

# Corel PhotoPaint 9 – first steps

# PAINTING BY NUMBERS

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In true Linux tradition, Corel is giving away copies of its "PhotoPaint 9" image editor for Linux. This alternative to GIMP is absolutely brimming with useful features, but isn't particularly beginner-friendly. So, for those who think they might get lost in the PhotoPaint jungle, in this feature we'll introduce you to this very useful program and some of its most important features.

Having made any configuration changes necessary, after starting PhotoPaint 9 it should, all being well, display a "Welcome" screen. In the

background, you should also see

what appears at first glance to be a somewhat overcrowded work area. To shed some light on this jungle of icon bars, we'll explore them one by one. To do so without boring you silly, we'll use an example task, in which we will place good old "Tux", the Linux mascot, into a pretty picture frame. The main focus will be on handling masking tools and layering technique, but we'll explore other areas along the way too. Before we get down to the nitty-gritty, though, we need to cover a few theoretical principles first.



## Basics

PhotoPaint is a pixel-oriented image processing program. All images are composed of individual points arranged in a rectangular matrix. By assigning colours to these individual points, which are known as pixels (an abbreviation for "picture element"), an image can then be created. The representation of such a graphic image becomes more detailed as more pixels are used. The number of pixels used is referred to as the resolution.

An alternative to this form of image representation (referred to as raster) is what's known as vector representation. Here, an image is made up from a number of individual geometric

shapes that can be manipulated individually or as groups and is ideal for technical drawings or illustrations. PhotoPaint doesn't support this type of image directly, though, instead leaving this to packages such as CorelDraw.

Having dealt with the very basics, before you go on to follow the steps required to enhance Tux in our example, it is well worth having a look at PhotoPaint's built-in tutorial. You can start this either via *Help/CorelTUTOR...* or by selecting the relevant option in the "Welcome" screen.

## Desktop

As we've already mentioned, to help you get to grips with PhotoPaint this tutorial will involve adding a frame to Tux. In order to do so we will, of course, need a suitable image of the little fellow before we can continue. Just such an image is included on our coverdisc. To open this, if you haven't already done so, launch Corel PhotoPaint 9 and, from the top right corner of the "Welcome" screen, select *Open Image*. If you have already shut this window by deselecting the little tick in the box at the bottom of the window, you can use the *File/Open...* option from the main screen. In either case, when the file open dialog box pops up, select the file *tux.cpt*.

Let's now take a closer look at the desktop. At the top of the screen you'll see three toolbars under the main menu bar. The first is the "standard" toolbar. This includes a few basic icons used for purposes such as loading and saving files. Beneath this you will find a toolbar with various masking

## Installation

Before you do anything else, you should first check whether your computer is up to the rather high minimum system requirement of the program. These are a 200MHz Pentium processor or faster, 64 MB RAM or more (128 MB RAM recommended), no less than 170 MB of free hard disk space, a mouse, and last but not least SVGA monitor and graphics card. You'll also need Kernel release 2.2 or higher, glibc libraries 2.0, 2.1 or compatible, X-Windows and Package management software for RPM or Debian Packages (dpkg/lapt-get). Keep in mind, though, that trying to run it on anything less than a Pentium II will result in very slow response when dealing with larger images, or more than a handful of smaller ones at once. Although Corel is giving the software away free, you can't, of course, just call them up and ask for one. Instead you'd normally need to download it from <http://linux.corel.com>, and at over 90Mb this is no quick process. We've included a copy on this month's coverdisc, though, which means you don't even have to spend a second online to download it.

To get the installation process under way, first unpack the PhotoPaint archive with a suitable program. You can use something like "Ark" under KDE, or you can use "tar xvzf <Filename>" in a terminal window. After that you need to invoke the installation utility by launching the "install" program that will have been unpacked along with everything else. Annoyingly, you won't be given a choice of installation directory – this has to be `/usr/lib/corel`. Under some distributions (including SuSE) a KDE menu item then has to be installed manually. To do this you can either make the links yourself or install two RPM format packages from the sub-directory `/ldists/redhat`. Both of the archives necessary for this begin their file names with "menu-" or "menusupport-redhat". If in doubt, you should read the `readme.htm` file provided. Alternatively, if you want to avoid all this, PhotoPaint 9 can be started at any time via a terminal window just by typing in `photopaint` and then pressing the enter key. Incidentally, fonts must be registered before they are used, but as with WordPerfect Office 2000, an easy to use font manager is provided as part of the package that can be used for this very purpose.

functions, which we'll be making extensive use of shortly. As well as providing access to certain other functions, the third toolbar keeps certain setting options easily to hand for whichever drawing tool has been selected, and so constantly alters its appearance. Obviously you will find (almost) all of the functions available in these three bars are also available from the normal menus.

A toolbar can be shown or hidden very easily. All you have to do is click on any toolbar, then select or deselect the appropriate toolbar from the menu that pops up. You can also alter the positions of any of the toolbars and even completely "detach" them from the desktop so that they are then in their own, free-floating, window. To move or detach them, simply drag them and drop them by clicking on the double vertical or horizontal lines you'll see at one end of the bar.

In addition to the toolbars we've just mentioned, on the left side of the main PhotoPaint

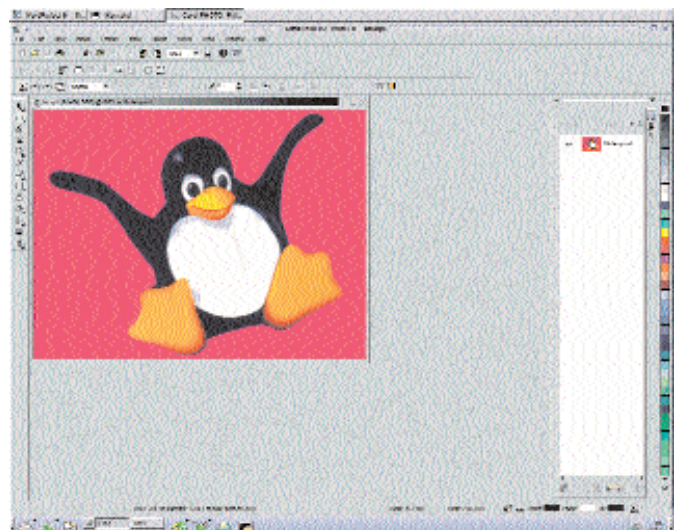
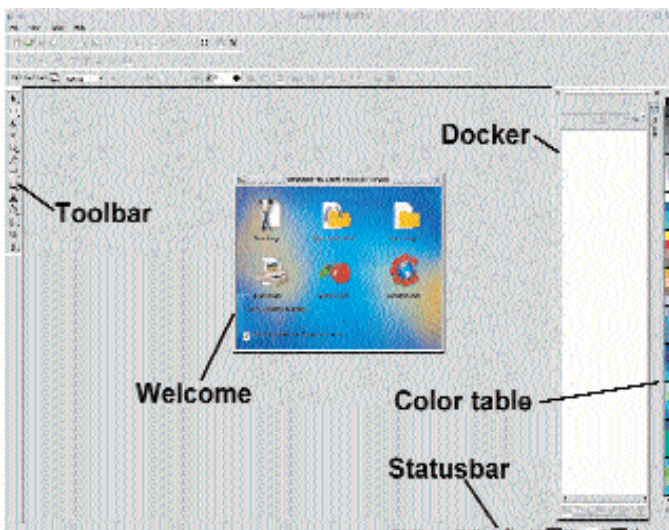
Window you'll see what's called the "tool palette", and on the far right you'll see a "colour palette". A status bar, which always keeps a few very helpful details handy, is visible at the bottom of the main window.

An additional window, just to the left of the colour palette, is part of the family known as "dockers". These are normally free-floating windows and are used for a wide variety of purposes. As the name "dockers" suggests, these windows can "dock" anywhere. A few of these windows can even be hung inside each other. By default, the docker displayed to the left of the colour palette displays a list of layers.

By using *Window/Dockers*, the various windows available as dockers can be maximised and minimised, which is very handy. This and other options to do with dockers and toolbars are well worth experimenting with if you are working with PhotoPaint for the first time. When doing so, be

[left]  
Figure 1: Corel PhotoPaint 9 after starting

[right]  
Figure 2: "tux.cpt" has been opened





### PhotoPaint and WordPerfect Office 2000

As you may be aware, some problems arise when you have both PhotoPaint 9 and WordPerfect Office 2000 installed on a system at the same time. Some of these problems can be avoided by always installing WordPerfect Office 2000 before PhotoPaint 9 and saying yes when PhotoPaint asks if you want to install an update for WordPerfect Office. This will avoid compatibility problems that result from PhotoPaint over-writing Office 2000's font manager. Incidentally, when asked for the path to the CD-ROM by PhotoPaint, simply specify the directory in which you unpacked the program in the first place. You should also note that any font types you installed yourself have to be registered again in the font manager in order to work. Even after doing all this, all will not yet be plain sailing. In order to prevent Office 2000 from suddenly becoming unable to find its spellchecker, you'll need to copy all files from the directory `/usr/lib/corel/shared/Writing Tools/9.01` into `/usr/lib/corel/Shared/Writing Tools/9.01` – note the capital S in the second path.

sure to experiment with the little double arrows that are displayed in the corners of some windows. You might also want to look out for small black triangles in the bottom right corner of some of the tool palette icons. These indicate that more objects from this family of tools are available but are currently hidden.

You will find, for example, tools to draw circles and polygons hidden underneath the rectangle drawing tool in the tool palette. To reach these hidden tools, move the mouse cursor over the rectangle symbol and hold down the left mouse button for a couple of seconds. A menu will then pop up from which you can choose the additional tools. Note the double lines displayed to the left of the extra options – clicking and holding on here will allow you to detach the menu and drop it anywhere on the screen, just like normal toolbars. Is that great or what?

### Get set, go

For all those who are impatient and want to get started with their painting immediately, try this: Click with the left mouse button on a colour from the colour palette. This then becomes the current drawing colour (a click with the right mouse button, on the other hand, would re-define the fill colour). Now select the bottom symbol in the toolbar, the "Paint Tool". This will allow you to paint directly

onto the image. When you do, note the way the property bar, (the full name for the last of the three toolbars at the top of the screen) changes. Also note that using this toolbar you can, among other things, alternate between various paint tools (the first icon from left) or define the shading depth (the slide controller). Feel free to experiment in order to become familiar with the various settings and what they do. If you make a mistake or do something particularly stupid, you can always reverse your action or actions via the *Edit/Undo* menu options or the backward curving arrow button on the first toolbar.

If you do experiment and end up saving any changes to Tux by mistake at this point, reload him from the CD.

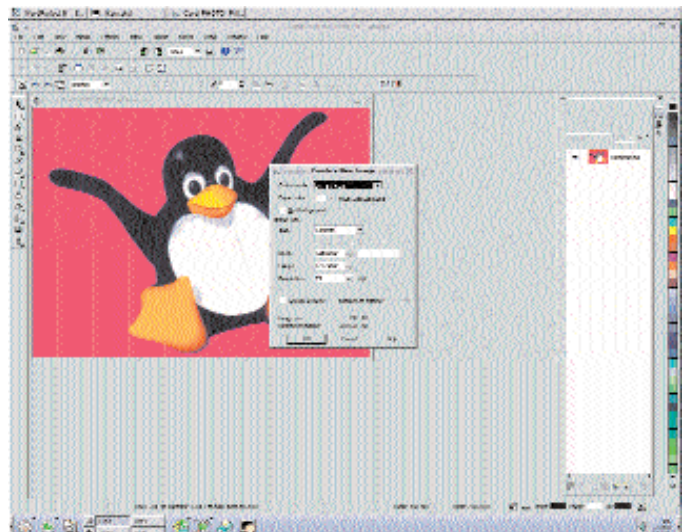
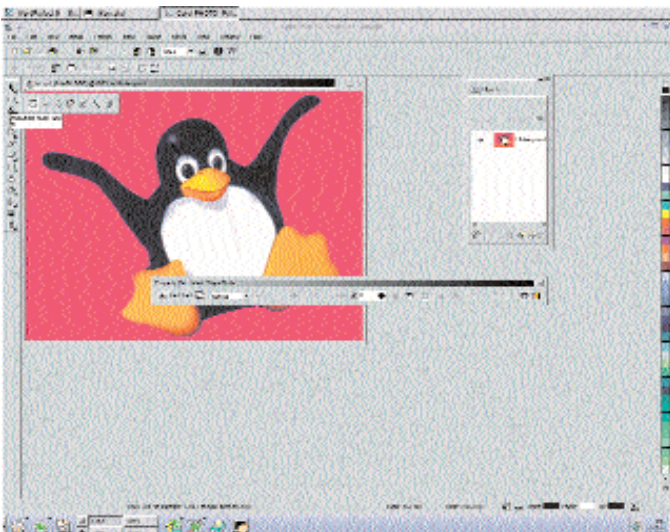
### Tux – you've been framed

Leaving Tux alone for a moment, using *File/New...*, create a new image. In the window that pops up, there are a few settings we need to change, and which need a little explanation.

As we've already mentioned, a colour is associated with each pixel in an image. The colour value can be based on the intensity of the colours red, green and blue ("RGB"), or cyan, magenta, yellow and black ("CMYK"). RGB colours are used in monitors and TV sets, while CMYK is used in most inkjet printers.

[left]  
Figure 3:  
The desktop with  
free-floating  
symbol bars

[right]  
Figure 4: Creating an  
empty image



In the type of RGB-images used on PCs, when you want to display "true colour" 16.7 million colour images, you have to specify three values for each pixel, between 0 and 255, one for the red, one for the green and one for the blue component. This means that each pixel requires 24 Bits (3 Bytes) of memory in order to store it. If such a wide range of colours aren't needed, you can conserve space by creating images where less memory is used to define the colour. You could use just one byte (8 Bits), for example, but then the image could consist of no more than 256 colours.

In a case like this, where only a small number of colours are used, it is possible to define exactly which colours these are, out of the full 16.7 million colours most computers can deal with. The required colours are defined in a table known as a colour palette, and each entry is assigned a number or an index. In the image itself, you then only need to store the corresponding colour index for each pixel. With viewing or creating images based on palettes, it is important that the correct palette is used at all times, as otherwise the colours won't look right.

For our new image we'll leave the setting as "24-Bit RGB" in the dialog box. Underneath this drop-down box you'll see an option that allows you to set the background colour of the new image – select White. "No Background", incidentally means that the background remains transparent.

In the "Image Size" group of options you can specify the dimensions of your image. Here it is possible to specify a fixed size from the drop-down box, or to adjust the borders to your exact requirements. If you choose the latter method, you should define, in the area to the right, the yardstick you want to use. In general this should be left as "Pixel", but you may want to choose other options on other occasions. Note how, in the lower area of the new image window, you are always shown how much memory space the new image will require if created using the current settings. For the purposes of our tutorial, select 640x480 in landscape format.

## Scene-setting

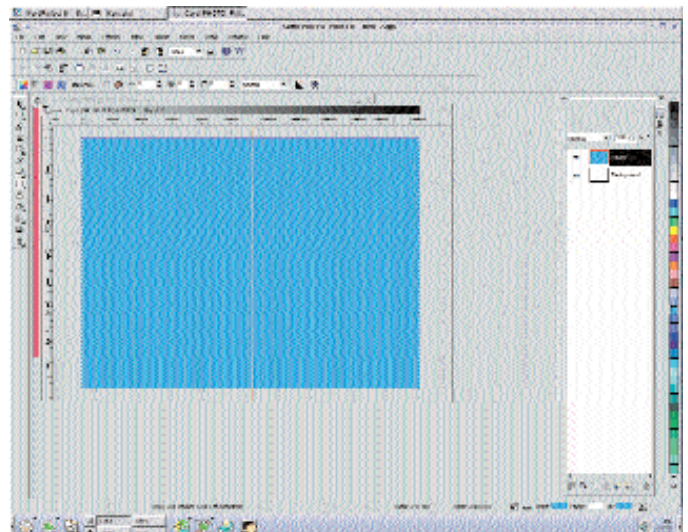
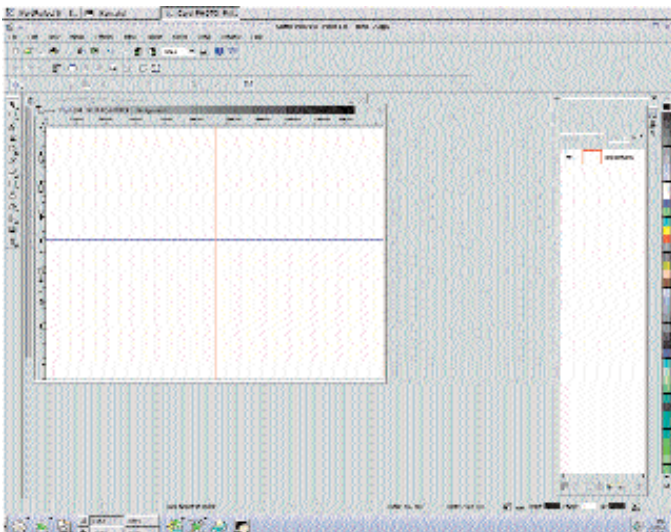
Once the new image has been created, the first thing to do is switch on the ruler, using *View/Rulers*. With this it is very simple to create the "guidelines" we'll add next. First, click on the horizontal ruler, hold down the mouse button and drag the guideline that will appear to roughly the centre of the image, then release the mouse button. Next, do almost exactly the same thing, but this time create a vertical guideline. Arrange this new guideline so that the two form a cross. You can move either guideline by dragging them and dropping them if you need to. Note that the selection tool, or "Object Picker Tool" as Corel calls it (which is at the top icon in the tool palette) must be activated in order to do so.

Worth knowing is that guidelines can be adjusted much more precisely by entering numerical values directly via the *View/Grid and Ruler Set-up* menu.

Having set up the guidelines, in the *View* menu activate *Snap to Guidelines*. In this way you make a guideline act as a sort of magnet to any objects which come close to it. This allows much greater accuracy in the orientation of objects.

In the next step, we'll create a frame for our penguin. To do this we'll need to create a rectangle in which we'll then have to stamp a hole. First, though, we'll pick a colour for the frame from the colour palette on the right hand side of the screen. Click with the left mouse button on a colour - any colour you like except white will do. As we've already mentioned, this allows you to define the drawing colour, while a right click will define the fill colour. Your selections are displayed in the status bar at the bottom of the screen as "Paint" and "Fill". If you don't see a colour you like in the palette, double click on one of these two symbols, which makes a colour window appear – you can make much more comprehensive colour choices here.

After you have decided on a colour, click on the rectangle tool – sixth symbol from the bottom on



[left]  
Figure 5: Showing ruler and two guidelines

[right]  
Figure 6: The finished rectangle



the Tool Palette. Now move the mouse cursor to roughly the point in the image at which the two guidelines cross. Next, click and hold the left mouse button, then move the mouse. You'll see a rectangle appear on the screen, the size and format of which you can control. Note how the guidelines have "sucked" the starting corner of the rectangle exactly onto the crossing point. Without letting go of the mouse button, press and hold the Shift key. This tells PhotoPaint that the point at which you began the drawing process should be the centre of the rectangle, and not the corner. Finally, drag the rectangle so that it covers the entire background and let go of the mouse button then the Shift key. Pressing the Ctrl key, by the way, makes all the edges of the rectangle equal, in other words allowing you to draw perfect squares.

Your image should now look something like that shown in Fig. 6. If it is not already displayed on screen, you should now open the Objects docker by selecting it in the *Windows/Dockers* menu. It is normally shown by default on the left next to the colour palette on the right side of the screen, though.

The Objects docker displays all objects contained in the currently active image. In our case you should see the rectangle object and the background, which is itself treated as an object, listed.

Each object lies on its own layer. A layer can be thought of as being a transparent sheet, many such sheets being arranged on top of each other. In our case the rectangle object is on a sheet lying over the background sheet.

The rectangle object should be surrounded by a red border in the list, which indicates that it is the currently selected object.

## Holes

Our next step is to stamp an oval hole out of the rectangle. This is where we'll put Tux. To do this, click on the second symbol from the top in the tool palette (the "Rectangle Mask Tool") and hold down the left mouse button until the tool sub-menu pops

up. From this, select the "Circle Mask Tool".

Now move back to the centre of the image over the previously created rectangle, hold down the shift key and, with the left mouse button pressed, draw an oval that does not touch the edges of the rectangle.

Next, select *Object: Cut Selection* from the *Object/Create* menu. *Cut Selection* will do just what it says it will, cutting out the oval from the rectangle, but not actually moving it anywhere so you won't be able to tell that anything has happened at first glance. But if you now look at the dockers window, you'll see the stamped out oval has appeared as a new object on a new layer. To move this unwanted object out of our way, click on the oval in the middle of the image and move it using drag and drop.

The white oval area which you can now see in the centre of the rectangle is not a collection of white pixels within the rectangle. Rather, it is the background showing through.

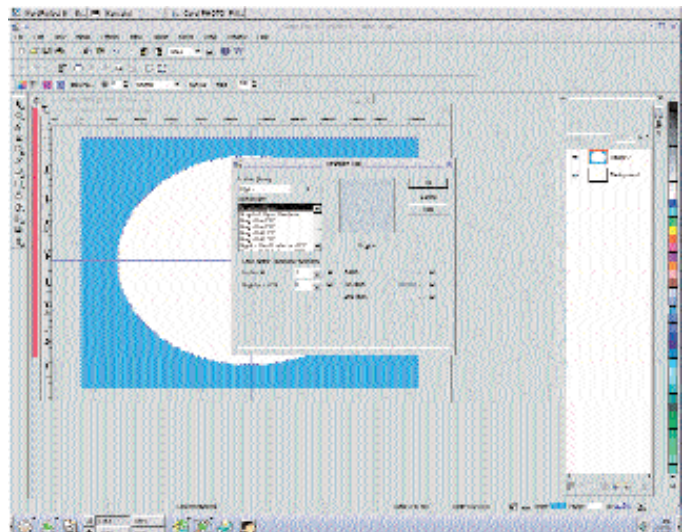
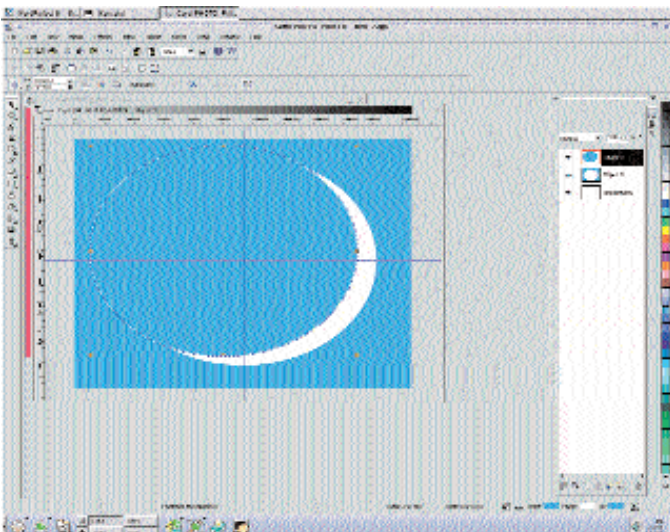
In the dockers window, the oval should now be highlighted black. If this is not the case, click once on its name (with a double click you would open a dialog window with additional settings). Since we no longer need this stamped out oval, we can erase it using *Object/Delete*.

## Fills

A basic, one colour frame does not look particularly attractive, and certainly isn't good enough for our friend Tux. For this reason we'll now go on to give both background and the frame a "fill". To do this, first select the background object from the layers list. Then select the paint pot from the tool palette (the "Fill Tool"). This will make some colourful icons appear on the property toolbar (the third and last of the toolbars at the top of the screen). The first four of the new icons represent the fill types you can use a solid colour, a shading, a bitmap (i.e. a pixel image) or a texture. Via the fifth button, "Edit Fill" you can then make extended adjustments to the fill action.

[left]  
Figure 7: The cut-out circle

[right]  
Figure 8: Selection of paper fill



For our image, click on the fourth icon, "Texture Fill", and then on "Edit Fill". From the "Texture List", select "Recycled Paper" and then click on "OK".

Move the mouse cursor to an area where the background is visible and press the left mouse button; this will give you a paper fill. Next, in the layers docker, select the rectangle object, then click on the third colourful icon on the properties toolbar (bitmap fill). Click on "Edit Fill" and, in the window that pops up, then click on the down arrow next to the large button showing a preview of the bitmap currently selected. This brings up a scrollable preview of more bitmaps you can use. Select the fourth image from the top in the left hand column. Incidentally, using "Load" you could also use one of your own images as fill object. Select "OK" and fill the rectangle with the bitmap by clicking on it.

Although it isn't too bad, our current arrangement isn't particularly good either. To spice it up and give it a feeling of depth, select the *Effects/Texture/Plastic* option. Leave the default values in this setting window and click "OK", and watch what happens. Isn't it great? Please note that this kind of effect can take a long time to complete on slow computers.

## Frame program

Now, finally, we are at the stage where we can put Tux in his new frame. To do this, select the window with the Tux image. As we only want to insert Tux and not the entire image in the frame, we must first cut out the little chap from his background. PhotoPaint helps here with its intelligent masking function: click on the second icon from the top in the tool palette and hold down the mouse button until the sub-menu appears and select the "Magic Wand Mask Tool". After you've done that, click on the area around Tux. The magic wand will then automatically and precisely mask that area and all areas of the same colour. However, what we've just done is select Tux's background, and not Tux himself. We therefore need to invert the mark in order to select Tux – you can do this effortlessly using the *Mask/Invert* option.

By the way, as an alternative to the magic wand you could also use the lasso. With this you only

need to roughly encircle the penguin. Once you've done this, PhotoPaint will attempt to find the edges of the encircled object and mask it.

However you decide to do it, our marked Tux can now be copied from his present location using *Edit/Copy* and inserted into the image with the frame using *Edit/Paste/As New Object*.

Activate the selection tool again ("Object Picker Tool") and then move the penguin to the right spot in the frame using drag and drop. If the penguin is too big for the opening, you can place the layers on which it lies behind those of the rectangle: To do so, with the penguin selected, choose *Object/Arrange/Order/Back One*, which moved him back one layer and therefore behind the frame. Alternatively, you can also pick up and change the order of the objects in the layers docker using drag and drop – try it!

We've just about finished, so we can now get rid of the guidelines we created right at the start. To do so, just click on them with the mouse and then, with the mouse button pressed, drag them back to the ruler, at which point they will vanish!

All you have to do now is store the image. Use the *File/Save as...* option to do this. When you do so, note how you can select from various file formats for the file. The options displayed depend on the colour model used (RGB, CMYK etc), and also on whether or not there are objects in the image. You cannot save an image with objects in BMP format, for example, unless you merge all the objects into the background layer first. You can do this using *Object/Combine/Combine All Objects With Background*. Worth noting, though, is the fact that you'll not have the option of separating the objects from each other again once you've done this and saved the file.

Well, here ends our introduction to Corel PhotoPaint 9. It hasn't been possible to show you absolutely everything. Indeed, we've only scratched the surface, so some exploration of your own would be very worth while. In particular, the effects (in the *Effects* menu) are something you should try out on a test image. When you do, though, note that some of the effects can only be applied to objects already selected.

For more information, you can turn to PhotoPaint's online help, or to one of the many books covering the subject.

[left]  
Figure 9: The completed frame with the plastic filter effect

[middle]  
Figure 10: Selected Tux

[right]  
Figure 11: The complete image: Tux in the frame

