

Gerald's Column by Gerald Fitton

The main topic for this month is printing labels. I don't know how it happens but it seems to me that many people ask for the same thing at the same time and this month it's labels. Perhaps it was the article on Printers in last month's Archive which triggered the requirement in your minds — maybe it is coincidence!

First a few other short points.

P(y)rotechnic

Fireworkz at Colton Software.

This section will use up about the space of these few notes.

You may receive it in the form of a press release directly from Colton Software. It may not be released in time for your deadline so I will be unable to send you the two paragraphs.

If the news is not released in time for your deadline then you will have to delete this section.

The lottery

I have received over a dozen letters pointing out a couple of errors which appeared in my article about recursion in the June 1995 Archive. It is not one of those occasions when I have made a deliberate error or made an outrageous remark in the hope of provoking a response; nor is it one of those many occasions when I don't know what I'm talking about! I did know the right answers and simply typed the wrong values.

The first mistake is in the section where I calculate the number of possible different selections of six numbers from forty-nine. The formula which I gave as $nCr(49,6)$ is correct but the value is 13 983 816 and not 13 986 816. The consequence is that the chance of winning the lottery is slightly better than I quoted – but I don't think you'll find that the difference is significant.

Second mistake. This occurred in the paragraph dealing with selecting five of the six winning numbers but without the bonus ball number. Many of you wrote to me saying that the value I quoted, 258, was right but that I wrote down the formula as $nCr(49,5)*nCr(42,1)$ and should have written $nCr(49,5)*nCr(43,1)$. This was not the mistake! The formula, $nCr(49,5)*nCr(42,1)$, is correct but its value is 252 and not 258 as I quoted. The difference, 258 – 252, is the 6 which qualify for the 'Five plus the Bonus Ball' prize. We must exclude those 6 winning lines where the sixth ball is the bonus ball because you don't just get the prize for five winning numbers but the prize for 'Five plus the Bonus Ball'!

Printers

As a result of my article about choosing a printer in last month's Archive I have already had many letters. Although I have replied to each of you personally, I would have liked to give you all a mention in Archive. Space doesn't allow that! Your comments to me are most appreciated and they help me to extend and consolidate my knowledge. That in turn makes my advice to you more accurate and hence more valuable to others.

I have chosen only one letter. It is from John Evans of Mijas Software and I shall publish only part of his long and most interesting letter. For colour printing John uses an Epson Stylus. He is delighted with the results and has sent me many samples. I am sure that the two points I have selected from the many will be of general interest.

The first is that version 1.28c of Printers has pleased him "especially". John, like many of my correspondents, echoes my own view that it is definitely worth upgrading to V 1.28c.

John's second point, backed up by samples, is that 360 dpi colour pictures look "washed out" but pictures printed at 720 dpi are "fantastic". By the way, as well as printing on paper he can print onto Schwan Stabilo overhead projector film. My comment in last month's Archive was that I thought 360 dpi was insufficient; John's samples reassure me about the value of going to a higher resolution for colour printing.

Did I say two points? John's third point does not refer to the Epson. For monochrome printing he uses a Hewlett Packard III Si laser printer to produce 300 copies (per month?) of his Parish Magazine, The Denver. John states that running costs would be higher on an offset lithograph. He praises the HP machine for its reliability, consistency and low running costs. In addition he echoes the view I expressed last month which is that laser printers produce higher quality than what he calls 'copy' printers.

Printing labels from a database

This is my topic for this month's article. As my example I shall describe how to print labels on an Avery L7161 sheet of labels. The L7161 holds 18 labels per sheet in 6 rows and 3 columns. It is a most useful size because the labels, being 63.5 mm by 46.6 mm, can be used as disc labels as well as address labels. The method I describe can be extended to other sizes of labels.

What package shall I use for my exposition? I have no doubt that many of my regular readers will be horrified and others intensely pleased that my choice is a rather well worn package, PipeDream 4. I have many reasons for choosing PipeDream 4 some sentimental and others pragmatic. One of my correspondents from New Zealand lists PipeDream amongst the many packages from which he might print his labels. After trying several other packages, like me, he is now using PipeDream. His final comment is that producing labels from PipeDream is faster than anything else that he's tried even though it took him longer than any other package to get it to work successfully.

Two other reasons are that (a) many of my readers still have PipeDream and use it regularly; (b) those of you with Fireworkz should be able to modify the PipeDream method for your package.

Perhaps my main reason for choosing PipeDream is because it allows me to repeat a maxim I first included in Archive many years ago. Although it is difficult to set up a label printing application in PipeDream, once set up, it is easy to use. The quote about PipeDream from long ago, "Hard to learn – easy to use", was intended to persuade you that, when you get to know PipeDream, there are ways of doing many things which are more difficult to achieve or even impossible with other packages.

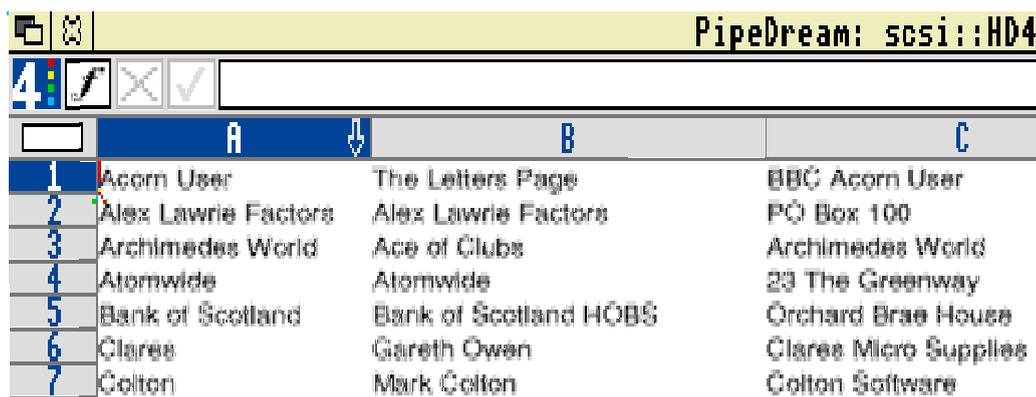
Although this article relates specifically to using PipeDream I shall describe the general principles so that you can work out how to apply those principles in your favourite package.

If you have Fireworkz or Impression Publisher here is your opportunity to write to me explaining your method so that I can write it up for Archive.

All the files to which I refer are on the Archive monthly disc in a directory called Labels.

The database

The screenshot below shows part of a typical database file [Addresses] in PipeDream format:



	A	B	C
1	Acorn User	The Letters Page	BBC Acorn User
2	Alex Lawrie Factors	Alex Lawrie Factors	PO Box 100
3	Archimedes World	Ace of Clubs	Archimedes World
4	Atomwide	Atomwide	23 The Greenway
5	Bank of Scotland	Bank of Scotland HOBS	Orchard Brae House
6	Claree	Gareth Owen	Claree Micro Supplies
7	Colton	Mark Colton	Colton Software

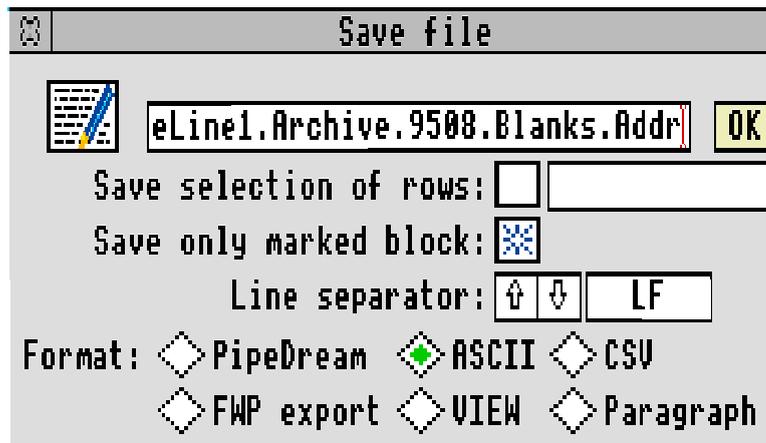
I use columns B to F for the address label. I use Column A only as a key field. In the case of private individuals it holds the surname of the addressee. Row 6 best shows the way in which I use column A in the case of a company.

You may have seen my occasional advertisement in Archive for the user groups I run. Other columns from G onwards hold details of the discs which subscribers have had or which they want at some time in the future. When I need a run of labels I sort the database on the column containing the disc we're about to send out. This collects together at the top of the database all those people for whom I need a label.

The TSV file

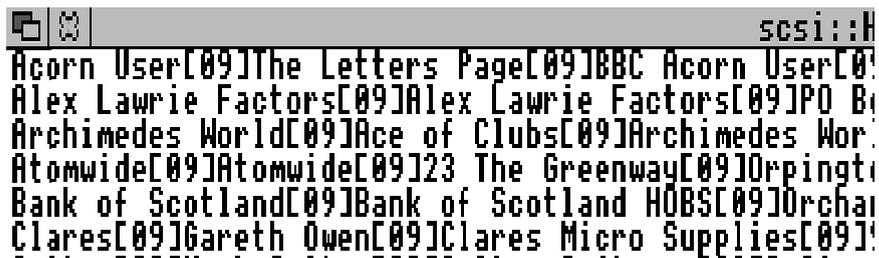
The acronym TSV stands for Tab Separated Value. Using PipeDream you need the label database in TSV format; other packages may require Comma Separated Value, CSV, format.

In PipeDream mark the block of addresses you want and save in ASCII format. I use the file name [Addr] for this purpose. The screenshot below shows the Save options you should select to save in TSV format:



The filetype of [Addr] is Text and it will load into Acorn's Edit utility.

The screenshot below shows part of the [Addr] file after it has been loaded into Edit:



The [09] is Edit's way of representing the Tab character. Each row is one record and each field is separated from the next by [09].

The [Default] PipeDream printer driver

We shall be using a PipeDream printer driver rather than a RISC OS driver and we shall print to a file (rather than to the printer) as an intermediate step.

The PipeDream printer driver we need must contain nothing which will introduce extra characters through, for example, the PON string. The [Default] printer driver supplied by Colton Software with PipeDream is such a printer driver.

You can change the PipeDream printer driver through the command <Ctrl PD> or through the Print – Printer configuration sub menu. If you save the file after changing the printer driver then the driver you've chosen will be saved with the file.

The text below is the total content of the [Default] printer driver supplied by Colton Software with PipeDream:

PipeDream printer drivers

This driver is an empty printer driver in order to enable the PipeDream defaults to be restored.

Created 15-Oct-91.

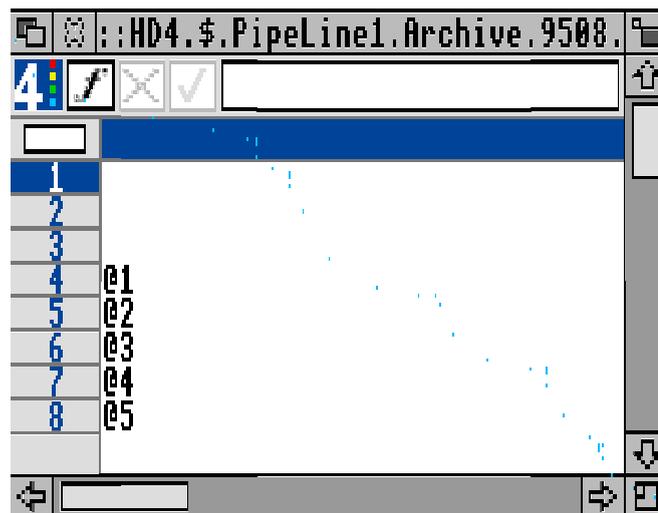
End of PipeDream printer driver

If you are using a package other than PipeDream and want to create such a file then you need to create a RISC OS text printer driver which introduces no extra characters through page start and line start strings etc, and use that printer driver.

The [OneLabel] file

The mail merge facility supplied as part of PipeDream allows you to extract values from a TSV file (held on disc) into the output which is 'printed' to a disc file.

The screenshot below shows the [OneLabel] file:



[OneLabel] represents a single label (remember there are 18 to a sheet) with rows 4 to 8 containing the contents of columns B to F of the original [Addresses] database.

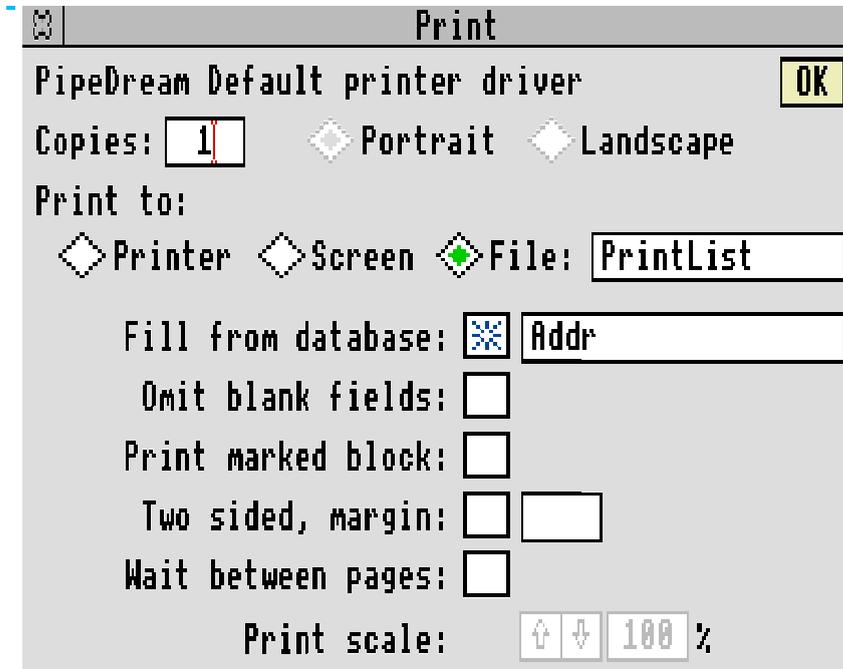
The values @1 to @5 in rows 4 to 8 have a special significance. They ensure that, when printed, each of the many labels produced contain data extracted from the [Addr] TSV format file. The first of the @ values which could be used is @0 but you will remember that column A of [Addresses] does not form part of the address which we want to print. @1 loads the contents of column B and @5 the contents of column F. Note that it does so from the file [Addr] (the TSV file held on disc, not in memory) and not from [Addresses].

If you are using a package other than PipeDream then you may need the [Addr] file in CSV format and not TSV format.

The mail merge operation

This is executed quite simply by loading the file [OneLabel] and tapping the <Print> key.

Looking at the screenshot below you will see that the printer driver chosen is the one called [Default].



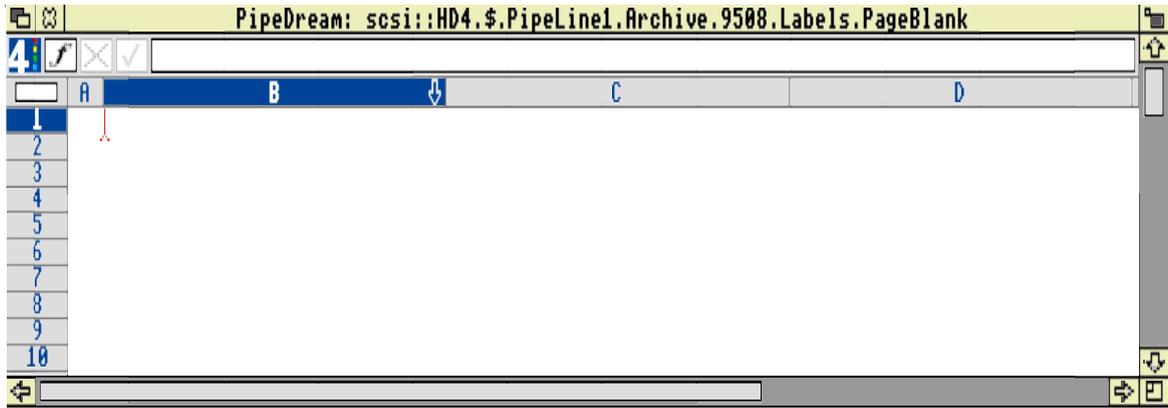
Using PipeDream 4, but not PipeDream 3, the printing options are saved with the PipeDream file. If you have the files from the Archive monthly disc you will find that the [OneLabel] file has been set up to use the [Default] printer, to print to the file [PrintList] and to use the database file [Addr]. If you are making up your own set of files then remember to save the blank [OneLabel] after you have set up the print options.

Also, instead of printing to Printer, ie on paper, you will see that PipeDream has been set to print to File, the file called [PrintList]. [PrintList] will be created in the same directory as that from which [OneLabel] was loaded.

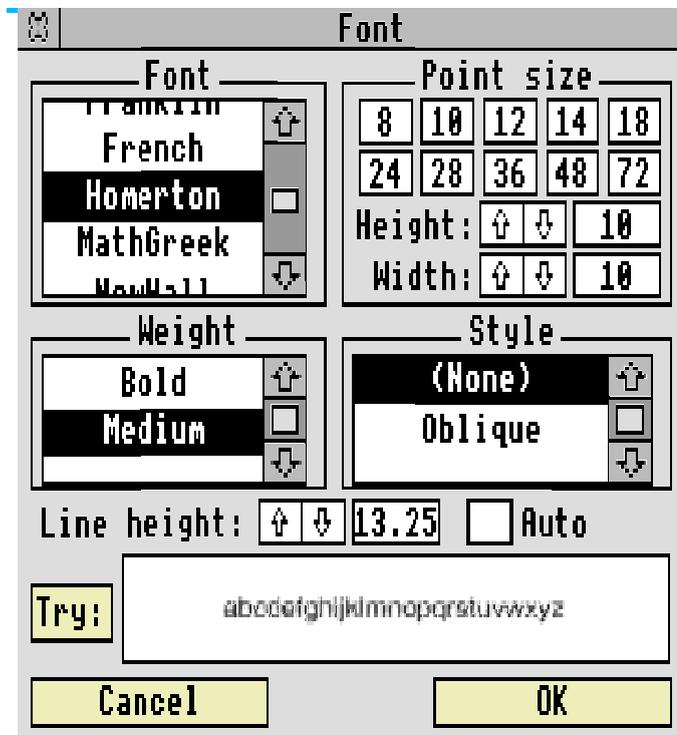
The mail merge operation fills the slots of [OneLabel] containing @1 to @5 (slots A4 to A8) with data from the database contained in the TSV format file called [Addr] and 'prints' the result, in plain ASCII format, to the file [PrintList].

The [PageBlank] file

The labels are printed from this file. When it is loaded it looks like the screenshot below:



Column A is used to set the left margin. Columns B, C and D are for the address labels and so the width must be adjusted to match the width of the label. For the Avery L7161 labels this is a <Ctrl W> width of 29 characters.



I use 10 rows per label so I need to choose the line height so that 10 times the line height equals the label height.

The line height is adjusted through the <Ctrl PFG> command or the Print – Font sub menu. From the screenshot above you will see that I have used a line height of 13.25 points. Different printers seem to have slightly different slippage as the paper is dragged through the rollers – my correspondents have had to adjust this value slightly to suit their printer. You will see that I use Homerton, a sans serif typeface, for address labels. The Post Office have told me that they prefer such a typeface.

If you are creating the file [PageBlank] then Save it after you have adjusted the line height.

Three columns of labels

Drag the file [PrintList] into slot B1 of [PageBlank] and you will find that you have one column of addresses in column B. Columns C and D are blank.

Go to the <End> of the file and note the row number. In the case of my example on the Archive monthly disc this is 180. Divide the row number by 3. $180/3 = 60$. Every label uses 10 rows so you need to round up to the nearest 10 and then add 1. Use <Ctrl CGS>, Cursor Goto Slot, to place the caret in slot B61. Mark the block B61 (in the example this is the first row of the 7th label) to the end. Place the cursor in slot C1 and execute <Ctrl BM>, Block Move. Labels 7 to 18 will fill column C. In the same way mark a block from C61 to the end of column C and move it to slot D1. You will now have three columns of labels which you can print out using the RISC OS drivers.

Although the example has only 18 labels and uses only one page of labels, I'm sure you'll see that you should move two thirds of the the addresses from column B to C and then a third from C to D if you are to use the pages of labels most efficiently.

Automation

I use an Obey file which calls up and runs several PipeDream command files to execute the whole of this label printing operation automatically.

I have decided, albeit with some reluctance, not to give details in this article since the space I would use and the possibilities for making mistakes are too great. Forgive me but I don't want to receive mountains of mail from you telling me how you've tried unsuccessfully to get the obey file to work with your system! If you understand Obey files and if you understand PipeDream command files I'm sure you'll be able to automate your label printing. If not then, even manually, the operation is a fairly slick one and definitely fast.

Other label sheets

I know that many of you use a label sheet other than L7161 for your address labels. If you use PipeDream and have created a set of files similar to [OneLabel] and [PageBlank] then please let me have them for distribution to others. If you have problems setting up PipeDream and need help in creating [OneLabel] and [PageBlank] for your labels and database then please send me the files that you have tried, on a disc please, and I'll do my best to find out what's going wrong for you.

Other packages

At this stage please don't ask me for details of how to do the same thing with packages other than PipeDream because I will find it difficult to provide you with a ready made solution.

If you have already created such an application for use with Fireworkz, Fireworkz Pro or Publisher's mail merge then please send me the example with the templates on a disc. When these arrive here then I'll let you know and I'll announce that I (or rather you) can help those who want to use the other package.

In Conclusion

I have decided to release our telephone number; you will find it on the inside cover of Archive under the heading of Abacus Training in future months. However, I must warn you that I have a 'day job' and that most of the time all you'll get is a combined answerphone and fax machine.

The number is +44 1793 723347 from outside the UK and 0 1793 723347 from within the UK. I would prefer a fax to a verbal message.

What I prefer most of all is for you to send me a disc containing your attempt to solve your problem. Please include example files if appropriate.

Thanks again for all your letters. I really do enjoy receiving them even if there is sometimes a delay between receiving them and replying.