The place to be

This column must be well-read by Microsoft employees because many of your past spreadsheet gripes have been dealt with in the new Excel 97, as Stephen Wells explains.

Coincidence? I don't think so. It's obvious that readers of this column are typical of the Excel users to whom Microsoft claims it listens. Just look at the number of features in Excel 97 that solve problems which have been highlighted in this column in the past.

For instance, last month (*PCW*, Feb) a doctor was asking for ways to immediately draw attention to certain medical conditions on a worksheet: Excel 97 now has a Conditional Formatting dialogue box which offers many more options than previously available. In the example in Fig 1, patients' weights are shown in column A. Column B highlights their condition. The cell formula is

```
=IF(A9>14,"OVERWEIGHT",IF(A9<10,
"UNDERWEIGHT",A9))
```

In this simple scenario, anyone over 14 stone is considered overweight, anyone under ten stone is deemed underweight, and between those extremes their weight is simply repeated in column B.

The Format menu offers a new option, Conditional Formatting. You can enter up to three options. So, if you include a cell condition that doesn't meet any of these set criteria, you have (in effect) four options. Each can start with a choice of "Cell Value Is" or "Formula Is". The first depends on the value or formula in the formatted cell. The second allows you to set the formatting, dependent on data or conditions other than in the selected cell. It might be today's date or a total at the foot of the worksheet.

In Fig 1 there are two "Formula Is" conditions. Condition 1 is

```
IF(B9="OVERWEIGHT",A9)
```

and Condition 2 is

```
IF(B9="UNDERWEIGHT",A9)
```

The format set for Condition 1 is a bold font, in red, with a pale yellow cell background. For Condition 2, it is a regular font, in green, with a pale blue background.

Allowing functions to be used to determine formatting will be a popular feature in a wide variety of applications. The content of a cell which is, say, more than 30 percent of the total of a row or column, can be highlighted. If you wanted any even whole number in the range E2:E80 to be purple, you could conditionally format E2 as follows:

```
=MOD(E2,2)=0
```

and then paste that format into the rest of the range. The format formula will be changed appropriately by the Paste tool. To see which cells on your worksheet have Conditional formatting, choose Edit, Go To, Special, Conditional formats.

A smarter chart

Two other recent requests were for better ways to chart stock and commodity prices (*PCW*, Feb). These investors had to make hundreds of plots and needed a better method of specifying dates along the x-axis. Now Excel 97 comes to the rescue. Previous versions allowed for 4,000 points per data series and a maximum of 32,000 points for all series in one chart. These specs have now been increased to 32,000 for a 2D chart and 256,000 points for the whole chart. And, there is a new option for specifying that an axis refers to dates.

In fact, it has never been easier to make and adjust charts. I must confess that in the past I used to get confused by all the nomenclature of chart objects. Now it's a doddle. Not only does the Chart Wizard now have tabs, but also a small preview window displays changes as you make them (Fig 2).

Whether you decide on a High-Low-Close stock chart, with or without the day's sales volume, or an Open-High-Low-Close chart, with or without volume, the new Step 1 dialogue box of the Wizard can show an example using your data. You can also print your worksheet data in a grid at the foot of the chart.

Additionally, Excel 97 offers more chart types in versions for black and white printers as well as some fancy ones for screen display, slides, or colour printers. There are now bubble, pie of pie, and bar of pie charts, and there are pyramid, cone and cylinder shapes for 3D bar and column
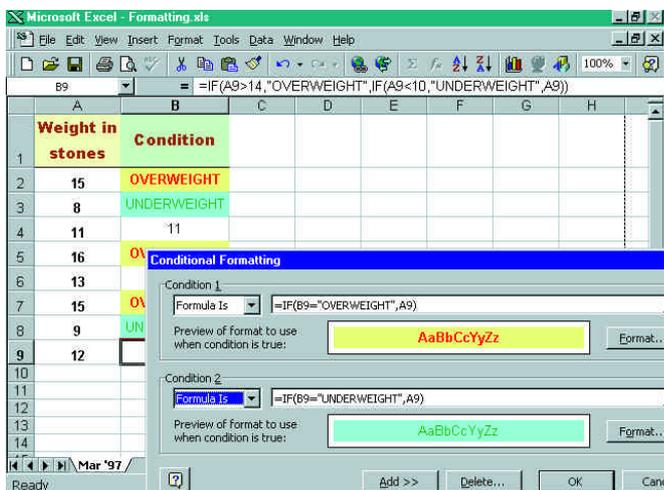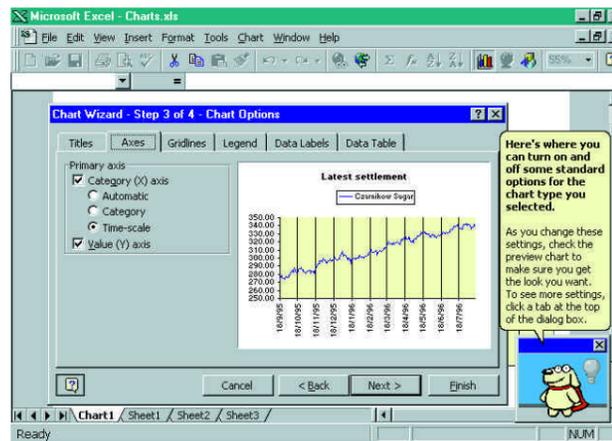
Fig 1 Excel 97 expands the options for conditional formatting. It can control font style, underlining, borders, shading and patterns

charts, as well.

The opportunities for designing custom charts are greatly expanded. If you want to have a green marble effect on the background, or a graduated mahogany effect on your bars, you can. Just choose the Fill Effects dialogue box (Fig 3).
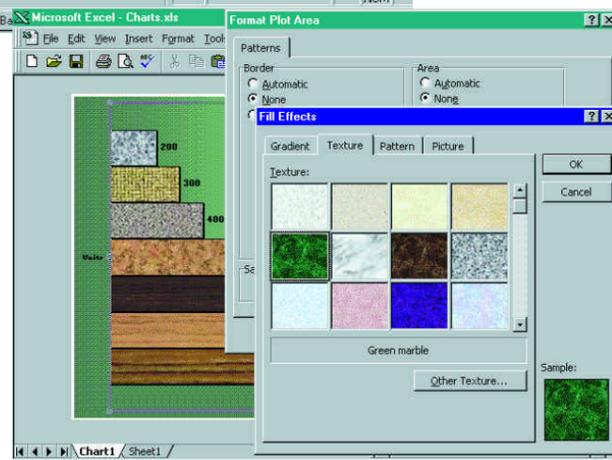
Good intentions

Ever since Dan Bricklin and Bob Franckston designed the first spreadsheet for the Apple II, we have all become used to entering cell references. We might type in cell B5: =B3+B4. With Excel 97, Microsoft allows you to return to the terminology of the accountant's ledger sheet. If the labels in A3, A4 and A5 are Cash and Securities, Accounts Receivable and Quick Current Assets, then in B5 you can actually enter =Cash+Securities+Accounts Receivable. These are called natural-language formulas. No, Excel doesn't automatically create names here. It just lets you use row and column labels as references. This assumes that you've checked the "Accept labels in formulas" box under Tools, Options, Calculation.

The problem is you can't paste labels in to create a formula. You have to type them in, which can take forever. Personally, I create formulas just by typing an "equals" sign and then pointing to the cells to use.

I also found, in the beta version I tried, that this feature easily got confused. My worksheet included a list of ratios, one of which was named Current. I wanted to add

Net Plant & Equipment to Current Assets to produce Total Assets. When I tried to type in Current Assets, Excel used the Current result instead. The workaround was to lengthen the first label to Current Ratios.

Also, in columns headed with years, I could refer in a distant cell to Net Sales 1996. But if the column heading was a formula, like =B1-1, instead of 1995, then I received an error message even though the sheet displayed 1995. One solution here is to create the column headings with AutoFill. Select the first or last cell in the range you want to fill and enter the starting value for the series. If you hold down the right mouse button as you drag the fill handle over the range, to the right or left, you're offered a wide range of options on the shortcut menu.

Incidentally, if you've got Excel 2.1, 3.0, 4.0 or 5.0 worksheets that you want to try out under Excel 97, it will not only load them, but you can also save them again in the original format. These saved files won't include a lot of Excel 97 features but at least it means you can still run them with the more familiar version. Excel 97 will save in lots of other formats, too.

Some features in Excel 97 are there because they've been introduced to all

Office 97 applications. One of these is more animation. If you like Lotus SmartSuite's way of dropping down menus you can choose Tools, Customise, Slide. Alternatively, you can check Unfold and the menus swoop down and out to the right. No swooshing noises, though, as with Lotus.

Common Outlook

Another common Office 97 feature is that the Journal in Outlook can record your daily activity. If you wish, it will record when you first opened a workbook, subsequent activity and the total time you have spent on it. This has a number of uses. Some professionals will use it for billing time to clients. If you're looking for an Excel file that you know you worked on last Friday, go to that day in the Journal and there is a path to the file.

Some new features have been brought across from Word and extended. Excel's AutoCorrect for text has a lot of built-in corrections, for instance "anual" is automatically changed to "annual", and you can add your own frequent mistakes and replacements. The extension is that if you enter a formula incorrectly (forgetting a bracket, for instance) Excel will now offer to correct it for you. Another addition from Word is multiple levels of Undo, and there is also a drop-down list of recent actions so you can choose which to undo.

Some features are replacements. The Function Wizard (with the Fx button) has been superseded by the Formula Palette. Click the new = button. The box to the left, which normally shows the current cell reference or Names, now offers a drop-down list of functions. Click on one and a dialogue box appears which displays the name of the function, each of its arguments, a description of the function and each argument, the current result of the function, and the current result of the entire formula.

The new Fx button on the Standard toolbar works like Shift+F3 and is used for pasting functions.

There are new features for improving worksheet presentation. One is that you can run column heading labels at any angle. Another is that you can merge cells. You may not want to centre a heading across the whole worksheet but, say, across columns B through F in one row. You select the cells, then right-click and choose Format cells, Alignment, Merge Cells and this group of cells is treated as one. Yet another new feature is easier printing. On

the View menu, there is a new Page Break Preview command. I love this: it shows your whole sheet with the default printing page breaks; you can drag them where you want, so you can easily set the page breaks to logical places in your work; and if it's more important to you to get everything on one page, Excel 97 will automatically scale everything down to fit.

Some new features are things which just needed fixing. Before, if you gave a Pivot Table fancy formatting in Excel 7, for instance, you lost it when you rearranged the data to another view. But now your formatting is retained and you can include calculated fields as well. (Incidentally, although Microsoft is calling this Excel 97, the version number, under Properties, is Excel 8.)

Some existing functions have been supplemented with a new version. Included in its calculations are cells which contain text or the values TRUE and FALSE. These include MINA, MAXA, VARA and VARPA.

I've never been one for overly-large

single worksheets but Microsoft says a lot of its customers want them bigger than ever; so Excel 97 increases the maximum number of rows from 16,384 to 65,536. This will be good news for Excel database users, of course.

A feature which I expect to use a lot is data validation. You can easily specify the type of data allowed in a cell and have a custom message displayed if a user tries to enter anything else. You could restrict the entry to a date, for instance, or a number below a certain amount. The Auditing toolbar has an additional helpful Circle Invalid Data button, too, which helps you find invalid data.

On the web

The most dramatic changes to Excel in this new version are the ways you can link beyond your own workbooks. You can create hyperlinks which jump to other Office files on your system, your network, your organisation's intranet or the internet.

Excel 97 offers so many features in this area that I'll expand on them in next month's column, but here's one example. You can easily run queries to retrieve data available on the web. Microsoft Office 97 provides several sample Web Queries that you can run. I was amazed at how easy it is to access this information. I put the cursor on a new worksheet and clicked successively: Data, Get External Data and Run Web Query. This presented four pre-written Web Query files which are included with Office 97. I chose "Dow Jones Stocks by PC Quote, Inc".

One more click on the Connect button in Internet Explorer, which starts in the background automatically, then my worksheet was loaded with ten columns of data about each of the Dow Jones industrial stocks (see Fig 4; prices are current except for a legally-required 20-minute delay behind the New York stock exchange, US Eastern time). The Query form even has AutoFilter set, so that you can drop down an alternative list of transportation or utilities stocks; or you could filter out all but the top ten in terms of sales volume or Net Change for the day. When Microsoft localises this feature, we'll be able to access London's FTSE 100 just as easily.

Scenario Manager on CD

Scenario Manager is a powerful Excel tool for analysing complicated problems. A Scenario is a named combination of up to 34 variable cells. The built-in tool enables you to consolidate multiple "what-if?" models in one spreadsheet, and switch between the Scenarios to see the impact of various assumptions on your model.

On this month's cover-mounted CD, go to Software, Hands On, Spreadsheets, and you'll find Scenario.exe. Copy it to a disk, then open Excel (v5 or higher) and minimise it. In File Manager or Explorer, double-click on Scenario.exe. It will maximise Excel and offer an interactive demonstration of Excel's built-in Scenario Manager. The example provided is for the owner of a small coffee shop who wants to analyse various business scenarios.
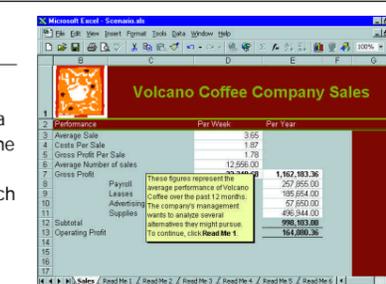
EXCELlent shortcuts in Excel 97

■ If you double-click a cell which contains a formula, any cell references in the formula change to different colours. The cells referred to are highlighted on the worksheet in those same colours. This new feature is called the Range Finder. To include more or fewer cells in a range reference, use the drag-handle in the lower-right corner of the border to select more or fewer cells. The formula will change correspondingly. (If you can't make a cell active for editing by double-clicking on it, choose Tools, Options, Edit tab and select the first Settings check box, "Edit directly in cell".)
■ If you double-click the border of a selected cell, you can move automatically to the corresponding edge of a block of data. Click the top of the cell to go to the top of the block and so on. This is similar to Ctrl + arrow key.
■ It's easy to list all your Outlook or Schedule + contacts on a worksheet. Open Outlook. Choose File, Import and Export, and click Export. In the Import Export Wizard, select the Contacts folder and the file type MS Excel. Name a new workbook, or browse existing workbooks and add a worksheet to one of them. You can either map the fields between the Outlook list and worksheet columns yourself, or the Wizard will do it.
■ You can create hyperlinks without using your modem. Choose any cell on your worksheet. Click on the Insert Hyperlink button on the Standard toolbar and then browse for a file. This will make a link to that file. The default display in the cell is the file name but you can change it to something else or use a picture instead. The file might be a text scrap on your Desktop, or in any Office application.