Clipping Pictures with !JCut
by Gerald Fitton

Introduction

I guess we've all been brought up to take pictures with a film camera. Our children (or grandchildren) may never use one! Digital cameras are rapidly replacing film cameras and with them comes a whole new picture taking technique.

Proccessing

One of the most obvious benefits of using a digital camera is that it doesn't matter if a lot of the snaps you take are complete rubbish. You can delete them and concentrate on the good ones. After deleting the rubbish your next step is to process the good ones. Processing can be used to make pictures lighter or to get rid of a rosy, green or blue tinge caused by having a wrong white balance. In this article I shall concentrate on Clipping on a RISC OS machine.

FinePix Viewer

If you have a Windows machine then you can use the software which comes with your digital camera for clipping. Bundled with my Fuji FinePix F700 camera there is an excellent piece of software called FinePix Viewer. With this software I can not only rotate images but also I can adjust the image quality, get rid of red eye, add text and clip the picture, all without loosing the !Exif information (more in another Windows based article).

!Jcut

For a RISC OS machine I recommend the free program !Jcut whcih can be downloaded from the website at http://www.dacha.freeuk.com.

After unzipping the downloaded archive, run !Jcut and the program icon will appear on the icon bar. JPEG files can be loaded to !Jcut by dragging the file to the icon on the icon bar.
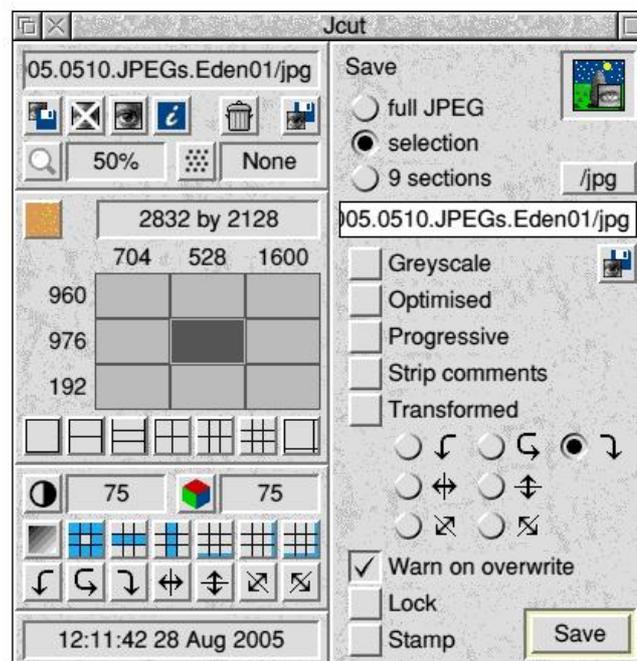
The Eden Project

The Eden Project is located near St Austell in Cornwall. It is a most interesting tourist attraction. In August 2005, as part of my grandfather duties I was commissioned to pick up my grandson from a short holiday with old friends in Cornwall and I took the opportunity to make a second visit to this site. It had been developed further since I last saw it in May 2005.

One of the two main domes is very hot and tropical so I gave that dome a miss this time. I took the picture shown below in the more temperate zone dome.

Selections

If you look at the !Jcut screenshot you will see that the size of the original picture in pixels is 2832 x 2128 and that, using a <select drag release> (as you might use in !Draw) I have divided this picture into nine "selections". The centre selection is 528 x 976 pixels. I chose to Save a "selection" (meaning the highlighted 'selection', in my case the middle one of nine), changed the file name and clicked on the Save button (bottom right).

Actually, I did this several times with slightly different selections and the picture I have included here is 480 x 944 pixels. I was able to get rid of some of the rubbish surrounding the interesting statue (or is a sculpture?) from the selection of 528 x 976 shown in the original !Jcut screenshot.

One of the reasons why I was able to have several chained attempts at the selection, cropping a bit more off each time, is because the selection is not degraded by reprocessing the whole of the JPEG file each time a little more is trimmed off the picture.

It is a valid criticism of some popular Windows software that the information is recompressed (as a JPEG format file) every time the file is Saved and then Reloaded. You don't get this problem with !Jcut and using Windows software you can always use the Undo command.

Exif

My best guess at this acronym is "Exchangeable Image File". The important thing to me (and to you) is not so much the words the acronym stands for but what it is and does.

My camera stores information in Exif format about the snaps taken with it as part of a JPEG file. This may have the wrong form of words because it may be that Exif is a form of (a sub-category of) JPEG file! Anyway, have a look at the two screenshots below.

<table>
<tr><td>

File/Folder Info

File Name: eden00.TIF
Type: TIFF
File Size: 17729KB
Image Size: 2832 × 2128
Date & Time: 22/08/2005 15:50:15
Shutter Speed: 1/300
Aperture: F5.6
Camera Model: FUJIFILM FinePix F700
Quality Mode: Hi(TIFF-RGB)
Comment: Eden Project - Statues
Copyright1: Gerald
Copyright2: Abacus Training
ISO Sensitivity: ISO160
Focal Length: 9mm
Exposure Correction: 0.0
Metering Mode: Pattern
White Balance: AUTO
Focus: AUTO
Flash: OFF
Flash Mode: AUTO
Flash Correction: 0
Macro Mode: OFF
Sharpness: NORMAL
Shooting Mode: AUTO Standard
FinePix COLOR: STANDARD

</td><td>

File/Folder Info

File Name: eden03a.TIF
Type: TIFF
File Size: 1386KB
Image Size: 480 × 944
Date & Time: 22/08/2005 15:50:15
Shutter Speed: 1/300
Aperture: F5.6
Camera Model: FUJIFILM FinePix F700
Quality Mode: Hi(TIFF-RGB)
Comment: Eden Project - Statues
Copyright1: Gerald
Copyright2: Abacus Training
ISO Sensitivity: ISO160
Focal Length: 9mm
Exposure Correction: 0.0
Metering Mode: Pattern
White Balance: AUTO
Focus: AUTO
Flash: OFF
Flash Mode: AUTO
Flash Correction: 0
Macro Mode: OFF
Sharpness: NORMAL
Shooting Mode: AUTO Standard
FinePix COLOR: STANDARD

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This screenshot on the left shows the Exif data for the original Eden picture before clipping. The screenshot on the right shows the Exif data for the clipped picture.

You will see that I took this 6MP picture with a FUJIFILM FinePix F700 at F 5.7 with a shutter speed of 1/300 second. I took the picture at 15:50:15 on 22/08/2005. This accords with my memory of the event.

I copied the pictures from my camera to my computer and then looked at the properties of the JPEG file using an Exif reader. Let me emphasise that all this Exif data is contained within the camera (and computer) JPEG file.

Exif in TIFF files

!Jcut preserves the Exif data (does !Jclean delete it?) in the selection. The Exif data from the 'statue' is shown in the screenshot on the right. This feature of !Jcut can be very useful.

I have made a couple of slight modifications to this statue file.

I have added some copyright data ("Gerald" and "Abacus Training") and saved what was a !Jcut selection as a (high quality) TIFF image.

You can see from this screenshot that TIFF files as well as JPEG files can contain Exif data. TIFF files have the disadvantage of being larger than JPEG files (for photographs). They have the advantage that they do not lose information when they are reloaded and resaved. TIFF is generally a better format than JPEG if you need to keep loading and saving slightly different variations of the picture as you work on it. Of course, "Undo" can be very useful and is a feature of nearly all Windows programs.

Picture CDs

This is a subject I shall leave until another day. However, at this point it is relevant to say that as far as I know DVD players which play CDs containing photos require the JPEG format and don't work with TIFF format files. The relevance of this is that however you process your sprites or TIFF files you will need to save as JPEG in order to display them on your TV set from a photo CD.

On this AVLine CD you will find an article by T.O.M.S. about the preparation of JPEG files for a CD which is to be displayed on a standard 625 line TV.

In Summary

!Jcut is a RISC OS utility which can be used to crop pictures whilst preserving all the Exif data. TIFF files can also contain Exif data. Generally, using the TIFF format until you have finished editing is good but !Jcut as a means of cropping a file to size is also good because it preserves as much of the original JPEG coding as possible.

In another article I shall describe how I can use FinePix Viewer, the software bundled with my Fuji FinePix digital camera, to do the same sort of thing.