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## **Spreadsheet Professional Quick Start Guide**

### **Contact Details**

Email: [info@bmesol.com](mailto:info@bmesol.com)

Tel : +44 1483 236 795

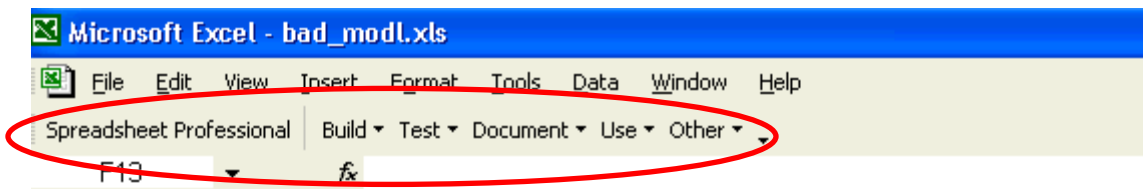
## Introduction

The aim of this document is to give you a quick introduction on using Spreadsheet Professional.

## Quick Start Guide

### Loading Instructions:

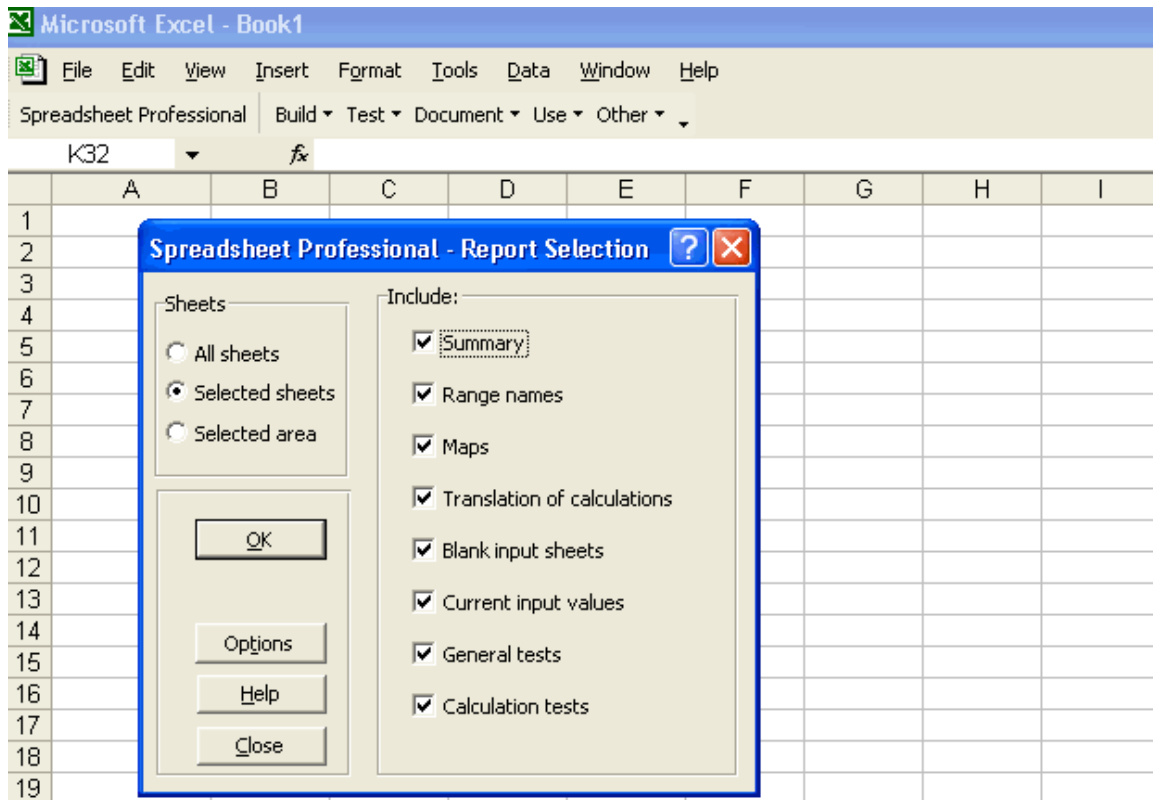
1. Download the attachment (sprdprof.zip or setup.exe) into a new directory. We recommend c:\program files\sprdprof, although you can use any directory you wish.
2. If you have received the zip version please unzip the files.
3. Run Setup.exe
4. Start Excel
5. Select the Tools, Addins, Browse option on the main menu. Locate and select the file Sprdprof.xla. You will find it in the directory you selected in the installation process.
6. After a few moments a new toolbar will appear (see below) which contains the menus to run Spreadsheet Professional and you can start using the product.



## Maps

Maps are without doubt one of the most important feature of Spreadsheet Professional.

To use, open a spreadsheet that you would like to look at. Click on 'Document' and then 'Spreadsheet Documenter'. The following should pop up.



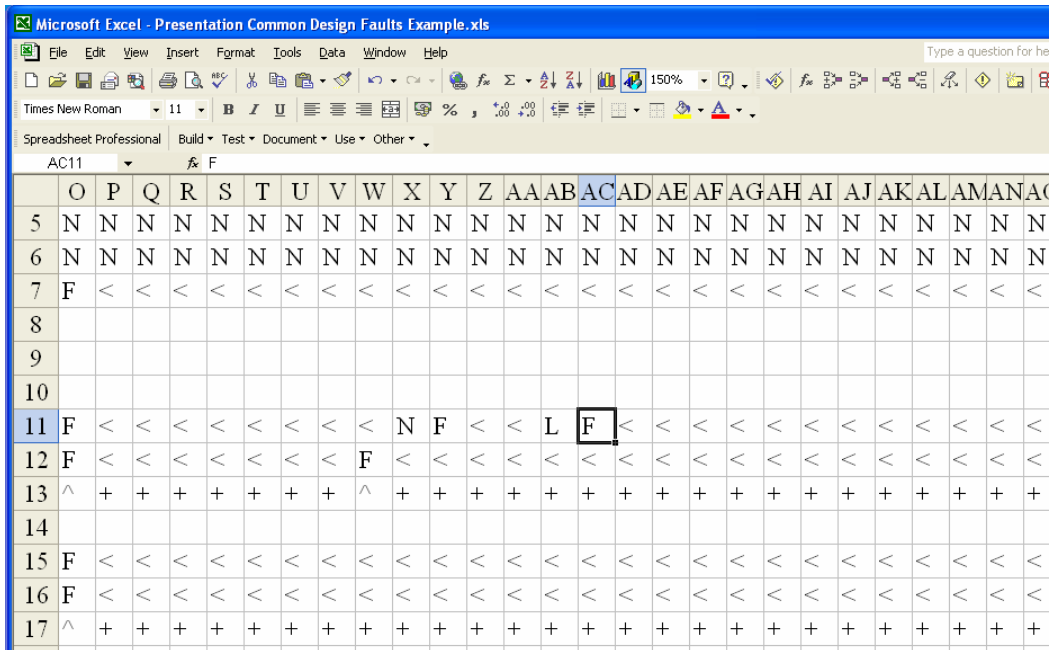
These are the reports that Spreadsheet Professional can run. For this exercise we are only interested in the Maps, so deselect the other options.

On the left hand side you can choose whether the reports should be drawn for the whole workbook (All Sheets), the Selected Sheets, or a Selected Area.

For now leave it on Selected Sheets.

Press OK

A spreadsheet similar to the one below should be generated.



	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	
5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
6	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
7	F	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<
8																												
9																												
10																												
11	F	<	<	<	<	<	<	<	<	N	F	<	<	L	F	<	<	<	<	<	<	<	<	<	<	<	<	
12	F	<	<	<	<	<	<	<	F	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	
13	^	+	+	+	+	+	+	+	^	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
14																												
15	F	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	
16	F	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	
17	^	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	

Although it may look confusing, this will provide you with the basis of any review. The meaning of the letters and symbols are as follows:

- L = Label/ Text,
- N = Numeric input (a number with no '=' in front of it),
- F = unique formulae (i.e. different in some way from the formulae around it),
- < = formula copied from the left,
- ^ = formula copied from above,
- + = formula copied from the left and above.

In order to trace back to the original spreadsheet you need only look at the equivalent cell on the original spreadsheet.

The trick is now to identify areas in the spreadsheet where the patterns don't make sense.

For example in the picture above, cell O7 is a unique formulae that is copied all the way across. Technically you can therefore look at the contents of cell O7, ascertain its correctness, and therefore be happy with the entire row as it is an exact copy.

Row 11 would be a concern. Cell O11 is unique and copied all the way till X11. Suddenly a numeric is in the row. This could indicate that the formula has accidentally been overwritten with a number. The next cell indicates that it is a unique formula again because it is different from the cell to its left.

Cell AB11 indicates that a label or text input exists. This could happen with the



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formatting of the cell or a word accidentally being inserted. So in order to gain comfort for row 11 it is advised that you review the correctness of the contents of cells O11, X11, Y11 (as the formula could be different from O11), AB11 and AC11.

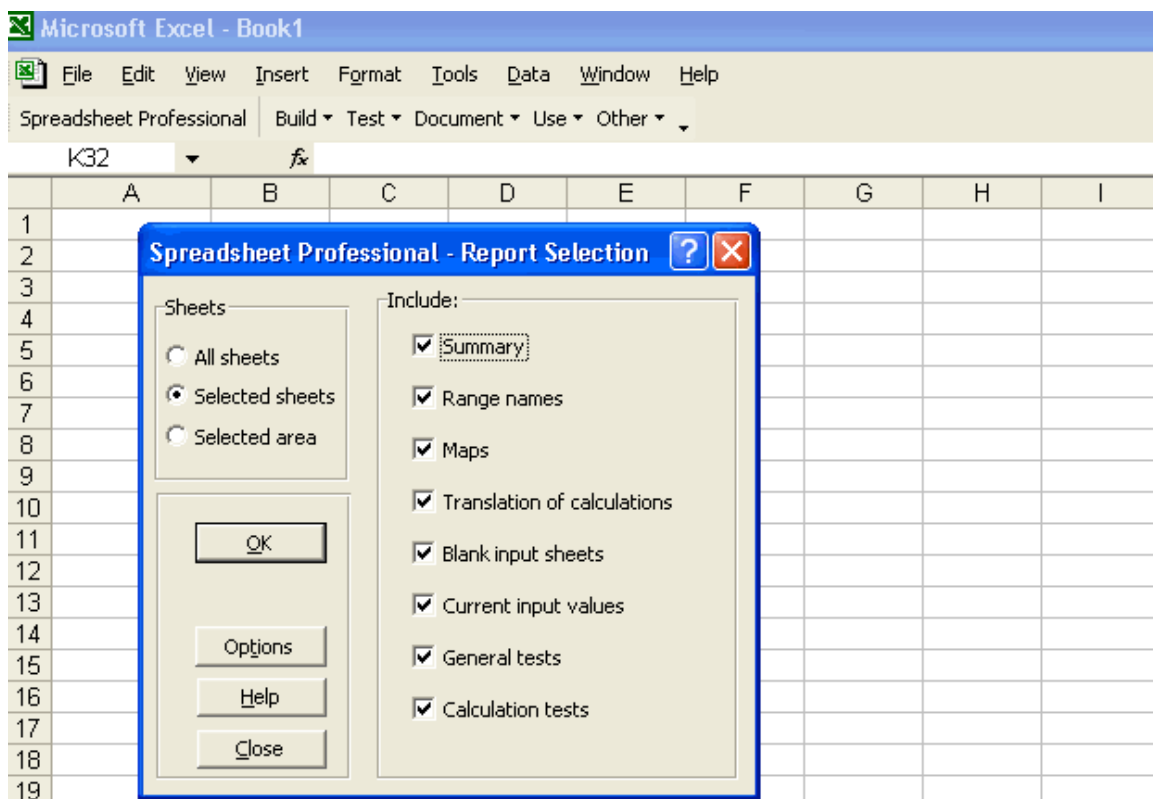
Based on the picture you would also look at cell W12.

## Prioritising the cells you look at

The nature of spreadsheets is such that even using maps, the amount of work required to review the unique formulae can be considerable and time consuming.

Spreadsheet Professional has a number of built in tests to help prioritise where you should start looking for errors.

To use, open a spreadsheet that you would like to look at. Click on 'Document' and then 'Spreadsheet Documenter'. The following should pop up.



For this exercise we are only interested in the 'General Tests' and 'Calculation tests', so deselect the other options.

For now leave it on Selected Sheets.

Press OK

A spreadsheet similar to the one below should be generated.



<b>Summary statistics</b>	
<b>Range analysed</b>	A1:DI117
<b>Number of numeric inputs</b>	201
<b>Number of formulas</b>	916
<b>Number of unique formulas</b>	37
Unique cells are those that are not copies of the cell to their left.	
<b>Percentage of unique formulas</b>	4%
<b>Number of labels</b>	66
<b>Potential errors summary</b>	
<b>Possible error condition</b>	<b>Frequency</b>
Unused input value	14
Unused calculation	14
Forward row reference	2
IF function	1
Numeric rule	12
Complex calculation	2
<b>Protection not enabled.</b>	
This sheet is not protected. Users can overwrite the contents of any cell even if the cell is locked.	
<b>Test notes.</b>	
Only unique cells have been tested.	
Remember to check cells that are a copy of the cells shown on this report.	
Only the first cell in each range referenced by a formula has been tested.	
<b>Unused input value</b>	
A number has been entered which is not used in any calculation.	
Potential errors to watch for:	
1. A calculation contains an incorrect reference.	
2. The writer of the spreadsheet may have forgotten that this input value exists and hard coded the value directly into subsequent calculations.	
BU103:BU109, BU111:BU117	

Spreadsheet Professional has gone through each cell and performed a number of tests. In the report it will summarise the results.

It also provides the detailed results which comprise of a short paragraph explaining the concern, and then a listing of the cells that are at risk.

Of course this is not an exact listing of the errors, and a manual procedure needs to be performed to understand the correctness of the cells identified.

As you work through the list I recommend that you tick off the cells that you have looked at on a printed version of the map to avoid repetition.

Depending on the style of development, all the tests may not be applicable to your spreadsheet. In the options section of Spreadsheet Professional you can turn off certain of the tests.

**WARNING:**

As this is an iterative process and requires that each test be performed on each cell, it can take time for the report to run.

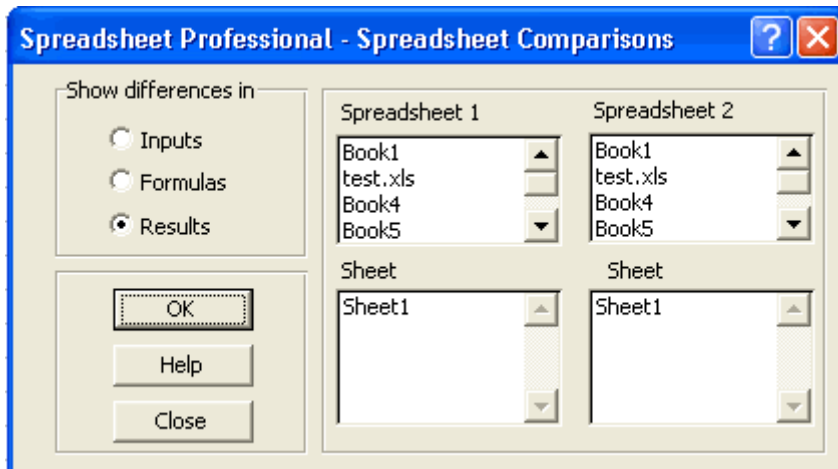
Experiment on smaller spreadsheets. When you get to 30 and 40 MB models it is suggested that you consider running this particular report over night.

## Comparison Tests

Often there will be several versions of the same spreadsheet and it is useful to see what the differences are between them. This could apply to different versions of a spreadsheet or where spreadsheets should be exactly the same e.g. reporting templates for different divisions. Spreadsheet Professional comparison tool can make life easy.

Open the two spreadsheets that should be similar (if you don't have similar spreadsheets, open a spreadsheet, make an exact copy and then change one or two formulae in the copy).

Click on the 'Use' button and then 'spreadsheet comparison'. The following should pop up.



Under Spreadsheet 1 highlight the 1<sup>st</sup> spreadsheet. Under spreadsheet 2 highlight the 2<sup>nd</sup> spreadsheet. Underneath each section you will see a list of the sheet names. Highlight the sheets you want compared.

On the top left you can specify what differences concern you. My focus is normally on formulae differences. Click the formulae button and then OK.

A listing of the differences will be displayed.

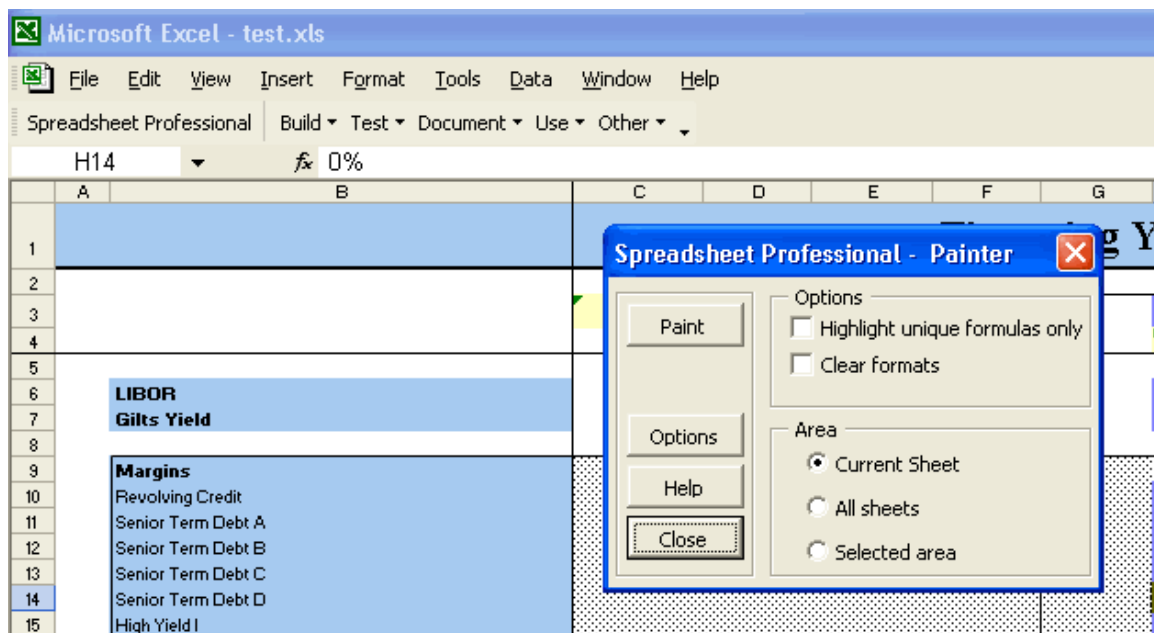
There are ways around comparisons where structural changes cause significant differences.

## Spreadsheet Painter

This tool enables you to quickly ‘paint’ a spreadsheet to give you some idea of the underlying data in the cells.

Open a spreadsheet that you want to paint.

Click on the ‘Build’ button and then ‘Spreadsheet Painter’. The following will pop up.



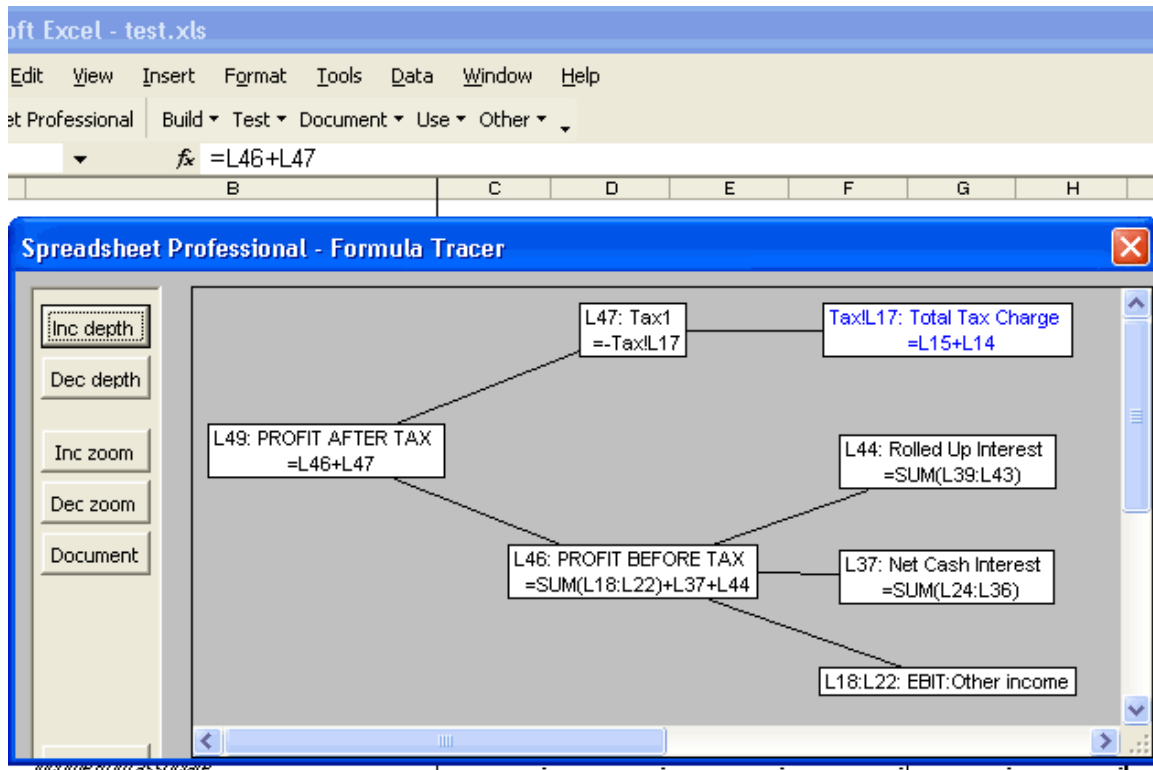
You can click on the ‘Options’ button to change the colours used. You can also choose whether you want to ‘paint’ the current sheet, whole workbook or current area. For now keep it at current sheet and click ‘Paint’.

Another option is the ‘Highlight unique formulas only’. This will colour the equivalent of the ‘F’s in the maps. This enables you to review the unique formulae on the actual spreadsheet.

## Spreadsheet Formulae Tracer

The Spreadsheet formulae tracer allows you to visually ascertain the components of a formula and is particularly useful for complex formulae and nested if functions. It also allows you to trace the formula all the way to its inputs.

In order to activate, select the cell you want to visualise. Click 'Build' then 'Spreadsheet Formula Tracer' (or 'Document' and then 'Spreadsheet Formula Tracer'). A diagram similar to the one below should appear.



The tool expands the formula into its components. It attempts to name the cell by looking at the labels inserted in the spreadsheet. It then shows the formulae, and then the result.

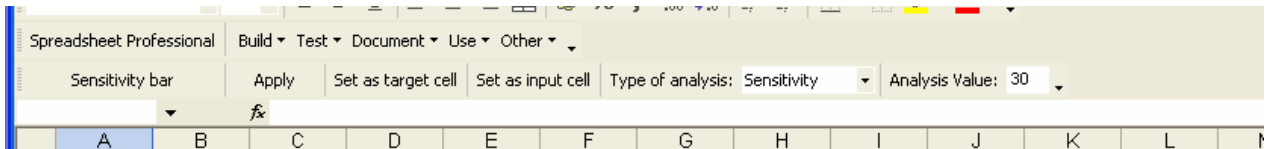
If you want to go deeper into the formula, you use the 'Inc depth' button on the left. Depending on the structure of the spreadsheet it may be possible to visually document the entire thought process from final answer to inputs.

If you want to document the picture to put on file, you click the 'Document' button. This is an essential aid in understanding complex formula and nested IF statements.

## Sensitivity Tool

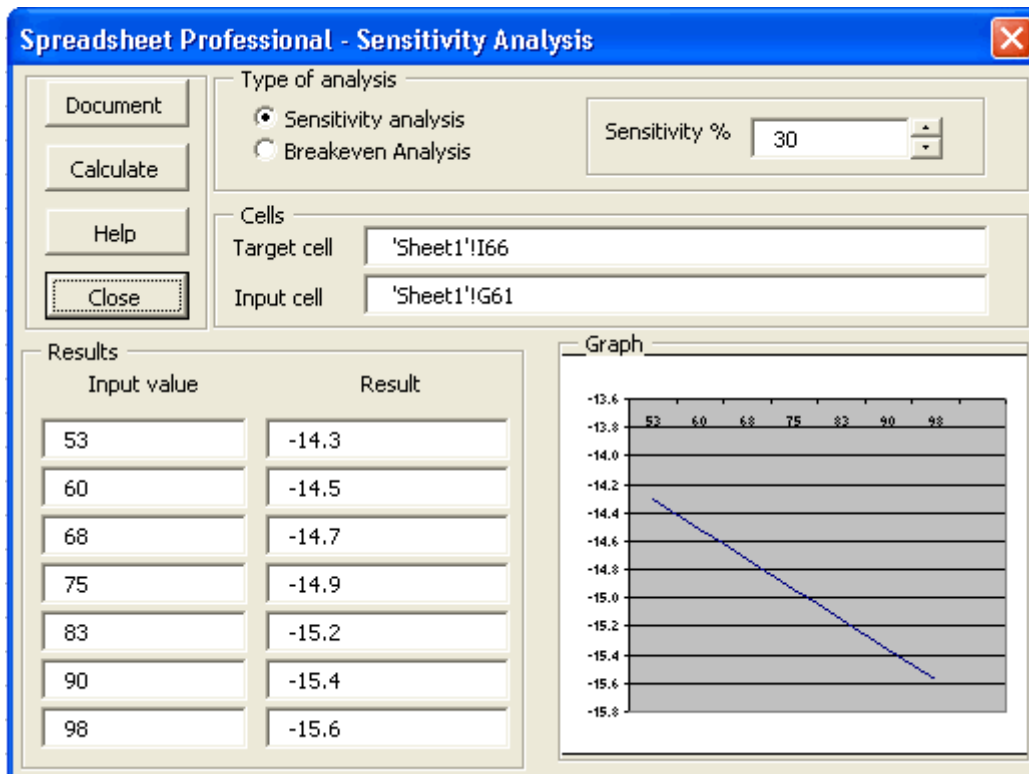
Running sensitivities in Excel can be time consuming. This tool makes it easier to document the effect of changes in inputs on the results of a spreadsheet.

Click 'Use' and then 'Show Sensitivity Bar'. The following should appear.



On an open spreadsheet, click on the cell that has the result you want to test. Then click the 'Set as target cell' on Spreadsheet Professional.

Click on the cell that contains the input that affects the target cell. Then click the 'Set as input cell'. Click 'Apply'. Something similar to the following should appear.



You can document the results by clicking on the 'Document' button.

## Other tools

Other tools exist within Spreadsheet Professional.

Under the **Build** toolbar, is the **Translation bar**. This produces a bar at the bottom of the screen that attempts to convert the formula in the current cell into English based on the labels of the spreadsheet.

Under the **Test** toolbar, is the **Spreadsheet Checker**. Its acts in a similar way to MS Word's spell checker except the tests it performs are the same as the general and calculations tests performed in the reports.

Under the **Other** toolbar, you can change a number of options to make the tool work for you. These include the types of tests performed, colours used in painting, and where the tool can find the labels to convert the formula into English.

## Conclusion

By using Spreadsheet Professional you can significantly reduce the time it takes to review models, and at the same time be more certain of the results.