

Oops. Last month was a very busy month for SumProduct with everyone everywhere on client work, training and MVP Summits. Summit had to give as a result – we took our eye off this ball a little and made an omission in last month’s newsletter. We try to bribe you into forgetting this with mention of our annual Christmas Quiz with prizes!! Our header last month was truly ironic (maybe we we missed something)...

It got us thinking, maybe we ought to talk about Data Validation this month!

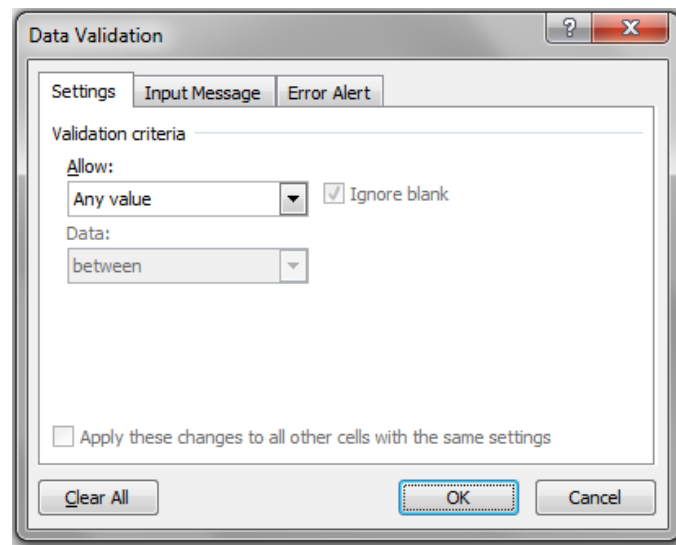
Season’s greetings to you all.

Liam Bastick, Managing Director, SumProduct

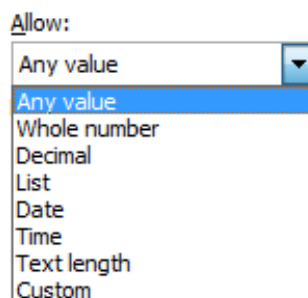


Data Validation

To access data validation, from any cell in Excel, go to the Data tab of the Ribbon, then to the Data Tools group and click the Data Validation icon (ALT + D + L is probably quicker). This brings up the following dialog box:

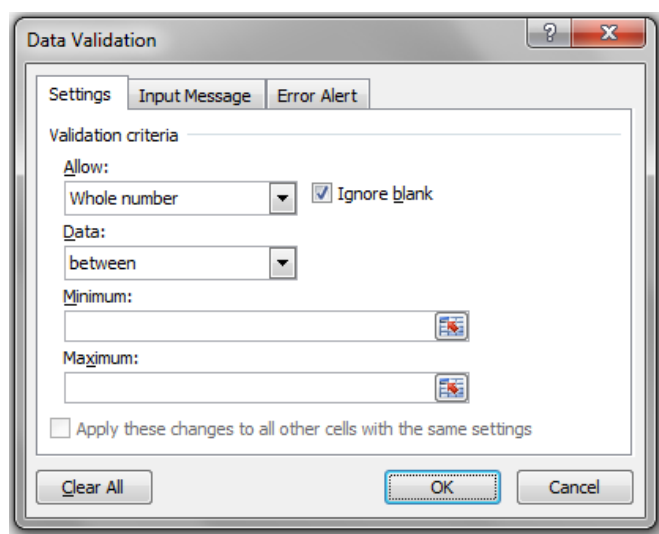


The default setting for all cells in Excel is to allow any value (pictured). This can be changed by changing the selection in the ‘Allow’ drop down box. It may be modified to any of the following:

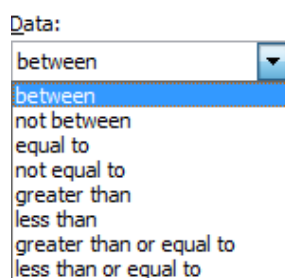


Most of these criteria do exactly what they say on the tin: by choosing 'Decimal', the input must be a number, whereas 'Whole Number' allows for integers only. However, making a selection from the 'Allow' drop down box is only the first part of the data validation process.

Once a selection has been made (for example, using 'Whole Number'), the dialog box will change appearance, viz.

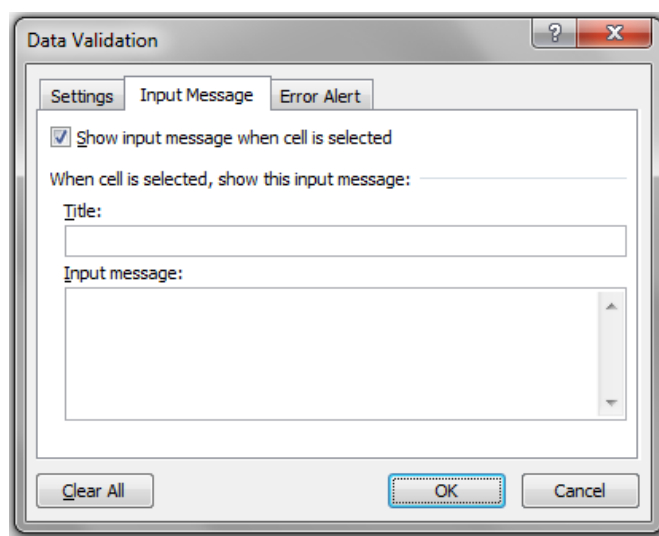


The 'Ignore blank' check box is no longer greyed out. This allows blank cells to be 'valid' regardless of the criteria selected. The remainder of the dialog box is governed by the 'Data' drop down box. There are various selections that may be made:

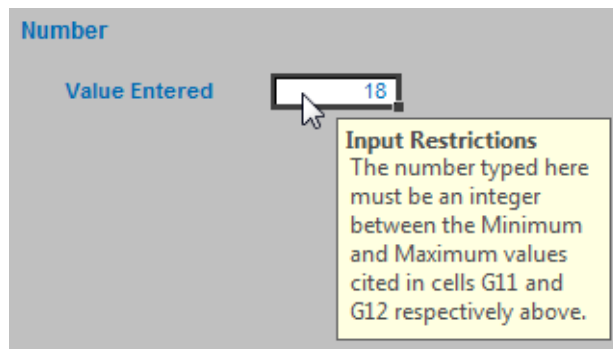


Depending upon the choice made, the box will prompt for values (e.g. Minimum and Maximum in the illustration above) which can be typed in, or else the values can refer to cell references directly or indirectly via range names.

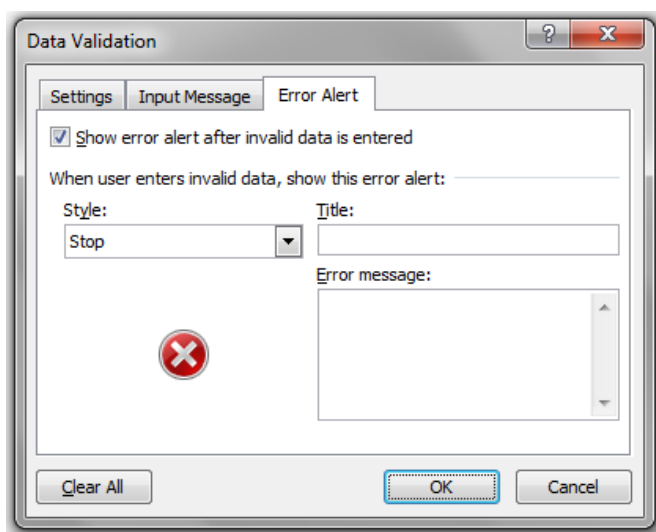
Once the choices have been made, you might wish to utilise the other two tabs of the Data Validation dialog box.



With the 'Show input message when cell is selected' checked, if the end user selects the data validated, cell the message typed in here will appear. This can make data inputs in a model much simpler as end users are 'spoon fed' with a pop-up box detailing what to do. In the example below, the 'Input Restrictions' comment only appears when the cell is selected:



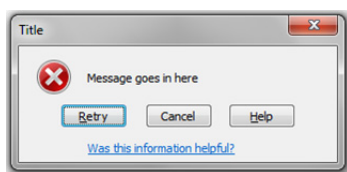
The third tab selects what to do if invalid data is entered in the cell:



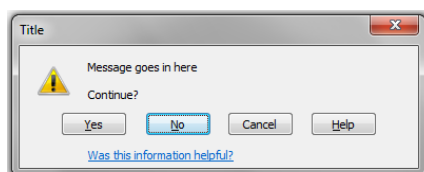
This alerts the end user when an invalid entry has been made (e.g. typing "dog" when a number is expected) – as long as the 'Show error alert after invalid data is entered' check box is ticked.

There are three styles available:

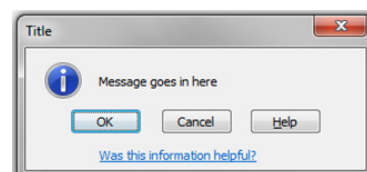
Stop



Warning



Information



The three styles provide differing treatment of invalid data:

- **Stop** – the value will not be accepted and the end user will be prompted to retry;
- **Warning** – the end user will be warned that the data is invalid, but be asked whether it is OK to continue;
- **Information** – the end user will be advised that the data is invalid but that the data has been accepted.

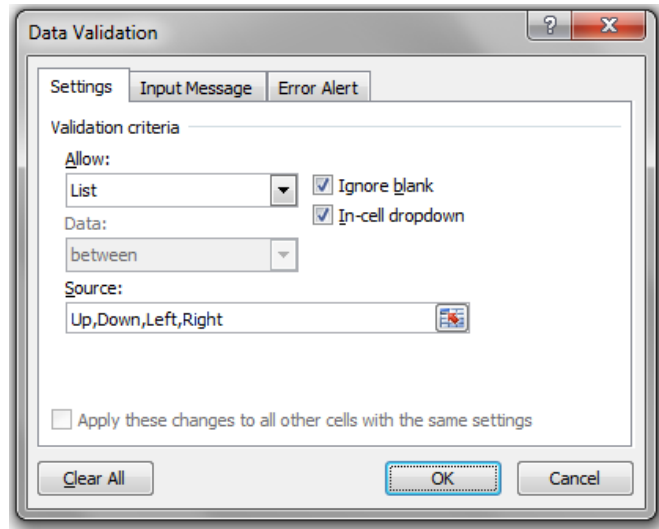
If the 'Show error alert after invalid data is entered' check box is not ticked, no prompt will occur and invalid data will be accepted in the cell without any warning.

Other Types of Data Validation

Whole Number, Decimal, Date, Time and Text Length are all relatively straightforward, albeit very similar in nature. This leaves just two remaining categories to consider.

List

This functionality allows the end user to select from a list.



With 'List' selected, the dialog box prompts for a source for the list. In the illustration, the entries have been typed in, separated by a comma. However, the data can use cell references which are in a column – or

a row – as long as the cells are on the same worksheet. For lists, we strongly recommend using the 'In-cell dropdown' which provides a dropdown list of valid entries once the cell has been selected.

Custom

As you become more experienced, you may find the functionality limiting. This is where the final 'Allow' category comes in useful, as you design your own data validation.

Note Well

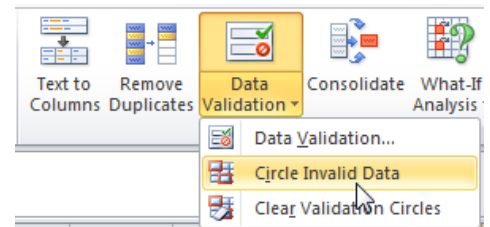
Data validation will not solve all of your data entry problems. If data has already been entered into a cell and data validation is applied retrospectively such that the contents of the cell would be deemed

invalid, no warning will ensue. Similarly, if the contents of a list are altered, any cells that selected the changed value will not update automatically.

To counter these issues, invalid data may be identified on a worksheet as follows:

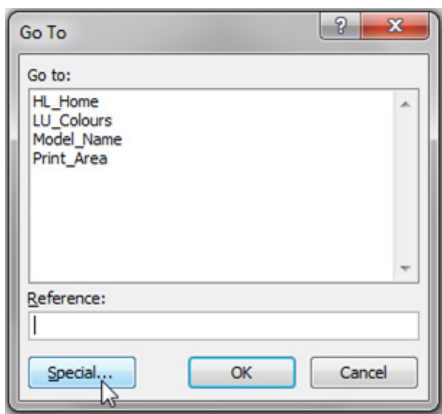
- On the Data tab of the Ribbon, go to the Data Tools group and click the drop down menu next to the Data Validation icon
- Select 'Circle Invalid Data' (ALT + A + V + I)

This will circle all invalid data on the worksheet.

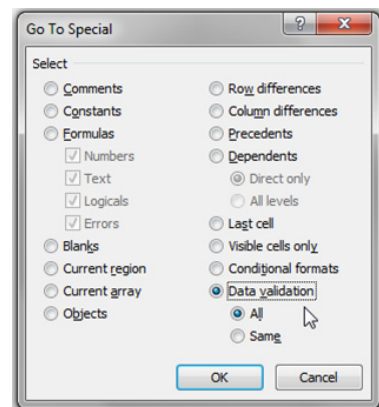


One other issue is locating cells that have been data validated in the first place (i.e. no longer allow 'any value'). The simplest way to do this is through the 'Go to' dialog box (F5), click on the 'Special...' button and then select 'Data Validation' (either all data validated cells or those validated similarly to the cell presently selected):

Select 'Special...' on the Go To Dialog Box



Choose Data Validation



More tricks and tips can be found on our website as www.sumproduct.com/thought.

New Functions in Excel 2013 – Re-revisited

It's great when you work in an industry that is renowned to pay great attention to *detali*. So we come back this month to eat humble pie and congratulate our eagle-eyed readers who spotted our, er, "deliberate mistakes". Well done one and all, you passed our test...

- **DAYS** – returns the number of days between two days
- **FORMULATEXT** – returns the formula at the given reference as text
- **ISFORMULA** – returns TRUE if there is a reference to a cell that contains a formula
- **PDURATION** – returns the number of periods required by an investment to reach a specified value
- **RRI** – returns an equivalent interest rate for the growth of an investment
- **XOR** – returns a logical exclusive OR of all arguments

However, gremlins got into the machinery and somewhere between original copy and publishing, we decided RRI was worth ignoring. To make amends, please find our omitted explanation below, including revisiting **PDURATION** to put **RRI** in context.

PDURATION

This function returns the number of periods required by an investment to reach a specified value. For example, consider looking to save towards your retirement:

	A	B	C	D
1				
2				
3		Value of Investment Now	\$ 5,000.00	
4		Required Amount	\$ 100,000.00	
5		Rate	5%	
6				
7		Years	61	
8				
9				
10				

=PDURATION(C5,C3,C4)

A depressing thought, but here at SumProduct we have already come to terms with the fact that our retirement plans are probably pipedreams. Would you mind if we increased our rates..?

RRI

This function (Required Rate of Investment) is essentially the flipside of this coin. Let's say you wanted to retire in 10 years' time:

	A	B	C
1			
2			
3		Value of Investment Now	\$ 5,000.00
4		Required Amount	\$ 100,000.00
5		Number of Years	10
6			
7		Required Rate	34.9%
8			
9			
10			

=RRI(C5,C3,C4)

Simple! You just need a 34.9% p.a. rate of return. If you find such a bona fide rate of return, please let us know. Charles Ponzi need not apply.

MVP Summit Update

November saw our own Liam Bastick heading for Redmond, home of Microsoft HQ, to attend the annual MVP Summit and catch up with fellow Excel experts from around the globe. With fresh faces and old friends to catch up with, Microsoft briefed the brigade on what's coming and sought out ideas on improvements.

We'll bring you more details on forthcoming Excel goodies as and when we can. In the meantime, meet some of the Excel MVP gang hard at work in one intense briefing session (hmmm...):



Excel MVPs one and all (from left to right): Chris "Smitty" Smith, Liam Bastick, Charles Williams, Ingeborg Hawighorst, Ron Coderre, Jan Karel Pieterse, Wim Gielis, Ken Puls, Roger Govier, Mynda Treacy, Jon Acampora.



Upcoming SumProduct Training Courses

- Melbourne** 1st - 2nd Dec 2014: Power Pivot training
- Sydney** 3rd - 4th Dec 2014: Power Pivot training
- Brisbane** 8th - 9th Dec 2014: Power Pivot training
- Perth** 10th - 11th Dec 2014: Power Pivot training
- Dubai** 21st - 23rd Mar 2015: Strategic Planning, Forecasting and Budgeting
- Hong Kong** 5th - 8th May 2015: Strategic Planning, Forecasting and Budgeting
- London** 18th - 20th May 2015: Strategic Planning, Forecasting and Budgeting
- Singapore** 26th - 29th May 2015: Strategic Planning, Forecasting and Budgeting
- New York** 31st Aug - 2nd Sep 2015: Strategic Planning, Forecasting and Budgeting
- London** 19th - 21st Oct 2015: Strategic Planning, Forecasting and Budgeting
- Hong Kong** 26th - 29th Oct 2015: Strategic Planning, Forecasting and Budgeting
- Dubai** 8th - 10th Dec 2015: Strategic Planning, Forecasting and Budgeting

Key Strokes

Each newsletter, we'd like to introduce you to several useful keystrokes you may or may not be aware of. This month – we thought it might be appropriate to suggest some that are useful for model checking purposes!

Keystroke	What it does
CTRL + [Trace precedents
CTRL +]	Trace dependents
ALT + T + K	Launch worksheet error checking
ALT + T + U + E	Trace error (requires cell containing error to be selected)
ALT + T + A	Launch Autocorrect Options dialog box

There are over 540 keyboard shortcuts in Excel. For a comprehensive list, please download our Excel file at <http://www.sumproduct.com/thought/keyboard-shortcuts>.

Christmas Quiz Challenge

SumProduct, in conjunction with the Chartered Institute of Management Accountants (CIMA), is pleased to announce the annual Xmas quiz. It's open to everyone, not just accountants. Check out the Excel challenge – with prizes – in the December issue of Insight at <http://www.cimaglobal.com/Thought-leadership/Newsletters/Insight-e-magazine/Insight-2014/Insight-December-2014/In-this-issue/>

Our Services

We have undertaken a vast array of assignments over the years, including:

- **Business planning**
- **Building three-way integrated financial statement projections**
- **Independent expert reviews**
- **Key driver analysis**
- **Model reviews / audits for internal and external purposes**
- **M&A work**
- **Model scoping**
- **Project finance**
- **Real options analysis**
- **Refinancing / restructuring**
- **Strategic modelling**
- **Valuations**
- **Working capital management**

If you require modelling assistance of any kind, please do not hesitate to contact us at contact@sumproduct.com.

Spread the Word

These newsletters are not intended to be closely guarded secrets. Please feel free to forward this newsletter to anyone you think might be interested in converting to "the SumProduct way".

If you have received a forwarded newsletter and would like to receive future editions automatically, please subscribe by completing our newsletter registration process found at the foot of any www.sumproduct.com web page.

Any Questions?

If you have any tips, comments or queries for future newsletters, we'd be delighted to hear from you. Please drop us a line at newsletter@sumproduct.com.

Training

SumProduct offers a wide range of training courses, aimed at finance professionals and budding Excel experts. Courses include Excel Tricks & Tips, Financial Modelling 101, Introduction to Forecasting and M&A Modelling.

Check out our more popular courses in our training brochure:



Drop us a line at training@sumproduct.com for a copy of the brochure or download it directly from <http://www.sumproduct.com/training>.