



Scouting out a solution

Dyb-dyb-dyb, dob-dob-dob... Stephen Wells presents an unusual spreadsheet for planning Scouting hikes. And, he does his best with a useful guide to helpful web URLs.

Having gained much from my stint as Patrol Leader of the Woodpeckers, years ago, I was delighted to receive an unusual spreadsheet from Mike Foster, who is the treasurer of his local Venture Scouting unit in Staffordshire. (Venture Scouts are the over-16's.)

This spreadsheet isn't for figuring out which scouts are behind with their subs, it's for route-planning when preparing walks — I love these unusual Hands On applications!

I've loaded the spreadsheet into Lotus 1-2-3 R5, as you will see from Fig 1, although Mike wrote it in Release 4. It calculates the average compass bearing in both true and magnetic, and also works out the length of time that each part of the walk should take.

"The time formula assumes a walking speed of 4Km/h," writes Mike, "and adds an extra half hour for every 300m climbed, one minute for every 10m, though you can change this. It then calculates the figures for hours and minutes, converts them to strings and joins them with a colon ':'. In calculating the minutes, I have added a '0' to the front of the string and then taken the right two characters in order that '4' will become '04' but '14' would stay as '14'.

"The bearing formulas use the magnetic offset (westerly) given in B1. I have used three spare columns in calculating these values as the formulas would otherwise exceed the 512-character limit imposed by 1-2-3 Release 4. Columns K, L and M, therefore, give the distance travelled east, the distance travelled north and the angle of the direction of travel from the N/S line respectively. These can either be hidden or just not printed, depending on preference.

"The bearing formula then calculates which direction this is in, and from that the

	A	B	C	D	E	F	G	H
1	Magnetic Deviation (W)	5						
2	From		To	True Bearing	Mag Bearing	Distance	Height Gain	
3	Car Park by Ilam	147 508	Dale End	147 595 N	355	11		
4	Dale End	147 595	Footpath	145 599	333	328	0.5	
5	Footpath	145 599	Heathcote	147 602	34	29	0.25	
6	Heathcote	147 602	Junction	146 606	346	341	0.25	
7	Junction	146 606	Tissington Trail	148 609	34	29	0.75	
8	Tissington Trail	148 609	Path	142 639	349	344	4.5	
9	Path	142 639	A515	144 642	34	29	0.5	
10	A515	144 642	C-Road	148 649	30	25	0.5	
11	C-Road	148 649	Monyash	150 655	18	13	1.5	
12	TOTAL						19.75	
13		Camp at: Rowson House Farm (155 664)						
14								
15								
16								
17	Monyash	150 665	Path	148 649	187	182	2	
18	Path	148 649	A515	144 642	210	205	0.5	
19	A515	144 642	T. Trail	142 639	214	209	0.5	
20	T. Trail	142 639	Vincent House	137 632	216	211	1	
21	Vincent House	137 632	Pilsbury	116 635	278	273	2	
22	Pilsbury	116 635	Road	115 625	186	181	1	
23	Road	115 625	Path	117 623	135	130	1	
24	Path	117 623	Junction	121 609	164	159	1.5	
25	Junction	121 609	Newfield	114 605	240	235	1	
26	Newfield	114 605	Path	108 606	279	274	0.5	
27	Path	108 606	Ford	098 596	225	220	1.5	
28	Ford	098 596	River - Westside Mill	101 589	157	152	1	
29	River - Westside Mill	101 589	Bend	099 556	183	178	5	
30	Bend	099 556	Wetton	108 554	103	98	1	

Fig 1 An application designed for route planning. It calculates where you should be if you don't get lost

bearing. It then tests to see if you are travelling N,S,E or W and adds letters instead; a touch more friendly than numbers. The magnetic bearing is then calculated from the true bearing and given in column F.

"The formulas rely on you being west of the Greenwich meridian and in the northern hemisphere, but it is easy enough to compensate if this is not the case. All that needs doing is for you to change the sign of the offending result in either K or L: that is, make the answer from K negative if you are east of Greenwich, or make the answer from L negative if you are in the southern hemisphere."

Mike's example is for a short training hike for the Queen's Scout Award, in the

White Peak area, starting a few miles out of Ashbourne, Derbyshire. A typical formula in the Mag Bearing column is:

```
@IF(E3="N", 360-A: SBS1, @IF(E3="E", 90-A: SBS1, @IF(E3="S", 180-A: SBS1, @IF(E3="W", 270-A: SBS1, @IF((E3-A: SBS1)=0, "N", @IF((E3-A: SBS1)=90, "E", @IF((E3-A: SBS1)=180, "S", @IF((E3-A: SBS1)=270, "W", (E3-A: SBS1))))))))
```

The basic formula used in the Time column is:

```
@STRING(@INT(((G4/SDS1)+(H4/SFS1))), 0) & ":" & @RIGHT("0"&@STRING(((60*((G/SDS1)+(H4/SFS1)))-60*(@INT(((G4/SDS1)+(H4/SFS1))), 0), 2)
```

Where to find what URLooking for

■ **Baarns Publishing**, Mission Hills, California, is a team (now including the well-known author, Rob Bovey) dedicated to producing productivity enhancements for Microsoft Office Professional products. Baarns offers: a range of Excel books by post; and Excel business, financial, statistical, and home and personal add-ins you can download. There is also an Excel FAQ (Frequently Asked Questions) section. There are shortcuts to the External Microsoft Newsgroup site, the Excel section on the Microsoft web site, and the Excel Knowledge Base. www.baarns.com

■ **Computer Manuals On-line Bookstore** is a well-established on-line bookshop run from Sparkhill, Birmingham. You'll find illustrations of covers of new books on spreadsheets and reviews, interviews with authors, resource kits, a search function to find subjects of interest among the volumes available, and an ordering service. www.compman.co.uk

■ **Easter Eggs**: a huge collection (basket?) of Easter Eggs submitted by volunteers is offered by David Nagy-Farkas at Washington University. Everything, from games to pocket calculators, are included (also, see *Walkenberg*, below). <http://weber.u.washington.edu/~davidnf/egg.html>

■ **Excel Monthly Magazine**: older issues are called "Excel Pages" when you print them out but, strangely, they are called "Tips & Tricks" on the web site. At time of writing the monthly issues available are from August '95 to July '96. www.microsoft.com/excel/work_tips.htm

The most recent issues of Excel Pages magazine, listed as "Tips & Tricks" on-line (though you need Word 97 or its viewer, to read them) are at www.microsoft.com/msexcel/support/content/tips/xlpages.htm

■ **Facts about Lotus 1-2-3 97** for Windows 95 and NT, and links to other Lotus product and service pages, can be found at www.lotus.com/123/214e.htm

■ **Marchcom** specialises offers a comprehensive on-line service called CAROL (Company Annual Reports On Line). There are separate sections for UK and continental companies. You start by selecting a group like banks, chemical, media or transportation companies, and the available firms in that category are listed. You can download any report, such as a Balance Sheet or P&L Statement. Excel 97 will open an HTML page and display it, properly formatted on a new worksheet, complete with corporate name on the sheet tab. www.carol.co.uk

■ **Microsoft's main page** for Excel tech support, consulting services and pre-sales information. www.microsoft.com/msexcel/support/

■ **Microsoft's "Work with Excel"** page offers Excel patches, fixes, drivers, utilities, virus information, tutorials and links to third-party web sites. www.microsoft.com/msexcel/fs_xl.htm

■ **Microsoft Excel Knowledge Base** contains articles about Excel and particularly its occasional shortcomings. The best way to use this service is to first download the file "index.txt" then use Find to search for the particular subject in which you are interested. Say you want to add labels to data markers in an x-y chart. You might search for "labels" and eventually find "Q161513: Macro to Add Labels to Points in an XY (Scatter) Chart". You can note the reference number, then go back on-line and select directory q161, then directory 5, then the file 13.txt, and download it. [ftp://ftp.microsoft.com/deskapps/excel/kb/](http://ftp.microsoft.com/deskapps/excel/kb/)

■ **Rick's Software Development Center** has a TalkShop, Bulletin Board and Information Center about Excel. Rick Dill worked for Microsoft for 11 years, teaching programming, and lives in Redmond, Washington. <http://forums.msn.com/SOFTWAREDEVELOPMENT/category2/forum3/01c2f3.asp>

■ **J. Walkenberg Associates** is a San Diego consulting firm, run by John Walkenberg in La Jolla, California. His page offers lots of add-ins for Excel, Lotus 1-2-3 and Quattro Pro together with tips and shortcuts and details of his own books. There is also lots of fun stuff like the "Easter Eggs" I mentioned on page 282. www.j-walk.com/ss/

■ **Webzone** is a Midlands public access web server which runs an on-line conference for some 200 web designers. If you are uploading spreadsheets to your own page, some of their code could be very useful. There are generic scripts you can download for operations like adding page counters to your page, or guest books for accepting responses. www.Webzone1.co.uk/www/demo/index.htm#html



Carlton Communications is one of many UK companies which make their financial results available on the CAROL web site

where D1 is walking speed in Km/h and F1 is the number of meters climbed, which cause one hour to be added to your time.

Thanks to Mike for his contribution and he certainly deserves a book token. His spreadsheet is on our cover-mounted CD-ROM this month.

Page break poser

Steven England, of Devon, emails:

"I have test results, on an Excel spreadsheet, for students at the college where I work. The spreadsheet is set up to percentile the marks for a whole year-group, which is split into sets. My query is, how can I get Excel to automatically put in a page break after each set, so that each set's results are printed on separate sheets? I put in the page breaks manually, but this is irritating, particularly when people leave or join the college, because the page

breaks are then in the wrong places and I have to start from scratch, removing the old page breaks and entering new ones."

Steven didn't say which version of Excel he was using, but in my reply I suggested he could start a new worksheet for each set and keep all the worksheets in one workbook. If he wished to write a macro, then in Excel 4 he could use the PAGE.SETUP macro function.

In Excel 97, the following sets a page break above row 25 on Sheet1:

```
Worksheets("Sheet1").Rows(25).PageBreak = xlPageBreakManual
```

And this example sets a manual page break to the left of column J on Sheet1:

```
Worksheets("Sheet1").Columns("J").PageBreak = xlPageBreakManual
```

If the set range varies, the range can be given a Name. Any changes in the range will be allowed for by the Name.

Now they tell me!

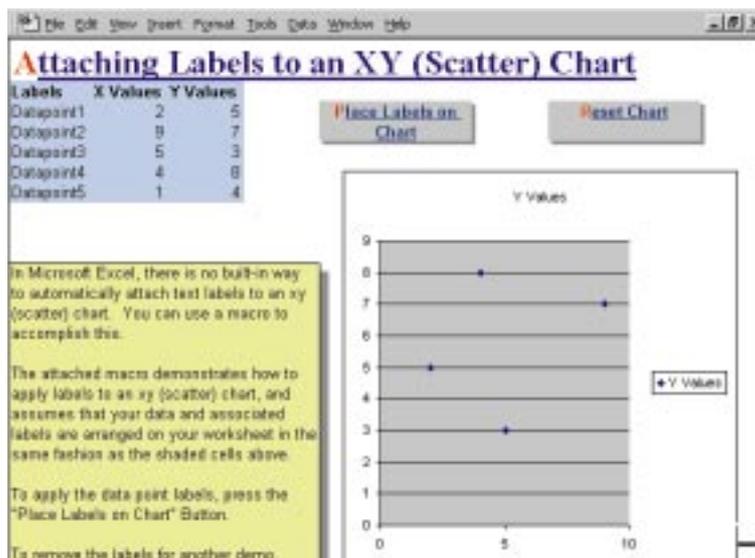
Last month, a reader was asking for a way to add labels automatically to an x-y scatter chart, as you can in Lotus 1-2-3. In other words, the x numbers were in one column of his worksheet, the y numbers in another, and the labels in a third.

Having found no immediate solution to this, I asked a friendly spreadsheet adviser and he knocked up a short macro (which earned him a book token). He also told me about Rob Bovey's utility which does the same thing.

All this bother, yet Microsoft offers three different solutions, none of which are mentioned in the help files. First, if you wander down the right paths from the Microsoft home page you can get to the Power Utility Pak, which is actually published by John Walkenberg. Then, if you patiently trawl through the Excel Knowledge

Fig 2

A macro for attaching data labels which is included in the Excel file, Sample.xls. It is included with Excel 95 and 97



Base you find a comprehensive document, complete with listing for a suitable macro, which I've included on the PCW CD-ROM.

Finally, in an issue of the on-line Excel Pages magazine (in an article which had nothing to do with this subject at all), I found a reference to a Sample.xls file, from the Office suite which contains a similar macro (Fig 2). And it is already on my hard disk! More embarrassing still, I had mentioned this file in my February column and then forgotten all about it.

Belated convert

I found myself with a list of items in one column of a worksheet the other day, and wanted to see if it contained any duplicates of items in a column of another sheet.

I knew very well that there is a way of comparing two columns — I recalled writing about it, but couldn't remember the procedure. Time to try out the PCW CD-ROM. I slipped the latest one in the drive and the main menu appeared. I clicked Hands On Spreadsheets. Acrobat loaded. I clicked the button with the binoculars and a page, then entered "compare two columns" in the Search box, with only the Proximity option checked. Acrobat immediately went to the file for Hands On Spreadsheets, Dec '96, with the chosen words highlighted.

It was one of those helpful tips contributed by Shane Devenshire. Terrific. It still tickles me when something new actually works.

Dates and figs

I've been sitting for far too long on an interesting letter about date formats, from Ian Galpin of Poole. I've mentioned before that as I never issue more than one invoice

a day, I create my invoice numbers by reversing the date of the invoice; so, one raised on 30/9/97 would be numbered 970930. Most of the software on Ian's PC reflects his interest in astronomy and he tells me that astronomers use an International Date Format of the year first in four digits, then the month in two digits (padded zero if necessary) and the day in two digits (likewise).

Although this conveniently gets around the topical Year 2000 computer problem, the original intent was to avoid other variances. As he says, 02/04/96 would be 2nd April in the UK and 4th February in the US. Because astronomy is an international science, observations are passed around the world. (Apparently, astronomers also use a common time-zone, but that matters less here.) Another argument for the year-month-day format is that it is consistent with the "largest first" format for time, which is Hours:Minutes:Seconds.

For his DOS software he has COUNTRY=088, instead of 044 in his Config.Sys file, but he warns of Code Page potential problems. In Windows' Control Panel, Regional Settings, you can specify a year-month-day format. And of course in a spreadsheet, it's simple.

With 1-2-3 you can use Style Number Format or Style Worksheet Defaults to specify date formats in a specific worksheet, or use Tools User Set-up International to specify long or short International Date formats by default. In Excel you simply enter any Custom format you like.

Life's little oddities

One of the delights of sharing other users' knowledge via the internet is stumbling

across little oddities. I think of these as the Keith Chegwins of spreadsheeting. One of these I found via John Walkenberg's web page (see "Where to find what URLooking for", page 281). I had been aware that it is possible to display a list of the developers of such software, if you know a series of non-intuitive steps. These displays are sometimes called "Easter Eggs" (more because of Fabergé than Cadbury).

■ To display Excel's 97's Easter Egg: open a new workbook. Press F5. Enter X97:L97 and press Enter. Press Tab. Press Ctrl+Shift and click the Chart Wizard button on the toolbar. Then use the mouse to move around. I found the credits hard to read but the colour and animation is dramatic.

■ If you have Excel 95: open a new workbook. Scroll down and select row 95. Press Tab. Choose the Help / About Microsoft Excel command. Press Ctrl+Shift and click the Tech Support button. You'll be greeted with a new non-Excel window. Explore the window using the arrow keys.

■ To see the Excel 5 Easter Egg: choose the View / Toolbars command. Click the Customise button. Scroll down the Categories list and choose the Custom category. Drag the second button (with a deck of cards image) to any visible toolbar. Click Cancel if you are asked for a macro. Click Close to close the Customise dialogue box. Press Ctrl+Shift+Alt, and then click the new toolbar button.

On the PCW CD-ROM

■ In the Software Library, Hands On, Spreadsheets section this month are examples of some of the material about spreadsheets available on the internet (see also, "Where to find what URLooking for", page 281).

■ The file "labels.txt" is the MS Knowledge Base document, Q161513, which includes the code for a macro to add labels to data markers in an x-y chart.

■ An example of the Knowledge Base index is in "index.txt", although you should go on-line to see the most recent listing of documents.

■ Mike Foster's spreadsheet for planning walks is in the file "walk.wk4". It is in Lotus 1-2-3 R4 format and will import into Excel.

PCW Contacts

Stephen Wells welcomes problems or solutions relating to spreadsheets. Write to him at the usual PCW address or email spreadsheets@pcw.co.uk.