Best of Both
by Gerald Fitton

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"Tell me where is fancy bred,
 Or in the heart or in the head?"

The Merchant of Venice - William Shakespeare (1564-1616)

It is not only the beauty which lies in the eye of the beholder (Plato - circa 400BC) that is subjective but also also our perception of the unknown. We can either welcome or we can fear the new experiences that exploration may bring. This photomontage, "The Unknown of the Big White", by Marta Demarteau, depicts a world containing known and unknown elements which offer, somewhat ambiguously, both excitement and danger. Some of you will see the solidarity of the rocks as reassuring whilst others will see them as menacing. Do you perceive the white bear and the tusks as fascinating or frightening? Given a choice, would you risk venturing into this surreal world?

RISC OS and Windows

To RISC OS and Windows Operating Systems I'm sure some of you would add Linux, Mac OS or Android - and you will be willing to defend these alternative OS. However, for this set of articles, I shall concentrate on gaining the 'Best of Both' from RISC OS and Windows; I shall leave it for other authors to show how this 'Best of Both' concept can be applied to a combination of RISC OS with Linux, Mac OS or Android.

In my pursuit of truth, I insist that RISC OS has its good points and that Windows also has its good points. In my pursuit of that same elusive truth I have found that RISC OS has its weaknesses, as does Windows. So, when using my desktop computer, my choice of operating system might be summed up as, 'The Best of Both'. Currently my 'Best of Both' is to use the RISC OS emulator, RPCEmu, on a machine running Windows 10. From within RISC OS I run applications such as PipeDream and Impression; from within Windows I run applications such as Photoshop, Premiere and Audacity.

In this set of articles I shall try to encourage you to try this 'Best of Both' approach rather than fear the unfamiliarity of the Windows operating system. I hope to do this in a way which helps you to avoid the most serious dangers and disappointments whilst still giving you the pleasure of exploring something which is new to you.

Until a few years ago I had become so familiar with the RISC OS environment that I was unwilling to even consider the merits of any other operating system. I assure you that you can learn, just as I have, to prefer Windows for some tasks rather than continue to work within the familiar, but sometimes limiting, RISC OS environment.

The User Interface

For those of us brought up on RISC OS, our first experiences of Windows can be totally frustrating. Even the 'End' key doesn't seem to work as we think it should! Marking a block in Windows uses different key presses from the RISC OS convention; <CTRL + S> rather than <F3> is used to Save a document. However, if we persevere, then eventually these unfamiliar keyboard short-cuts can and will become familiar to us.

Filetypes

Although in Windows, keyboard shortcuts are different from those of RISC OS, training ourselves to use these new shortcuts has a short, albeit steep, learning curve. It is much more difficult to learn how to handle the difference in the way that filetypes are labelled.

Why do filetypes exist?

It is because, by allocating a filetype to a data file such as a photograph, a double click on the file name will open an application and then load our file into a window running that application. We double click on a PipeDream file and PipeDream runs; we double click on an Ovation Pro file and Ovation Pro runs. Text files are loaded into !Edit and CSV (Comma Separated Values) files are loaded into a spreadsheet or database of our choice. We expect RISC OS to know that a file with the ImpDoc filetype requires the application Impression to be loaded.

RISC OS Filetypes

In RISC OS, the filetype is stored as a hidden extension of the file name. All RISC OS filetypes are given a unique three character hexadecimal code; the ampersand, '&', is used to show that the number following it is in hexadecimal. For example &FFF (hexadecimal FFF) has been allocated to the filetype Text; &B27 to Ovation Pro files; files in JPEG format, which I shall use as an example in this article, have the filetype &C85.

You can find an extensive list of RISC OS filetypes at:

https://en.wikipedia.org/wiki/List_of_RISC_OS_filetypes

This register of filetypes and many other resources is maintained by RISC OS Open:

https://www.riscosopen.org/content/allocate

By maintaining this register of hexadecimal codes and filetype names, this organisation helps to ensure that no clashes nor ambiguities occur.

If you write a completely new application and want to allocate a hexadecimal code and filetype which is unique to your application, then RISC OS Open is the organisation to which you should apply.

Windows Filetypes

The filetype in Windows is stored in an extension following a full stop. For example text files have the extension '.txt'; Ovation Pro files have the extension '.dpd'; JPEG files have the extension '.jpg'.

You'll find a list of many common, and a few uncommon, Windows extensions at:

https://en.wikipedia.org/wiki/List_of_file_formats

Porting from RISC OS to Windows

Photographs can be stored in many formats (e.g. RAW and TIFF) but a format common to both Windows and RISC OS is the JPEG format; in Windows the usual extension is '.jpg'; in RISC OS the filetype is JPEG having the hexadecimal code &C85.

As my example of porting a picture file, I shall use a hypothetical file called 'MyPicture' which in Windows is called 'MyPicture.jpg' and in RISC OS is called, more simply just 'MyPicture'. In RISC OS it has the filetype JPEG and the hexadecimal code &C85.

When we Save 'MyPicture' from within the RPCEmu RISC OS emulator (but not VRPC - see below), the filename when viewed in Windows will be 'MyPicture,c85'. In Windows this file has no recognisable extension so that a double click will not load the file into a JPEG viewer such as PaintShopPro or Photoshop.

In Windows we can change the filename from 'MyPicture,c85' to 'MyPicture.jpg'. When we have done this we can double click on the renamed file (with its '.jpg' extension) and it will load into our chosen JPEG viewer, for example into Photoshop.

Porting from Windows to RISC OS

Having changed the filename in Windows from 'MyPicture,c85' to 'MyPicture.jpg' we have removed the ',c85' extension so it shouldn't surprise us that, when we look again at the file in RISC OS, the filetype is no longer 'JPEG' but the default 'Text'. RPCEmu no longer recognises 'MyPicture' as a JPEG format file. Furthermore we will find that the filename has changed from 'MyPicture' to 'MyPicture/jpg'. Although there is still a '/jpg' in the filename, double clicking on this file (from within RISC OS) will load it into !Edit and not into a RISC OS JPEG viewer.

In RISC OS we can select this file which we know to be in JPEG format and change its filetype to JPEG. When we have done this, a double click will load it into a JPEG viewer such as !SwiftJPEG. !SwiftJPEG is currently at version 1.13 (07-Aug-2012).

Returning to Windows

Because, whilst we were in RPCEmu, we changed the RISC OS filetype from the default, Text, back to JPEG, when we look at the filename in Windows it is 'MyPicture.jpg,c85'.

Ideally what we want when we double click on the JPEG file is for it to load into (for example) !SwiftJPEG in RISC OS and Photoshop in Windows without having to keep changing the extension in Windows and changing the filetype in RISC OS.

There are ways of achieving this.

Red Squirrel and VRPC

The free emulator, Red Squirrel, is the foundation upon which the commercial VRPC has been built; both of these applications can use the contents of a special file called Extensions.txt to achieve the desired result of a double click in both RISC OS and Windows.

In both Red Squirrel and VRPC you'll find a file called:

RedSquirrel/plugins/Hostfs/Extensions.txt

An entry written in this file might be:

c85 : jpg,cmp,jif,=jpeg,pjpg,jff,jpeg,jfif,jpe,c85

This entry in the Examples.txt file will cause Windows files such as 'MyPicture.jpg' (files with the '.jpg' extension) to map to a RISC OS file called 'MyPicture' with filetype JPEG (without the '/jpg' but with the built in &C85 hex code). Also it will execute the reverse mapping of the JPEG format 'MyPicture' in RISC OS to 'MyPicture.jpg' in Windows.

As an example of the application of my 'Best of Both' policy, in Windows I can create and modify a JPEG file using Photoshop. If I save the file in Windows from Photoshop as 'MyPicture.jpg' then a double click from within Windows on this file will load it back into Photoshop for further fine adjustment or even a major modification.

Then, without making any changes to the filename or filetype, I can open my VRPC (or Red Squirrel) RISC OS emulator and I'll see 'MyPicture' with its JPEG filetype. A double click on 'MyPicture' will load this file into !SwiftJPEG application. In my VRPC RISC OS emulator environment, I can drag this JPEG picture into a frame within !OvationPro for RISC OS and it will be embedded in the Ovation Pro document. Excellent!

RPCEmu

I consider this mapping, using Extensions.txt, to be one of the best features of VRPC (and Red Squirrel) when comparing VRPC with RPCEmu. This feature removes all the difficulties of using, for example, pictures such as 'MyPicture.jpg' in Photoshop when using Windows and as 'MyPicture' in !SwiftJPEG or !OvationPro when using RISC OS.

Although there is a file called MimeMap present in RPCEmu, it is not used by this application to simplify what I might call 'the filetype problem'. Nevertheless, there is another way of using the same filename in both Windows and RPCEmu. In order to bring this about we need to use as our file name for 'MyPicture', the extended version, 'MyPicture.jpg,c85' in Windows and 'MyPicture/jpg' in RISC OS.

In Windows, an extra step is needed. We need to specify that files with the extension '.jpg,c85' should be opened using Photoshop (or whatever application is our choice for this filetype). In Windows 10, right click on the file 'MyPicture.jpg,c85' and use the sub-menu 'Open with ...' to choose to 'Always use this app to open .jpg,c85 files'. This will instruct Windows 10 to load into Photoshop all files with the extension '.jpg,c85'.

When we have done this we will find that, in Windows, a double click on 'MyPicture.jpg,c85' will load it into Photoshop. In RISC OS the file will be shown as 'MyPicture/jpg' with the filetype JPEG and hexadecimal code &C85 so that a double click will load it into !SwiftJPEG. Furthermore, perhaps of greater importance, is the fact that 'MyPicture/jpg' can be dragged into a frame within !OvationPro for RISC OS and it will become embedded in the Ovation file.

Whilst I accept that this process of adding '/jpg' to the file name in RISC OS and using the extension '.jpg,c85' in Windows, is messy compared with Red Squirrel and its commercial successor,VRPC, at least this procedure works.

There may be a way of doing the same sort of thing in RPCEmu as is done in VRPC but, if there is, then I haven't found it.

File Formats

Now I want to discuss file formats using as my example files which, when opened using a suitable application, display pictures or screenshots.

There are many international standard formats for pictures including GIF (Graphic Interchange Format), BMP (Bit MaP), PNG (Portable Network Graphics) and TIFF (Tagged Image File Format). Each of these formats have their own advantages and disadvantages when compared with JPEG; nevertheless, JPEG, with all its limitations, is the most used format.

RISC OS has its own bit map format called Sprite with Filetype &FF9. Files using this Sprite format can be edited and otherwise modified using the RISC OS application, !Paint. However, unlike the JPEG filetype, there are no applications in Windows which can interpret this format.

So to one of my 'Rules' for making the 'Best of Both' strategy work. If you want to use graphics files (e.g. photos or screenshots) in both RISC OS and Windows it is advisable to use a file format which exists in both RISC OS and Windows - albeit using different applications. The JPEG format can be processed in both environments and so, because of this, in my opinion, JPEG is the format of choice for use in both environments.

Applications for Editing

Until recently, in Windows, what are now called applications were called programs. Probably it was the advent of the ubiquitous 'App' of the iPhone and Android machines which has encouraged, possibly forced, Microsoft to make the change and, starting around the time of Windows 8, they now refer to their programs as applications!

There are many filetypes which have an internal format which is exactly the same in both Windows and RISC OS. These include, but are not limited to, text, JPEG, PostScript, PDF (Portable Document Format), CSV (Comma Separated Value) and some, but not all, email formats. I have used as my example that of a JPEG file being opened by Photoshop in Windows and !SwiftJPEG in RISC OS. Provided that the JPEG file has been constructed in accordance with the JPEG standard, then there are applications in both Windows and RISC OS which can be used to open, display and modify the JPEG file.

For those files which have filetypes that can be used in both Windows or RISC OS environments then there are some RISC OS applications which are more useable than any of the easily available Windows applications. However, for some filetypes, there are some Windows Applications which are more useable than the applications which are available for RISC OS. Recognising which filetypes are best processed using RISC OS apps and which filetypes are best processed using Windows apps is part of my 'Best of Both' policy.

Following my example, I much prefer editing JPEG files using Photoshop and/or PaintShopPro (Windows applications) than trying to do something similar from within any RISC OS application. The price of Photoshop Elements is about £50 and this application is upgraded every year; it is well supported and its development is continuous. I am not aware of any RISC OS application which has the facilities offered by Photoshop. However, within RISC OS, !SwiftJPEG does display JPEG files correctly and Ovation Pro for RISC OS will accept JPEG files no matter whether these JPEGs have been created or edited using a RISC OS or any of the many Windows applications which can be used to process JPEG format files.

Applications for Usage

As my example of what I have called 'Applications for Usage' I shall choose a Desk Top Publisher. Generally it is advisable to use those Desk Top Publisher applications in both Windows and RISC OS which will accept the format you choose for displaying your pictures. For example, the Impression series (including Style, Publisher and Publisher+) are not able to import JPEG graphics whereas Ovation Pro can do so with great success.

If your RISC OS screenshot is a Sprite then you will have to use an application such as !ChangeFSI to convert the JPEG to Sprite format before it can be loaded into Impression.

In Windows there are many conversion programs which will accept picture files in a wide variety of formats such as TIFF and BMP and then (still in Windows) you can 'Save as ...' a choice of many other formats; these invariably include the JPEG format I recommend.

Although I have used as my example picture files in the JPEG format and a Desk Top Publishing application which uses JPEG files, a similar approach can be made for other filetypes such as audio, video and even text which need to be edited in either RISC OS or Windows before loading the edited file into an application which can use these files.

My Golden Rule of Filetypes (for example a JPEG picture file) is to choose to use filetypes which are available in both RISC OS and Windows.

My Golden Rule of Applications (for example a Desk Top Publisher) is to choose to use those applications which accept the filetypes chosen using the Rule of Filetypes.

Following these two Rules, I use JPEG rather than Sprites for bit mapped graphics (such as photos and screenshots) and, because it accepts JPEG format files, I use Ovation Pro rather than Impression as my Desk Top Publisher of choice.

Dual Environment Applications

There are a few of what I have called 'Applications for Usage' which exist in both RISC OS and Windows. I shall briefly describe two of these, both of which I use a lot.

Fireworkz is a seamlessly integrated spreadsheet and word processor application for which there are both RISC OS and Windows versions. It is not a Desk Top Publisher.

Ovation Pro is a Desk Top Publisher which is available in both RISC OS and Windows. Ovation Pro, in my opinion, is unrivalled by any reasonably priced Windows equivalent.

With both of these applications, Fireworkz and Ovation Pro, DTP files created in one version will load flawlessly into the other version. In Windows, Ovation Pro has the filetype extension, '.dpd'; in RISC OS it has the filetype &B27. Similarly, Fireworkz has the Windows extension, 'fwk' and the RISC OS filetype, Firewrkz, hex code &BDF.

Graphics which are in the format JPEG can be loaded into and retrieved from RISC OS and Windows versions of both Ovation Pro and Fireworkz; these JPEG files can be loaded into what I have called 'Applications for Editing' in both Windows (e.g. Photoshop) and into a RISC OS JPEG editor.

This is an example of what I mean by 'Best of Both'.

Still to Come

In a future article I shall discuss the use of postscript and PDF files, porting zip files, the use of fonts and porting emails from !Messenger (in RISC OS) to Windows Live Mail.

Box Out - Knowledge and Wisdom

When we are children, everything is new to us. We neither are, nor do we expect to be, familiar with the many things with which we interact. Quickly we learn a strategy which allows us to survive all but the most destructive of these new things. We learn to taste before swallowing, we learn to interact with people, we learn that operating switches can have wonderful or fatal consequences, we learn that hot things hurt and we learn how not to fall off a bicycle! Unless something terrible happens to us, unless our parents are over-protective, then we learn how to build up our knowledge of what is dangerous, what is safe and, above all, what can be intensely exciting. We experiment in order to expand our knowledge of this new, unfamiliar world. Some of our experiments are those we choose for ourselves; others are forced upon us.

When we are children we have an outlook on life in which we embrace the unexpected because we know that it has the potential to be exciting. As we grow older we begin to cherish, with increasing frequency and boring dependency, life choices which, in truth, overwhelm (some would argue, frustrate) our childhood curiosity. Instead of welcoming exploration, we choose to live in an environment which offers us the security of familiarity. We lose our appetite for the unknown; we fear that the outcome may be something bad, something we cannot control or, perhaps, something for which we no longer have the inner resources nor the resolve to handle.

I take the view that this inertia which creeps up on us as we age, is a bad thing; we lose our ability to experience the wonder, the fun, that trying out new risky things, even when we fail, gave us as children.

Have we lost our capacity for fun forever?

Let me put it to you that as we grow older, when we bravely (or foolishly?) embark upon something new, then, at first, we will probably experience failure. We will make mistakes; we will long for the old familiar things to which we have become accustomed - and conditioned. For many people the mere potential for this initial, albeit inevitable, failure discourages them from even contemplating something new; they stick to the old ways with which they have become far too comfortable to have fun.

In growing older and more set in our ways we have lost something we had in our childhood; we have lost our taste for adventure and the joy that adventures good and bad can bring. We rationalise this rejection of the unknown by over stating its dangers and under estimating the joie de vivre which it can bring.

When you are a beginner you have no right to feel disappointed when, almost inevitably, you fail - you are not yet good enough to deserve success. Don't be deterred by how bad you are at your new venture; accept this as quite normal. Don't allow your fear of making a mistake stop you from experiencing the wonderment which, as a child, you felt when encountering the unfamiliar.

When we were children, it was our mistakes and not our successes from which we gained the knowledge that helped us improve; now that we are older, I suggest to you that it is our mistakes and not our successes which bring us wisdom. In our mature years we need to make mistakes in order to gain wisdom.

Bio-Bit

Gerald tries to do something new each day. At first it was simple things such as stirring his coffee left-handed. One night it was taking a photo of the Big Dipper (sometimes called The Plough - part of Ursa Major). One day it was Windows 10!