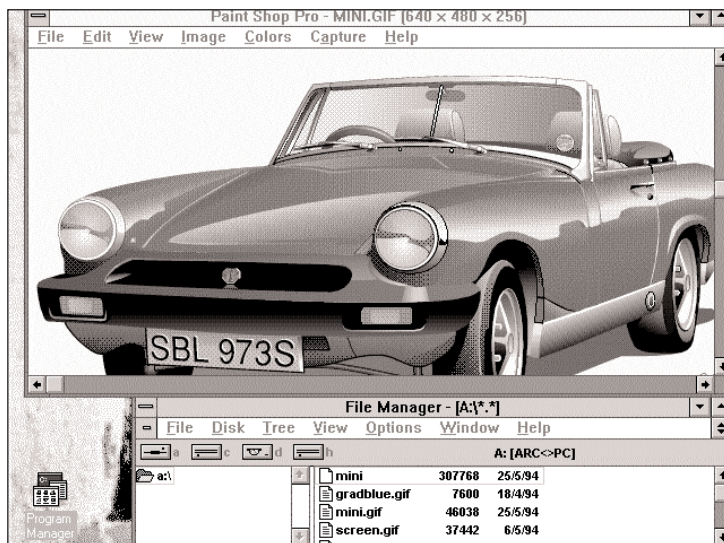# PC Forum

In this month s Forum, Gordon Gilmore looks at the question of transferring vector image files to other systems

The ArtWorks 'Midget' transferred to a PC

I recently began a project on a PC which needed various screen images, and I rather fancied creating something out of the ordinary, perhaps involving gradient fills, distorted text and the like. In a fit of enthusiasm I bought myself a copy of ArtWorks.

ArtWorks looked like the ideal tool but for one thing. I needed bitmap images, but ArtWorks is a vector based image program and, not surprisingly, saves and exports its data to vector format files (in this case EPS). Many PC programs accept EPS files, though there are also many that prefer GIF, TIF, PCX, BMP and other bitmap files. For example, the presentation package Harvard Graphics will import many different bitmap formats but only one type of vector file. As it happens, that is the Adobe Illustrator format which ArtWorks does export. Unfortunately my ArtWorks refuses to communicate with my Harvard Graphics!

The eventual solution may be to buy a copy of ArtWorks for the PC (see last month s news pages), but as that may be some time away yet, another way has to be found.

In fact, if all you want in the end are bitmaps, the solution is already built in to RISC OS 3 in the form of Paint. In principle all I need to do is display the ArtWorks image and use Paint s snapshot facility to copy part of the screen to a sprite file, which can then be converted to GIF using Creator or something similar.

End of story? Not quite. First of all we have to remember that all the PC display modes use square pixels, whereas the dear old Arc uses rectangular pixels in many modes, particularly 12 and 15. Unless this is taken into account the image displayed on the PC will be squashed to half its height. This can be solved by using ChangeFSI to alter the sprite size, but you may then find that all that beautiful graded filling in your image becomes banded or patterned.

The obvious solution is to work in a square pixel mode; the obvious choice is VGA mode 28 for a 256 colour image, or mode 27 if 16 colours will suffice. Since these have the same resolution (640 by 480) as most PC displays, you can avoid rescaling.

The problem comes if you need a full 640 by 480 screen image for the PC (images for use as Windows wallpaper must be precisely that size if they are to fill the whole screen). Although modes 27 and 28 are 640 by 480 resolution, your ArtWorks image will be surrounded by the usual Wimp paraphernalia of title bar, scroll bars etc. If you have ArtWorks version 1.1 or later, help is at hand in the form of the Preview option on the View submenu. Select mode 28 (or 27) from the dialogue box, click on O K and the image will be displayed full screen without any of the surrounding window borders or other screen clutter. But now we can t see the icon bar to activate Paint s snapshot.

No matter. Click Menu to return to the normal display (as a matter of

interest, Select and Adjust zoom into and out of the image respectively). Select Snapshot... from Paint s icon bar menu. In the dialogue box select Grab whole screen and click on the User defined delay radio button. Type in a suitable delay period and click on O K. This delay must be long enough for you to tell ArtWorks to present the preview display and to redraw the whole picture. Even for a simple image 30 seconds is not too long. Eventually Paint will grab the screen and its save box will appear. Since you can t see any filer windows you will have to type in a full pathname.

One slight difficulty is arranging the magnification of the image (zoom) and the position so that it is centred on the screen in the preview display. I have devised a routine for myself which means that I can produce a full screen mode 28 sprite ready for conversion to a GIF file with the minimum of fuss.

First of all I work on a custom sized paper, 336mm wide by 252mm high. These mysterious numbers are in fact in the same ratio as 640 and 480. I then create a white box with black border 320mm by 240mm on the background layer, with the left hand bottom corner set at x=8mm and y=6mm. This is most easily set up by creating any old size of box and then typing the appropriate numbers into the writable icons on the status bar. This box is simply a guide to the usable working area (because it is on the background layer it has a grey rather than black outline).

When the work of art is completed (and saved!) the procedure is simply to select the zoom icon and click on Zoom to window on the status bar. That automatically centres the image on the preview screen. Now manually type in a zoom factor of 58%, and when previewed in mode 28 the image will be centred and fill the whole screen. All that remains is to take the snapshot.

Perhaps we shouldn t leave the topic without considering the official ways of transferring ArtWorks images to PC programs. This is achieved via the Export menu. From here the ArtWorks image can be saved in an EPS format (Encapsulated PostScript) suitable for Adobe Illustrator (versions 88 and 3.0) or Corel Draw (versions 2.0 and 3.0). In each case various features have to be sacrificed in order to satisfy the target application. For example, graded fills may have to be translated to polygons of a single colour, and text will be converted to a path. Another limitation is that sprites incorporated into the ArtWorks image will not usually be passed in the EPS file. If at the end of the day all we want is an image on the PC screen and don t intend to edit it further, there is a lot to be said for transferring the image as a bitmap file.

We are intending to cover the whole thorny

should mean you can use them. If not, a new utility from DeskTop Laminations called MMviewer (£47.50 to education) claims to allow PC CD-ROMs to work properly under the PC Emulator. This is still in development but is an interesting one to watch.

Postscript

In the last year Chris Drage, Mark Sealey and other contributors to RISC User have also reviewed: the first six Anglia CD-ROM titles (7:4 and 7:5); the Project Horizon material and PhotoBase (7:6); ArtWorks, CD Fran ais, Goldilocks and Exploring Nature (7:8). You are referred to these for further information.

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question of image transfer between
systems in a future issue. If you
have any experiences of this
subject, or any tips that you can
share, please let us know.