



# Tune In Right

TV-tuner cards provide an ideal solution for Net surfers who are couch potatoes as well. Here's how you can turn your desktop computer into a TV screen in a few easy steps

Hatim Kantawalla

So you're planning to buy a TV-tuner card? Smart move! Doing your TV-viewing on the computer rather than buying another TV not only saves you the money and space, it also makes life so much more convenient. Now you won't have to leave your desk to catch a glimpse of the latest cricketing

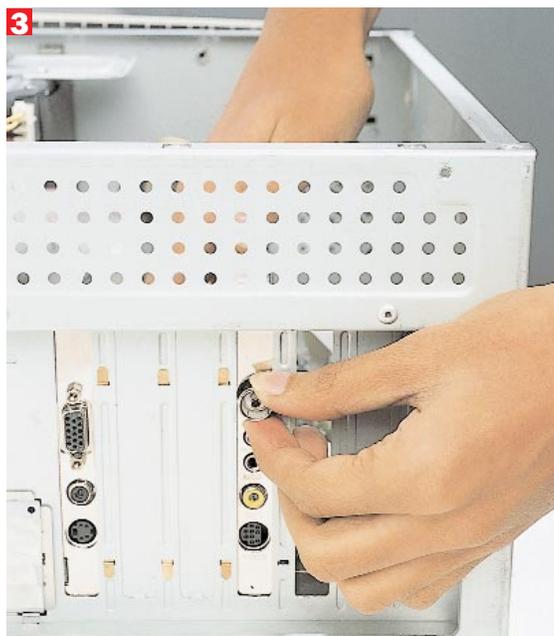
action, or fight for the TV remote with other family members. And TV-tuner cards now have tons of extra features to offer, such as FM radio receivers, composite video-outs and desktop cameras capable of working like video security devices. Of course, it will help if you happen to have a 21-inch monitor, but what the heck, you can't have everything, can you?

Installing the TV-tuner card into your PC is a simple procedure, as you will soon see for yourself. For this workshop the card we used was the PixelView PlayTV PAK. It is a PCI-based tuner card that consists of a PV-BT878P tuner module for tuning into the channels. However, this card does not have an FM radio receiver. Now let's get started without further ado.

## 1 Selecting the Card

If the card is an add-on, it should be a PCI card. If you're going in for a combo (a card containing both the tuner module and display chip for VGA output), it should preferably be an AGP card.

This may sound easy, but can sometimes be a bit tricky because some PCI slots share Interrupt requests (IRQs) and in case there is an IRQ conflict, it may render the tuner card useless, or some features such as video-capture may not work. Usually the last two PCI slots share IRQs. Avoid installing your card in these slots.



## 2 Fixing the Card

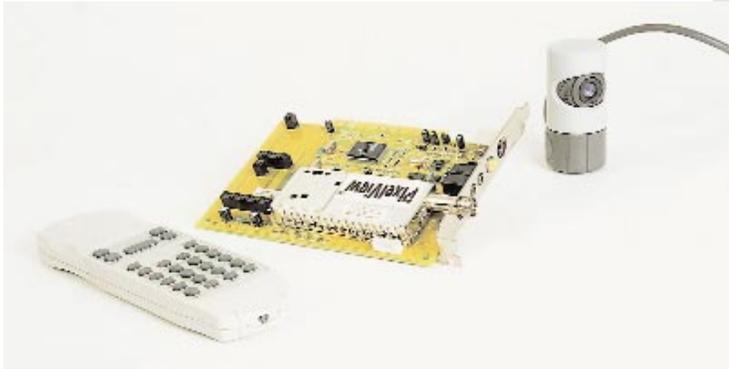
**Step 1:** First turn off the power. Remove the case and insert the TV tuner/capture card (fig 1). Make sure the adapter card is well seated in the slot, then fasten it securely with a screw (fig 2).

**Step 2:** If inserting the card into the slot is a bit difficult, you can remove the CATV header from the TV-tuner card during insertion and then re-insert it after installing the card (fig 3).



## 3 Installation Procedure

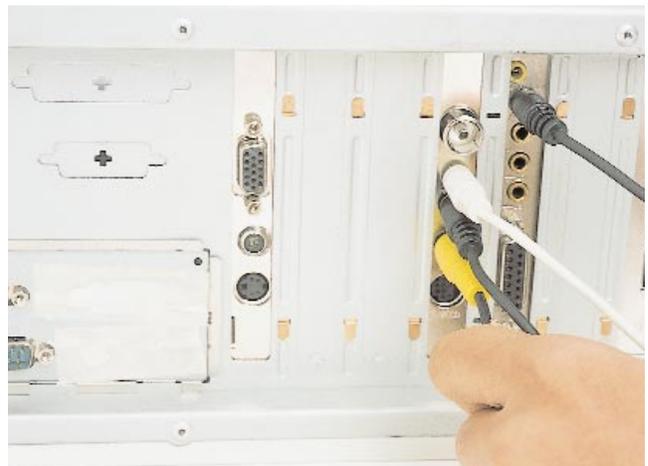
**Step 3:** Most TV-tuner cards come along with a remote control and a remote control receiver. Plug the remote receiver into the slot where 'Remote' is inscribed. Keep the remote receiver module in the line of sight of the remote.



**Step 4:** Plug one end of the audio cable into the 'Audio' output and the other end into the 'Line In' of the soundcard.



**Step 5:** Connect the CATV/VHF/UHF antenna cable. If the card has an FM radio receiver, you can plug that cable too into the extra tuner input port of the tuner module.



## Troubleshooting and General Guidelines

**Do keep these compatibility issues in mind:**

- ✓ Before buying your TV-tuner card, check that it supports your VGA card as an interface. Some older TV-tuner cards are very choosy about the VGA card they work along with. Some may not work with a high-end 3D-accelerator card either.
- ✓ Ensure the card is not sharing any IRQs with any other expansion cards in your sys-

tem. Usually, installing the card in the second, third or fourth PCI slots will prevent any problems occurring due to sharing violations.

- ✓ Make sure PCI bus mastering is enabled in your BIOS.
- ✓ Turn on DMA (direct memory access) from the device manager for your IDE drives if you

want to do some heavy video capturing.

- ✓ Check whether your line-in volume is turned on.
- ✓ If possible, dedicate an IRQ to the card in the BIOS to avoid further conflicts.
- ✓ Check for an onboard jumper for NTSC or PAL (BGHI). Make sure PAL (BGHI) is enabled using the jumper on the card.

## 4

### Installing Software and Drivers

The software installed will differ from model to model, but as long as you follow and understand basic terms and settings you should be fine.

After the physical installation of the card, start up your PC. Usually Windows will detect the card and ask for drivers.

Provide the drivers from the driver CD provided with the card. After this procedure, Windows will prompt you to restart the PC. After restarting the PC, open Control Panel and go to the System option. In that, move to the Device Manager tab and then click on Sound, video and game con-

trollers option. You will find extra devices with the module chipset name in front of each device. Select the device and then click Properties. Check in the Resource option tab for each of these devices to make sure they are not sharing IRQs with any other devices.

## 5

### Finalising Settings

After this, start the TV-tuner program (in this workshop, this was the PixelView station). It will prompt you to select various options such as:

1. Country code configuration
2. VGA card identification
3. Motherboard chipset identification
4. PAL or NTSC mode selection menu.

[Note that this will be done automatically if the proper country is selected. In any case, for India this is PAL(BGHI) or

PAL(BG)].

After these settings are done with, the setup program will auto scan all of the channels available. You can do this manually too by selecting 'Scan' from the menu.

After all the channels are scanned and stored, you can change the view size to full screen by double-clicking the display window. Some VGA cards may not be compatible with the full-screen option if it

does not support the 640x480 resolution. The remote control requires no additional settings and will work once enabled from the menu.

Well, that's all there is to it! Channel surfing is now possible on the computer. Sit back, go click-click on the remote, watch Amitabh Bachchan reel off questions on *KBC* and go click-click on the keyboard searching for answers on the Internet at the same time! 📺

# Too many users

Creating users, assigning them to groups and setting permissions offer a convenient way to share your computer among many users. Let's go about doing this with Windows 2000 Professional

Sumod Hajela

If many people share your computer, Windows 98 simply doesn't do enough for you. Its user management is limited to individualising the look of your Windows desktop and switching between a few data folders. Windows 2000 Professional with NTFS offers far more control over who gets to do what with your computer. By assigning different access permissions to other users, you can effectively limit interference between you and them. Each user gets his private

documents and settings that no other user can modify. Additionally, you can designate folders, and even entire partitions, off-limits or read-only for other users.

Before starting with the process of creating users it is important to understand the relationship between users and groups. Each user can be assigned an individual set of permissions regulating access to the system. This would include the ability to read or write to files in a specific folder, use an installed printer or modify its settings, connect to the Internet or modify connection

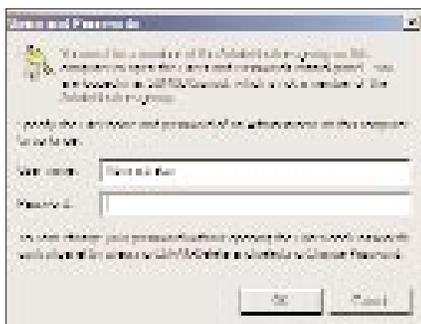
parameters, etc. A personal set of permissions makes it easy for each user to have a different experience with the same computer, without intrusion from other users.

It is possible that more than one user is assigned the same set of permissions. All such users are usually grouped together. A group can have the same security information that a single user has. Groups are used to maintain permissions and users are assigned the required permissions by making them members of groups that have those permissions.

## 1 The Simple Way of Adding Users

Make sure you have the administrative rights for the system. The default 'administrator' account on the system is initially the only account with these rights.

**Step 1:** User management can be done through the Control Panel. Go to Start > Control Panel > Users and Passwords.



You need to log in as administrator to add users

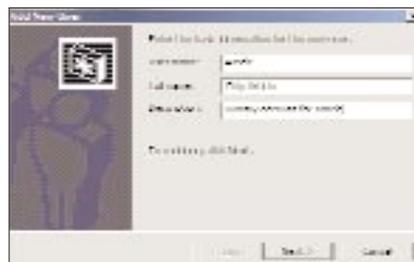
**Step 2:** The Control Panel applet shows the list of accounts available on the system (Administrator and Guest accounts are there by default). To add more users click on the 'Add...' button.

**Step 3:** The 'Add New User' wizard starts and leads you through the process. You have to first give a name to the user. You



Initially, there are only the default accounts present

only have to fill in the 'User Name' field; the remaining fields are helpful in



Fill in the required details of the user

identifying people if you have many users, but are not really necessary.

**Step 4:** Assign a password to the user. Of course, the user can change this initial password after he logs in. To do that, he has to press Ctrl+Alt+Del and click on



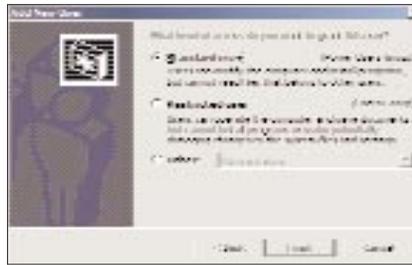
A good password is easy to remember and hard to guess

'Change Password' in the Security window. You can leave the password blank to allow the user to log in and change his password without having to be told the initial one.

**Step 5:** Finally, the user is assigned to a group. This window shows the two default user types created but also allows you to select another group. You should select 'Restricted User' if you do not want the user to install applications

or else select 'Standard User' if that does not matter.

While assigning a group, do not select the Administrator group, since this will effectively create a second administrator level account and the user will have complete control over the system (See box, 'Standard Groups in Windows 2000' for a detailed description of the permissions for each default group).



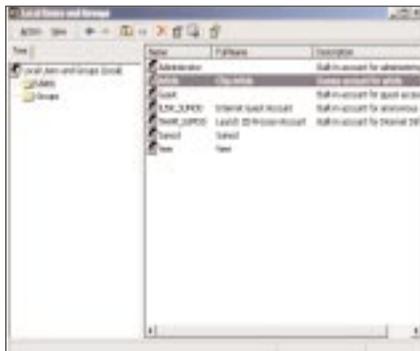
Assign rights through group membership

If you have created your own groups, use the last option to select that group. You can only assign multiple group membership through the advanced interface. That's all there is to creating user accounts.

More user account control is available in the Advanced Configuration mode. To get there, click on the 'Advanced' button in the 'Advanced' tab.

## 2 The Powerful Way of Adding Users

The Advanced control interface is an MMC (Microsoft Management Console) applet that shows users and groups in two folders. Right-click any user account to set its password or choose 'Properties' from the menu.



Control freaks get to know this interface well

From the Properties view you can enable or disable an account and manip-

ulate its password settings. You can also force the user to change his password, or prevent him from ever doing so through the appropriate check boxes.



More control over account access



The user inherits permissions from both groups

The 'Memberships' tab allows you greater control over the user's group membership. If you configure the security settings correctly, you will only need to assign permissions to groups and not to individual users.

Then, when you add a user to a particular group, he will have the appropriate permissions. With multiple groups, you can even have more flexible security rules.

## Standard Groups in Windows 2000

**Administrators:** Members of this group have full control over the computer. That means any user of this group can make any kind of changes to the system including creating, modifying and deleting other users. It is the only built-in group that is automatically granted almost every built-in right in the system.

**Backup Operators:** Members of this group can back up and restore files on the computer regardless of any permissions that protect those files.

They can also log on to the computer and shut it down, but they cannot change security settings. With complete access to the file system, they can potentially cause

security problems so use this group with care.

**Power Users:** Users who are a part of this group can create user accounts. They can modify and delete only those accounts that they create. They can create local groups and remove users from local groups they have created.

They can also remove users from the Power Users, Users, and Guests groups. But they cannot modify the Administrators or Backup Operators groups, nor can they take ownership of files, back up or restore directories, load or unload device drivers or manage the security and auditing logs. Even if you have administrative access, you

should use this group for your working account to minimise the damage done by viruses or worms.

**Users:** Members of this group can perform most common tasks such as running applications, using local and network printers and shutting down and locking the workstation. Users can create local groups, but can modify only the local groups that they created. They cannot share directories or create local printers.

**Guests:** The Guests group allows occasional or one-time users to log on to a workstation's built-in Guest account and be granted limited rights. Members of this group can also shut down the system.

### 3

## Creating a Group

The Advanced view is the only view from which you can manipulate groups. You only need to create new groups if you want to organise permissions differently from the standard groups. When created, the group inherits permissions available to 'Everybody'. Click on Action > New Group in the MMC menu to create a new group. In the 'New Group' window that comes up, you need to assign the group a name. Click on the 'Add...' button to assign users and other groups to the new group.

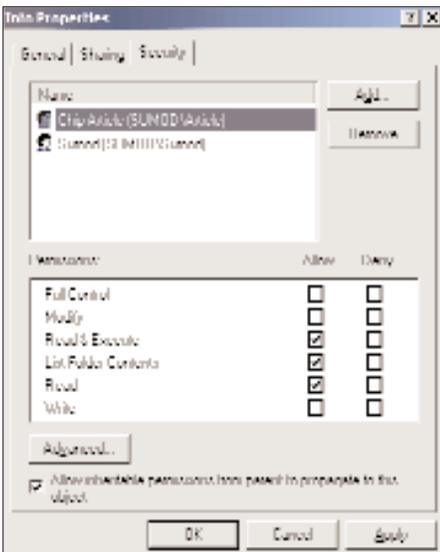


A group can contain user accounts as well as other groups

### 4

## Assigning Permissions

All objects in Windows 2000 have permissions associated with them. The most common objects you see are files and folders. To be able to control access to files and folders, you must have an NTFS partition. If you are using a FAT partition, you can convert it to NTFS using the convert.exe tool.

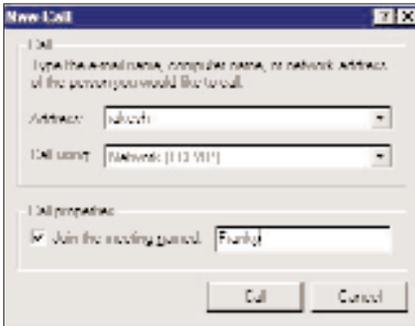


The Security tab shows permissions assigned for this folder. Only the groups listed have any access and the 'article' user can read files but not make any changes to them

To set permissions for any folder, right-click on the folder and select Properties. After this, switch to the Security tab to modify the permissions. By default, most folders have full permissions for 'Everyone' and the inherit permissions checkbox is enabled.

To restrict access, uncheck the inherit permissions checkbox and remove the 'Everyone' group. Now add groups that you wish to allow access to, and select the level of access from the list. 

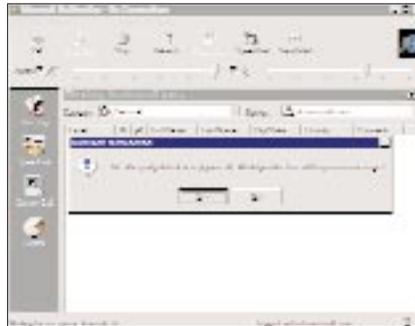




Enter the name of the person whom you want to call

the name and click OK. NetMeeting will send a request to the remote machine and will wait for the response.

**Step 3:** At this juncture, the remote machine will get a message box showing your name and your request. The remote machine can either accept or decline your



Sometimes a request may be rejected

request. If the request is declined you will be disconnected from the meeting network. If accepted, you are then in a meeting and can start communicating.

At any point of time if you feel the meeting is getting too dull, you can hang up. This does not in any way disturb the meeting. NetMeeting at present supports

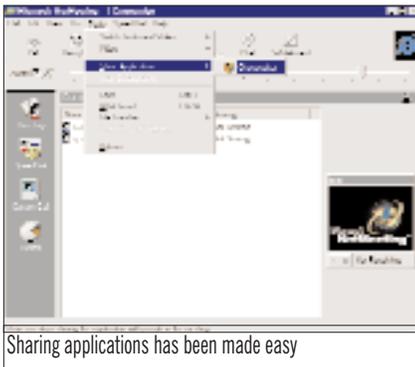
**tip** To receive calls over a null modem cable, click the Tools menu, click Options and then click the Protocols tab. Select the Null Modem protocol, and then click Properties. Select the COM port to which the null modem cable is connected. If you want to connect to some machine through a proxy server, you have to manually configure audio and video properties.

a maximum of 32 users, though the network bandwidth may also play a role in limiting the number of users. You can also place NetMeeting calls to multiple users.

Any person in a meeting can place NetMeeting calls to other people. In addition, other people can join a NetMeeting in progress by calling one of the participants.

## 3 Sharing Applications

**Step 1:** NetMeeting allows users to share application for others to view and use it on a network. To allow participants in the meeting to use an application in your machine, you have to first share the appli-



cation from Tools > Share Application. The applications that are shared come up as a list on everyone's machine. Anyone can double-click on that application to start it. In collaborative sharing, other participants can also use the application at the same time. For instance, you can type a sentence in Word, then some other participant can type in his reaction. This increases the interactiveness of the meeting to a great extent.

**Step 2:** The latest version of NetMeeting (version 3) also has an option of remote desktop sharing, which enables NetMeeting to call an unattended computer (without host) and share the desktop. To enable remote desktop sharing, go to



Collaborating of files can be done

Tools and click Remote Desktop Sharing. A wizard will guide you through some simple steps which will facilitate the sharing of the desktop files.

## 4 Transferring Files

The file transfer option enables you to exchange files with the participants in the middle of a meeting.

**Step 1:** Go to Tools > File Transfer and click Send File. In the File dialog box, select the file you want to send and click OK. The file will be transferred to the remote machine. You have the option of sending files to just one user in the



File transfer is fast

meeting or to all the participants.

**Step 2:** When you get the file from someone, NetMeeting does not ask you for download permission. Instead it downloads the file in the default directory. You have the option of saving, opening or deleting the file. File transfer is very fast in a local intranet when compared to a meeting hosted on the Internet. ▶

# 5

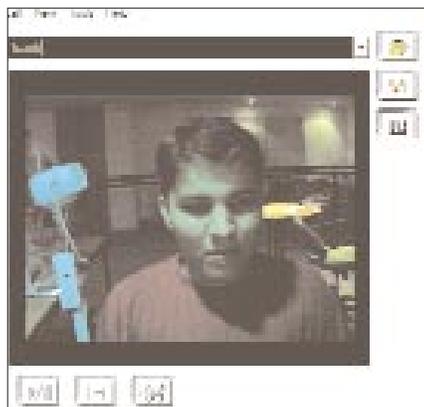
## Chatting and Chalking

NetMeeting enables you to chat with all the participants in the meeting. When one person in the meeting starts the chat, a chat window opens in the computers of all the participating PCs.

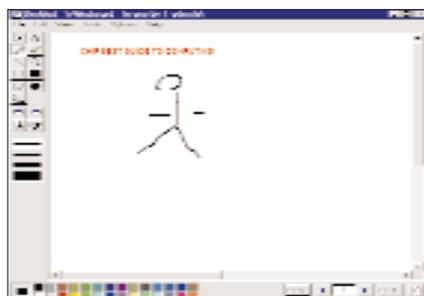
**Step 1:** When you click on the chat button, a small window opens in which messages can be typed for other users to see. You can save the chat messages in a .htm file for later viewing



You can chat with other participants



Video chatting is clear



Whiteboard lets you draw symbols for others to see

in a Web browser. However, for the chat option, all participants need to have the same version. If some of the participants are using a different version, chat will not work properly. The Whiteboard feature in NetMeeting allows one participant to draw something and explain to the other participants. This can be useful while explaining some company plans, flow charts or even a simple diagram.

**Step 2:** Click on the white board and a small MS Paint miniature window will open in the PCs of all participants. You can draw freehand drawings, symbols or write text for other participants to view and edit.

By default, anyone in the meeting can modify the diagrams or whatever else you have made on the white board which will be seen by all the participants. To disable that, click on 'Lock contents' button in the Control Panel. As a result, participants will only be able to view but not edit the diagrams. So the next time you feel reluctant to attend a meeting in a stuffy room, start an online meeting using this power tool. 

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# The Final Cut

Step into the first learning blocks of video editing by making clips of video using VCD Cutter

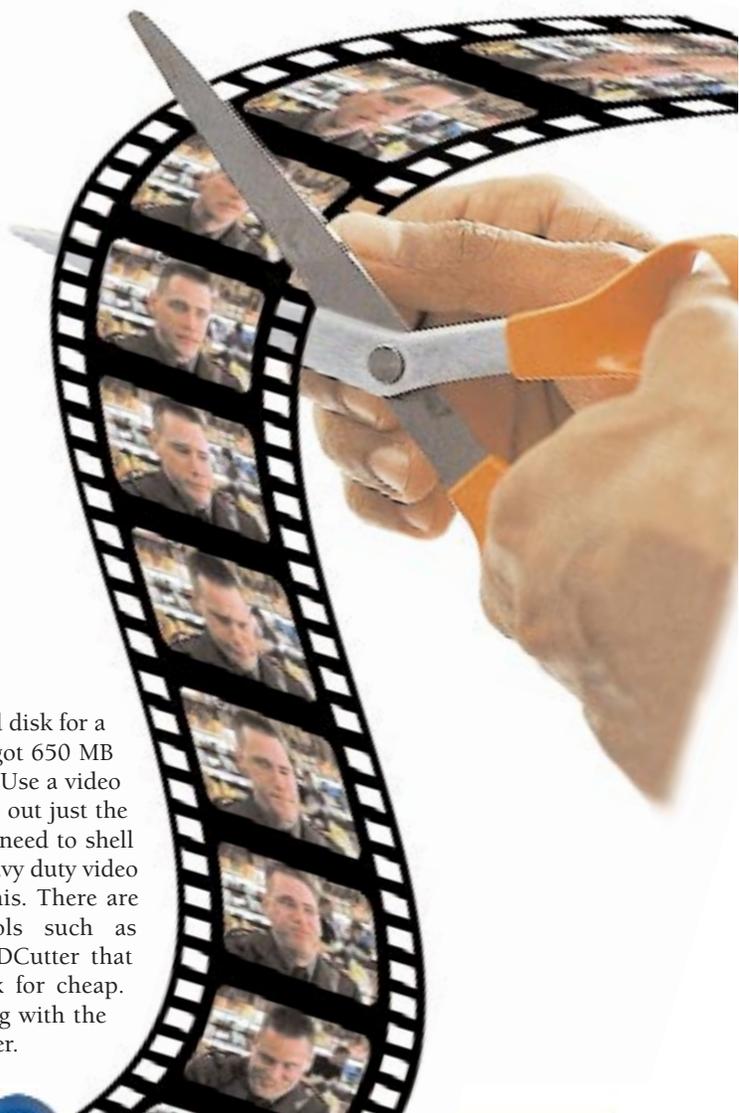
Sumod Hajela

You went and bought that *Mission Kashmir* video CD because the songs are so amazing. Now you have a little problem. Every time you want to listen to a song, you have to hunt around for it on the VCD. And forget about queuing the songs in a playlist.

Take another scenario: what do you do if you want to keep funny bits of the latest Jim

Carey movie on your hard disk for a quick laugh but haven't got 650 MB spare on your hard disk? Use a video clipping software to chop out just the bits you want. You don't need to shell out piles of money for heavy duty video editing software to do this. There are plenty of smaller tools such as VCDGear and VCD Cutter that will do the trick for cheap.

Let's get cracking with the simple VCD Cutter.



1

## Configuring VCD Cutter

Once you have installed VCD Cutter, go to View > Options to configure capture settings. In the 'Extract' tab, choose one of the extract modes. The 'mpg' mode extracts video with sound, the 'm1v' mode extracts only video and the 'mp3' mode extracts only the sound. For now, set the extract mode to 'mpg'. From the Settings tab, set the folder in which all the video manipulation will take place. By default, this folder is the one in which VCD Cutter is installed. You can set the screen capture format here as well. JPEG will produce poorer quality caps but they will occupy far less space than the BMPs.



Set up your output options here

2

## Cutting a Clip

This will make VCD Cutter automatically scan the VCD and add all video files to its playlist. Play the movie file to the point you want to begin clipping. Click on the downward pointing arrow button on the toolbar, or press F5 to mark the beginning of the selection.

As the video plays along, you will see a blue selection marking within the time tracking bar. When

in VCD Cutter. **Step 1: Mark the beginning:** Insert the VCD in the CD-ROM drive and click on File > Play VCD





the video plays out to the point where you want to stop the clip, click on the upward pointing arrow button, or press F6. The video will continue playing but the selection marker will stop moving.

**Step 3: Add to list:** Now, click on the 'Add to list button' which looks like many little screens stacked up, or press F7.

Switch to the Clip List tab below the time tracking bar. You can see that a little thumbnail picture of the clip has been added to the clip list. You can repeat these three steps for all the clips you want to cut from the video and they will be added to the clip list.

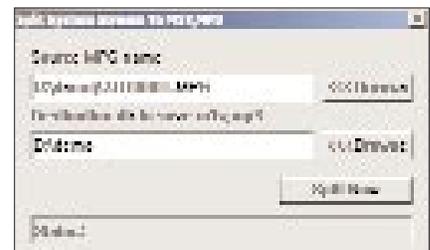
**Step 4: Cut scene:** Once you have all the

clips you want, click on the video camera button or press F8 to save the clips to your working directory. The output depends on the options you set in the Extract tab. If you checked 'Save to multiple files', each of the clips will be saved to a separate file, otherwise all the clips are joined together in the order in which they are marked, and saved to one big file.

### 3 Separating Audio and Video

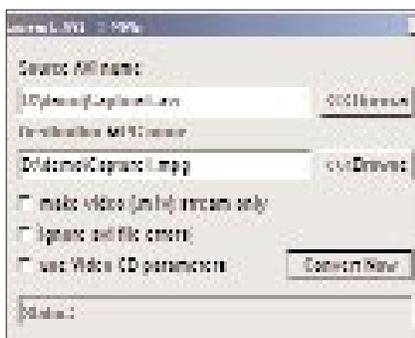
Songs are usually heard not seen, therefore you might want to save the song sequences as audio tracks rather than video segments. Conveniently enough, the sounds are encoded in the video using an MPEG algorithm similar to MP3. If you select the 'mp3' option from the Extract options tab and follow the sequence outlined in Step 2, then you will get only

audio tracks. To extract the audio track from a clip you have already taken, click Tools > Split System Stream. This will output separate video clips without sound and an audio track that you can play in WinAmp or some other audio player. The audio-less video clips are much smaller as well, so if you do not need a soundtrack, you can save space on video this way.



### 4 Better than AVI

Most video capture takes place to an uncompressed AVI format. These AVI files are huge, and take up a lot of hard disk space. VCDClip lets you convert these AVI files to the much more efficient MPEG compressed format. The conversion also helps because there are many different encoding schemes used for compressed AVI and the viewer must have the right Codec. If the Codec is not available, the AVI cannot be viewed. There's no such confusion with MPEG.



The conversion process on compressed AVI causes a slight loss in quality, so it is best used with raw AVIs. To convert files, click Tools > File Convert : AVI to MPG and select the input AVI and the output MPEG file names. If your video capture file does not have sound or you do not want the sound, check the 'Make Video (m1v) ...' check box to reduce the file size. To create a VCD style MPEG stream, check the 'Use Video-CD...' check box. 

# Pretty pictures, palm size

So what if your Palm IIIx has a black and white screen? You can still carry pictures around in it and even watch videos while you walk

Sumod Hajela

If you still use your Palm for just ToDo lists and Contact management, you are surely missing out on something. Microsoft's PocketPC offers built in multimedia capability on a gorgeous 256

colour screen, so why should users of Palm Pilot be left behind?

Even though most Palms offer just four levels of greyscale in a small screen, there are many graphic viewers around, and now there is even video for the brave hearted or for those who miss the tiny,

grainy postage stamp size things that passed for video in the days of the 486. You can download most of these image viewers from various Web sites. But for this workshop, we have got cracking with two cool, nifty viewers—ActiveSky and AlbumToGo.

## ActiveSky Video Player

### 1 Installing

Switch your little Palm into an overload of ultra-cool with real moving video in the ActiveSky video player (download the software from [www.activesky.com](http://www.activesky.com)). Run the installer to automatically set up the player on your Palm. One HotSync and you are almost set.

The player requires a free registration

or it expires after 30 days. Go to the Web site and click the 'Register' link. Tap the Menu button and select 'Register ActiveSky' to get the registration screen. You will need the DeviceID shown there. After you fill up the short form, you will be mailed the registration code for your DeviceID. Enter that into your player and you are done.



### 2 Watching the Videos

**Step 1:** Now you need the videos. Go to the ActiveSky Web site and click the 'Content' button to get a list of sites that offer ActiveSky compatible videos. Download any you want to see and HotSync them to the Palm. They will show up in the video list.

**Step 2:** Choose the video you want to see and tap the Play button. Use the standard player buttons to control the video. You will notice that purpose made animation films (2b) look far better than real videos of fashion models (2a) converted to ActiveSky format, though both are viewable.

You can set the playback options from the 'Video Options' menu. You can set the player to loop through just one movie or the entire list. If your Palm supports 16 levels of grey or if you happen to have a Palm IIIc colour screen, you can put those to good use here.



## AlbumToGo

### 1 Installing

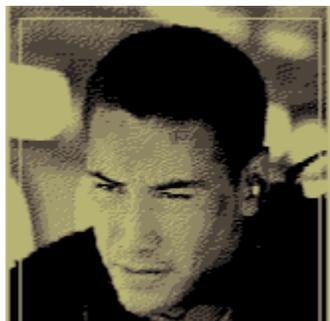
A much more practical application, AlbumToGo from Club Photo (download from [www.clubphoto.com](http://www.clubphoto.com)) is a picture library for the Palm. Simply unzip the archive to your hard disk to install the PC version of this program. HotSync to install the AlbumToGo.prc Palm program. The desktop application is used to convert your standard JPG images to the Palm DB (PDB)

format. The conversion process transforms your high colour image to a small 160x120 pixel greyscale image. The application comes with a set of sample images in both JPG and converted PDB formats that you can immediately try out. Once the images are in the PDB format, HotSync them to make them available to the Palm component of the program.

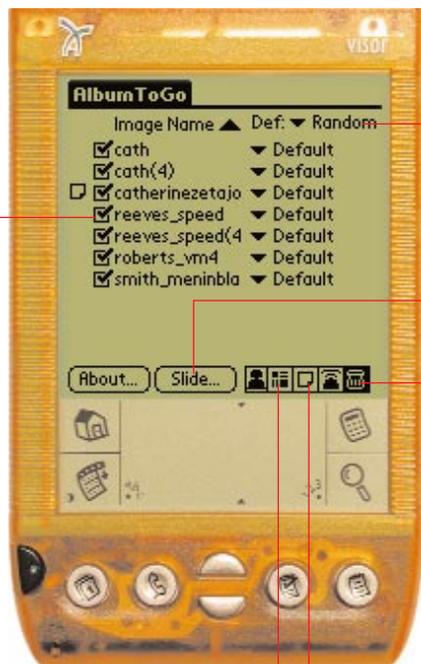


The PC program converts JPEG to AlbumToGo format

### 2 Working with the Images



Click on a file in the list to view it. If the contrast isn't too great, use the contrast dial on the left to adjust the levels.



Flip through all the pictures using the Slide-show button. You can set transition styles using the menu on the top right.



Switch to Rename mode if you want to rename files. Click the file you wish to rename and type in the new name in the pop-up window.



The Notes mode lets you edit more detailed descriptions for your images. You can also click on the little note icon along the left margin to edit a note without switching to this mode.



Sick of seeing a picture? Zap it from the Delete mode. Pictures do not take too much space so you needn't worry on that account unless you have a few hundred of them in there.