

Gerald's Column *by Gerald Fitton*

Archive was first published in the Summer of 1988. I received a complimentary copy which I liked so much that I took out a subscription immediately. I decided that I should support this publication in other ways such as by reviewing software.

In 1998/99 the Archimedes was single tasking as was the review copy of PipeDream 2 which Paul sent me. There are a few people who still use it on an old RISC OS 1 machine. PipeDream 2 is an integrated spreadsheet / word processing package which was way ahead of its time. Let me quote the legendary Robert Macmillan: "PipeDream may be difficult to learn but (it is) easy to use". By this he meant that PipeDream was highly flexible but a lot of experience was, and still is, needed if this flexibility is to be exploited to the full.

Archive too contained many innovative editorial ideas, one of which was the specialist 'Column'. I volunteered to write PipeLine, a monthly column providing help for PipeDream users. Although Archive provided much needed Technical Help as an optional service to members I found myself helping users of this "difficult to learn but easy to use" package, a service which I still provide a dozen years later.

The PipeLine Column was renamed a couple of times before becoming Gerald's Column. The scope of the articles has expanded from PipeDream to one which covers topics from mathematics to philosophy! Nevertheless, my column has its roots in PipeDream and that is my excuse for using PipeDream and Fireworkz for this month's examples.

My subject is 'Filters'. I believe that filters for many other packages such as Schema, Impression and Ovation Pro will use the same strategy as that which I shall describe for PipeDream and Fireworkz Pro so, even if you are not a user of these packages, nevertheless you might find our ideas for the future of filters interesting.

What is a Filter?

A 'Filter' is a means of converting files from one format to another.

PipeDream and Fireworkz have built in filters for Loading and Saving a limited range of formats. I shall such filters 'Internal'. During recent months I have received many requests for an upgrade of PipeDream and Fireworkz which increases the number of packages or formats which are automatically Loaded and Saved. In this month's article I shall describe what is available and the decision we have made for future filters.

External Filters for Schema

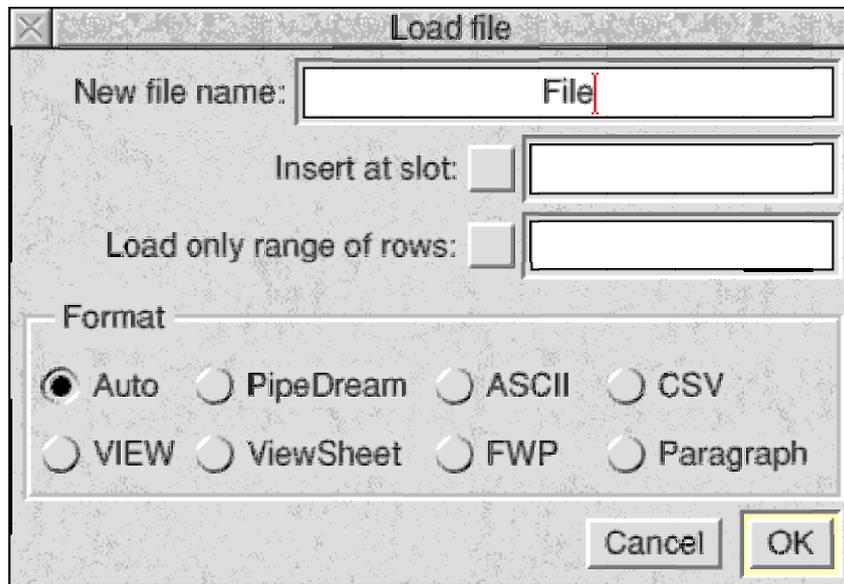
The utilities [!ConvS2WK1] and [!ConvWK1] are supplied with Schema. The first converts Schema files to the Lotus 1-2-3 WK1 format and the second converts files in WK1 format to Schema format.

I shall refer to separate utilities such as these as 'External Filters'.

Internal PipeDream Load Filters

Let's take PipeDream as our first example. PipeDream has a Load file menu which allows you to make your selection manually. Fireworkz does not have this facility.

Have a look at the screenshot below:



The default selection is 'Auto'—an automatic selection from the other seven formats listed. Naturally PipeDream can Load files in PipeDream format. Let's have a look at the seven other formats.

ASCII format is often referred to as 'Plain Text'. Codes below ASCII 32 are ignored.

CSV stands for Comma Separated Value, a common format for transferring spreadsheet and database data from one package to another; PipeDream Loads each Value into a separate cell. Although it is an undocumented (or, more correctly, partly documented) feature, files containing the <Tab> character, ASCII Code [09], are loaded as 'Tab Separated Value' files when the CSV option is selected.

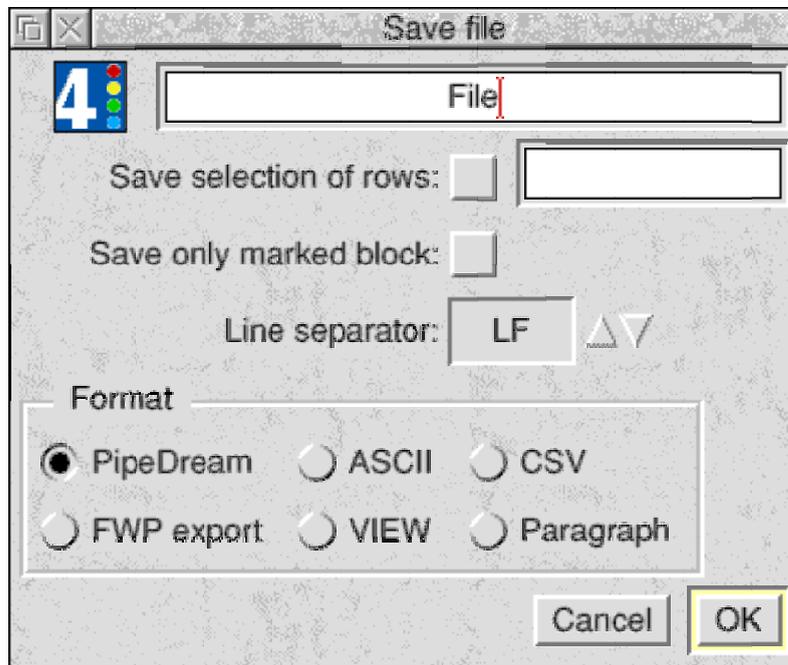
Also, PipeDream will Load files in Paragraph format. This choice was considered essential because PipeDream (unlike Fireworkz) does not support multiple rows within a single cell. If the Wrap option is ON then Paragraph format will automatically format a long text string into multiple rows. A blank row is used as a separator between paragraphs.

The other three formats, VIEW, Viewsheet and FWP (First Word Plus) are historical formats used by the pioneering BBC Computer (the precursor to the Acorn Archimedes Series). These formats are rarely if ever used these days.

Another undocumented feature of PipeDream is that if you drag any file to the PipeDream icon on the icon bar it will be loaded. PipeDream does not return an error message such as "An application that loads a file of this type has not been found".

Internal PipeDream Save Filters

Using the internal Filters you can Save PipeDream files in six different formats (including the default, PipeDream). These are shown in the screenshot below:



The two historical formats, FWP export and VIEW, are virtually unused these days. There is a negligible requirement to port these files from the Archimedes to the BBC computer.

Of the others, Paragraph format is useful for Saving text files which are subsequently Loaded into, say, Ovation Pro. If you Save a PipeDream file containing multiple rows of text in ASCII format then, in Ovation Pro, each row will produce a new paragraph; if you Save in Paragraph format then multiple rows will convert to a single paragraph. A blank row is used to separate paragraphs. You may need to experiment with the Line separator if you are porting files into a word processor which runs under Windows.

CSV format is used when the data is to be ported into a Spreadsheet, Database or as a Table into a Desk Top Publisher. You can not Save in TSV (Tab Separated Value) format from PipeDream 4 or 4.5; you could in some earlier versions of PipeDream.

External PipeDream Filters

Colton Software provided two external filters for PipeDream. I call them 'External' because they are utilities which are separate from the PipeDream program.

In the directory PipeLotus (on the Archive monthly disc and elsewhere) you will find the July 1999 version of the PipeDream to Lotus 123 converter. Until the rise of Excel, Lotus 123 was the definitive spreadsheet package for the Windows platform. Even now it is regarded as the lowest common denominator for the exchange of spreadsheet formulae.

The advantage of using the !PD123 converter instead of Saving in CSV format is that !PD123 converts PipeDream spreadsheet formula as well as values. Also it works in reverse converting Lotus files into PipeDream format.

To use it you must install !PD123 on the icon bar and then drag the PipeDream file to the icon. A Save box pops up; from it you can Save a Lotus format version of the PipeDream file. Lotus files will Load into Excel automatically since Excel has a Lotus input filter.

In the directory PipeImp of the Archive disc you will find the PipeDream to Impression converter provided by Colton Software. It can be used for Tables as well as those PipeDream files which are mainly single column text. Generally, if I have a file which is a single column of text, then I will Save in Paragraph format and Load that text file into Impression; if I have a Table then I will use the !PD_Imp filter.

!PD_Imp does not work in reverse from Impression to PipeDream.

Internal Fireworkz Load Filters

Of course Fireworkz Pro will accept files in Wordz, Resultz, Fireworkz (non Pro) and Recordz formats. If you have (a recent version of) Fireworkz Pro on the icon bar just double click on the file and it will Load automatically. With earlier versions of Fireworkz Pro you will need to instal Fireworkz on the icon bar and then drag the files to the icon.

Fireworkz Pro has internal filters for Loading RTF (Rich Text Format), Lotus WKS and WK1 format, PipeDream, FWP (First Word Plus), CSV format and ASCII format.

In addition the current version does have an Excel version 4 Load Filter. However, as a general rule, it is better to Save the Excel file in Lotus format because Lotus formulae will Load into Fireworkz Pro more reliably.

The method of use for RTF, Lotus, Excel, PipeDream, FWP, CSV and ASCII formats is to drag the foreign format file to the Fireworkz icon and then select a suitable Fireworkz template. I recommend that you create and Save a suitable Fireworkz Template file before dragging the 'foreign' format file to the Fireworkz icon. Some reformatting is inevitable.

The RTF format used by Microsoft Word undergoes continual development. The Fireworkz RTF Load Filter was last upgraded at Fireworkz Pro version 1.31/02 to match the more recent versions of the Microsoft RTF Save filter. If you use an earlier version of Fireworkz Pro with later versions of Microsoft Word then you will find that the conversion is worse than if you use Fireworkz Pro Version 1.31/02 or later. Earlier versions of Microsoft Word work well with earlier versions of Fireworkz Pro!

In Fireworkz Pro version 1.31/05 (17-Jul-2000) the loading of PipeDream files has been made automatic. In a Fireworkz Pro cell you can have a formula which refers to a cell or cells or even Names which are in a PipeDream file. The PipeDream file will be automatically loaded and the Fireworkz Pro cell reference will be evaluated using the data from the PipeDream file. This feature has been added because many users of both PipeDream and Fireworkz are using PipeDream for all the data processing (including data entry) but they prefer the greater layout flexibility of Fireworkz for the final printed or displayed document. Let me expand on the use of this new 'HotLink'.

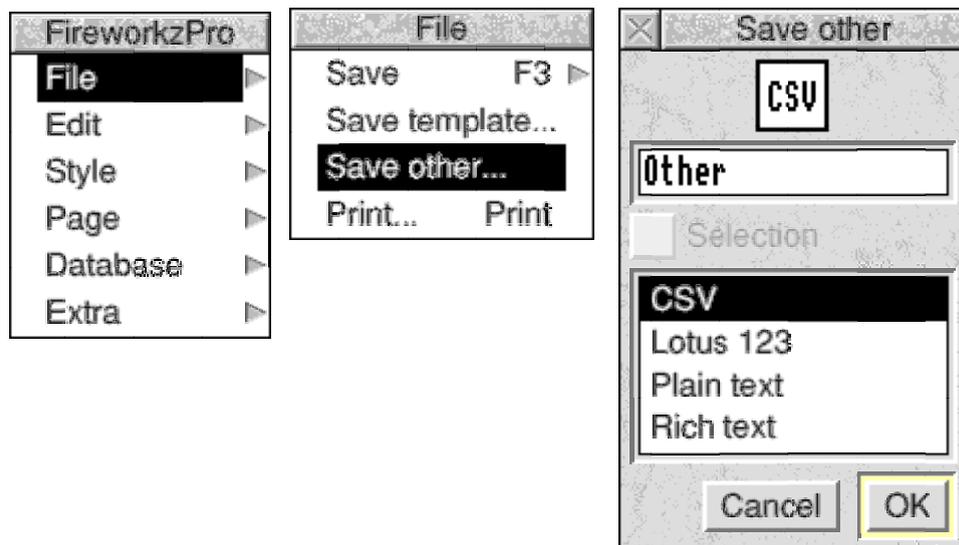
PipeDream is much faster than Fireworkz Pro, it does not 'clutter' the screen with page boundaries. Fireworkz Pro uses Floating Point arithmetic for both screen drawing and spreadsheet calculation. Floating point hardware improves the speed of Fireworkz Pro beyond all recognition—but I know of only a few who have an FPA.

Generally, when compared with Fireworkz Pro, PipeDream is faster and much more flexible with regard to the input, output and processing of data, particularly if the System Font is used. However, Fireworkz Pro with its multi row headers, use of colour, Styles, variable width cells and page based layout is a much better package for the final document.

This new 'HotLink' between PipeDream and Fireworkz Pro makes it much easier to use PipeDream for data input, data processing, etc and Fireworkz Pro for the output document.

Internal Fireworkz Save Filters

The options for the formats in which you can Save a Fireworkz file are shown in the screenshot below.



The 'Plain text' format is ASCII.

The 'Rich text' is one of the many RTF formats (all of which claim to be 'standard'). The RTF format in the Fireworkz internal filter was upgraded at version 1.31/02 (10 Jun 1999) to match recent versions of Microsoft Word.

The CSV format does not preserve spreadsheet formula whereas the Lotus format does. Lotus files Saved using the internal filter will Load into Microsoft Excel.

External Fireworkz Filters

Harriet Bazley has developed two external filters which you will find in the FireImp and FirePipe directories of the Archive disc. The !FireToImp filter converts Fireworkz files to Impression format. The !FirePipe filter converts Fireworkz files to PipeDream format.

I and others are most grateful for the work which Harriet has put into these utilities. She is more than willing to discuss details with anyone having difficulties or interested in developing them further.

You might like to use them as examples if you decide to develop other filters.

Other Filters

In the past some of our PipeLine members have written single tasking BASIC programs which have created multi column PipeDream files and Saved the PipeDream file they have created. Perhaps the most famous of these is a program called [DiscsCat] written by one of our former PipeLine members, Francis W Aries. Francis' program allows you to create a catalogue of the files on a floppy disc; the catalogue is in PipeDream format. I include it (together with my tribute to Francis) in the DiscsCat directory. Of course, the PipeDream file constructed by this program will Load into Fireworkz.

The Future

Generally it is easier to write a program for an Import Filter for PipeDream than it is for Fireworkz. The PipeDream 'constructs' are simpler than those of Fireworkz. PipeDream uses a pair of % characters to enclose an instruction. Here are two examples. The first is the construct %CO:B,16,60% which means that Column B has a width of 16 'characters' and a 'wrap width' of 60 'characters'. The second is the construct %V%L%26 which means that this particular cell contains the Value 26 and is Left aligned.

At present there is a great deal of interest in the HTML format. I am asked regularly if Save in HTML format can be added to the PipeDream and Fireworkz Save options.

We have given a great deal of consideration to including more internal filters within PipeDream and Fireworkz and we have concluded that External Filters is a better alternative. Part of the reason for this is that PipeDream and Fireworkz are 'stable' and so the programme is modified only slowly rather than many times a year!. We do not want to create a new upgraded version when the only change is one which takes account of new 'standards' for RTF or Excel or HTML. We believe that it is much more satisfactory to provide an external filter which can be changed more rapidly and does not require users to upgrade their main program (PipeDream or Fireworkz) unnecessarily.

Third Party Involvement

Consequently we are encouraging third parties (that means you rather than us) to develop filters for Loading 'foreign' formats into PipeDream and Fireworkz and for Saving PipeDream and Fireworkz files in these 'foreign' formats.

The two examples by Harriet Bazley use a BASIC program to convert the files and I believe that this is the simplest way of producing most filter programs. One filter for which there is a demand is a filter for converting PipeDream files to HTML. This could be written in single tasking BASIC. If you want to have a go then we will give you what help we can by way of explaining the PipeDream constructs.

Of course the third party writing the filter (you) would be the owner of the copyright of the filter. If you wish then they can sell it and we will help with its promotion. However, up to now those who have created filters have made them available either without charge or for a nominal payment.

Please contact me if you would like to undertake such a project.

Finally

Thanks for your many emails and letters. Thanks also to those who have sent me a self addressed sticky label and return postage with their letters. Again my thanks to those who have included an example illustrating their comments or difficulties as an email attachment or on floppy disc. My address is that of Abacus Training which you will find in the Fact File at the back of Archive.