



Playing it off-key

Stephen Wells waxes lyrical about entering and stacking data without an arpeggio of keystrokes, by composing your own macros.

We start this month with a query from Dr H Baillie-Johnson of the Norfolk & Norwich Hospital, who emailed me to request "...an easy way to enter data into calculation cells in the top few rows of a spreadsheet, and then, without playing an arpeggio of keystrokes, have the row stored in the bottom of the sheet, stacking upwards."

He continues: "I'd like to enter a row of cells, see the results, and then dump the contents onto the top of the stack, leaving the top of the sheet clear for the next row of data entry. I use either Excel 5 or Lotus 1-2-3 Version 3.1."

Having at an early age passed the Grade II, Pianoforte exams of the Royal College of Music myself, the arpeggio metaphor tickled me. In the same way that you can record a tune as you play it, with Excel or 1-2-3 you can record your actions and from then on just play them back as often as you wish. Similarly, you can write down your composition. The song sheet in this case is a macro. Or you can get the spreadsheet to write it — which is what I did in this instance.

As Dr Johnson sent no more than the above, I've constructed an example on the lines of his description — *but please take note that medically-speaking it is, of course, nonsense* (see Fig 1).

The entry line is Row 1. The only calculation is that the dates in Column F are 90 days after those in Column A. This is simply to check that a transferred formula works. The "stack" is currently in rows seven to 13. As requested, the new row will shift down to the top of the stack (row seven) and the other archived data lines will move down.

I happened to use Excel 7, but Excel 5

works in a similar way. You choose Tools, Record New Macro, and give the new macro a name and shortcut key. I chose "Move_Row" and Ctrl+m.

You can assign your new macro name to appear on the Tools menu. Another option lets you store the macro under "This Workbook." That means a tab with the "Move_Row" name appears automatically at the foot of your screen whenever you load your workbook. Then you press the keystrokes you want the macro to emulate. I pressed the keys in Fig 2.

It's easy to see what's happening: the cursor zips back to square one, goes from there down to row seven and slips in an extra row; then it jumps back to cell A1. The macro then highlights the contents of that row, cuts it and pastes it down on row seven. Then the cursor goes back to the start, so you're ready to enter a new row.

If you click the Move_Row tab, you'll see a listing in Visual Basic as shown in Fig 3. Obviously, rather than make the keystrokes initially as I did, you can compose your macro in that language if you want to.

This solution is for the problem as posed. But if you don't need the entry line, you could have the macro open automatically with a dialogue box, then add the entered data to the stack.

Preaching to the unconverted

An email from Denzyl Pereira tells me he has to convert a lot of *.wks files to *.xls files and he's been loading them and re-saving them, one at a time.

He says: "This is tedious to say the least — is there a macro that can do the lot in one go? I know Word has one that converts a whole heap of .SAM files to .DOC files but Microsoft has been unable to help me on this."

I have Word 7 which includes the equivalent macro CONVERT7.DOT. It does indeed offer a wide choice of word processor file extensions for conversion.

Interjecting a little complaint; I find that in Office 95, Word 7 has all kinds of well-designed, upmarket extras which Excel 7 doesn't have. Ease of changing the dictionaries and formats from US English and styles to UK English and protocols is just one of many details lacking in Excel.

You get the impression from the Windows 95 literature that you only have to set the preferred date format in Control Panel, Regional Settings (say, d/M/yy instead of MM/dd/yy) once, and then everything will conform. Hell, I can't even get the various modules of Office to conform to that. One day I also hope to make Microsoft's own Exchange, and Schedule Plus, both offer the same address book. I have to keep one for each although the flagship module,

Fig 1 Medical matters

Example of a spreadsheet for a hospital which uses a macro to move a newly-entered row

	A	B	C	D	E	F
1	5/2/96	3	Macragel	injection	25mg	5/5/96
2						
3						
4						Row 1
5						
6						
7	3/2/96	2	Pisabenelean	tablet	75mg	3/5/96
8	1/2/96	1	Atinolyl	capsula	50mg	1/4/96
9	30/1/96	3	Chleatheledone	tablet	12.5mg	29/4/96
10	28/1/96	2	Tonartac	cream	50mg	27/4/96
11	26/1/96	5	Macragel	injection	12.5mg	25/4/96
12	24/1/96	6	Biogopholine	tablet	100mg	23/4/96
13	22/1/96	3	Apelcordial	capsula	12.5mg	21/4/96
14						
15						

Fig 2

The keystrokes recorded to make a macro which moves a row

```
Ctrl+Home
Down Arrow x 6
Alt+I,R
Ctrl+Home
Shift+Ctrl+Right Arrow
Alt+E,C
Down Arrow x 6
Alt+E,P
Ctrl+Home
```

Fig 3

The macro automatically recorded from Fig 2

```
' Move_Row Macro
'
' Keyboard Shortcut: Ctrl+m
'
Sub Move_Row()
    Range("A7").Select
    Selection.EntireRow.Insert
    Range("A1:F1").Select
    Selection.Cut
    Range("A7").Select
    ActiveSheet.Paste
    Range("A1").Select
End Sub
```

Word 7, naturally offers addresses from both books! But I digress...

If you want to study that macro, Denzyl, and you have Word 7 go to File, Open, c:\msoffice\winword\macros\convert7.dot.

Then choose Tools, Macro, BatchConversion, Edit. With a good knowledge of Visual Basic and the patience of Job you could probably convert it to do what you want.

Colour me blue

In the December issue, I wrote about translating SuperCalc files to be read in Excel and maintained that you couldn't easily carry forward formulas. This prompted several emails, including one from Tony Beckett with a jolly good tip in it.

He says: "You can save the SuperCalc file and instead of using the default .CAL suffix, impose your own suffix of .WKS." He adds: "This has never caused me any problems apart from the cosmetic one that when such a file appears in Excel, the text is coloured blue."

I tried this with SuperCalc 5.1 and Excel 4 and he's right on both counts. The Export command offers only the optional extensions XDIF, DIF, CSV and dBase. But if you Save in the regular way but edit the filename.cal to filename.wks, SuperCalc immediately switches to Export by

itself and saves a Lotus file. Excel will import that file with most formulas intact and the figures are indeed, initially, blue.

The main formulas which don't translate easily are in the date group. But I've solved this in the past by opening a dummy column (or row) with the date entries plus 60. Then I copy that column (or row) back over the original.

It's SuperCalc... but not as we know it, Tim

Another email on the subject, from Tim Wood, who adds the phrase "Accountancy, but not as we know it", says he prefers the DIF method (which I'd described) because "SuperCalc's WKS files load into Excel with zero column width" — not something I had encountered myself. He continues: "We use both programs in our busy accountancy office."

"We have found printing the biggest problem. SuperCalc 'remembers' the last print area used whereas Excel uses the current, highlighted area. And Excel named ranges cannot, apparently, be used for printing via Print Manager which requires a view to be named for this purpose and then entered as well on page setup. This is so long winded!

"We have resolved printing problems by naming each (or multiple) ranges to be printed. For example:

```
"Print_Profit"
```

Running this little macro to directly display the named ranges in print preview:

```
Print_Selection
=PRINT(1,,,1,,TRUE,,,,,1)
=RETURN()
```

The macro is saved in a hidden personal workbook and run via a custom toolbar button."

Tim's company must be slow to invest in current hardware, because he continues: "For serious number-crunching, SuperCalc is vastly superior in terms of both speed and simplicity, and is still used most of the time (by choice) until a high-quality report is required."

The other kind word he has for Microsoft's spreadsheet is: "Excel's strong point is the multiple pages of a workbook which, ultimately, one cannot do without."

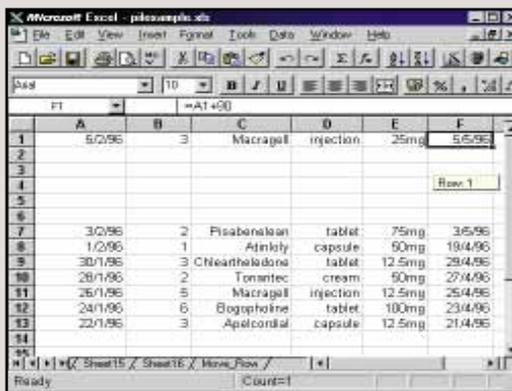
But then we part company when he closes with: "Lastly, with the amazingly low cost of quality, double-entry accounting software I would say that only a professional masochist would keep primary accounting records in a spreadsheet nowadays!"

This might be true if you are an accountant setting up the books for a client, but I can think of numerous situations where locked-in software just doesn't give the



Finding your document

The most frequently-used dialogue box in any Office application is File Open. So every module of Microsoft Office Version 7.0 uses the same new, improved, version of it called FastFind. There are not only options to search by file name, type or date but additionally you can enter just one word or other property and find the file which contains it. Here, I've used the fictional drug Macragell in Excel 7 and FastFind has zeroed in on the correct worksheet to open.



The File Open box looks exactly the same in Word 7 and you can find Excel files in Word and Word files in Excel.

If the search finds a number of applicable files, you can differentiate between them using a choice of buttons: List (by name and icon), Details (size, type and date), Properties, and Command and Settings.

You can even preview a segment of the file, as shown here, assuming that you've checked Save Preview Picture in the actual file under File, Properties.

results you want, in the time you've got to spare. I have reviewed dozens of accounting packages over the years and I've never yet found anything as quick and easy to use as my own current Excel 7 multi-paged workbook.

I can immediately show results by account, day, month, quarter or year, and my financial statements and tax records are always current. Accounts packages, which are basically crippled databases designed to be used by anybody, are like frozen dinners — superficially attractive but unsatisfying, although they can be a boon to large companies and those small business people with little knowledge of accounting and spreadsheets.

Driving him scatty

I have been entering into some correspondence with Chris John, of Richmond, on the subject of charting. He originally emailed me his problems in trying to get Access to make a graph from his Paradox data: he wanted his x axis to be a time series, although his time intervals were irregular. I suggested he didn't really want a time series but could send me a disk with his data, in a form I could import to Excel.

He later sent a printout of his table and the dates were, on average, 95 days apart. But they ran from 0 days (i.e. two entries on the same day) to one gap of 184 days. He also enclosed a hardcopy of a successful result in Excel using a scatter chart joined by a line. I've recreated a simplified form of this in Fig 4. You'll see that Excel gives you an x axis with dates

spaced 200 days apart in this example, plots the correct numbers on the correct original dates and then joins up the points.

Eric is semi-happy; he's pleased to have found a solution, but teed-off that he can't get Access to give him the same result. Ah well; it's "horses for courses".

Science lesson

Bijan Mohandes emailed me to ask how to customise Excel's scientific format.

The scientific format is used for particularly large and small numbers. All it does is to show the number multiplied, or divided, by powers of ten. For example, the number 0.000678 which could also be written as 6.78 / 10⁴ (6.78 divided by 10,000) is shown in scientific format as 6.78E-04.

The first part, to the left of the E, is called the "mantissa". The part to the right of the E is called the "exponent". If the exponent is negative, as in this case, it means that the value is divided by ten to the given power. If the exponent is positive, as in 6.78E+04, that translates to 6.78

* 10⁴ or 67,800.00.

If the actual value is negative, as in -6.78*(10⁴), then the minus sign appears to the left of the mantissa so: -6.78E+04.

These examples are all shown in Excel's standard Scientific format to two decimals, which is the same as the Custom format set up like this: 0.00E+00.

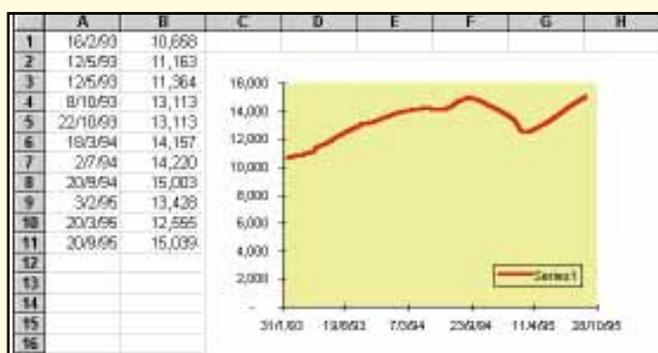
The Scientific format can also be selected with different decimal numbers. The number 0.0678, in Scientific format to three decimals, is displayed as 6.780E-02. This is the same as the Custom format set up like this: 0.000E+00. If you set up the Custom format with an extra zero in the exponent like this, 0.000E+000, then 6.780E-002 is displayed.

If you choose to prepare your own Custom format, the digits can be represented as 0 or # or ?. An 0 (zero) means the digit will always be displayed, even when it's a zero. The # sign suppresses zeros at the beginning or the end of the number. The ? sign after the decimal point displays a space if it is zero, and at the end of the number to make the decimal points line up in a column. It is also good for fractions that have varying numbers of digits.

Bijan specifically wants his exponents in multiples of three as he uses the numbering system kilo=E3, milli=E-3, mega=E6, micro=E-6. Don't we all? At the moment, when he enters -00000009, Excel is responding with -9.00E-07 and he wants this value to display as 900E-9. Choose Format, Cells, and you'll see that the default is Scientific, two decimal places. Just change it to Custom 000.E+0

Incidentally, before I get buried in beefs from bearded boffins, let me clarify that Excel only promises a number precision of 15 digits.

Fig 4 Scattering wisdom



A line scatter chart with an x-axis of regular time intervals produced from the irregular dates in column A

PCW Contacts

Stephen Wells welcomes comments on spreadsheets and solutions to be shared. Send them to PCW Editorial at the usual address or Stephen_Wells@msn.com