

Gerald's Column

by Gerald Fitton

PipeDream does contain a Sort command which is not case sensitive. In this month's article I shall describe how to use functions built into PipeDream which will allow you to automatically execute case sensitive sorting.

Case Sensitive

I shall start by explaining the difference between Case Sensitive and Not Case Sensitive sorting. Look at the screenshot below:

	A	B	C	D	E
1					
2		Original		Sorted	
3		Words		Words	
4					
5		zilch!		Aaron	
6		beta		Abacus	
7		zulu		abacus	
8		Bravo		alpha	
9		Abacus		Beta	
10		abacus		beta	
11		Aaron		Bravo	
12		alpha		zilch!	
13		Beta		zulu	
14					

For my example I have a column of words such as those of column B which I want to sort. I mark the block, B5B13, and execute the PipeDream command <Ctrl BSO> (Block SOrt). The result of such a sort operation is shown in column D. You will see in this Sorted Words column that "abacus" and "alpha" precede "Beta" and that "beta" precedes "Bravo".

Now look at the screenshot on the next page.

In the Sorted Words column, column D, you will see that all the words starting with a lower case letter such as "alpha" are below all the words starting with an upper case letter such as "Bravo" and "Beta".

In this article I shall explain how I have done this and how to automate the process.

c:\\$.From A540.SQ 01.Archive.2007.0704.Files.PipeDream.Sort02b *

	A	B	C	D	E
1					
2		Original		Sorted	
3		Words		Words	
4					
5		zilch!		Aaron	
6		beta		Abacus	
7		zulu		Beta	
8		Bravo		Bravo	
9		Abacus		abacus	
10		abacus		alpha	
11		Aaron		beta	
12		alpha		zilch!	
13		Beta		zulu	
14					

Rank Number

First a digression.

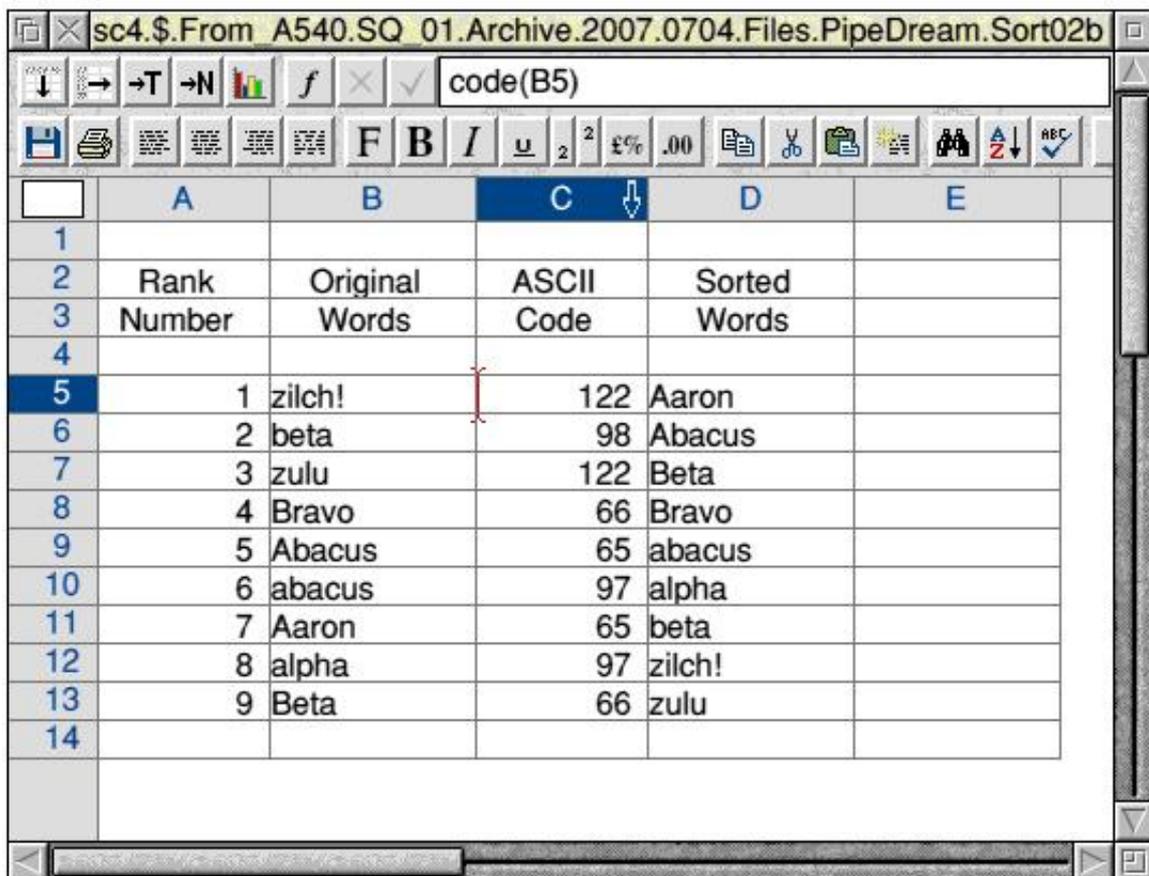
c:\\$.From A540.SQ 01.Archive.2007.0704.Files.PipeDream.Sort02b *

	A	B	C	D	E
1					
2	Rank	Original		Sorted	
3	Number	Words		Words	
4					
5	1	zilch!		Aaron	
6	2	beta		Abacus	
7	3	zulu		Beta	
8	4	Bravo		Bravo	
9	5	Abacus		abacus	
10	6	abacus		alpha	
11	7	Aaron		beta	
12	8	alpha		zilch!	
13	9	Beta		zulu	
14					

For the purpose of consistency in my screenshots I wanted to be sure that I could always get back to my original list of words. As you can see from the next screenshot I have included a Rank Number in column A so that, by sorting on this column I can always get back to my original list.

The Clever Bit

Of course, this is the bit you've all been waiting for.



	A	B	C	D	E
1					
2	Rank	Original	ASCII	Sorted	
3	Number	Words	Code	Words	
4					
5	1	zilch!	122	Aaron	
6	2	beta	98	Abacus	
7	3	zulu	122	Beta	
8	4	Bravo	66	Bravo	
9	5	Abacus	65	abacus	
10	6	abacus	97	alpha	
11	7	Aaron	65	beta	
12	8	alpha	97	zilch!	
13	9	Beta	66	zulu	
14					

In cell C5 I have entered the PipeDream formula code(B5). This function, code(cellref), returns the ASCII code of the first character in the referenced cell. This formula is replicated down column C so that, for example, C12 contains the formula code(B12).

The ASCII code of "B" is 66 and the ASCII code of "b" is 98. Consequently, we now have a number in column C which allows us to distinguish "B" from "b".

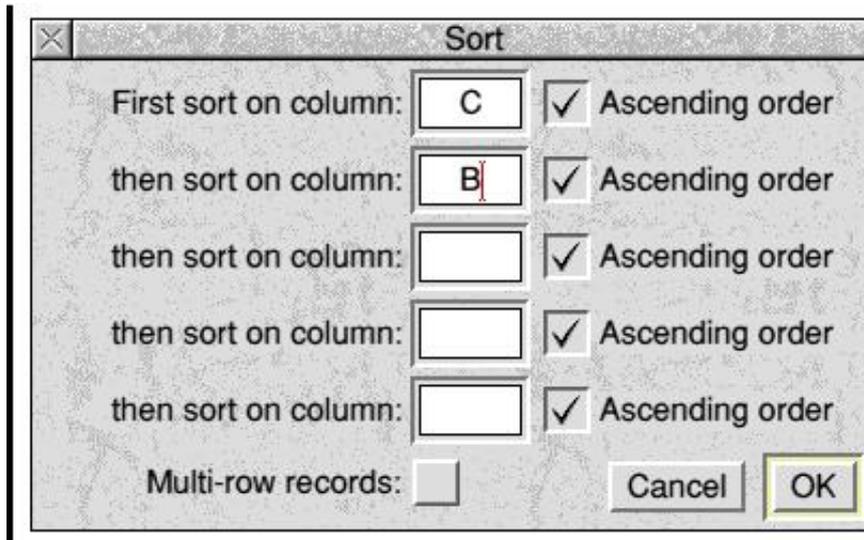
Case Sensitive Sorting

Probably if you are doing this operation 'for real' then you would not bother with the Rank Number of column A, or maybe you would. It's up to you. In what I describe I shall assume that you are using it for some perverse (or dare I say 'Paul Beverley type') reason.

Mark the block A5C13 (or whatever your block consists of) and then execute <Ctrl BSO>.

The Sort sub menu pops up.

You will see that I have entered C as the first column on which to sort. This is the column containing the ASCII codes so that it will distinguish between upper and lower case letters. This ensures that the sort is Case Sensitive.



What PipeDream does is to sort the whole marked block using this column only. If this was the only criterion for the sort then you could easily find that you had "Abacus" above "Aaron" and "zulu" above "zilch!".

This is not what you want.

By using as your second criterion for your sort the original column of words, column B, you will ensure that words such as "Abacus" and "Aaron" are sorted on the second (and remaining) characters of the words.

The Final Step

Finally, mark the sorted column B and copy it to the empty column D. The result is the screenshot above which shows that the Sorted Words have been sorted in a case sensitive manner.

At this point you can, if you wish, delete unwanted columns or otherwise make the document more presentable.

Automation

One of the regular complaints about PipeDream is that the commands are "Quirky".

This is true. The list of commands dates back to well before the GUI (Graphic User Interface) of (some, at the time said "for") WIMPs (Windows, Icons, Mice and Pointers) so you would expect this kind of non standard operation of marked blocks etc.

On the other hand, PipeDream was created in the days when booting up in BASIC was the norm rather than into a DeskTop environment. In those days most computer users expected, indeed they even demanded, that they should be able to 'tweak' absolutely everything used by a program! Consequently, the expert user of PipeDream can make it do almost anything except play music and run videos! Computers didn't run videos in the days when PipeDream was invented and developed.

There are two ways of automating the process I've described above. One is to use a Command File, a list of PipeDream commands which are executed automatically when the PipeDream Command File is run; the other is to use a Custom Function to do the sorting.

This month I'll describe the use of a Command File.

The Data File

In this next screenshot you'll see two files.



The file on the left, [Sort3a], is a 'before' and the file on the right, [Sort3c] shows the file 'after' sorting using a PDCmdFil (Command File) which I've written to do the job.

In operation, place the cursor anywhere in column A of [Sort03a]; double click on the PDCmdFil [Sort03b] to run it; then, after some screen action you'll see the file transformed to the version shown as [Sort03c]. I haven't used the Command File to rename or save the sorted file but it would have been easy enough to add it.

I am sending all the files to Paul and I would like him to do the actions I've described in the previous paragraph (double click on [Sort03a] followed by double click on [Sort03b]) and then he will assure you that not only does it work but that, with [Sort03b] sitting on the DeskTop, any column of words can be sorted using a double click on this Command File and that it is (in my opinion - and his?) easier than doing a more conventional manual sort!

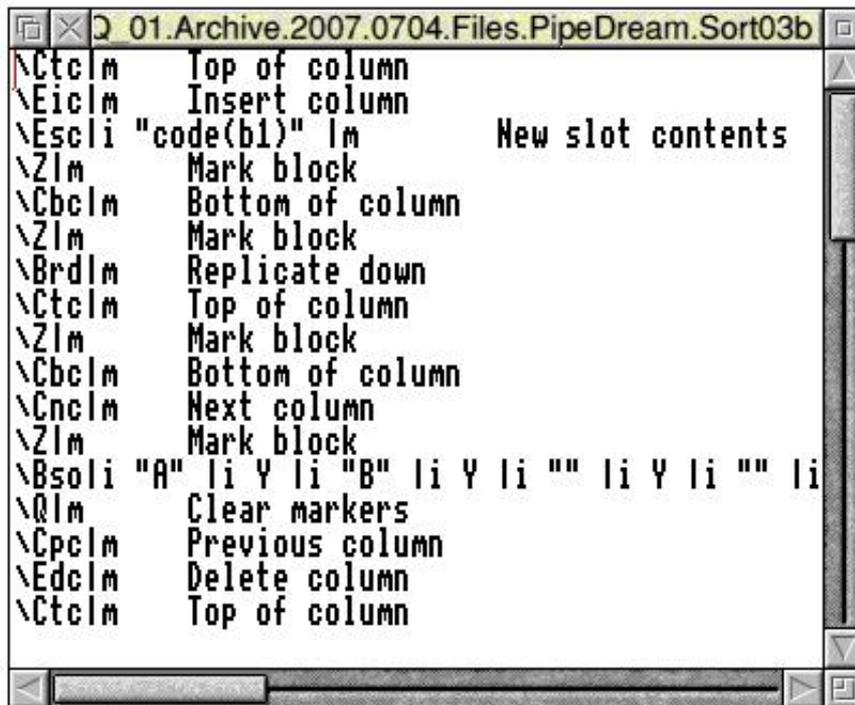
The Command File

Although I used the words "which I've written" to describe the PDCmdFil, [Sort03b], that is really a gross over-statement of my involvement.

PipeDream has the built in facility to record a Command File.

All that I did was to execute <Ctrl FY>, enter the name of the Command File, [Sort03b], and then do the job once manually followed by another <Ctrl FY> to close the Command File and the Command File appeared by magic alongside [Sort03a].

There is a little skill in choosing exactly how to execute the sequence of commands in such a way that the Command File Recorder isn't confused - but I shall not confuse you at the moment by describing in detail what to do and what not to do when recording a Command File. Nevertheless, in order to partly satisfy the curious (who haven't got a copy of this command file - it's on the monthly disc and elsewhere) I include as my final screenshot a list of the commands which are in the Command File. The important bits are not the comments (such as "Top of Column") but the Commands (such as "\Ctc|m"). You can leave out all the comments leaving only the Commands. The file will be much smaller and totally inscrutable except to an expert!



```
01.Archive.2007.0704.Files.PipeDream.Sort03b
\Ctc|m    Top of column
\Eic|m    Insert column
\Escli "code(b1)" |m    New slot contents
\Z|m     Mark block
\Cbc|m    Bottom of column
\Z|m     Mark block
\Brd|m    Replicate down
\Ctc|m    Top of column
\Z|m     Mark block
\Cbc|m    Bottom of column
\Cnc|m    Next column
\Z|m     Mark block
\Bsoli "A" |i Y |i "B" |i Y |i "" |i Y |i "" |i
\Q|m     Clear markers
\Cpc|m    Previous column
\Edc|m    Delete column
\Ctc|m    Top of column
```

Writing to me

If you have a PipeDream problem then please write to me at archive@abacusline.co.uk.

Also, please let me know whether this sort of article is the sort of thing you would like to see in Archive or whether you prefer a more general article?