMs that there is a growing trend of building up of virtual communities whose only presence is online. With technological innovations coming in every day, IM chat technology not only provides instant real-time communication but also adds colour and personality, which many prefer over traditional forms of communication. Today, IMs comes with variety of features, and here's a look at some of the best.

### **MSN Messenger 7.0**

One of the oldest—and arguably the best—IM clients around, MSN Messenger has been one of the best Microsoft products yet. It has almost all the features anyone would want for chatting and exchanging files.

A brilliant interface with a customisable appearance gives users the feel of 'being there'. Communication is reliable—there is hardly any loss of chat text. Even messages that do not make it to the recipients are returned to the sender with a notice.

Today, one doesn't even require a Hotmail account to sign on to MSN. An MSN Passport service account is all that's required and you can use MSN Messenger with the e-mail id you registered on Passport.

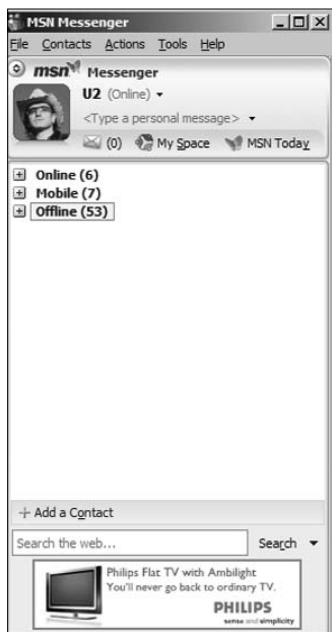
The chat window has lots of features such as the usual smileys, winks, display pictures, themes for the chat window, and more. Font sizes and colours can be easily modified. On the whole, it gives the user a lot of options in terms of appearance, which is one of the crucial factors in such software.

On the security side, Microsoft has covered a lot since critical flaws were found in version 6.5. Thankfully, no major security flaw has been found in version 7.0 till date, for which some credit should go to Microsoft for maintaining most of the ActiveX features and fixing up the flaws.

The overall chatting experience on MSN is pleasant and there aren't any bugs or features that may be a bother. The webcam feature is good, and picture quality on a broadband connection is fairly good. It works OK even over a 56K modem.

A feature that has been missing from MSN Messenger is offline messaging. If a user is offline, you cannot leave a message that can be checked the next time they log in.

Overall, MSN Messenger is one of the best chat clients—simple to use, with all the necessary features.





## Yahoo! Messenger 7.0

Of all the IM clients that are tied to a portal, Yahoo! integrates its features in the best manner possible. In the new version 7.0, it comes with the added feature of video calling. Yahoo's interface, though well laid out, still feels a bit clustered because there are too many buttons too close to each other.

The colour scheme, though, is what saves this chat engine from being unusable. Come to chatting and Yahoo! delivers one of the best chatting experiences. It has smileys to express almost any expression one would like to convey, and if you're not happy, you can add your own customised smileys here as well (like with MSN).



The chat window has standard font customisation with audibles, which express emotions with that extra bit of humour. One feature that really stands out for Yahoo! is the message archive and reading of offline messages. If you have something short and urgent to say, you can literally drop a line!

Though the program's animated emoticons and 'IMVironments' seems to appeal to younger users, they, quite surprisingly, turn out to be good for breaking the monotony. A great example of the integrated network supporting interesting extras is the Yahoo! Photos IMVironment, which lets you share photos you have stored online right in the messaging window.

Sadly, ads appear in the multi-user chat window, although

not in the one-to-one messaging window. Anyhow, those are painfully irritating and obtrusive. Still, overall a very solid and reliable chat client.

### ICQ 5.04 (Lite)

ICQ was the first IM client that became popular. With its new, clean-and-intuitive interface, it still has its cult following in large numbers. ICQ Lite has all the essential features of the full version.

It has the standard features that all other good IMs like MSN and Yahoo! have. You can message people, exchange files, send SMS messages, and voice chat. It includes multilingual support and the ability to save chat histories. A typing indicator indicates when a contact is typing a message.



The SMS service, though not very reliable, does not require registration with the service provider, but there are limitations depending upon what region you're in. ICQ Xtraz is a very neat feature that lets you send cool, personalised ICQ greeting cards. These stand out from the usual e-greetings you find on the Net.

The basic chat window is full of features. It makes the sound of an old typewriter when you're typing text, which is an interesting feature but can be annoying if you're chatting while listening to music! Like with all good features, you have the option to switch it off. The real stand-out feature is "Buzz It", which is present in the Xtraz sidebar. It lets you send messages to multiple recipients at once. By enhancing its features and adding the new Xtraz side tab, ICQ is once again applying for the position of "best chatting software".

### **Gaim 1.3**

Gaim gives you the flexibility that none of the other major IMs do. It allows cross-platform chatting using its multi-protocol option, which is functional on the Linux, BSD, MacOS X and Windows platforms. So you can log on to your multiple accounts using only one software, saving heaps of CPU resources. What's more, Gaim is open-source, and is compatible with the AIM, ICQ, MSN Messenger, Yahoo!, IRC, Jabber and Zephyr networks. You can now chat with your friends on Yahoo!, MSN or even IRC channels at the same time using the same instance of the chat window.

Gaim is fairly light on features, but has all the essentials such as file transfer (which doesn't work with all networks), Away messages, typing notification, and MSN window closing notification. One stand-out feature is that you can assign different buddies different sounds or actions when they come online.

Gaim, though not the best IM client we've seen, is stable and does all the small things chat software should. It's definitely the best of the 'other' software that provide cross-platform chatting.

## 5.7 P2P File Sharing

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P2P or Peer-to-Peer software is file-sharing software that has literally shaken up the Internet. If you're looking for a particular type of file, usually a multimedia file, and you know it exists, there's a good chance you'll find it on a P2P network.

In essence, it's basically sharing your resources with other users on the network, so that each node in P2P acts as both a client and a server.

Initially, this concept created quite a furore in the digital entertainment business as it affected the business significantly. Why? No one wanted to buy music anymore. It was available for free! What was happening was that one person who had legally bought a copy of, say, a music album, shared it on a P2P network (mainly Napster in the initial days), and distributed it among millions of users.

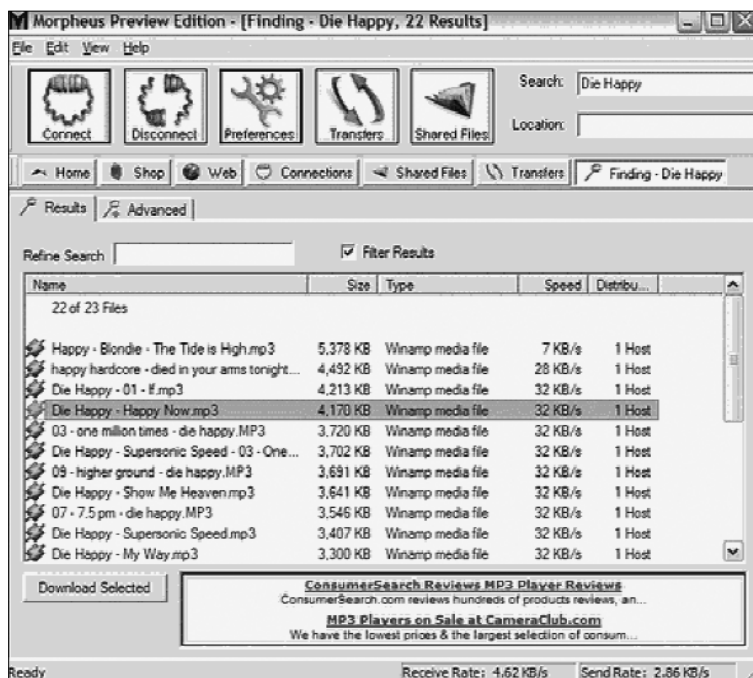
A Torrent is a P2P network with better file management and distribution, leading to higher download speeds. Today, there are several P2P software available, but the best ones are the ones that have the maximum number of users, which leads to more sharing of more resources. Here is a look at some of them.

Always remember to respect copyright laws, and to download only non-copyrighted material when using any of the following clients.

### **Morpheus 5.0**

The all-new Morpheus 5.0 is one of the best P2P software available. Powered by the NEOnet network, Morpheus 5.0 comes with a strikingly good interface and a very user-friendly search panel. It utilises the patented 'distributed hash tables' that leads to more relevant searches and faster downloads.

One of the key features of Morpheus is that it searches



beyond its network. It connects with the Gnutella, Fast Track (formerly KaZaA), eDonkey, and BitTorrent networks, giving you more options for your search. Search results are extremely fast, and the interface is helpful in conducting advanced searches.

The Help section, too, is useful. It gives you suggestions and also tells you how to optimise the software to perform better in conjunction with other networks.

In software like these, layout makes a world of a difference in terms of usage. In the new version, tabbed panes let you easily do searches and keep track of download speeds. Even the display panes can be easily customised.

Multiple searches can be displayed on the left side of the search screen. Multiple searches appear side-by-side, and are

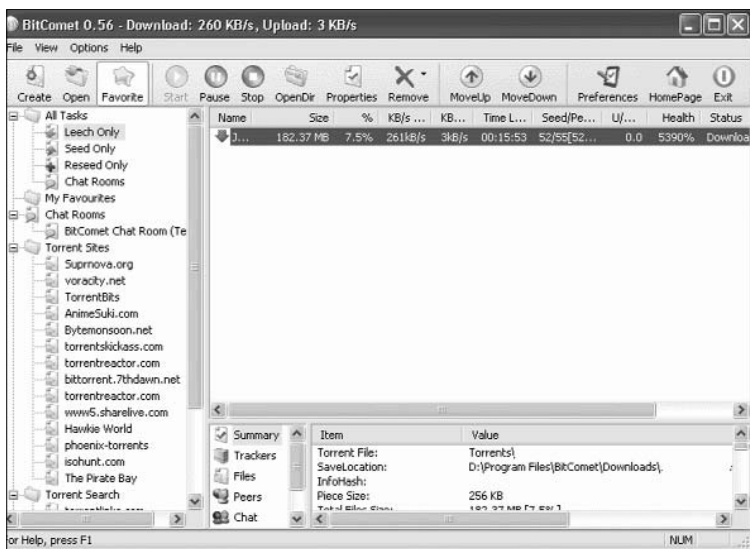
depicted through a progress bar when you switch between panes.

There is also a neat feature that indicates the network status—the network you're searching in and the network you're connected to. This is another much-improved feature over previous versions.

The built-in media player, however, is still mediocre, as it supports only limited file types. The ad banners are less obtrusive but they change too randomly, and can irritate at times. You can get rid of them for \$20 (Rs 870).

## BitComet 0.6

Torrents are fast becoming the most popular file sharing protocol. They feature the unique ability to download a particular file from more than one user (provided that file is being shared by more than one user). This gives torrent networks remarkably superior download speeds at any time of day, and they act like actual file servers on the Web. There are many user-made soft-



ware that can operate on Torrents, but BitComet is one of the oldest and the best.

The interface is similar to the other P2P software, but with reduced functionality. Torrents also have their own set of dedicated Web sites, but that may require registration with some. So for special-interest group users, this is a fine option.

With BitComet's three-pane interface, you get a list of Web sites that host the file you wish you download. All file formats are supported, and filenames are informative enough to let you make a decision whether something is your desired file. Once you decide what file you want to download, double-clicking on it would download it to your desktop (or a pre-defined folder) from where you have to drag and drop it into BitComet. It then searches for how many sources are available for the file, and the time taken for this can vary depending on the availability of the file.

For example, an MP3 of a top song would take less time than, say, a video clip of BBC's clickonline. This version of BitComet comes with chat capabilities, stats trackers, and the ability to bookmark your favourite sites.

Going by the current trend and its increasing popularity, BitComet is a very good alternative to your usual P2P file sharing.

### **LimeWire 4.9**

LimeWire took over the reins from Napster when the latter was forced to shut down by US Federal agencies. It uses the Gnutella engine, which is one of the oldest for P2P filesharing.

LimeWire hasn't been behind in the trend of updating its interface. The new interface is neat and simple, with most of the functionalities accessible from the main window. However, the new Java-based interface can be a bit slow to load at first. The improvement is not only on the surface; the new search query gives better results than previous versions.

The most significant are the video searches, which, in earlier versions were, at best, modest. But in version 4.9, there are substantial improvements with more results, and it supports almost all formats.

The download progress bar has also been redesigned, and the file details do not conflict with download details. The striking feature of LimeWire is how smooth and fast it operated once the initial load-up is complete. Switching between windows is easy on the CPU as well. The filters are accurate, but one can always work around them; this is one area where there hasn't been much of an improvement over previous versions.

Overall, LimeWire gives solid performance, but be prepared for a few minor glitches.



## 5.8 Tips and Tricks

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### Firefox

#### Use Windows XP-styled menus

If you're running Windows XP and want your menus to fit in with the default (Luna) style, add the following code to your `userChrome.css` file:

```
/* Make menus XP style */
menupopup, popup {
    border: 1px solid ThreeDShadow !important;
    -moz-border-left-colors: ThreeDShadow !important;
    -moz-border-top-colors: ThreeDShadow !important;
    -moz-border-right-colors: ThreeDShadow !important;
    -moz-border-bottom-colors: ThreeDShadow !important;
    padding: 2px !important;
    background-color: Menu !important;
}
menubar > menu {
    border: 1px solid transparent !important;
    padding: 2px 5px 2px 7px !important;
    margin: 0 !important;
}
menubar > menu[_moz-menuactive="true"] {
    background-color : Highlight !important;
    color: HighlightText !important;
}
```

#### Use Windows Classic (9x/Me/2000) Styled Menus

If you want the menus to appear native to the Windows Classic appearance, add the following code to your `userChrome.css` file:

```
/* Windows Classic (9x/Me/2000) style Menus */
```

```

menupopup, popup {
    border: 2px solid !important;
        -moz-border-top-colors:    ThreeDLightShadow
ThreeDHighlight;
        -moz-border-right-colors:   ThreeDDarkShadow
ThreeDShadow;
        -moz-border-bottom-colors:   ThreeDDarkShadow
ThreeDShadow;
        -moz-border-left-colors:    ThreeDLightShadow
ThreeDHighlight;
    padding: 1px !important;
}
menubar > menu[disabled="true"] {
    border: 1px solid transparent !important;
}
menubar > menu[_moz-menuactive="true"] {
    border-top: 1px solid ThreeDHighlight !important;
    border-right: 1px solid ThreeDShadow !important;
    border-bottom: 1px solid ThreeDShadow !important;
    border-left: 1px solid ThreeDHighlight !important;
    background-color: transparent !important;
    color: MenuText !important;
}
menubar > menu[_moz-menuactive="true"][open="true"] {
    border-top: 1px solid ThreeDShadow !important;
    border-right: 1px solid ThreeDHighlight !important;
    border-bottom: 1px solid ThreeDHighlight !important;
    border-left: 1px solid ThreeDShadow !important;
}

```

## Use Your Own Background Image For The Toolbars

In addition to changing themes, you can personalize Firefox even more by using your own toolbar background image. Add the following code to your userChrome.css file:

```
/* Use a background image for the toolbars:
```

```
(Substitute your image file for background.gif) */
menubar, toolbox, toolbar, .tabbrowser-tabs {
    background-image: url("background.gif") !important;
    background-color: none !important;
}
```

It's easiest to place the image file in the same location as the userChrome.css file. The image can be of any image format supported by Firefox.

### **Make the active tab easier to distinguish**

In order to make the active tab easier to distinguish among the currently opened tabs, you can also change the colors for the tabs. Add the following code to your userChrome.css file:

```
/* Change color of active tab */
tab{
    -moz-appearance: none !important;
}
tab[selected="true"] {
    background-color: rgb(222,218,210) !important;
    color: black !important;
}

/* Change color of normal tabs */
tab:not([selected="true"]) {
    background-color: rgb(200,196,188) !important;
    color: gray !important;
}
```

## Thunderbird

### Use different Quote Level Colors

This tip is very useful because it adds different colours of both the text and background of different quote levels in messages. This makes it much easier to follow a long discussion in newsgroups for example, where the level of reply quotes can go very deep.

Of course, you can customise the colours in the code below to your own liking. Add the following code to your userContent.css file:

```
/* Quote Levels Colors */
blockquote[type=cite] {
    color: navy !important; background-color: RGB(245,245,245)
!important;
}
blockquote[type=cite] blockquote {
    color: maroon !important; background-color:
RGB(235,235,235) !important;
}
blockquote[type=cite] blockquote blockquote {
    color: green !important; background-color:
RGB(225,225,225) !important;
}
blockquote[type=cite] blockquote blockquote blockquote {
    color: purple !important; background-color:
RGB(215,215,215) !important;
}
blockquote[type=cite] blockquote blockquote blockquote
blockquote {
    color: teal !important; background-color: RGB(205,205,205)
!important;
}
```

### Make newsgroup names appear expanded, not abbreviated

The newsgroup server names appear abbreviated in the folder

pane. Add the following code to your user.js file to display the full name instead:

```
// Don't abbreviate newsgroup names:
user_pref("mail.server.default.abbreviate", false);
Use Windows XP styled menus
```

If you're running Windows XP and want your menus to fit in with the default (Luna) style, add the following code to your userChrome.css file:

```
/* Make menus XP style */
menupopup, popup {
  border: 1px solid ThreeDShadow !important;
  -moz-border-left-colors: ThreeDShadow !important;
  -moz-border-top-colors: ThreeDShadow !important;
  -moz-border-right-colors: ThreeDShadow !important;
  -moz-border-bottom-colors: ThreeDShadow !important;
  padding: 2px !important;
  background-color: Menu !important;
}
menubar > menu {
  border: 1px solid transparent !important;
  padding: 2px 5px 2px 7px !important;
  margin: 0 !important;
}
menubar > menu[_moz-menuactive="true"] {
  background-color : Highlight !important;
  color: HighlightText !important;
}
```

### Use Windows Classic (9x/Me/2000) styled menus

If you want the menus to appear native to the Windows Classic appearance, add the following code to your userChrome.css file:

```
/* Windows Classic (9x/Me/2000) style Menus */
menupopup, popup {
```

```

        border: 2px solid !important;
        -moz-border-top-colors:    ThreeDLightShadow
ThreeDHighlight;
        -moz-border-right-colors:  ThreeDDarkShadow
ThreeDShadow;
        -moz-border-bottom-colors: ThreeDDarkShadow
ThreeDShadow;
        -moz-border-left-colors:   ThreeDLightShadow
ThreeDHighlight;
        padding: 1px !important;
    }
    menubar > menu[disabled="true"] {
        border: 1px solid transparent !important;
    }
    menubar > menu[_moz-menuactive="true"] {
        border-top: 1px solid ThreeDHighlight !important;
        border-right: 1px solid ThreeDShadow !important;
        border-bottom: 1px solid ThreeDShadow !important;
        border-left: 1px solid ThreeDHighlight !important;
        background-color: transparent !important;
        color: MenuText !important;
    }
    menubar > menu[_moz-menuactive="true"][open="true"] {
        border-top: 1px solid ThreeDShadow !important;
        border-right: 1px solid ThreeDHighlight !important;
        border-bottom: 1px solid ThreeDHighlight !important;
        border-left: 1px solid ThreeDShadow !important;
    }

```

### Use Your Own Background Image For The Toolbars

In addition to changing themes, you can personalise Thunderbird even more by using your own toolbar background image. Add the following code to your userChrome.css file:

```

/* Use a background image for the toolbars:
   (Substitute your image file for background.gif) */
menubar, toolbox, toolbar, .tabbrowser-tabs {

```

```
background-image: url("background.gif") !important;
background-color: none !important;
}
```

It's easiest to place the image file in the same location as the userChrome.css file. The image can be of any image format supported by Thunderbird.

### **Remove items from the main menu**

Some people like to place all their toolbar items on the same row as the menu. In order to save horizontal space, you can remove top menu items that you don't use. Add the following code to your userChrome.css file:

```
/* Remove the Go and Help menus
   (These are just examples. Try changing "Go" to "Edit" or
   "Message") */
menu[label="Go"], menu[label="Help"] {
    display: none !important;
}
```

### **Change Group By Sort Background Colour**

You can change the background colour of the Group by Sort titles ("Today", "Yesterday", and so on). Just add the following code to your userChrome.css file:

```
/* Override of backgroundcolor for
   Group by Sort "Today, Yesterday
   and so on ... */
treecchildren::-moz-tree-row(dummy) {
    background-color: #96C0EF !important;
    margin-bottom: 1px !important;
    padding-left: 2px !important;
}

treecchildren::-moz-tree-row(dummy, selected) {
    background-color: -moz-Dialog !important;
}
```

```
}  
  
treechildren::-moz-tree-row(dummy, selected, focus) {  
    background-color: Highlight !important;  
}  
treechildren::-moz-tree-cell-text(dummy) {  
    font-weight: bold !important;  
}
```



# Text Editors



Most of us want an office suite with the all the bells and whistles—word processor, spreadsheet, presentation software and so on. But what if you are on a shoestring budget? You are in luck. Thanks to the availability of software like OpenOffice, Easy Office, 602 PC Suite, AbiWord and Portable OpenOffice—freeware that will meet all your requirements, offer improved features and enable a smooth transition.

## 6.1 OpenOffice.org

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### 6.1.1 Introduction

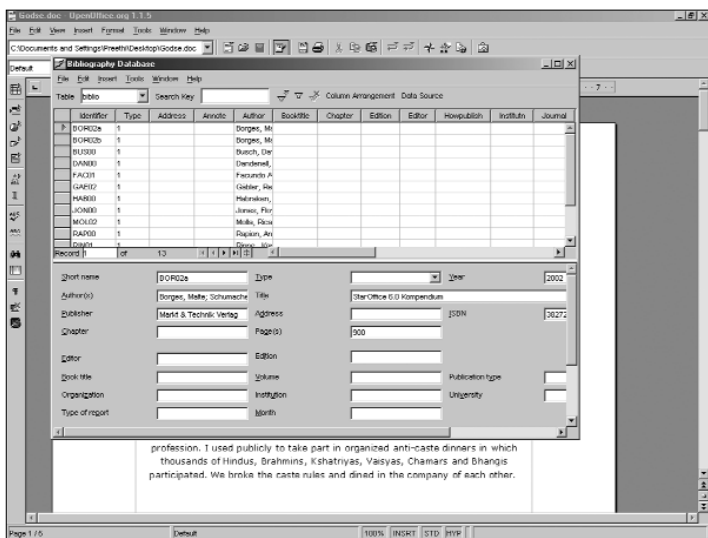
Efficiency is the mantra everywhere today and at the same time customers also want the options available to be reasonable. In such a scenario if you were to offer a product for free then you can be sure that there would be many takers for it. OpenOffice is one such product which suits not only the free criteria, but it is also a very worthy competitor for Microsoft Office. Coming from the Sun Microsystems stable, OpenOffice also known as 'OOo', has been in development for three years and can be downloaded from the official Web site: <http://www.openoffice.org/>.

Installation does not take much time and is pretty smooth. One small hiccup that you may face while installation is that it asks for the presence of Java on your system, if it is not there already. Though it is not a compulsion, OOo recommends Java for better performance. OOo comprises of 'Writer'—the word processor, 'Calc'—the spreadsheet, 'Impress' for presentations and 'Draw' for diagrams. Let's look at each of these separately

### 6.1.2 OOo's Writer

The interface looks pretty similar to Microsoft Word. The toolbars on the top of the document list all the functions similar to Word. One feature that I particularly liked about OOo Writer is the 'Autocomplete' feature. What this does is that it guesses which word the user wants to type and guesses it even before the user can complete typing. If it is actually what you want to use then you just need to press [Enter] and the complete word appears, else just go on typing what you want without bothering with what the application has to offer.

Another feature that's very useful is the ability to export your document in Writer as an Acrobat PDF file, which is absent in word. However the much useful option in MS Word which offers you correct spellings of incorrectly typed words is absent here. Some things that are simple in MS Word become a little complicated when it comes to Writer. This includes changing the font type which has to be done



The Bibliography Database in OOo Writer helps the user to keep tabs on various terms being used in the file

differently than in Word, word count cannot be found easily and one needs to go to File > Properties > Statistics. OOo offers you a range of templates to choose from including faxes, business cards, expense claim forms and more. In case an autocorrection is carried out, OOo pops a light bulb at the bottom right hand corner of the screen, something similar to the assistants available in MS Word like Clippit, Genius and F1 to name a few. Writer also offers bullets, numbered lists and outline numbering. The choice of bullet styles, special characters and graphics is quite extensive, however the detailed option which allows positioning numbers, bullets or characters in Writer is a lot better than that of Word.

Options while using Tables in Writer is similar to Word. One feature which I found very handy in Word is the small box containing the plus symbol which appears on the top left hand corner of the table. This is useful while moving or deleting the table in a matter of few clicks. However this is not possible with Writer, here, if one has to move the table from one page to the other, then select the entire table manually and either copy and then paste it. This is also what

has to be done if you want to delete it. However rows and columns can be inserted using the right mouse click menu.

Unlike Word, Writer allows you to do a lot of things with its headers and footers. Multiple headers can be defined using new page styles that can then be applied to different documents. There are options available for positioning and including design choices such as borders, backgrounds and shadows.

The menus in Writer like Edit, View, Insert etc. give you a lot of choice to do a variety of functions. One can now include mathematical formulas having complex symbols such as pie, ohm and so on with the help of the option for inserting formulas in a table. Writer can be a useful tool for organisations who want to project documentation and need to include chart, symbols and hyperlinks in the document. Word users may find it simple to use the Writer interface, but may also find some things like word count, mentioned earlier a little irritating. Nevertheless, it is certainly a good option available free of cost.

**Tips:** Files in Writer are saved under the extension .sxw, but one can also save it as .doc for Windows and .rtf for Macintosh. Writer can read and write MS Word files, however .sxw format is not valid in Word.

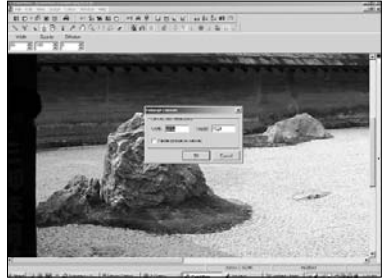
### **6.1.3 000's Calc**

The Spreadsheet in OpenOffice is called Calc, which is similar to Microsoft Excel. The formulas provided and the options in the various menus are very similar to Excel, which should make people switching from Microsoft feel comfortable with the interface. Each spreadsheet has 32,000 rows, 256 columns, 81,92,000 cells and 256 sheets and OpenOffice version two hopes to match Excel in terms of the rows.

The basic formatting, styling options available in Excel are also present in Calc. Advanced options such as Pivot table, conditional formatting, filtering are also present. Pivot table of Excel is known as Data Pilot in Calc. There are about 490 functions available in

different categories present in Calc, ranging from maths, finance, statistics, array, logical and so on.

There is an AutoPilot button on the formula toolbar which helps opens a dialog where you can search **asdasdad**



through a list of available functions. All the formula can also be formatted as per the users need. Goal seek function in Calc is similar to that of Excel which helps you work on formats in reverse and shows how to achieve the desired result, rather than the trial and error method. Comments which Excel allows to be inserted in each cell is absent in Calc.

The Autocomplete function referred to in the Writer is also available in Calc. Graphs and charts in Calc do not offer as many options as in Excel, but the formatting options available are good enough to make a decent graph. The formats in which graphs can be presented are limited and you have about eight options to choose from. It's not possible to increase the size of the legend once it has been inserted in the chart. One can shown comparative data from a different spreadsheet with the use of the 'Floating Frame' option within the current data sheet. Calc supports MS Excel format very well and files can be easily imported from Excel and worked upon without having to do any modifications.

#### **6.1.4 OOo's Impress**

Open Office's alternative to MS PowerPoint is called Impress. Impress has all the usual range of fonts, colours, transition effects, speaker-notes, handouts and HTML export options. The transition of a file from PowerPoint to impress is quite smooth, except for animations, which cannot be displayed as effectively. However, a presentation created in Impress does not run as smoothly in MS PowerPoint.

The presentation wizard helps the user set parameters such



Ooo Impress has a range of options such as Animation, Slide Transition for slide beautification

as transition and speed before you start working on the actual slides. It's also possible to save presentations as Flash animations, which will be helpful while uploading on Web sites. One small drawback I found in Impress was the area where it tells you to 'click to add sub-titles'; here you have to click specifically on that line itself. If you click anywhere else in the area then you are not allowed to enter any text. Bitmap images can be treated to a range of effects ranging from aging, polarization, and mosaic—useful for giving the picture the pixelated effect. These effects can be given to the picture by using a filter option on the top left hand corner of the presentation. The usual effects present in PowerPoint are also present here.

Another application in OpenOffice—Draw is a good companion to be used with Impress. A graphical diagramming module, useful not only with Impress but all of the other OpenOffice applications. The Draw application is useful while dealing with diagrams, shapes, 3D illustrations and special effects. The block arrows and flowchart

symbols come handy while making project designs. Anything made in Draw integrates well with all OpenOffice applications such as Writer, Calc and Impress. However, the result is not the same while using a Draw product with products of MS Office.

## 6.2 E-Press's Easy Office

---

### 6.2.1 Introduction

One more alternative to MS Office from the freeware stable is E-Press Corporation's EasyOffice. Unlike OpenOffice that only offers the basic word, spreadsheet application etc., EasyOffice is more comprehensive.

The EasyOffice application includes: EasyWord with PDF Filter (supports .doc, .rtf, HTML and PDF files); EasyMail(an email client), EasySpreadsheet (similar to Excel), EasyPresentation (PowerPoint-like presentations), EasyDictionary (full-reference dictionary), Easybookkeeper (accounting), EasyPad (Notepad replacement); Easy Contact Manager (hot lists, mass e-mails, and form letters), EasySpeaker (can read documents and e-mails out loud), EasyZip (zipping/unzipping program), Easyhelper; EasyImage; EasyDatabase; Easycalculator, EasyCalendar; EasyBackup, EasyIM Setup, and lots more. Lots more have to be offered by version 9.0 that was reviewed.

EasyOffice can be downloaded from the official site, <http://www.e-press.com/downloads/freeware.html>. It gels well with the Windows operating system and can work well even in the presence of MS Office. EasyOffice can be installed in 30 different languages, something that's not possible with OpenOffice. All the add-ons available make the package a very heavy one. The complete package if installed will take up about 95 MB of your disk space. Let's take a look at a few of the main products of this office suite.

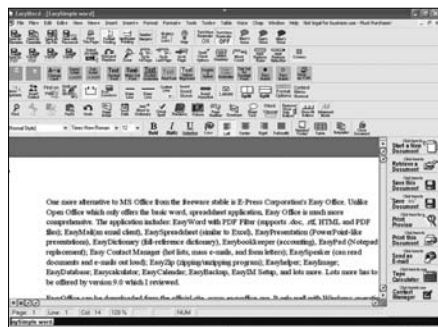
### 6.2.2 EasyWord

The first thing that struck me about Easy Word was the number of menus on the menu bar. Apart from the usual File, Edit, View and

so on many menu items had a '+' (plus) version of it in the menu bar as well. For e.g. File had File+, Edit had Edit+ and so on. The plus menus listed at least 12 to 16 more options than the parent one, except for the File+ menu which had more than 30 options to choose from! The developers may argue that it is for better accessibility, nevertheless I personally prefer functions apart from the important ones to be listed under maybe a 'Miscellaneous' or 'Options' tab.

The toolbar is pretty decent offering shortcuts to most of the basic functions. However, one word of caution, do not activate the 'Show All buttons' shortcut on the toolbar. What follows is something like this (Screen Shot comes here). Yes, this is what unfolds and no, I have not tested all of them. EasyWord provides good compatibility with MS Word documents, PDF and HTML files. However you need to install the PDF filter to be able to export the files as PDF documents. It also includes dictionaries in different languages such as English, Spanish, French, Italian, German, Portuguese and Swedish. Medical and legal dictionaries are also available here.

Other useful features in EasyWord include mail merge, printing labels and envelopes, word count, automatic backup and more. Here you will come across Ancestor Backup. Though it is a very weird name for a menu item, it basically keeps a copy of all the back-ups taken while the document was in use. Some menu items have hotkeys but others can only be accessed directly using the mouse. EasyWord allows you to add words to the user dictionary, which I have not seen in



Easy Word's Advanced Mode is an extremely cluttered Window.



any other suites allowing to do. The thesaurus offers both synonyms and antonyms for the word listed. I decided to check the Grammar check option, but could not proceed, because of “An unsupported operation was attempted error”!

The Help index is exhaustive and provides detailed information on all the topics required. One of the menu items named ‘Chap’ can be very useful for people who want to write books using Easy-Word. A new chapter is inserted within the same document as a different tab, something similar to how worksheets are inserted in Excel. However it is not very user friendly, I faced a lot of confusion trying to delete unwanted chapters and every time I



asdasdad

I thought that I had finished deleting a certain chapter, it was invariably some other chapter that got deleted!

Besides the ‘Undo’ function cannot get back your wrongly deleted chapter and in order to salvage your work the only thing you can do is close the entire document without saving the changes and reopen it again! Some things are just better in MS Word. Overall I would say it is a good word processor and also the number of things that you can do with and to a document is certainly considerable, considering that it’s freeware.

### 6.2.3 EasySpreadsheet

Spreadsheets have been round in the market for a long time and perhaps are the most used application, even more than word proces-

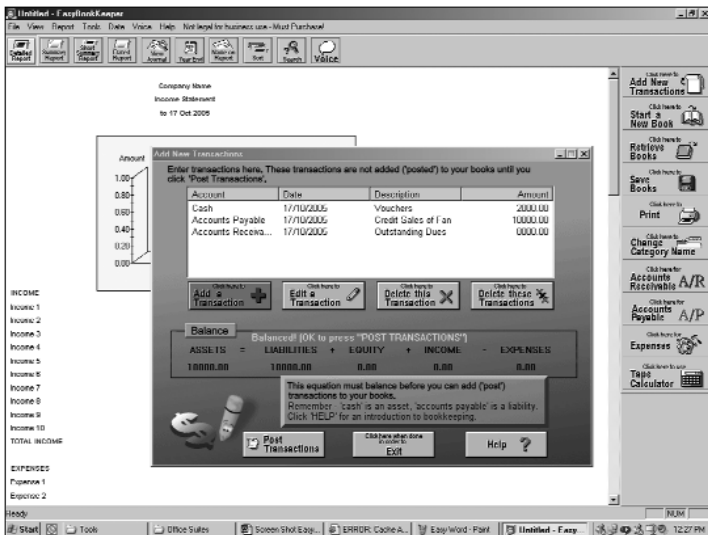
sors. Spreadsheet offered by EasyOffice is very predictably called EasySpreadsheet. I realised here that only Microsoft has named its application differently. Excel users will find the interface very similar and will not face any problems. The number of menus here is thankfully limited to the basics except for File menu, which has its cousin File2 as well. The menus contain the basic functions similar to that of Excel.

EasySpreadsheet supports .xls format and also allows files created locally to be exported in PDF formats. EasySpreadsheet files are saved under the extension '.ess'. Though the interface of EasySpreadsheet is similar to Excel, the functionalities offered by EasySpreadsheet are certainly no comparison to Excel. It lacks many of the advanced features available in Excel. Something as simple as making a chart is a nightmare. First you need to have your data range and on choosing the option to create a chart, EasySpreadsheet generates a default bar graph. If you want to have a pie chart instead then you have to double click the default graph and choose from about 50 options to finally get the end result. And you may still not be satisfied by what you see!

EasySpreadsheet gives the total of vertical columns and rows at the end of each row and column, this is useful when dealing with large amount of data in numeric form. EasySpreadsheet has about 125 different functions available, but the advanced options of pivot tables, array formats, conditional formatting, filtering, and macros are missing. To do complex accounting functions, EasyBookkeeper provides templates for standard record keeping functions.

#### **6.2.4 EasyPresentation**

A replacement for MS PowerPoint? Not quite! EasyPresentation is a very simple tool that helps you make presentations. The usual templates, backgrounds, effects, animated transitions, sounds are all available, however the interface itself is pretty mediocre and unattractive. Out of EasyWord, EasySpreadsheet and EasyPresentation, the menus here are most simple. Each of them has a list of not more than ten items.



**EasyBookkeeper—a simple application for book-keeping entries**

The toolbar present on top of the screen has buttons that are only useful for navigation. Nevertheless the simple layout will be very useful to a beginner who has never used any other office suites. EasyPresentation allows the user to record sounds that needs to be displayed along with the presentation. While saving a presentation made in EasyPresentation, you can choose to include the EasyPresentation Viewer so that it can be viewed even in the absence of EasyOffice.

### 6.2.5 Miscellaneous

As mentioned in the beginning EasyOffice is much more than the basic three products. Voice-recognition and read back is present in all of the above three programs. There is the EasyZip program that helps in zipping/unzipping files and is compatible with all the zip programs and files.

Then there is the EasyDatabase, a simple database program that helps you create large databases for storing records. It provides good compatibility with Access and FoxPro files. You also

have EasyMail, a mail client that's a good alternative to MS Outlook. EasyBookkeeper, as mentioned earlier is a good application for businesses who want some basic accounting software.

Next, there's EasyCalculator, which is much more than the simple calculator of MS office. It helps you do financial, statistical, geometric, and scientific and many more such complex calculations. It is very useful for students who do not have access to all the tables or who do not all the formulae by heart.

This is just the tip of the proverbial iceberg, EasyOffice offers a lot more and all cannot be covered in this chapter. But, you sure go ahead and download EasyOffice from the *Digit* DVD this month.

## 6.3 The 602 PC Suite

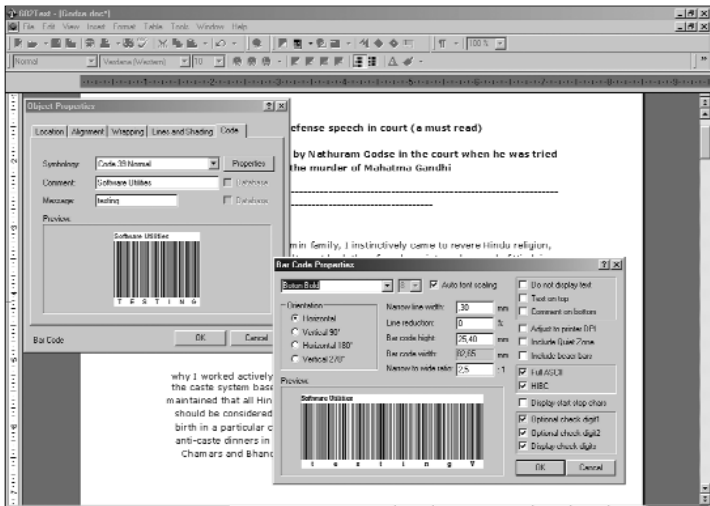
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If you are looking at using an office suite similar to MS Office in most accounts, then the 602PC Suite is the one for you. What began with some programmers in the Czech Republic trying to duplicate MS Office applications, has now grown into a full fledged replacement to it. At 29 MB, the size of the package is also not much and it offers good compatibility with MS products. The freeware version is only for personal use and cannot be used commercially.

By default the 602Text word processor and 602Tab spreadsheet use .doc and .xls file formats. This is useful to users seeking a free alternative to Word and Excel. The 602PC Suite offers the following; the suite comes with the following products: 602Text—Word Processor, 602Tab—Spreadsheet, 602Album—Digital Photo Album and 602Photo—Photo Editor. The 602PC Suite can be downloaded for free from their site <http://www.software602.com/products/pcs/>

### 6.3.1 The 602Text

As an alternative to MS Word, the 602Text from the 602PC Suite is very decent. The menus and options available are similar to that of



**602 Text provides the option of printing barcodes**

Word. Even the views available in 602Text are quite similar to Word such as 'normal', 'page', 'outline' and 'HTML' view. The normal headers, footers, endnotes are all available here as well. 602Text's Brush Active is the closest we found to Format painter of Word from all the three suites reviewed, a useful tool when it comes to text editors. The interface is very simple yet attractive, with toolbars made up of pretty buttons and a shaded blue background.

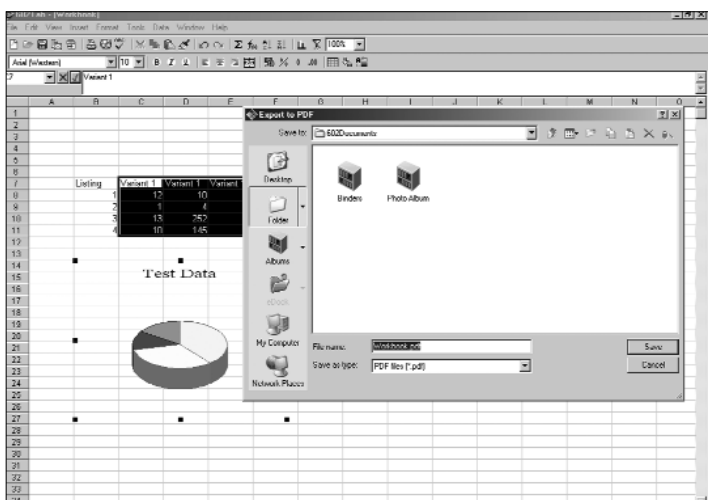
It offers good compatibility with MS Word documents and supports everything from tables, footnotes, bulleted lists, et al. There is an option to create different headers and footers for even and odd pages or only for the first page of the document. The toolbar on the top of the page sports various shortcuts inserting files from other 602PC Suite applications like 602Photo and 602Tab. There is a button for inserting Magic Text, somewhat similar to WordArt in MS Word, minus the shadow effects. It lets you manipulate the text by dragging the different corners of the text to achieve the desired effect. Another feature is the barcode maker, which enables you to insert barcodes into your documents directly and also print them on labels.

The 602Text also supports multiple languages like English, French, German, Italian, Spanish and Portuguese with assistance for the spellings in these languages as well. A complete manual to effectively use every feature of 602Text can be downloaded from [http://cftb.net/downloads/602text\\_manual.pdf](http://cftb.net/downloads/602text_manual.pdf) that gives you a complete rundown on each and every feature of the product.

### 6.3.2 602Tab

602PC Suite's spreadsheet application is called 602Tab. At 16384 rows and 256 columns, a typical sheet can contain 41,94,304 cells of data. It can be trusted to handle large files, the common financial and others tasks used for managing data. In the 602Tab, if you want to open a new workbook then it will not open in the same window but a new copy of the application is uploaded every time, which not only utilizes extra resources but will also lead to unnecessary clutter on the Windows taskbar.

The interface is pretty similar to MS Excel. 602Tab provides over 150 functions, however, it does not support complex features like conditional formatting and pivot tables. Compared to EasySpread-



602 Tab allows you to export files in a PDF format

sheet, 602Tab's chart features are much better and provide enough options to make a decent chart. Once you have finished making the chart and need to modify any of the elements in the chart, then we would recommend making a new chart all together, than bothering to do the modifications! Even here it needs you to select the data which will be used for making the chart before choosing the chart type. The 602Tab also has ODBC support, which can be used to import database tables into the worksheet.

The inbuilt help is enough but sometimes you may want to know more. A complete rundown on everything you need to know about 602Tab can be found in this manual at [http://www.gigabytescs.com/Docs/602tab\\_manual.pdf](http://www.gigabytescs.com/Docs/602tab_manual.pdf). Although there is a long list of languages available, you cannot use them all with the freeware version and need to register to gain the complete benefits. However if you are a small business or need a spreadsheet for personal use, then 602Tab is worth checking out.

### **6.3.3 602Photo and 602Album**

602Photo is a photo and scanner image editor that supports files like .jpg, .tiff, .psd and more than 15 others. Like the other applications in the suite, even 602Photo allows the user to export images in a PDF format. It allows the user to play with images by adding various effects including Diffuse, Emboss, Fish Eye Lens and Lithography.

It can be compared to Kodak Imaging for Windows, however, it is no replacement for software like Adobe Photoshop or Macromedia Fireworks. You will not find any drawing tools in 602Photo, however there are enough for editing and changing image qualities. The regular brightness control, red-eye removal, auto tuning etc. lets you modify the image to your liking.

602Album lets you create albums to store your pictures and binders for keeping documents and spreadsheets. It is a useful application for any project work which will require you to use both images and data alike. Apart from pictures and data, 602Album also allows you to add voice narration to your file.

Though the sound quality of the recording is not very good it is good enough as basic speech software. It allows you to create a digital photo album with options to perform enhanced photo printing, batch photo resize, slideshow and even upload to the Web. The Web photo album feature automatically resizes large pictures to make them appropriate to be uploaded.

## 6.4 AbiWord (Version 2.2.10)

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How many of us have actually ventured forth to try a word processor other than the ubiquitous MS Word? If you haven't already, then start with AbiWord, the tagline of which claims, "Word processing for everyone"—and indeed, from a novice to an expert, typing mere text to creating complex tables, it all turns easy with the feature-rich AbiWord, a typical WYSIWYG (What You See Is What You Get) word processor.

### 6.4.1 Background

AbiWord is part of AbiSource—a project started by the SourceGear Corporation that aimed to develop a cross-platform, Open Source office suite beginning with AbiWord, the project's word processor. A complete usable word processor, AbiWord is free software that you can redistribute and/or modify under the terms of the GNU General Public License. SourceGear released the source code to AbiWord, an open developer community formed around the project, which continues to improve and enhance AbiWord. AbiWord Version 1.0 was released in April 2002, and Version 2.0 was released in December 2004. Its latest stable release is version 2.2.10. Its latest development release is version 2.3.99 and is aimed at developers.

### 6.4.2 Usage

The installation is a cinch, just follow the steps outlined and you have AbiWord up and running in no time! At first glance, you might feel you have opened a slightly modified MS Word document. It is actually delightful to work in AbiWord—the layout is extremely neat—and as far as the Graphic User Interface goes, the command buttons are relatively large, colourful and appealing. AbiWord gives users a unique



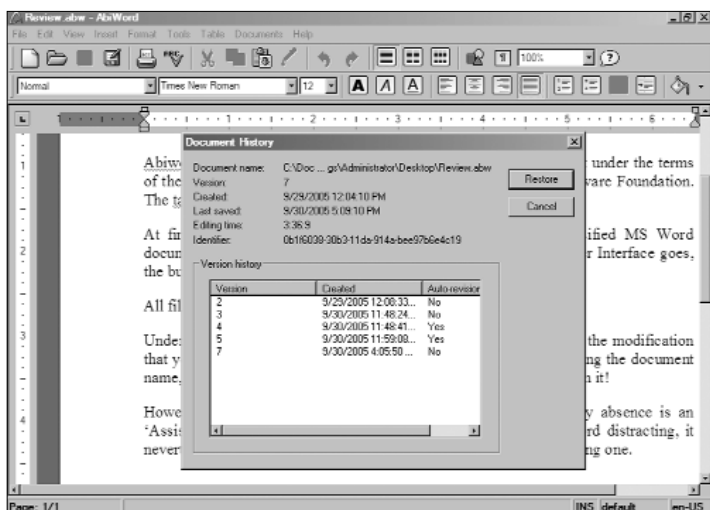
combination of menus, icons and the graphical representation of the document on-screen as it would appear on the printed page.

The Menus are as same as other popular Word documents, starting with 'File', 'Edit', 'View', 'Insert', 'Format', 'Tools', 'Tables' and 'Help'. A typical AbiWord document can be set using rulers, margins, indents and tabs. Even the shortcut keys for the commands are same as those in MS Word: for instance, Cut is [Ctrl + X], Copy is [Ctrl + C] and so on.

The taskbar prominently displays the commonly used icons such as 'Save', 'Print', 'Open' etc, to name a few. There are numerous benefits of using AbiWord—a single click can transform your text into columns. The processing is faster, you can easily add one or more taskbars that you may need. Other functions such as 'Insert Picture', 'Mail Merge', 'Text Formatting', et al can be done with ease.

### 6.4.3 Exclusive To AbiWord

Under Tools > Document History > Show History, you can see all the modification that you may have made to your AbiWord document



The 'Document History' option shows you all modifications made to the file

till date including the document name, version, date of creation and even the amount of time spent on it! And under the Document History > Compare Documents, you can do a quick comparison of two or more documents.

The icing on the cake is that AbiWord can read and write various file formats. Its import/export filters include RTF, HTML, OpenOffice.org, Microsoft Word and LaTeX. Another plus point is that the native file format is in XML—thus facilitating the sharing of data across different systems. Note that AbiWord comes in different languages including Hebrew and Arabic! As a matter of fact, it supports right-to-left, left-to-right, and mixed-mode text. AbiWord also supports command—line conversions, printing, and mail-merge.

More importantly, as you can see in the adjoining screenshot, AbiWord uses only around 3 to 6 MB of memory usage while MS Word uses over 10 MB.

#### **6.4.4 Missing Elements**

However, two features that are conspicuous in AbiWord by their very absence are—a grammar checker and an ‘Assistant’. A grammar checker is crucial for any MS Word document, AbiWord lacks in this respect, although it has a spell checker. And while some may find the Office Assistant in MS Word distracting, it nevertheless plays an important role. AbiWord needs to incorporate these two features to increase its functionality and popularity.

While it may not match other popular word processors in all aspects, it does offer features that others may lack and is very user-friendly. With a miniscule 5 MB download size, and coupled with the fact that it’s free, AbiWord does make a great alternative word processor.

#### **Tips And Tricks**

1. AbiWord plugins are often packaged as bundles, with each bundle comprising import and export plugins that read and write various file and component formats, and the other bundle is

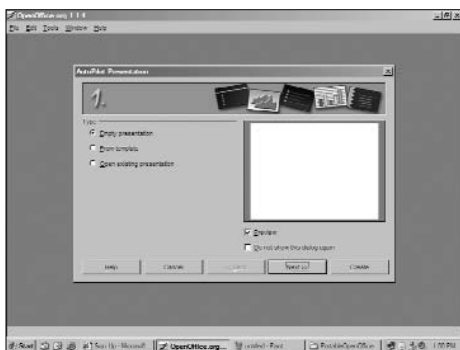
comprised of tools and utilities that perform various helpful tasks from within AbiWord. You can deactivate and install new plugins as and when required. All 'published' plugins are available at <http://snipurl.com/i1xx>.

2. AbiWord can open MS Word documents. You can save your AbiWord file as a '.doc' or an '.rtf' file, which is readable by all versions of MS Word.

## 6.5 Portable OpenOffice

As you have read earlier in this chapter, OpenOffice is a multi-platform and multi-lingual office suite and an open-source project. Compatible with all other major office suites, the product is free to download, use and distribute. Now consider this

scenario. You need to work on a computer that does not have an Office suite installed. Nor do you have any of the conventional means to download or install it. But what if you have a 'portable' office suite on your USB drive that's all ready to go? Indeed, as the name suggests, Portable OpenOffice is a 'complete' office suite that is 'completely' portable and is meant for use on a removable drive.



**Portable OpenOffice has all features of OpenOffice**

The credit goes to John Haller for coming up with the fully functional portable version of OpenOffice ([http://johnhaller.com/jh/useful\\_stuff/portable\\_openoffice/](http://johnhaller.com/jh/useful_stuff/portable_openoffice/)). Haller is the CEO of Rare Ideas, a Web development firm.

Moreover, Portable OpenOffice has been designed to perform faster using certain optimisations to make it faster and extend the life of the

USB key. It will also work from a CDRW drive (in packet mode), ZIP drives, external hard drives, some MP3 players, flash RAM cards and more. Moreover, you do not have to install the software as it includes a launcher that may be placed anywhere on the removable drive.

It has all the features of the regular OpenOffice suite—the only difference is that it's portable. It comes with a specialised launcher that lets you execute OpenOffice from a directory of your choice. The other devices Portable OpenOffice is compatible with are: CDRW (in packet mode), ZIP drives, External Hard Drives, MP3 Players, Flash RAM Cards and so on. To install, just download the ZIP folder and unzip it to the root directory of your USB drive. This will create a 'PortableOpenOffice' directory and all other essential directories. To use OpenOffice.org on your drive, launch it with the PortableOpenOffice.exe file in the PortableOpenOffice directory.

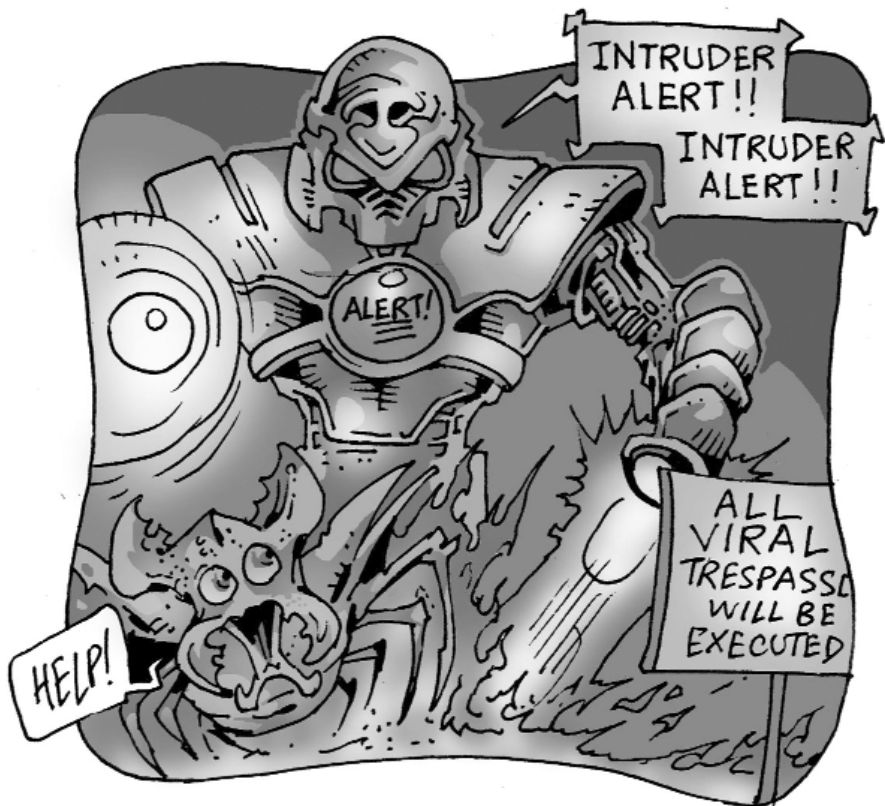
As of now, the Portable OpenOffice is in the 4-Beta state. It falls under the GNU General Public License (GPL). The current Portable OpenOffice is for the Windows platform only—its user interface is Win32 (MS Windows), and it can run on Windows 2000, WinXP, Win98 OSR2, and WinME.

Be that as it may, the Portable OpenOffice will prove to be equally useful for end users and developers.

## **Tips and Tricks**

1. Portable OpenOffice can also be launched using a simple .BAT file. In order to use a .BAT file for launching Portable OpenOffice, simply save the following batch file in your program directory root. Please remember to alter the batch file IF you have renamed the Portable OpenOffice directory.
2. To upgrade to a newer version of Portable OpenOffice.org, simply remove your existing Portable OpenOffice.org folder and download the latest version and unzip it to your drive.

# Security



This could well be the most important chapter of this book—it talks about software that you *must* have installed on your computer, most notably anti-virus programs. Firewalls are important, and we hope this chapter will alert you to the importance of one. Then we talk about anti-spyware tools, anti-spam tools (which, once you start using, you won't be able to live without!), and finally, a couple of tools to secure information on your PC.

## 7.1 Anti-Virus Programs

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All of you reading this know (hopefully!) the importance of having an anti-virus installed. There was a time when it wasn't essential, but that time has long gone—traffic on the Internet contains so much malicious junk these days that often, when you connect a virgin computer to the Net, you're attacked before you can download virus definitions!

Here, we talk about the free anti-virus programs available for download. We have no idea why people pay for anti-virus software when you have these programs available!

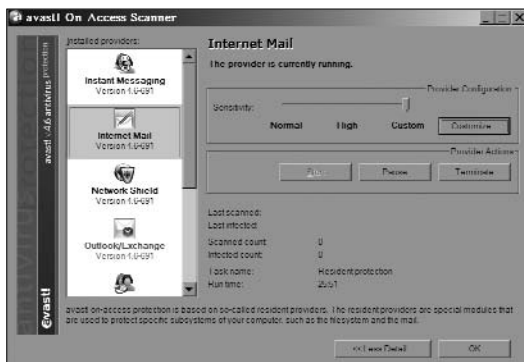
### 7.1.1 avast! Home Edition

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#### Our Experience

avast! is one of the most widely-used free anti-virus software out there. Lots of us here at *Digit* use it at home, too.

An anti-virus cannot be tested the way other software is tested—you'd need to throw viruses at it in order to test it, and since we don't have any viruses at hand, we can't do that! One other thing we could do is to install various anti-virus software, and see which one catches the most viruses. However, all our computers here at *Digit* are virus-free, so we can't do that either! The only thing we could do is, of course, install the anti-virus



You can customise the sensitivity of each of the 'providers' in avast!. Higher sensitivity means more system resources

and check for usability.

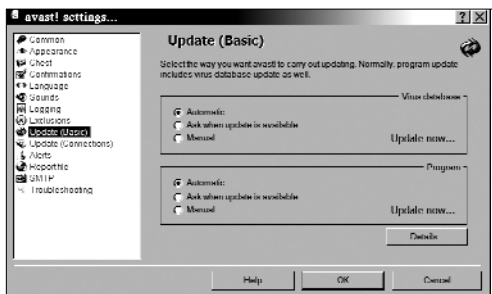
Your best guide as to which anti-virus to use is the features it provides. One outstanding feature of avast! that we must mention

before we go into a detailed feature list is that the updates are small and frequent, unlike, for example, in Norton. Every couple of days, while you're connected to the Internet, you get a little pop-up that says new virus definitions are available, and it takes just a few seconds for the update process.

When you first install avast!, the two icons that appear might confuse you—"why are there two icons?" Actually, the first is the VRDB icon, and the second is the on-access scanner icon. Quickly choose (via a right-click) to merge the two icons, and there you are—one little blue ball.

The blue-ball icon looks cool. When it's 'blocked', with a red cross, the providers aren't running; when it's grey, avast! is waiting for something to happen, and when it's blue, everything's OK. However, the icon's animation can be a little irritating—whenever you open (or close) anything (including the screensaver!), the little blue ball rotates for a while.

All menus can be accessed from that icon via a right-click. You can easily pause and re-start resident scanning. Updates—for the program itself or for virus definitions—are easily accessible from right here, though you won't use this much—courtesy the automatic updates. And there are lots of options you can change to change the way the program works: just do this once, then just let the program sit in the system tray and do its work!



avast! settings are easy to understand. And how you update is up to you—manual or automatic

You can stop individual providers from the icon in the system tray: avast! has what it calls ‘providers’, which is basically the different parts of the program that scan for different things—IMs, P2P, Web, e-mail, and so on. The configuration screen can be configured to show little detail or more detail. In other words, you can either let the program do its work without knowing what it’s doing—accepting what avast! thinks is optimal—or you can get your hands dirty and mess around with the settings if you wish.

Coming to the scanner program: you can choose, amongst other things, the type of scan: quick, standard, or thorough. But there’s something quirky we must mention here: the interface has a cool blue look, with a ‘play’ button for starting a scan and so on—and it’s actually skinnable! It looks a little like Winamp or some other media player, with cool buttons and so forth. Now who would ever want to download and place a skin on an anti-virus program? But well, there it is!

Finally, avast! is *very* light on system resources—which is important for anyone who has a slightly older computer! The only time it uses system resources is when it’s updating. Also, there’s a good support forum, at, of course, <http://forum.avast.com/>.

### **Avast!’s VRDB**

VRDB stands for ‘Virus Recovery Database.’ The aim of the VRDB is to help when, despite all the security measures, a virus gets inside the computer and files get infected. With the help of the VRDB, it is possible to repair infected files (return them exactly to their original state).

avast! stores information about the actual state of the files, doing it three versions back for each file. The database creation/maintenance is performed either when the computer is idle, or when the screen saver is running. You can choose when this gets done. This database, once it is created, is updated every three weeks—this value may be changed by editing the ‘avast4.ini’ file.



If a file is infected by a virus, and if there are multiple versions of the file in the database, you can choose which version you want to restore.

## **Features**

Here's a partial feature list, highlighting the more important stuff, quoted from avast's Web site.

### **anti-virus Kernel**

With the avast! anti-virus kernel, you can expect 100 per cent detection of 'In-the-Wild' viruses and excellent detection of Trojan horses.

### **Standard Resident Protection**

File system protection ensures that no virus will be started on the computer. avast! offers a wide range of settings, such as the possibility to specify that files will be scanned during copying, or that the scanning will include files with a given set of extensions only.

### **P2P And IM Shields**

Avast! features a module for the protection of IM programs, and a module for the protection of P2P programs. The list of supported IM and P2P programs is extensive, with more than 30 programs currently supported.

### **Web Shield**

Web Shield is a unique feature of avast! that enables it to monitor and filter all HTTP traffic coming from Web sites. The Web Shield acts as a transparent HTTP proxy and is compatible with all major Web browsers. Unlike most competitive solutions, Web Shield's impact on browsing speed is almost negligible.

### **Automatic Updates**

Automatic updates are another need in virus protection. Both the virus database and the program itself can be updated automatically. The updates are incremental, with only new or missing data downloaded, thus reducing the transfer heavily.

## **System Integration**

avast! antivirus features outstanding integration into your system. A scan can be started directly from Windows Explorer, by clicking a folder or a file with your right mouse button and selecting the corresponding choice from the menu. A new option is boot-time scan (Windows NT/2000/XP/.NET only). This allows a user to instigate scanning before a virus is activated, in the case that a virus is suspected to be active on your computer already.

## **Integrated avast! Virus Cleaner**

avast! includes a Virus Cleaner, a tool designed for a complete removal of most common infections from already-infected computers.

## **Support For 64-bit Windows**

avast! Home now fully supports the 64-bit Windows platform. Regular (32-bit) anti-virus applications are unable to operate correctly on the 64-bit Windows platform. The new avast! uses native 64-bit drivers, delivering the same level of protection as in the 32-bit Windows environments. The installation package is the same.

## **What Else You Need To Know**

Although avast! Home Edition is 'free', please note the following regarding avast! Home Edition (which is what is included on this month's DVD), which outlines whether the product is indeed free for you or not, and how to uninstall the product.

Regarding whether avast! Home Edition is free for you: "avast! Home Edition is now free of charge for home users for non-commercial use. You can find more information at [www.avast.com/eng/free\\_virus\\_protection.html](http://www.avast.com/eng/free_virus_protection.html)

"To use the Home Edition, you should register it at [www.avast.com/i\\_kat\\_207.php?lang=ENG/](http://www.avast.com/i_kat_207.php?lang=ENG/)

However, after initial installation, you have 60 days to trial the product (as with all avast! AntiVirus products) before you must complete registration. The registration process will take you only a couple of minutes.”

Regarding uninstallation: “Sometimes it’s not possible to uninstall avast! the standard way—using ‘Add/Remove Programs’ in the Control Panel. In this case, you can use the uninstallation utility, aswClear. To uninstall the software using aswClear.exe:

1. Copy aswClear.exe on to your desktop, and open (execute) it
2. If you installed avast! in a folder different from the default, browse for it. Be careful! The contents of any folder you choose will be deleted!
3. Click ‘Remove’ and restart your computer.”

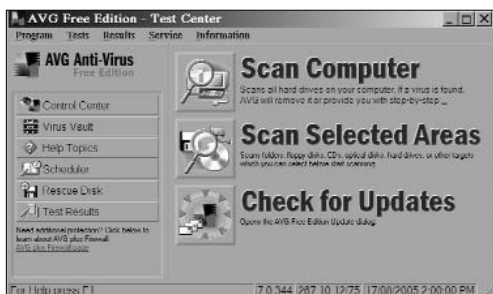
## 7.1.2 AVG Free Edition

This is another very popular free anti-virus. Like we said before, we didn’t actually throw viruses at it and see if it could catch them, but we took a look at the interface and features.

### Interface And Features

The program interface itself is very slick. The little icon that stays in your system tray isn’t that slick—it looks like a black-and-white mess—but that’s not what you look for in an anti-virus, is it? Besides, the icon pops up a warning when your virus definitions are out-of-date.

The first thing we noticed



The huge buttons make it clear that AVG is designed for ease of use. Everything is on the main screen

about AVG was that when e-mails were being sent and received, the program automatically brought up a bar that displayed what was going on: “mails being downloaded,” “no viruses found,” and other messages along those lines—very cool!

Installation was a breeze. The installer for the Free Edition automatically assigns you a registration number during installation. There’s a helpful post-installation screen that lets you configure the commonly-used aspects of the program. You are prompted straight-away to update your virus definitions.

Features are aplenty, while not being too confusing, just like avast! and all other good software. You can scan floppies, program files, documents, and e-mail files; you can choose to ‘use heuristic analysis’, enable ‘on-close scanning’, or even scan all files. You can choose to do a quick test—this is the ‘System Areas Test.’ The System Areas Test only scans important system areas, files and registry keys.

Double-clicking the icon on the system tray brings up everything at a glance: the resident shield, the e-mail scanner, the status of the internal virus database, etc. You can check for updates with one click. You can choose to have the program check for updates periodically—at intervals that you specify—and to scan your computer at periodic intervals. In the Pro (paid) version, you can also select what areas of the computer to scan at periodic intervals.

One thing about anti-virus programs is the way they seem to stick on and be out of your control! For example, in Norton AntiVirus, it’s not straightforward to shut down the program; the program seems to behave as though it knows better than you. In AVG, the Control Center and the app that scans disks are separate, as it should be. And unlike Norton, it’s easy to shut down the program—just two clicks!

So what’s not to like? About the only thing we found was that there are a couple of cryptic things in the menus. For example, under ‘Properties’ in the ‘Control Center’, you have the option to

“Display a component” ... or to display it “only when a faulty condition exists.” We don’t know what this means, and the Help didn’t, well, help.

### From The Web Site

From <http://free.grisoft.com/doc/2/Ing/us/tp1/v5/>: “AVG

Free Edition is a well-known anti-virus protection tool. AVG Free is available free-of-charge to home users for the life of the product. Rapid virus database updates are available for the lifetime of the product. AVG Free is easy-to-use and will not slow your system down (low system resource requirements).



All the aspects of the AVG program are displayed in this screen

Highlights include automatic update functionality; the AVG Resident Shield, which provides real-time protection as files are opened and programs are run; the AVG E-mail Scanner; the AVG On-Demand Scanner, which allows the user to perform scheduled and manual tests; free Virus Database Updates for the lifetime of the product; AVG Virus Vault for safe handling of infected files...

AVG Free Edition is for private, non-commercial, single home computer use only. Use of AVG Free Edition within any organisation or for commercial purposes is strictly prohibited. The AVG Free Edition is absolutely not for use with any type of OEM bundling...

The latest version, which is bundled with this month’s DVD, is version 7.344. For the Reference Guide, see [http://free.grisoft.com/softw/70free/doc/avg\\_fre\\_ref\\_en\\_70\\_12.pdf](http://free.grisoft.com/softw/70free/doc/avg_fre_ref_en_70_12.pdf)

### Why Pro?

Why would you want to go Pro if everything is provided in the Free Edition? Well, here are the reasons as on the Web site, which aren’t compelling enough, in our opinion:

- m AVG Free Edition cannot be installed on server OSes, nor can it be used for the scanning of network drives. But that shouldn't bother home users.
- m Scheduling options in the AVG Free Edition are limited (only one scheduled update per day, one scheduled scan per day etc.). But why would you want to update or scan more than once a day?
- m AVG Free Edition receives updates via a lower priority service. Priority updating via ultra-reliable Akamai servers is only available for purchased products. Well... as long as our virus definitions get updated on time, we're happy!
- m AVG Free Edition does not offer advanced testing options, such as automatic healing, password-protected archives reporting, adjustment of scan process priority and many others.
- m AVG Free Edition has no technical support. That's about the only substantial reason for home users to upgrade to Pro, but even then, we don't think it'll be too often that you'll need technical support. There's a forum in case you have an issue: <http://forum.grisoft.cz/freeforum/>.

### 7.1.3 AntiVir

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#### **Our Experience**

AntiVir is yet another popular free anti-virus. Installation is a breeze, as you might expect, and the program starts scanning your disks immediately upon installation, without warning! Of course, you can cancel the procedure...

Anyway, AntiVir isn't as light on system resources as you might want it to be—it's light enough, but can't compare with, say, avast!, for smallness of memory footprint.

The logo that sits in the system tray is a mess of red and white, and if you don't mind that, read on...

The interface looks pretty sparse compared to the other software we've reviewed in this section. It's probably the simplest and most accessible of all. Again, there are two separate programs—the scanner and the resident protector, as it should be. The actual scanning program isn't that sparse on tabs, and has a whole lot of options: how to repair a file, scheduling of scans, the Internet update, and much, much more.

There's no immediate prompt for virus definition updates, nor does the program warn you if your definitions are out of date. There also wasn't any indication that one could schedule automatic updates. Apparently you can, though.

Under 'Internet Update', there's a helpful table: under one column it says "on your PC," and under the other, "on the Internet". It lists out the program version, the version of the virus definitions, and more, so you can see at a glance what's on the Internet that's not on your computer!

In AntiVir, you have the option of scanning all files, or using a file extension list. Using a file extension list (provided you know how to do it properly) can significantly reduce scanning time. Though other programs in this section have this feature, it's not as patent and accessible as in AntiVir. There are options aplenty in the scanning program, like we said. Scanning options go as detailed as scanning on file read, file write, or file read and write.

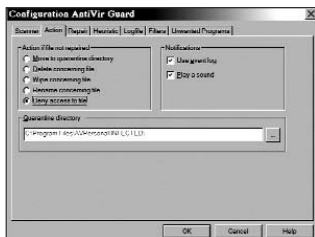
There's a tab called "Action if file not repaired." Here, of course, you specify what action to take if AntiVir can't repair a particular file.



AntiVir has the sparsest main screen of all the three

You can choose to ‘report’ other kinds of files in addition to viruses: “SPR (security privacy risk)”, “Unusual runtime compression tools,” “Jokes,” “Double extension files,” “Games,” and more. So what do these mean? From the help file, we found that, for example, “joke” files have known extensions, and are viruses that masquerade as jokes. Also, “games” refers to recognisable games like Minesweeper, which one may want to ban from an office environment. However, if this is the Home edition, what is a game scanner doing? We wonder...

Talking about the Help, it’s very comprehensive, unlike, for example, AVG’s. Apart from helping you out with every single thing in the interface, there’s a description—within the help file—of thousands of viruses!



There are several actions you can decide to apply to an infected file

One hitch, however. While updating the virus definitions, the program timed out too often, and we weren’t able to update the definitions file. It could have just been a random occurrence, or maybe free-av’s servers aren’t that reliable—we can’t say for sure.

Reports have been given quite a bit of weightage, and there are several options under ‘Reports’: display, settings, delete, print, summary reports, and more. Again, like with the other programs we’ve discussed, it’s easy to exit the program.

## From The Web Site

From free-av.com: “Private and individual use of AntiVir Personal Edition is completely free of charge. The reliability of AntiVir (has been) demonstrated in numerous comparison tests and references featured in independent trade journals. AntiVir:



AntiVir displays info about viruses right in the help file!

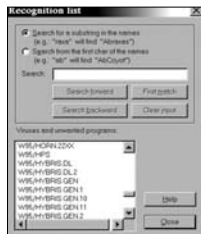


- m features detection and removal of more than 150,000 viruses
- m is always among the winners of comparison tests featured in computer journals
- m has a resident Virus Guard that serves to monitor file movements automatically, e.g. downloading of data from the Internet
- m scans and repairs macro viruses
- m protects against Trojans, worms, backdoors, jokes and other harmful programs
- m protects against previously unknown macro viruses, boot record viruses and master boot record viruses

And last but not least,

- m features quality “Made in Germany” (Cool selling point for a car, but an anti-virus?)

Whatever the quirks of the online description of AntiVir, it’s still a great program!



**If you suspect you're infected, you can find out more about what you're infected with**

## 7.2 Firewalls

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Basically, you need a firewall to protect your computer against Trojans, spyware, worms and other known and unknown threats. A firewall prevents unauthorised or malicious applications from reaching your computer. A good personal firewall should enable even inexperienced users to customise and fine-tune security policies. ('Security policies' refers to, for example, what programs or types of traffic to block, and what to do when something bad seems to be happening.)

### 7.2.1 Sygate Personal Firewall (SPF)

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SPF claims to be the easiest-to-use PC firewall. It's free for personal home use, as of now.



With SPF in place, you'll need to get used to warnings like this one!

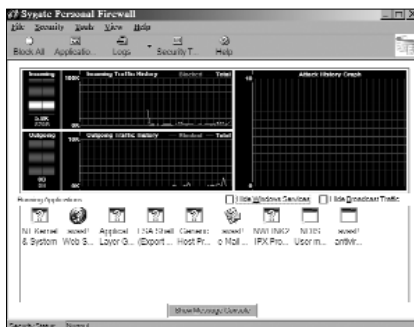
#### Our Experience

First off, after installing and running SPF, you'll see some weird messages that may confuse you. Remember that every single outbound and incoming connection—many of which you may not be aware of—are monitored by SPF. It sits in the system tray, and monitors everything. Double-clicking the icon brings up the console, where you can manage everything about your connection, be it a LAN, a dial-up connection, or whatever else.

The console lists all the programs that have requested connection service. You can choose to allow, ask, block or terminate any of these—in short, meaning full control. The console can be as detailed or as sparse as you wish.

There's a continuous moving graph that shows how much traffic is moving through your connection, and how much of it is being blocked by SPF. Remember all the times when you see activity on your connection, and you don't know where it's coming from? With the firewall in place, all malicious traffic is blocked.

The applications menu lists out all the programs that you ever started after installing SPF. It lists whether you chose to block them, allow them, or make SPF ask you when the program tries to access your connection. You can change any of these settings.



**SPF's main screen. This lists all programs that are accessing your connection, as well as all inbound and outbound traffic**

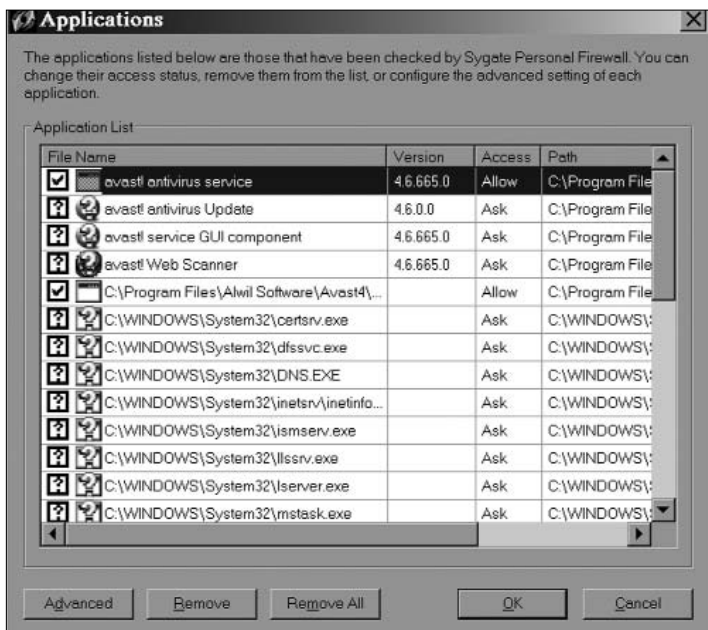
Each new activity that is initiated—for example, your anti-virus program bringing in updates—is caught by SPF, and it asks you whether to allow it or not. Now you know you can be safe whatever Web site you're visiting—if the site tries to download something onto your computer, it simply can't, not without your consent!

You can choose to hide Windows services, that is, the essential components of Windows that access the network. There are several of these, and clutter up the list, and anyway, it's best not to mess with what these programs access.

There's an attack history graph, which, obviously, tells you about attack attempts that have been targeted at your machine. Using a firewall gives you an idea of how much unwanted network traffic happens all the time, and how prone you are to attack!

Then of course, SPF gives you detailed logs: security, traffic, and system logs, and even packet logs!

Several legitimate things are recognised as 'hijacking' or some other such thing. There's no need to panic. For example, when our anti-virus program tried to use its updating module to access the Web, here's what SPF told us:



SPF lists all programs that have ever attempted to use your connection. You can choose to “allow”, “ask” or “deny” their attempts

“Application Hijacking has been detected

The application: C:\Program Files\Alwil Software\Avast4\ashDisp.exe try to launch another application: C:\Program Files\Alwil Software\Avast4\Setup\setup.ovr to go to remote host 192.168.0.1”

Clicking the ‘Security test’ button connects you to scan.sygate.com, and Sygate tries to see how ‘visible’ your computer is on the Internet. As an indicator of what this test does, here’s what showed up when we ran the test:

“We have determined that your IP address is 127.0.0.1

This is the public IP address that is visible to the internet.

Note: this may not be your IP address if you are connecting through a router, proxy or firewall.

Trying to gather information from your web browser...

Operating System = Windows XP

Browser = Firefox 1.0.6

Trying to find out your computer name...

Unable to determine your computer name!

Trying to find out what services you are running...

Unable to detect any running services!"

This test is especially useful for those with an always-on connection with a static IP address, as these are more visible on the Internet and are more at risk. There are other scans available at <http://scan.sygate.com/>, and these include the TCP scan, which could take 45 minutes to complete!

Finally, you can choose to 'block all', and you're totally safe. This is helpful if you're connected and you have reason to believe that you're being attacked.

### **From The Web Site**

Like we said, Sygate claims that SPF is the easiest-to-use personal firewall out there. From the Web site: "SPF is the most user-friendly PC firewall and personal desktop security solution... It ensures your personal computer is completely protected from malicious hackers and other intruders while preventing unauthorised access from your computer to a network. In essence, it makes your protected machines invisible to the outside world. That makes SPF a must-have security measure for any PC that connects to a private network or the Internet.

"Once you've been compromised, every other network you connect to is at risk; including your home, business and online bank accounts. No matter where you use your computer, whether remote or behind a corporate firewall, whether dial-up or an always-on broadband Internet connection, it gives you complete confidence that your precious business, personal, financial and other data is safe and secure."

## 7.2.2 ZoneAlarm

### A Comparison With SPF

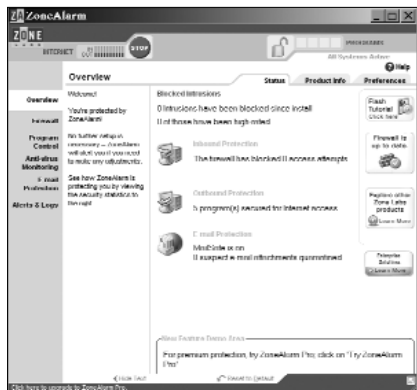
Despite Sygate's claims of SPF being the easiest-to-use personal firewall, we do think that with its cleaner interface and fewer options, ZoneAlarm is easier to use. The fewer options does not mean that your computer is less protected; however, you do feel less 'in control.' The position that ZoneAlarm takes is that most people just want their systems protected from all the baddies out there, and that they don't want to configure anything.

ZoneAlarm assumes you know much less about firewalls than SPF does.

Before we tell you something about the program, remember that this version—the one provided on the DVD—is free *only* for personal and non-profit use.

### Our Experience

The installer asks you to configure the firewall and choose between the basic and Pro versions. After installation, you're invited to watch a video (this requires you to be connected to the Internet) that teaches you how ZoneAlarm protects you, important tips and shortcuts for using the program, and about the situations when you may need to take action.

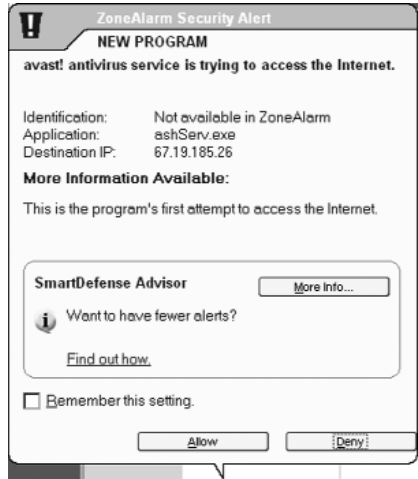


ZoneAlarm provides you most of the information you need to know in an easy screen, without going into technicalities. The emphasis is on ease of use

The first thing we saw was the program detecting our anti-virus trying to access the Internet, and presenting a pop-up win-

dow that mentioned this. It identified the .exe file that was doing this, it identified the destination IP, and said this was “the program’s first attempt to access the Internet.” That’s the level of detail you get!

At the same time, in case such alerts are irritating, there’s even an option in that same pop-up window that asks if you want to have fewer alerts. So we gather that ZoneAlarm is very customisable. Finally, you can choose to allow or deny the program access to the Net.



A typical pop-up brought up by ZoneAlarm. Click “Allow” or “Deny”, or choose “More Info”

Here’s what the screen looks like when you start up ZoneAlarm (see screenshot on previous page). First off, it says you’re protected by ZoneAlarm, and that “no further setup is necessary”—and that ZoneAlarm will alert you if you need to make any adjustments.

There’s an indication of how many intrusions have been blocked since install; there’s an “Inbound Protection” header, which told us how many access attempts the firewall blocked. Then there’s an “Outbound Protection” section, which told us how many programs were currently permitted to use the Internet. The “E-mail Protection” section told us how many suspect e-mail attachments had been quarantined since install.

You can set the level of protection for the Internet Zone and for the Trusted Zone, where you enter the IPs of which computers you ‘trust.’ Under ‘Program Control’, you can choose the level of warnings you receive when programs try to access the Internet—

for example, if you want each and every program to be blocked by default and unblocked manually, you'd set the level to "high."

While the actual options are configured on the right, the descriptions are on the left—so you know exactly what to do.

When the program puts your computer in stealth mode—which you can enable by going to the Internet zone and choosing the "high" security level—any uninvited traffic receives no response, not even an acknowledgement that your computer exists. This renders your computer invisible to other computers on the Internet, until a permitted program on your computer initiates contact.

You can stop the program from doing its duties by pressing one large red button. And you can easily "lock" the Internet altogether with one click as well! Finally, you can easily update the program with one click.

### **From The Web Site**

ZoneAlarm is an easy-to-use firewall that blocks hackers and other unknown threats. It "Systematically identifies hackers and blocks access attempts," and "Automatically makes your computer invisible to anyone on the Internet."

From snapfiles.com, "ZoneAlarm's firewall provides the ultimate intrusion security for your personal computer. Combining the safety of a dynamic firewall with total control over applications' Internet use, ZoneAlarm gives rock-solid protection against thieves and vandals. It gives you control over the door to your computer. With Stealth Mode enabled, ZoneAlarm's firewall renders your computer invisible to the Internet and potential intruders. If you can't be seen, you can't be attacked!"



## 7.2.3 Kerio Personal Firewall (KPF)

### A Preliminary Note

For home users, Kerio Personal Firewall 4 (KPF) is available in two flavours—the full edition and the limited free edition. After installation, KPF works as the full edition for 30 days, after which it becomes the limited free edition. The limited free edition does not provide the content filtering capabilities such as blocking pop-up windows, ads, VB scripts, cookies, and other extra features.



The screen that pops up when you're installing KPF allows you to choose your user level

See the comparison table at [http://www.kerio.com/kpf\\_comparison\\_version.html/](http://www.kerio.com/kpf_comparison_version.html/) for more details.

In addition, during installation, a message comes up saying that you can install KPF in Simple or Advanced mode. Here's the description we got from the setup program:

- m Simple (No popup mode): This is the typical setting for most users. By default, the firewall won't ask you for anything. You can switch to advanced mode later.
- m Advanced (Learning mode): This setting provides more security and flexibility for advanced users. The firewall will ask you about unknown network traffic and launching unknown applications."

We chose to install KPF in Simple mode.

### Our Experience

Kerio's interface—rather, the information in the main window—is the most cryptic of the three firewalls we're talking about

**Kerio Personal Firewall**

**KERIO**

Overview | **Services** | PolicyEngine | Events

Overview | Network Security | **Services** | Logs & Alerts

Stop all traffic

Name	Protocol	Port	Protocol	Port	Protocol	Port
system	TCP	1	163			
system	TCP	11				
msn # Mail Scanner Service	TCP					
Internet Web Scanner	TCP					
Applications Layer Gateway Service	TCP					
L3A Build (system service)	TCP	355				
Generic Scan Process for Win32 Services	TCP	11				

4 Connected to: 4 Connected out: 14 Listening: 32

Ignore | Filter | Help | OK | Cancel | Apply

point” meant. Then, at the bottom of the screen, there’s “Connected in”, “Connected out,” and “Listening,” each with numbers after them. Without looking at the help file, there’s no way to tell what these mean! Who needs this much detail right in the main window?

One interesting and useful feature about KPF is that ads in Web pages are automatically blocked! Ad-free surfing is a great experience, but unfortunately, the Limited Free Edition (into which the program on the DVD morphs in 30 days) does not support this feature.

## RangaRakes

## **So why KPF?**

So why would you opt for KPF at all, when you have the total simplicity of ZoneAlarm and the relative simplicity of SPF? The answer is that KPF is targeted towards more advanced users. Here are excerpts from a review by Joseph Moran at winplanet.com:

“Though (firewalls) from companies like Symantec, McAfee, and Zone Labs are better known, Kerio Personal Firewall 4 (KPF4) distinguishes itself in the category by managing to be easy enough for a novice to operate while still providing many of the advanced features that typically appeal to more tech-savvy users.

“What sets KPF4 apart from some of its competitors is the detailed information the alerts provide and how it is presented. Users will likely find the clarity of information in KPF4’s alert dialogs to be one of the program’s greatest strengths.

“Each alert offers large ‘permit’ and ‘deny’ buttons along with a simple checkbox to create a rule for future traffic of that type (rather than requiring you to select from a number of options on a selection list, as some products do).

“Furthermore, KPF4 provides as much information as it can to help you make an informed decision about an alert. In most cases this includes the full and actual program name rather than simply the name of the .exe file, which can often be cryptic. When you consider that many firewalls typically provide you with little information beyond “app.exe is attempting to access the Internet,” the benefit of Kerio’s approach is clear.

“Those users who like to know exactly what’s going on with their PC will appreciate the high level of detail KPF4 provides.”

## 7.3 Anti-Spyware

Like anti-virus software, you know you need to have anti-spyware installed on your computer. The hitch is that no free anti-spyware out there is a real-time scanner, that is, one that catches spyware as it's being downloaded to your computer. The Pro version of, for example, Ad-Aware, provides this feature. Nevertheless, here are two anti-spyware software that are known to complement each other well—we recommend you install both of them.

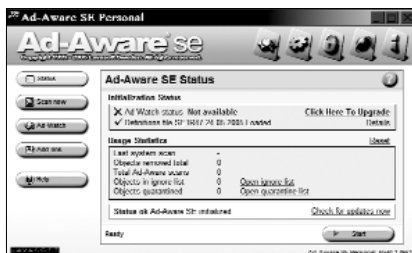
### 7.3.1 Ad-Aware SE

The installer for this great program is on the DVD, but for the latest updates, visit [www.lavasoftusa.com/support/download/](http://www.lavasoftusa.com/support/download/). We haven't included the latest definitions on the DVD because by the time you read this, the definitions file on the page might have changed.

The screen starts up showing the status, including which definitions file is loaded, when the last system scan was, number of objects quarantined, and more. You can click “Check for updates now” so your definitions are up to date, and you can start a scan from the same screen.

The Help button is on the left, and the Help is pretty good—of course, it's quite a small file, because you don't really need much help with Ad-Aware! You just run periodic scans and delete or quarantine objects.

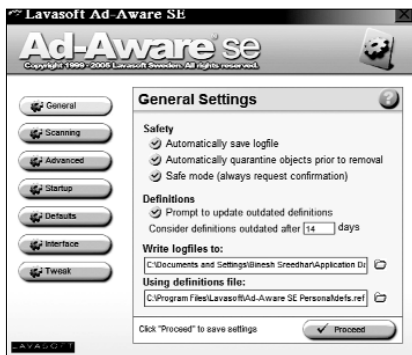
The interface, on the whole, we must say, is really simple—as good as it gets. Just click “Scan” and let Ad-Aware do its stuff! Of course, this is not to say it's a feather-weight program: if you want to get your hands



Ad-Aware SE's simple interface. You can do most things right from this screen

dirty, there are many things you can do—for example, changing the scanning options, changing the advanced options, and so on. The help file should come in handy in this case.

Then there are the scan modes: “smart system scan,” “full system scan,” “custom scanning options,” and “scan volume for ADS,” all of which—except for the last—are self-explanatory. It turns out that ADS is not ‘ads,’ but stands for Alternate Data Streams. More information on this can be found at [http://wiki.castlecops.com/Ad-Aware\\_FAQ#Alternate\\_Data\\_Streams/](http://wiki.castlecops.com/Ad-Aware_FAQ#Alternate_Data_Streams/)



If you want to play around, you can get to screens such as this one!

So apart from ADS, what does Ad-Aware scan for? Basically, spyware. From Lavasoft’s Web site: “Ad-Aware is designed to provide advanced protection from known Data-mining, aggressive advertising, Parasites, Scumware, selected traditional Trojans, Diallers, Malware, Browser hijackers, and tracking components.”

Apart from scanning for ADS, everything else is straightforward enough. That’s what makes Ad-Aware so popular—apart from, of course, the fact that it’s free for non-commercial use.

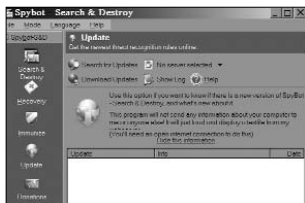
### 7.3.2 Spybot - Search & Destroy (SS&D)

SS&D is reputed to be one of the best spyware scanners out there. Also, it’s been said that SS&D complements Ad-Aware well. However, there might be a couple of hiccups with the interface before you get to being able to perform a full system scan! More about these later...

First off, the first three paragraphs of the license agreement are fun. We urge you to read them, and not just skip past it like we do with most other licence agreements!

After installation, on the first run, SS&D prompts you to create a backup of your registry, which is a good thing.

One problem is that the program doesn't, unlike Ad-Aware, come pre-loaded with definitions. You need to download them. On top of that, you have to perform the definitions update from within the software *after* having downloaded the definitions. The bad thing about this is that the software doesn't warn you that you need to do these actions. If you proceed to do a scan without having done the updating, you get a five-second scan that says "Congratulations! No immediate threats were found." This scan basically does nothing.



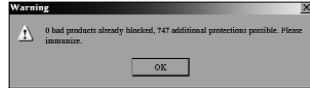
SS&D's interface isn't really polished

When we tried to download the updates, it said "bad checksum!" for all the components. We had to try four different mirrors before we were able to download the updates. Though other Digit members swear that they've never seen that happen before! Perhaps it was a temporary bug.

We've provided the latest definitions on the DVD: it's an .exe file you need to run after installing the software. These were the latest definitions at the time of going to print, and you might want to check for the latest definitions at [www.safer-networking.org/en/download/](http://www.safer-networking.org/en/download/)—they're called "Detection updates."

At some point during the installation, setup says, "It's recommended you apply some basic Immunization. If you do not want to immunize at this point, you can do this later... There are basically five buttons—"Search & Destroy," "Recovery," "Immunize,"

“Update,” and “Donations.” All of which are self-explanatory except for “Immunize”. So what does “Immunize” do? From the help file:



Here's a cryptic message SS&D threw at us, basically asking us to use the 'Immunize' option

“SS&D allows you to immunise your computer against some spyware. It currently offers three different immunities:

### 1. Permanent Internet Explorer immunity

This allows you to tweak some internal IE settings to block the installation of known spyware (and similar threats) installers. SS&D is able to set all entries for those that are in its database to be blocked. If you want to distinguish, you should install SpywareBlaster.

### 2. Permanently running bad download blocker for IE

This is a second layer of protection for IE. While the Permanent Immunity blocks installers by their ActiveX ID, this one blocks anything that should come through by different aspects.

### 3. Permanent Opera immunity

This list shows all Opera profiles, and how many of the plugins that SS&D knows as bad are already blocked in each profile.

Not many browser plugins are currently working for Opera, but trying to install some may crash Opera, and ActiveX support for Opera is available in third-party beta software, so use this function as a precaution against future misuse of Opera through spyware.”

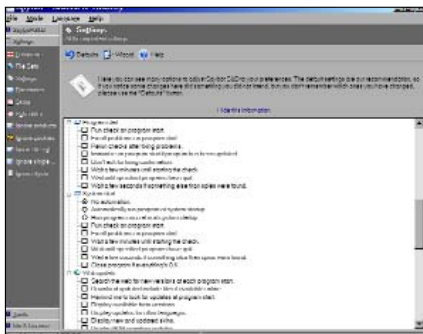
Clicking “Search & Destroy” presents you with three simple buttons—help, print, and “Check for Problems.” That button is the heart of the program, of course.

Also, next to the File menu, there's a “Mode” menu—which allows you to switch between Default and Advanced modes. When you try to switch to Advanced mode, a warning pops up, which informs you that the Advanced mode offers you more options but

that there are more chances of damaging your system if you switch. Who wants to mess around with such things? We left it as it is, but if you're amongst the more curious ones, you might want to try Advanced mode.

Another little bug we found: the “show log” button didn't show up anything.

Anyway, after getting everything straight—installing the definitions, updating the software and running the scan—SS&D caught more bad things than Ad-Aware did, in the brief while we'd let each of them run. This doesn't mean SS&D is a ‘better’ software: like we said, they complement each other, and it's recommended to have both of them installed on your system.



SS&D's options are comprehensive. You can control each and every aspect of the program's behaviour

## 7.4 Anti-Spam Software

For a while now, with all the spam we receive, anti-spam software has actually been *essential*—in terms of how much time and headache it saves us—yet we don't see too many people using spam blockers! We hope that in the following pages, you'll get the idea that installing and using one is easy.

### 7.4.1 POPFile

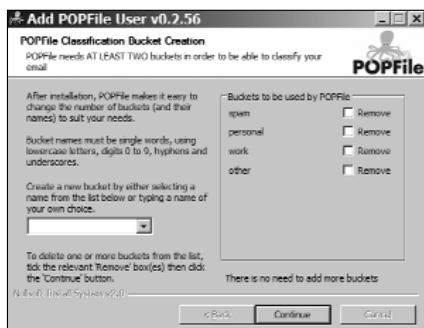
POPFile is a general purpose automatic e-mail classification *and* spam filtering tool. It works transparently as a POP proxy between your e-mail client and the mail server. What this basically means for you is that POPFile can talk to your mail client; it intercepts mail as it's being received and classifies it according to what it's



already learnt. POPFile uses Bayesian statistical analysis to classify incoming messages in user-defined categories.

So what has it learnt? What you teach it, of course! You see, when you install POPFile, it can do nothing. What happens is that it shows you mail that has just arrived, and how it was classified; you change the classification, and that is one ‘lesson’ that POPFile learns. Over a few hundred ‘lessons’, the program becomes competent enough.

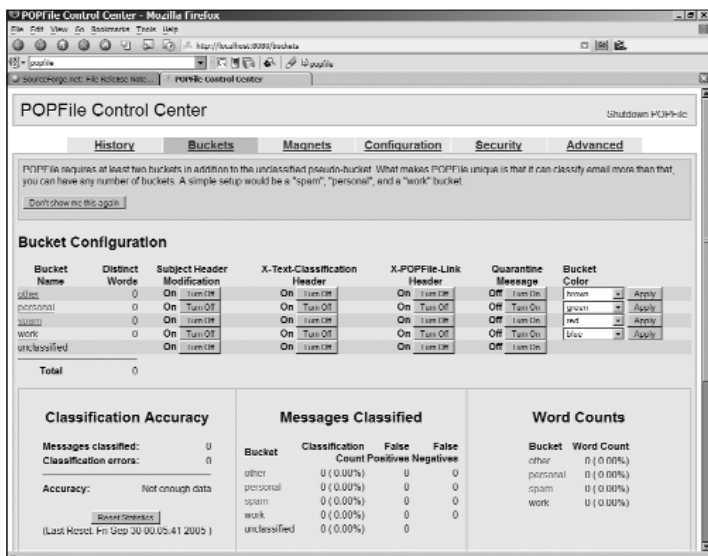
OK, if it sounds like we jumped the gun, let’s begin at the beginning. What you need is a spam-catching tool for your e-mail client. POPFile is one of the best ones out there. Run the Windows installer provided on the DVD, and head to <http://popfile.sourceforge.net/manual/email.html/> for instructions. (You’ll see tabs on this page starting from ‘Installation’, and you might want to start off there, although it’s pretty straightforward.)



**POPFile doesn’t just classify mail as ‘good’ and ‘spam’; it puts them into the buckets you create**

Refer the screenshot alongside. During setup, POPFile asks what buckets you want to create. Don’t be put off by the new word—a bucket is nothing but an abstract folder that POPFile uses to dump mail into. So if you have the ‘Work’, ‘Personal’, ‘General’ and ‘Spam’ buckets, POPFile knows that it will be classifying mail into one of these four. You can have as many buckets as you want.

Now, POPFile automatically detects the mail clients you have installed, and asks which one(s) to integrate with. You don’t need

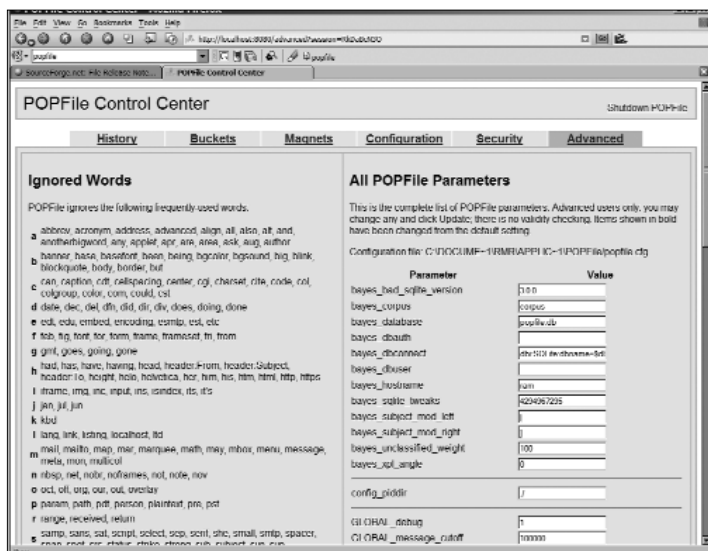


POPFile presents all its information in your Web browser. Although it's conceptually simple, there's so much information in these tabs that it could take some time to get used to, and use it to your advantage—and fun!

to change anything in your e-mail client at this point (we used Outlook Express). POPFile sets itself up to work with OE. Installation then finishes, and you're ready to go—except for two things: training and filters.

POPFile tags message subject lines with words such as “spam” while classifying them. Now, that's a bucket—an abstract folder. To turn this into a concrete folder—that is, to get the results you want, with spam in the ‘Spam’ folder and work mails in the ‘Work’ folder and so on—you need to set up OE's filters. You simply filter on the basis of the words that POPFile has assigned to the messages. Simple, isn't it? (See the link above for instructions on how to set up filters for OE or your mail client.)

The interface can seem a little confusing. What's my Web browser doing displaying POPFile, you might ask. Well, POPFile has a Web-based interface, so it uses your browser to display all the



One great thing about POPFile as a spam filter is that you can let it be as complicated or as simple as you want it to be. In the 'Control Center', you're presented with several options and settings, both basic and advanced

information you need to see. Amongst the tabs POPFile displays are Buckets, Advanced and History. (See accompanying screenshots.)

Under 'Buckets', you tell POPFile what Buckets you need. POPFile knows nothing about the difference between spam, work mails, personal mails and so on; they're just categories as far as the program is concerned. Like we said, you can configure as many buckets as you want, but obviously, you need at least two.

The 'Advanced' tab you probably don't want to touch—unless you're the experimenting kind.

Under 'History', you can classify your mail (the exciting part!) You can see the mails that have recently arrived. POPFile hasn't classified them, of course. You change the classification for each e-mail, and like we said, those are the lessons from which POPFile learns.

With your Buckets and OE filters in place, you'll soon begin to see your mails going to the correct places—spam into the 'Spam' folder, and so on.

You can also use POPFile with IMAP accounts, and as an incoming SMTP filter or for NNTP news.



POPFile displays all the messages you received since installation, and what it did with them

## 7.4.2 K9

K9 is yet another, small program you can configure to talk to your e-mail client and filter out spam. Unlike POPFile, K9 only works with POP3 mail clients, and also, it only classifies mail as spam or non-spam—not into any category you wish.

Visit [www.keir.net/k9.html/](http://www.keir.net/k9.html/) for advanced instructions on how you can configure the program.

What would make you prefer K9 over, say, POPFile? There are just a couple of reasons you might want to consider a lesser-known spam filter like K9. For one, it's lighter on system resources, for the simple reason that it's not as complex. Secondly, instead of a somewhat intimidating Web interface that may confuse some people (as with POPFile), K9 is more of a 'Windows program'—it has its own interface window, and lists out all mails that you've received since installation.

K9 sits in the system tray, and the icon is animated when mail is being received. You'll need to have K9 running when receiving mail, of course. The interface—which looks just like an e-mail client all by itself, except that sending and receiving has to be done through your regular mail client!—is remarkably simple.

Even the options in the ‘Advanced’ tab aren’t that complex, and a novice can configure some of these. ‘Recent Emails’ is where you see all your mails. Don’t get confused when you see all your mails here—they’ll still be visible in your mail client! Here, you classify or re-classify mail as spam or not. You can read and delete mails from right here. Deleting a mail from here doesn’t delete it from your mail client. There’s also the Search feature, which lets you search for mail based on keywords just like in your mail client.

**K9 has a few, simple buttons. Configuring it is a breeze**

Simply look at a mail, and mark it as spam. You can, of course, also correct your own rating of an e-mail later. K9 will learn over time, and over time you'll see more and more mails getting classified as spam. There's a "spam percentage"—this indicates how confident the program is that a certain mail is spam.

Though simple, K9 doesn't skimp on features. You can view the work it's been doing with your mails

You'll need to periodically check to see if K9 has classified spam correctly. It's inevitable that in the first couple of weeks, it'll classify lots of non-spam as spam, and you'll need to correct it by clicking the mail (in the main window) and clicking "Good."

The Statistics tab gives you all the info you need on how well K9 has performed.

Finally, we need to mention that just like with the other programs we've mentioned, with K9, too, you'll need to set up filters in OE (or your mail client) to actually route the spam to a different folder—which you can call, for example, “Spam.”

Some of us at *Digit* have used K9 for a while, and have found that it reaches good performance levels about a month from installation (given that you receive about 10 mails a day, and that seven of those are spam). Unfortunately, with anti-spam software, “good” is never good enough—you’ll still need to periodically check for ‘false positives’: good mails that have been classified as spam! You don’t want to lose even one good mail a month, do you?

## 7.5 Folder And Drive Protection Software

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We’d bet our last penny you’ve got something on your computer you don’t want anyone else to see! Besides, you might also want to limit access to your computer in some ways—for example, you might not want your friend to mess with your Control Panel.

There are many, many programs out there that allow you to hide, encrypt, password-protect, or otherwise limit access to files or regions of your computer. But what about freeware? Unfortunately, it turns out there aren’t too many. You could search, but here are a couple of essential software.

### 7.5.1 The Microsoft TweakUI Powertoy

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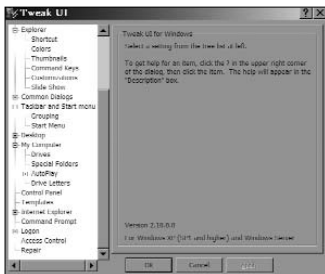
TweakUI helps in tweaking several—albeit small—aspects of your system. We’ve included it in this section because you can use it to hide drives, and if hiding drives is all you need to do, TweakUI is perfect. Of course, it offers no security—anyone who clicks on ‘Program Files’ and then goes to ‘TweakUI’ can restore visibility of all drives. But still, if someone is going to use your computer for a brief while and for some reason you’d rather some drives didn’t show up, this is the tool for you.

Hiding drives with TweakUI is easy as a-b-c. Just click ‘Drives’, and uncheck the drives you want to make invisible. When next you fire up Windows Explorer, the drives will not show up, and there won’t be anything on the status bar either, saying “Plus two hidden” or something of that sort.

The version of TweakUI we've provided on the DVD is meant for use with Windows XP.

## 7.5.2 CleverCrypt Lite 1.5

CleverCrypt Lite is Crippleware in a way, because the free version (the one that's on the DVD) limits you to only one drive, and that drive is limited to 20 MB. However, it's still useful for storing those special documents that you want no-one to access.



**TweakUI used to be bundled with Windows 95; it's now a PowerToy**

The program is extremely easy to use. In the limited version, there are three things you can do—create a secure drive, open it, and close it.



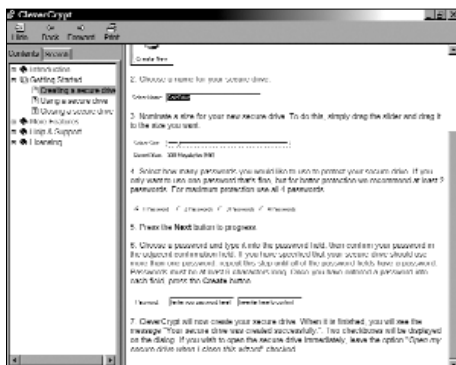
**CleverCrypt's interface. Simple enough. Create, open, and close secure drives. The free version is limited to a 20 MB secure drive**

Creating a drive just involves specifying the size (up to 20 MB), where on your physical hard disk it will reside, and giving it a name. Once you've done this, CleverCrypt generates a virtual hard drive, which shows up in Explorer as a separate drive (for example, if you've got C: and D: and a CD-ROM, then the drive shows up as F:). You can now open the drive and use it as you please. For example, just transfer your important documents to this drive.

When you're leaving your computer and you want the protection to kick in, just close the drive from the control panel. No-one will be able to access the drive without knowing the password(s). Yes, there are multiple passwords you can assign in sequence, up to a maximum of four. We don't know how four passwords help

better than one long password of, say, 32 characters, but well.

When you want to access the drive the next day, say, you click 'Open Drive', and supply the password(s). The drive opens and is ready for use!



**CleverCrypt is simple enough to use, but on top of that, the help file is comprehensive**

When you close the drive you created and used, the contents are encrypted on the basis of the password(s), so no-one can access it in any way without using advanced decrypting tools (and we assume your computer isn't powerful enough to run these anyway).

Help is short but well-written, and tells you all you need to know. As you can see in the screenshot above, the help file even has screenshots!

The program does keep bugging you—for example, if you accidentally click on an option that's not available in the Lite edition, a pop-up tells you to go Pro for only \$29.95 (Rs 1,300). This may be worth it, if you want to conveniently encrypt gigabytes of data, and access them easily by typing in a few passwords.



**Creating a new secure drive in CleverCrypt just means giving it a name, a location, and passwords**



## 7.5.3 WinGuard Pro 2006

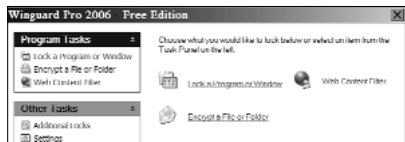
This is another program that's mildly crippled, but it does let you get things done. The interface is uncluttered, help is helpful, and the program is easy to use on the whole. Just remember never to forget your password(s)!

The program, as expected, sits in the system tray, with the main functions a click away. As you can see in the screenshots, there are several operations you can do to

restrict access to certain areas of your computer. You can lock the workstation altogether, but this feature is useless—pressing [Ctrl] + [Alt] + [Del] allowed us to end task!

Apart from that, you can encrypt the contents of any folder (although encrypting subfolders with one click is not possible in the free edition; you need to manually encrypt each subfolder). Also, you can, for example, choose to restrict access to the Control Panel. When you've done this, and then try to open the Control Panel, a message comes up saying that the Control Panel has been locked, and that it is not accessible—you need to unlock it using the password you provided.

Overall, the idea of this program is to restrict access to *regions* of your computer—whether it's a folder, a saved Web page, the Control Panel, the Registry Editor, or whatever—pretty useful. And though it sits in the system tray, exiting the program isn't the solution for would-be snoopers—you need to supply the password upon exit, of course!



WinGuard Pro allows you to 'lock' certain regions of your computer



All of WinGuard's configuration can be done in a matter of minutes

This approach to PC security is very different from that of CleverCrypt—in the former, you place your documents in a specially created drive; here, you don't create anything, just encrypt them wherever they are. WinGuard may be a better software for you if you want to restrict access on your PC to other things besides files. If files are all you want to protect from prying eyes, CleverCrypt is lighter and simpler, and may be a better choice.

## 7.6 Tips & Tricks

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### Anti-virus

1. Never, ever switch off the resident-protection feature of your anti-virus, even if it decreases the performance of your computer. If the performance decrease is unacceptable, upgrade!
2. Keep your virus definitions up-to-date. Use the auto-update feature of your anti-virus, and don't ignore the “do you want to update now” messages, however often they seem to be popping up.
3. Even if your definitions are regularly updated and you haven't noticed any suspicious activity on your computer, do a thorough system scan at least once a month.
4. Most people skip this step, and then suffer later: always create an emergency boot disk and keep it in a safe place!
5. In some cases, running an anti-virus scan in Safe Mode will allow you to find and kill viruses that would otherwise remain hidden.

### Firewalls

6. If you are doing something that requires Net access, allowing the traffic would be necessary. If you are not expecting, or unsure of what is going on, using a search engine will give you an idea of what the program is. Say a.exe is attempting to connect to the Internet. A search on Google will give you an idea of what a.exe is.
7. If you're new to firewalls and you'd like to know how vulnerable your computer is, head to [https://www.grc.com/x/ne.dll?bh0bkyd2/](https://www.grc.com/x/ne.dll?bh0bkyd2) and follow the instructions.
8. A firewall is a powerful tool that requires an understanding of how the program works and what exactly it is doing. Reading

the help files is a very big step in the successful configuration of your firewall. There is a learning curve when you use a firewall. Be prepared to spend some time learning how to configure and use it.

9. If you are running a third-party firewall such as Norton, McAfee or ZoneAlarm, be sure to turn off the Windows Firewall.
10. You can temporarily disable a firewall by right-clicking the icon in the tray. This is handy when you know a site is one you can trust but your firewall is blocking it. Be sure to re-enable the firewall as soon as possible.
11. Read firewall notices carefully when they pop up. There are two mistakes you can make, of course, if you don't: let a bad thing in or prevent good traffic.

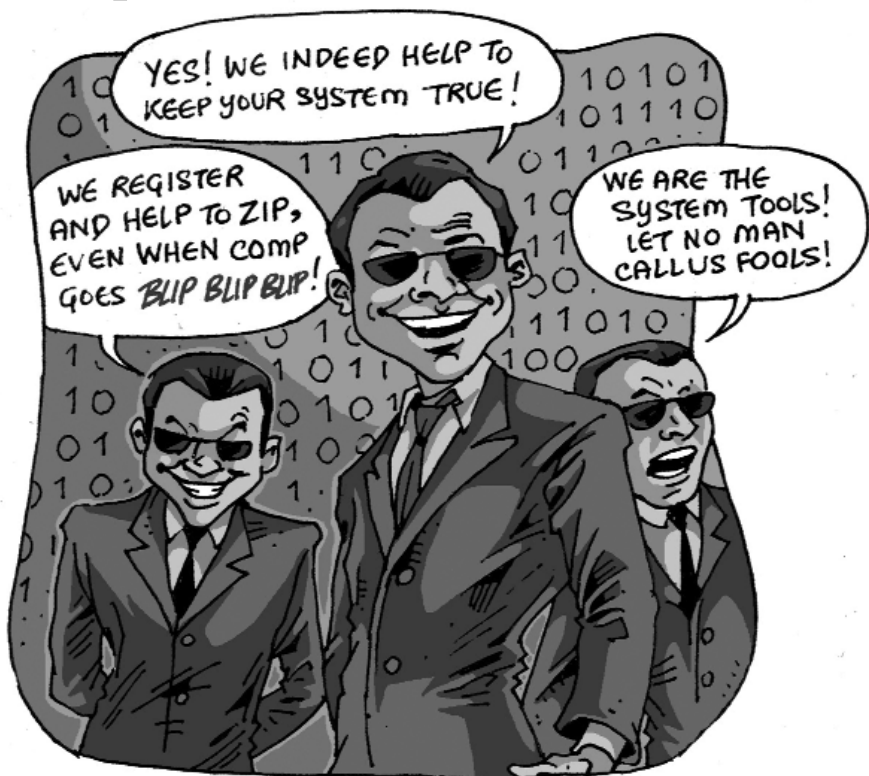
### **Anti-Spyware**

12. As with anti-virus software, you should check for updates regularly in the case of anti-spyware software as well.
13. Remember to do a scan every now and then, or schedule periodic bi-weekly scans if your program allows it. If you don't want to wait that long for the scan to complete, use a dedicated folder for your Internet downloads, then scan only that folder, the Windows folder, and the Registry. Another option is to use the 'Quick Scan' option if your program has it.

### **Anti-Spam**

14. Be patient with anti-spam software. Don't give up on it if it doesn't seem to be working well enough! It *will* improve over time.
15. Even after it looks like your anti-spam software has 'learnt' all it needs to learn, you'll still need to check the 'Spam' folder periodically for good mail. No anti-spam solution is perfect (yet).
16. Don't supply your anti-spam program with too many rules, such as, for example, telling it that all mail from xyz bank should go into 'spam'. It's better if the software learns from such mails, and it will not learn if you give it the rule.

# System



In this chapter, we talk about system utilities: desktop search utilities, file compression utilities, backup programs, programs that restore deleted files, and a file shredding program. Desktop search and file compression utilities are used by almost everyone, if not all. Of the other three, backup programs that automate the backup process make life easy, and are a good option in place of manually backing up your data to CD or DVD in an unorganised way. File restoring software help you recover lost files - files that you accidentally deleted. And finally, file shredders are the opposite of file restorers - they remove all traces of certain data from your computers so that no-one can ever recover them!

## 8.1 File Indexing and Search

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As you keep using your PC, you create files, download some off the Internet, copy some from your office machine, and so on - and they tend to bloat your system. Unless you categorise them properly, searching for a particular file can be difficult to say the least. Moreover, with the growing use of the computer for digital entertainment, files from devices such as digital cameras, handycams, DVDs, MP3 players, and more are finding their way to the hard drive, adding to the agony of remembering where exactly a particular file is stored.

It would be a good thing to have an application that could locate any file at the click of a button - and that's exactly what file-searching applications do.

Here, we review three such applications - Google Desktop Search, Yahoo Search and Copernic Desktop Search.

### 8.1.1 Google Desktop 2 (GD2)

Google Desktop was Google's first attempt at bringing its powerful online searching capabilities to the desktop. In its second iteration, this nifty utility has metamorphosed into an application that retrieves valuable information not only from your computer but also from the Web.

The installer is 1.3 MB, and can be downloaded from Google's Web site ([desktop.google.com](http://desktop.google.com)). Recommended system resources are 500 MB of hard drive space, a minimum of 256 MB of memory, and a 400 MHz processor. Once installed, the application prompts for setting up of preferences, which can later be altered from the menu.

With GD2, you can search for e-mails from Gmail, Outlook, Outlook Express, Netscape, Thunderbird and Mozilla Mail. Common files types such as PDF, Word, Excel, PowerPoint, PDF, MP3, and video files can be searched for. You can even search via meta tag data such as artist name, song title, etc. Messenger chat



information. Enabling encryption slows down the performance of GD2, though.

The UI is very much like the online search tool. Results are displayed in your browser; you can also search for an item on other Google networks such as Froogle, Local, Images and so on by right-clicking on the system tray icon and selecting the appropriate engine. Further, GD2 supports most of the syntax that Google's online search tool offers for better filtering of results.

Overall, Google Desktop 2 is <the> search tool for your desktop. Beginners might find the interface a little too rich; advanced users will love it!



Google  
Sidebar

### 8.1.2 Copernic Desktop Search (CDS)

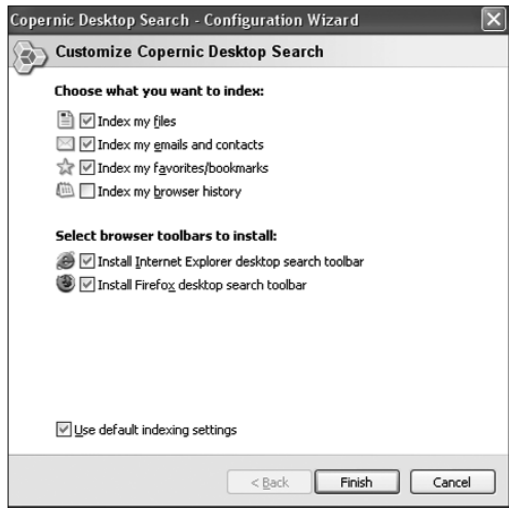
CDS was one of the first desktop search products - it came out much before Google or Yahoo! decided to enter the field. While Google Desktop features tight integration with IE for displaying results, Copernic displays results within its own explorer.

The user interface is clean and well-polished, and should pose no challenges for a beginner. In fact, the interface is pretty similar to standalone e-mail clients, and anybody who has used one will feel instantly at home with CDS.

The top bar consists of well-defined, self-explanatory icons. On the left-hand side you have the search box and the search filtering options. The right-hand pane is divided into a list box and a preview pane. The list box lists out all the results, and the preview pane shows the contents of the files - pretty useful.

CDS supports standard file types such as Word, Excel, PDF, text files, Java, XML, .ini, and most compressed files. It supports e-mail clients such as Outlook 2000/XP/2003, Outlook Express,

Thunderbird, Mozilla Mail and Eudora. It can index audio files with support for meta data of iTunes, OGG, WMV and WAV music. Indexing of M P E G , QuickTime and Windows Media Video files on the video front, and JPEG, EXIF, and GIF for pictures, is supported.



Copernic Desktop Search was one of the first desktop searches

Instead of using the standard interface, you can opt for launching searches from something called the Deskbar, or you can use the browser toolbar. (The browser toolbar for IE and Firefox are available during installation, and enable you to search directly from the browser window.)

CDS features abundant customising options via a simple interface. You can set indexing to run only when the system is idle. You can also set the gap between your leaving the PC idle and the indexing service starting. And you can even schedule the indexing service.

Overall, Copernic Desktop Search comes out as a thoroughly polished product, one that would be appreciated by beginners as well as advanced users.



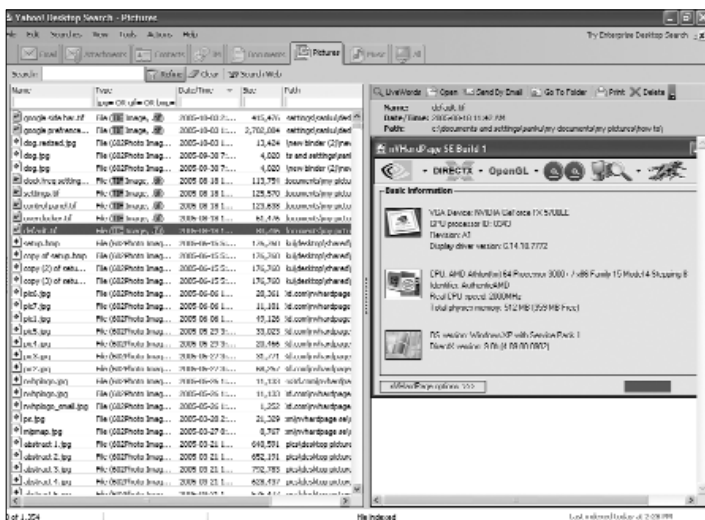
### 8.1.3 Yahoo! Desktop Search (YDS)

While Yahoo! was late to jump onto the desktop search bandwagon, it has utilised the extra time to polish its product.

Installation is point-and-click, of course, but note before you hit the 'Next' button that along with the desktop search utility, the installer also installs the Yahoo! toolbar, which you may or may not want. Also remember to review the two options that come up.

The top section of the UI consists of the menu and a series of icons for e-mails, attachments, pictures, video, documents etc. Just below the icons is located the search bar with other search-related options such as filters and Web search.

The left-hand pane lists all the items the search brings up, sorted according to file type, date, folder etc. To the right is the preview pane, which shows a preview of the contents of the file you click in the left pane. One good thing about the preview pane is that it treats the files as they appear in their original for-



YDS can index over 300 odd file types

mat; for example, an Excel file shows up as consisting of rows and columns.

YDS can index standard file types such as Word, Excel, PowerPoint, Zip and HTML, and 300-odd other file types! You can search for any type of attachments in your mailbox. For indexing Messenger chat logs and Yahoo! contacts, you need to provide your Yahoo! ID.

Yahoo's maiden effort is commendable. In terms of usability and features, it is similar to Copernic's solution. We think that whether you settle for Copernic or Yahoo! is just a question of personal preference.

## 8.2 File Compression

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Files on a hard drive are stored as a sequence of ones and zeroes, and often contain repeated patterns. A file compression program takes advantage of these patterns to reduce the file size. By assigning codes to particular repeated patterns, the compression program converts a large file into a smaller one, which contains a 'brief description' of the original file. Typically, a space saving of 10 to 30 per cent can be achieved for standard files.

Hard drives are getting cheaper, and drive space is no longer that much of an issue - so compression utilities have lost the advantage they once offered. However, you need to have at least one installed on your system, since file compression is still used when transmitting large files over the Internet, and in archiving.

We looked at three free applications that offer almost all the features found in paid utilities.

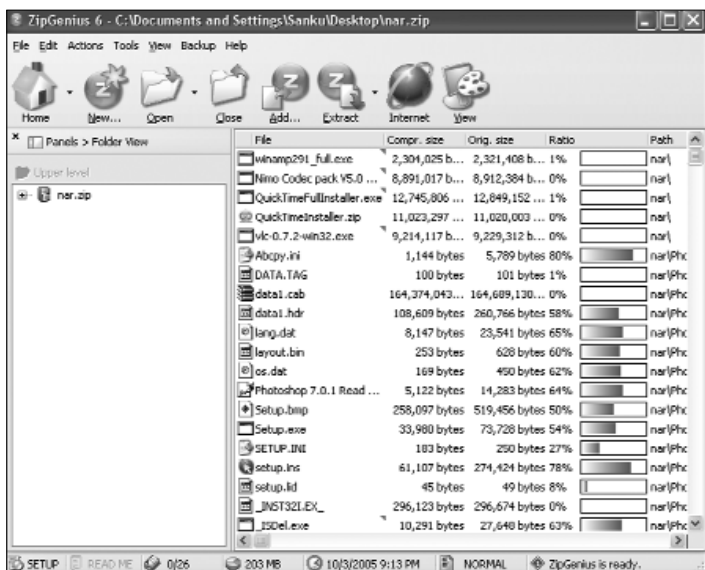
### 8.2.1 ZipGenius 6.0.2.103

ZipGenius works out as a great alternative to the venerable WinZip that everybody is so accustomed to. The small 4.5 MB installer packs in good number of features for a free utility.

On installation, ZipGenius integrates with the file manager so it can associate with the compressed files on your system. It supports around 23 formats, which include esoteric formats such as 7z, and Czip (crypto zip), as well as RAR, TAR, Z, etc. By default, ZipGenius associates with only a few compressed file types - you need to select other formats manually for association.

When launched from the 'Programs' menu, the application presents a wizard-type menu. You can shift to the 'expert' menu if you're sure about your skills.

Apart from standard features such as file compression, self-extracting archives, spanning, etc., ZipGenius also has a backup option. Here, you can take backups of your My Documents, My



ZipGenius is an alternative to WinZip

Pictures, and Windows folders, as well as Firefox profiles etc., at the click of a button or by using dedicated shortcuts.

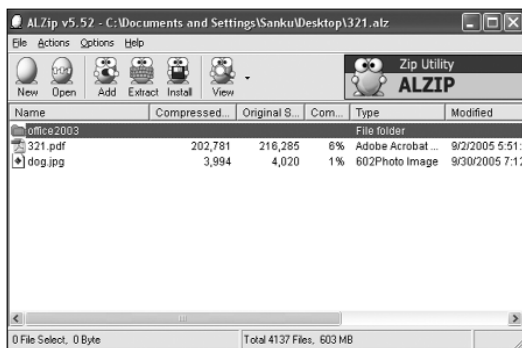
The utility performed as we expected - it was able to compress a 204 MB folder to 202 MB in just over 50 seconds, which is fair considering it's freeware. ZipGenius is possibly the best freeware compression utility to have.

### 8.2.2 ALZip

Though devoid of any fancy features or a polished UI, ALZip excels in what it is designed for. The user interface lacks the visual appeal of popular compression utilities such as WinZip and WinRAR, which suggests that this utility is for advanced users. The interface is plain, with just four egg-shaped icons, and a menu at the top.

ALZip integrates with the file manager and associates with most of the compressed file types on your system. The utility can

associate with almost 38 compressed file types including Bz2, jar, tar, tgz, bin, etc. This feature makes the utility a boon for people who have to constantly switch between Windows and Linux.



ALZip has a plain user interface

Standard features such as file compression, self-extracting archives and spanning are provided; however, don't expect any fancy features such as one-click backup.

What we liked about ALZip is its blazing fast performance; it took just 35 seconds to compress the same 204 MB file to 202 MB.

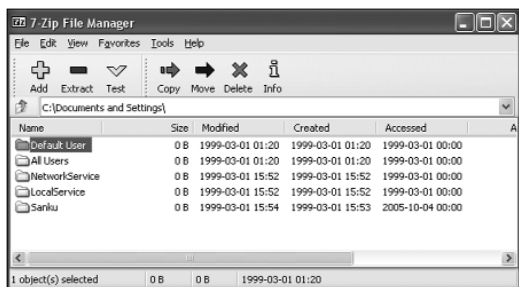
If you're confident about your computer skills, and are willing to trade fancy looks for geeky functionality, we'd suggest ALZip over ZipGenius.

### 8.2.3 7-Zip

7-Zip is well known for its 7z compression format, which has a high compression ratio. In fact, files compressed in the 7z format tend to be 30 to 50 per cent smaller than the corresponding ZIP files. 7-Zip supports around 13 compression formats, which include ZIP, TAR, and GZ, as well as its own 7z format. It can also archive files in the TAR and GZ format, unlike WinZip, which can only archive in the ZIP format. 7-Zip integrates with the file manager and automatically associates with compressed files on your system.

The user interface is a notch below ALZip, with no self-explanatory icons - just the context menu. The good part is that you can

drag and drop files to be archived in the main window. Alternatively, right-clicking a file also brings up the options menu, which allows for changing the compression level, compression algorithm, etc.



**7-Zip is an excellent compression utility**

We compressed our test 204 MB ZIP file using 7-Zip. It took around 50 seconds to complete the zipping of the 204 MB to 202 MB. 7-Zip is therefore not the fastest, but if you want extra reduction in size, you can use the 7z format.

7-Zip is an excellent compression utility; however, the user interface means it will appeal to computer-savvy users and to, for example, developers who need to switch between Linux and Windows - as with ALZip.

## 8.3 File Backup

In *Digit*, we've often emphasised the importance of backing up - so we won't do it again here! You can take backups by manually copying important files to a separate network resource or archiving them to CD or DVD. But a smarter way of achieving the same is using backup software. Such software automates the entire backup procedure, making sure you always have duplicate copies of your important files. Using backup software, you can take backups on a different partition of your hard drive, a different hard drive or on a network resource, or you can move them to an FTP location. There are applications that specifically deal with taking backups on optical media.

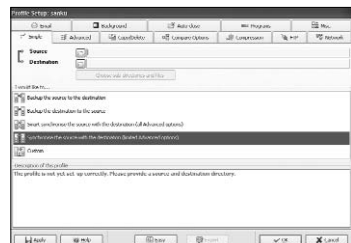
Here we review some of the best free tools available for backing up your data.

### 8.3.1 SyncBack

SyncBack is available in two versions - one free, and the other (SyncBackSE) paid. There are some differences in the feature sets, but the free version has enough features for a typical home user. SyncBack is widely regarded as the best free backup tool available.

Once SyncBack is installed, a wizard prompts for the creation of a new profile. It presents four options - two for backup and two for synchronisation. Using the backup options, you can move your files to another drive or an FTP server, or you can use it to copy files back from an FTP server or Zip file. Smart synchronisation makes it possible to have identical copies of a folder in two different locations.

The UI is simple and self-explanatory. The real power of SyncBack is the amount of customisation it offers; going through each and every option can be a daunting task. To help the matter, you can choose



SyncBack is available both in free and paid versions

between Normal and Expert mode. Scheduling your backup task is not a problem either.

Apart from standard backup features, SyncBack also offers advanced features such as encryption of data during the transferring of files. The use of MD5 checksum ensures even the smallest change in a file is noticed. One good thing about the incremental backup is that it retains multiple versions of the backup, so if you lose some part of your data, you always have the older version to start off with.

SyncBack is the best free backup tool out there. We strongly recommend you try it.

### 8.3.2 File Backup Watcher 2 (FBW2)

FBW2 is a smart backup tool that can help you take backups on a hard drive, CD or DVD recorder, and archive them to a compressed Zip file. FBW2 presents you with stylish 3D icons and a skinnable interface. The interface is divided into three panes. The left-hand side pane lists various backup options such as Backup, CD/DVD burner, and Zip. The right-hand side pane lists profiles (automated scripts) that one creates for backing up. The top pane consists of the context menu and icons listing various actions.

FBW2 comes with a step-by-step wizard that helps in setting up profiles, which automate your backup tasks to be run in the background. Scheduling the backup process is straightforward - the simplicity comes from the click-and-select interface.

Moreover, FBW2 comes with a CD/DVD burner, so taking backups onto optical media is just as simple. The inbuilt Zip tool



FBW2 helps you take backups on a cd or dvd



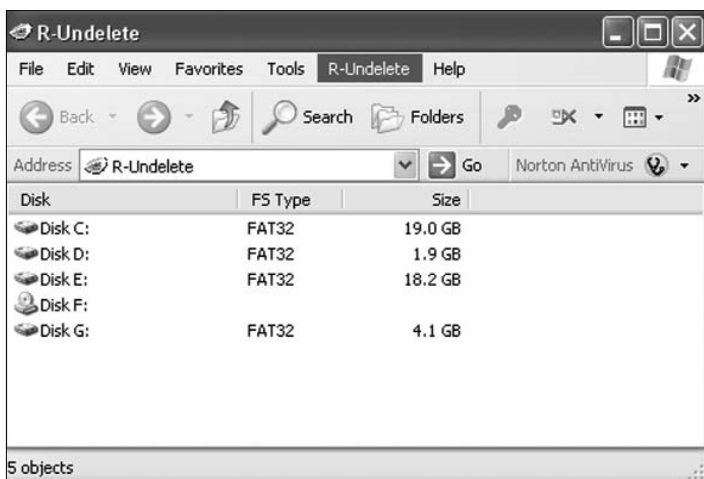
helps in compressing and archiving of files.

We found FBW2 to be a great tool for using as personal backup software. We'd recommend FBW2 to a casual user; network administrators and more computer-savvy users would do well to get their hands dirty with SyncBack.

## 8.4 File Restore

Every so often, we delete a file only to realise later on that the wrong version was deleted. There are tools that let you recover such deleted files; however, most of them are not freeware. Here we review two file recovery tools - R-Undelete, which recovers files up to 64 KB in size, and a freeware utility called, appropriately, FreeUndelete.

### 8.4.1 R-Undelete 2.1



R-Undelete is a file recovery app

R-Undelete is a standalone file recovery application based on R-studio's excellent file recovery engine. Unlike R-Studio, which has its own interface, R-Undelete integrates with the operating system's interface, providing the necessary navigating and search functions via Explorer. This unusual design takes some time to get used to, and so won't go down well with casual users.

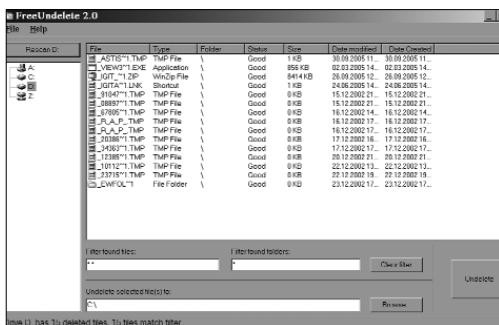
Once installed, R-Undelete appears under the main folder structure as a drive from where it can be launched. On launching, it lists all the partitions on your hard drive.

To recover files, you just need to right-click on a particular drive and choose to scan it. Once the program completes the scan, it lists all the deleted files it found on the drive. You now navigate to the folder from where you need to recover the file, and then just press 'Recover' to get it back. You can use masking filters to change what kinds of files are searched for.

A good thing about R-Undelete as compared to other, similar applications is its speed; it is fast at scanning a drive and recovering files. Moreover, it doesn't seem to bog down the system.

## 8.4.2 FreeUndelete

FreeUndelete seems a good piece of software. There are no filesize limitations - unlike in R-Undelete. The problem is that it takes a very long time to scan for deleted files. The UI is sparse, since there aren't too many functions to provide anyway: you can select a drive and scan it, and you can apply filters to the recovered files so it shows you, say, only recovered Word documents.



**FreeUndelete has no file-size limitations**

Nothing could be simpler to use. Scan a drive, view the results, apply filters if needed, and press 'Recover'! After recovery, there's a column that lists the 'condition' of the deleted files, which indicates the probability that the file will be recovered properly.

We'd recommend you install both R-Undelete and FreeUndelete; the former for speed (and files smaller than 64 KB), and the latter for files of all sizes.

## 8.5 File Shredder

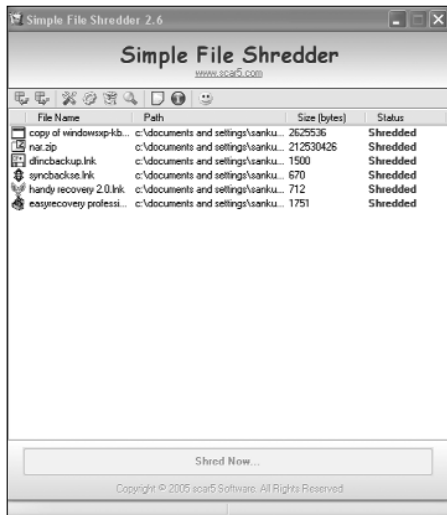
A file shredder application does pretty much what a paper shredder - used in offices to destroy sensitive documents - does. When a file is deleted, the OS just removes the link to that file from the file table, and does not actually remove them from the hard drive; this is the very reason why file recovering software are able to recover them.

A file shredder application, on the other hand, removes the link, wipes the data from the hard drive and then re-writes junk data on the same space. This makes it impossible for any recovery software to get the data back.

### 8.5.1 Simple File Shredder (SFS)

File shredders are extremely small applications and are also very simple to use, since there is hardly anything to understand. Just drag and drop the files you want to shred and hit the 'Delete' button!

SFS, as the name suggests, is a simple tool to get rid of sensitive data. The installer is hardly 500 KB, and installation happens before you can say 'Blink'. The UI is simple, with just 10 icons and a big drop box to drop the files to be shredded. Strong windows shell integration means right-clicking on a file gives you the option to shred the file. To avoid unauthorised use of this tool, a password can be set. Options also include setting up of the shredding level, which changes the number of times the program writes junk data to the disk - a higher level means



Simple File Shredder is an easy to use app

longer shredding times. SFS also has a drag-and-drop mode, which when activated presents itself as a small drop box without the icons, and remains on top of all windows. This comes in handy when you have to shred many files - just keep dragging files to the box and then, in fell swoop, shred them!

The System Junk Shredder is a class feature that allows shredding of Windows components such as Recycle Bin Contents, temporary files, Firefox and Opera histories, etc. For a free utility, SFS is an excellent tool.