Using **SOHO Software**
to manage legal data

By Rob Davis

Lawyers manage data. Legal principles, cases, files and clients are all just different levels of information. Success as a lawyer depends on how completely we can ingest, assimilate and retrieve complex information.

L ittle wonder, then, that personal computers have revolutionised legal practice. Complex documents and data are now stored, assembled and retrieved by document management systems.

But this technological revolution has also created new problems for lawyers. Old chores (such as legal drafting) have been replaced by new chores (such as managing file velocity, quality control, training and supervision of staff). Competitive advantages gained by early adopters quickly evaporate as competitors join the arms race for faster, cheaper and better ways of practice.

Technology that was once revolutionary is now commonplace. New technology has raised the bar for what is or is not reasonable care. Competition and innovation, once rare in the professions, have become the yin and yang of modern legal practice.

It is surprising, given the scope and pace of the information revolution, that most lawyers still lack the capacity to create simple software solutions to everyday challenges.

Perhaps the technology explosion has been so fast that lawyers have had no time to delve beneath the hood of the new machines to see what makes them tick? And the more reliance lawyers place on technology, the greater the imperative for new work systems, driving a need for even more custom-made technology to fill the gaps left by the major developers. Fortunately, there are some good products available that do the job nicely.

Three mature technologies give lawyers a surprising degree of power to create SOHO (small office/home office) solutions to repetitive tasks. These are spreadsheets (such as Microsoft Excel), consumer database products (such as Microsoft Access and FileMaker), OS level scripting tools (such as Microsoft's Visual Basic and Apple's AppleScript). This article will confine itself to a short review of *some* of the functions hidden beneath Excel's hood.

Most lawyers have a copy of Microsoft Excel somewhere on their network (often unused). Most people know Excel is a spreadsheet program. Few realise, however, that spreadsheets are special application databases and that Excel is probably the best of this genre.

Databases are merely places to store, arrange and retrieve data. In Excel, data is stored in cells, (each 'cell' being one of many rectangles bordered by the horizontal and vertical lines that make up a worksheet). Each of these cells can be used in a number of different ways.

First, cells can be formatted to impose rigour on the way they store and display information. For example, any cell may be defined (using 'Format > Format Cells > Number' menu) in a number of ways (for example, dates, currency, percentage, fraction, scientific, text, etc). Formatting cells in this way adds uniformity to the way that data is displayed and gives access to special calculation functions dependent on each format. For example, formatting a cell as a 'date' results in a wide variety of date formats that can be preset. When a date is entered the application displays it in the manner formatted (for example, entering '11/3/05' may be formatted to display as '11 March 2005') and Excel (using the computer's in-built system clock) calculates a sequential number for each of the seconds, minutes, hours, days, weeks months and years.

This sequential number function (which the user never sees) allows complex calculations to occur using dates. In this way it is easy to use Excel to create a wide range of useful tools, from complex file review schedules and reports, to limitation date calculators.

Having defined the format of a cell, it is also possible to combine data in many different cells as variables in   >>

calculations. Accessing Excel's calculation functions is simply a matter of selecting the cell where you wish the calculation to be performed and choosing 'Insert > Function' from the menu. This opens the 'Paste Function' dialog box, which enables you to build a formula from several different categories of function (such as Financial, Date & Time, Math & Trig, Statistical, Lookup & Reference, Database, Text, Logical, etc).

Selecting a particular function from the list gives the user access to a range of formulas and operations (collectively called 'Functions'). Functions can be combined to produce complex calculations involving an impressive array of mathematical formulas and operations, logical operators (such as And, False, If, Not, Of, True), lookup parameters in tables, etc.

The first-time user may easily be bewildered by the range of options available via the Functions dialog. Fortunately, a little persistence (through trial and error) will be rewarded with increased familiarity of and confidence in using Excel's hidden power.

Selecting individual cells for use in calculations is simply a matter of entering the relevant cell's row and column identifier (for example, cell 'C123' is the cell located on the page at row 123 of column C), or simply clicking on the relevant cells (which transfers the correct cell identifiers into that part of the calculation where the insertion point is located).

Calculation cells may access other cells that contain either discrete data or other calculations, even if located on different pages (called 'Worksheets' in Excel's lexicon) of the same spreadsheet.

It is surprising how quickly you become familiar with Excel's formula functions (which are very user-friendly). Regular use of Excel's functions produces sufficient familiarity to enable direct entry of the most commonly used functions from memory (without recourse to the Functions dialog box) simply by preceding the proposed formula with an '='. In Excel's lexicon, entry of an '=' simply means 'formula follows'.

For example, the following simple formula '=C11*15%/365.25*8' will calculate eight days' interest at 15% per annum on any amount contained in cell 'C11'. In Excel, the '*' symbol means 'to multiply'. Save for this exception, the other mathematical operators of +, - and / are self-explanatory.

Much of the power of databases derives from their ability to store a large amount of data in tabular form and access this information easily via a 'lookup' function. For example, a table may contain a number of rows (each representing a particular file) in which a cell corresponding to a column heading contains specific data relevant to that file (such as file number, date of birth, accident date, limitation period, etc). An example of a data table like this is displayed below:

	A	B	C	D	E
1	123	12/4/78	23/12/04	3	Etc…
2	456	4/2/90	1/3/03	3	
3	789	31/3/68	10/1/03	6	

It is easy to create a calculation (or even a search field) in Excel in which entering a file number in a specific search field will return a particular piece of information from the data table.

For example, entering the following lookup formula in a cell on a worksheet page called 'Search' will return, into that cell, data from the above table located on a separate page entitled 'DataTable' whenever a valid file number is inserted into cell 'A1' on the Search page.

=LOOKUP(Search!A1,DataTable!A1:A100,DataTable!B1:B100)

In English, this formula is an instruction to Excel's database engine to:

1. Look in Cell A1 for a number;
2. Search through the data in the DataTable column A between rows 1-100;
3. Locate the row that contains the same number that appears in step 1;
4. If a match is found, go to column B of the same row and get the number located in that cell; 5. Display that number as the calculation result.

Hence, entering file number 456 in the search field (cell 'A1' located on the 'Search' page) will instruct Excel to locate the corresponding file from the file number column 'A' in the 'DataTable' page and retrieve the date '4/2/90' from cell 'B2' in that table.

Individual cells, worksheets and even whole spreadsheets can be hidden and/or protected by password. This is useful to prevent alteration of sensitive data, hide and protect formulas from prying eyes (or unwitting damage), etc.

Because Excel is a powerful database application in its own right, any information entered into data tables in Excel may also be used as a source for data merges into Microsoft Word documents. These merge pathways can easily be created in Microsoft Office using Word's 'Tools > Data Merge Manager' menu. Small offices that cannot justify the cost of other database solutions can readily use Excel for storing and retrieving WP merge information.

The above are just some simple examples of some of the wide range of functions that lurk under Excel's bonnet.

Acquiring skill in using Excel's 'functions' pays unexpected dividends. In a way, it is like learning another language. A language that is already familiar as it follows the same basic conventions of logic and maths that most people acquire in primary school maths class. But just as learning a second language makes it easier to acquire a third, familiarity with Excel's functions makes it easier to learn the script syntax used in many other consumer databases and simple programming languages. ■

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