



Despair or Repair?

With Windows 10 and Excel 2016 coming out (for both PCs and Apple products), it's fair to say there are one or two areas for improvement, shall we say. This month we look at one or two tips that might help any of you recently afflicted. Sorry, I meant to say "affected".

We've also got news on MVP reappointment (yay!) and we thought we'd celebrate by looking at one of the most complex functions in Excel that no-one has ever heard of or used: **SUM**.

Don't forget, it's just one month to the [Excel MVP Summit South](#) – don't forget to register, we hope to see you there!!

Until next month.

Liam Bastick, Managing Director, SumProduct



Excel in 2016: Problems with Side by Side Installations

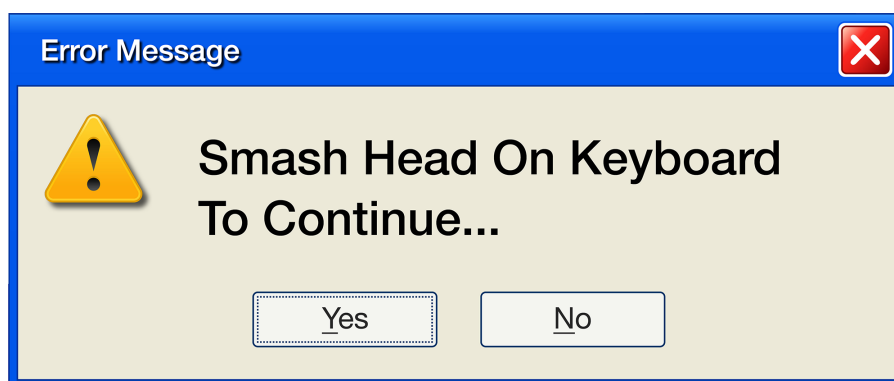
As more and more businesses consider upgrading to Excel – and Office – 2016, many decide to retain earlier versions of Office for compatibility with existing files, etc.

If you want to install and run more than one version of Office on the same PC, Microsoft offers some tips to help you avoid most set-up errors:

- In most cases you **cannot** run Office 2016 and Office 2013 on the same computer. The exception to this is if Office was installed using an MSI
- You cannot run Office 2016 with standalone Office 2013 applications, such as Project 2013, Visio 2013, or Access 2013. This gives rise to the "We need to remove some older apps" error
- Install earlier versions of Office first. For example, install Office 2010 before installing Office 2016 (or Office 2013)
- Make sure all versions of Office are either 32-bit or 64-bit (although Office 2007 and prior versions are all 32-bit).

Keep in mind that even if you follow these recommendations, you might still run into issues when you use two versions of Office on the same PC. If the above doesn't work, SumProduct has had some success in installing the newest version first and working backwards (only install the latest version of Outlook and use the custom installation tools for the other editions) – even though this is not recommended by Microsoft (or us, before you decide to sue us!).

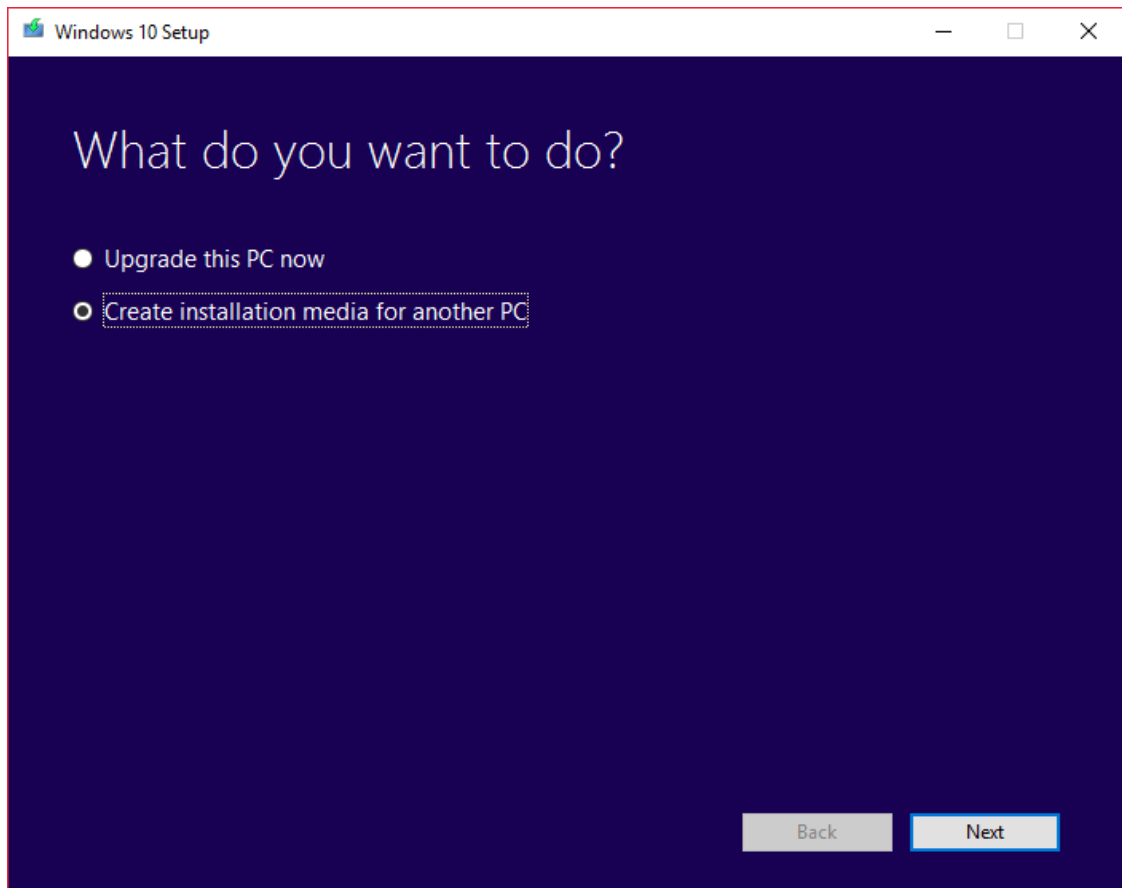
In particular, we have had several issues with side-by-side installations of Office 2013 and Office 2016 (e.g. you cannot open both versions of Excel at the same time, a re-boot may be necessary to switch versions). Given these problems, it is highly recommended only one of these two versions of Office is installed.



If you decide not to keep multiple versions and you uninstall the earlier versions, you might need to repair the version(s) remaining to make sure that the file associations will work correctly.

Windows 10 Product Key

Whilst we are on the subject of software issues, there's been a few in Windows 10 – some of which have required a clean installation of Windows 10 to correct. If you are unlucky enough for this to apply to you, getting the installation media is fairly straightforward; simply go to <https://www.microsoft.com/en-au/software-download/windows10> and click on the 'Download Tool' button:



We recommend the 'Create installation media for another PC' option to save the software to a USB (if for no other reason you only need to download the 3GB file once!).

Once downloaded, running the software is fairly straightforward and the default options – if instructions are read carefully! – allow for personal files / programs to be retained. Be careful!!

If you upgraded to Windows 10 from Windows 7 or Windows 8.1,

the general feedback is that the reinstallation works without a hitch, but there are some occasions when the installer may prompt for the Windows 10 Product Key. For preinstalled machines in particular, this can be difficult to find.

Therefore, **before you start** make a note of your Product Key as follows.

Copy the following Visual Basic to a new WordPad file:

Option Explicit

```
Dim objshell,path,DigitalID, Result
Set objshell = CreateObject("WScript.Shell")
'Set registry key path
Path = "HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\"
'Registry key value
DigitalID = objshell.RegRead(Path & "DigitalProductId")
Dim ProductName,ProductID,ProductKey,ProductData
'Get ProductName, ProductID, ProductKey
ProductName = "Product Name: " & objshell.RegRead(Path & "ProductName")
ProductID = "Product ID: " & objshell.RegRead(Path & "ProductID")
ProductKey = "Installed Key: " & ConvertToKey(DigitalID)
ProductData = ProductName & vbNewLine & ProductID & vbNewLine & ProductKey
'Show message box if saving to a file
If vbYes = MsgBox(ProductData & vbLf & vbLf & "Save to a file?", vbYesNo + vbQuestion, "BackUp
Windows Key Information") then
    Save ProductData
End If
```

```

'Convert binary to characters
Function ConvertToKey(Key)
    Const KeyOffset = 52
    Dim isWin8, Maps, i, j, Current, KeyOutput, Last, keypart1, insert
    'Check if OS is Windows 8
    isWin8 = (Key(66) \ 6) And 1
    Key(66) = (Key(66) And &HF7) Or ((isWin8 And 2) * 4)
    i = 24
    Maps = "BCDFGHJKMPQRTVWXY2346789"
    Do
        Current= 0
        j = 14
        Do
            Current = Current* 256
            Current = Key(j + KeyOffset) + Current
            Key(j + KeyOffset) = (Current \ 24)
            Current=Current Mod 24
            j = j -1
        Loop While j >= 0
        i = i -1
        KeyOutput = Mid(Maps,Current+ 1, 1) & KeyOutput
        Last = Current
    Loop While i >= 0
    keypart1 = Mid(KeyOutput, 2, Last)
    insert = "N"
    KeyOutput = Replace(KeyOutput, keypart1, keypart1 & insert, 2, 1, 0)
    If Last = 0 Then KeyOutput = insert & KeyOutput
    ConvertToKey = Mid(KeyOutput, 1, 5) & "-" & Mid(KeyOutput, 6, 5) & "-" & Mid(KeyOutput, 11, 5)
    & "-" & Mid(KeyOutput, 16, 5) & "-" & Mid(KeyOutput, 21, 5)

End Function

'Save data to a file
Function Save(Data)
    Dim fso, fName, txt,objshell,UserName
    Set objshell = CreateObject("wscript.shell")
    'Get current user name
    UserName = objshell.ExpandEnvironmentStrings("%UserName%")
    'Create a text file on desktop
    fName = "C:\Users\" & UserName & "\Desktop\WindowsKeyInfo.txt"
    Set fso = CreateObject("Scripting.FileSystemObject")
    Set txt = fso.CreateTextFile(fName)
    txt.WriteLine Data
    txt.Close
End Function

```

(With acknowledgment and thanks to Sergey Tkachenko for this trick.)

Then save the file to, say the desktop and then rename it as a .vbs file. Opening this file will provide the Product Key – and it may even be printed out. Trust me, much simpler than some of the alternatives.

Warning: Don't send the vbs file as an email attachment. You may find yourself blacklisted faster than you can say Taumatawhakatangihangakoauauotamatearehaeaturipukakapikimaungahoronukupokaiwhenuakitanatahu (<https://www.youtube.com/watch?v=1gOHsp4rVzU>). If need be, forward the text file described above.

MVP 2016



SumProduct is pleased to announce that our MD, Liam Bastick, has been re-awarded Microsoft's Most Valuable Professional (MVP) award for Excel for 2016. This award recognises exceptional technical community leaders from around the world who voluntarily share their high quality, real world expertise with others. Microsoft MVPs are a highly select group of experts representing technology's best and brightest who share a deep commitment to community and a willingness to help others.

Worldwide, there are over 100 million participants in technical communities; of these participants, there are fewer than 4,000 active Microsoft MVPs. In Excel, c.120 people have received this award.

Microsoft's MVP Award evaluates technical expertise and voluntary community contributions for the past year, considering the quality, quantity and level of impact of contributions. It's a difficult award to attain and just as difficult to retain. This is Liam's fifth consecutive award.

Now part of the Microsoft Partner Network and with intended involvement in this year's Excel Summit South, the Amsterdam Summit, the Data Insights Summit and the MVP Summit and the usual presentations / talks / training throughout Europe, US and Asia on our own, with various accounting institutes and other training partners, it's going to be another busy year for SumProduct - and we hope to justify Microsoft's continued faith in us.

Looking for SUM Trouble?

Is there really anyone out there that hasn't encountered the **SUM** function? Is there anything new for me to tell you about **SUM**..? Here is some food for thought.

SUM adds things up. It may include cells, numbers or ranges. In the context of financial modelling, summations are usually of numbers either directly above or to the left of the cell in question:

The screenshot shows an Excel spreadsheet with a formula bar at the top displaying '=SUM(C5:F5)'. The spreadsheet has columns A through G and rows 1 through 10. Column A contains the word 'Summary' in row 1. Column B contains 'Business Unit 1' through 'Business Unit 4' in rows 4 through 7. Columns C through F contain numerical data for 'Product A', 'Product B', 'Product C', and 'Product D' respectively. Column G contains the sum of the values in columns C through F for each row. The sum for Business Unit 2 (row 5) is highlighted in red.

	A	B	C	D	E	F	G
1	Summary						
2							
3			Product A	Product B	Product C	Product D	
4		Business Unit 1	54	46	78	31	209
5		Business Unit 2	40	72	25	47	184
6		Business Unit 3	91	82	76	80	329
7		Business Unit 4	79	12	28	92	211
8			264	212	207	250	
9							
10							

There is a great keyboard shortcut available on most PC's. If you select the cell to the right or directly below the values to be aggregated and then use the shortcut **ALT + =** you will see that the range is summed automatically. If you find this doesn't work for you, make sure you keep the **ALT** button held down on your keyboard.

We use this all of the time in modelling. It's a fast shortcut, it ensures you don't miss cells within the range, it requires the range to be contiguous and you can't leave blank cells. This shortcut actually forces you to build in a manner that will reduce the number of errors you might make.

Be careful with **SUM**. Consider the following example:

	A	B	C	D	E	F	G
1							
2					Values		
3					1		
4					2		
5					3		
6					4		
7					5		
8			Using SUM		15	=SUM(E3:E7)	
9			Using +		15	=E3+E4+E5+E6+E7	
10							
11							

In this example, the values in cells **E3:E7** are totalled in two distinct ways: the first uses the aforementioned **SUM** function with **ALT +=**, the other has added each cell individually using the '+' operator. Are you thinking you'd be mad to use the alternative (second) approach – especially if there were many more rows?

Well, take another look:

	A	B	C	D	E	F	G
1							
2					Values		
3					1		
4					2		
5					3		
6					4		
7					5		
8			Using SUM		12		=SUM(E3:E7)
9			Using +		15		=E3+E4+E5+E6+E7
10							

In this example, cell **E5** has been modified. It has been stored as text, even though it looks like the number 3. **SUM** treats this as having zero value whereas the more convoluted addition carries on regardless.

In an example like the one above, this may be easy to spot, but would you stake your life that the sum is correct?

[illegible]

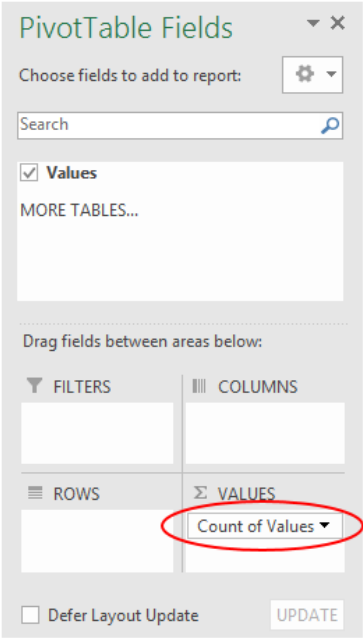
There is a simple way to check using the **COUNT** function. **COUNT** counts the number of numbers in a range, so we can use it to spot numbers that aren't numbers:

G5		=1-COUNT(E5)	
	A	B	C
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

	A	B	C	D	E	F	G	H	I
1									
2					Values				
3					1	-		=1-COUNT(E3)	
4					2	-		=1-COUNT(E4)	
5					3	1		=1-COUNT(E5)	
6					4	-		=1-COUNT(E6)	
7					5	-		=1-COUNT(E7)	
8			Using SUM		12			=SUM(E3:E7)	
9			Using +		15			=E3+E4+E5+E6+E7	
10									

Here, the formula in column I highlights when a number is not a number. Note how it reports by exception: if the cell in question contains a number then **COUNT(Cell_Reference)** equals 1 and **=1-COUNT(Cell_Reference)** equals zero. Only non-numbers will be highlighted – it's better to know you have two errors rather than 14,367 values working correctly.

If you don't think this applies to you, have you ever worked with PivotTables? This can happen when a field contains data that is not numerical (e.g. stored as text or blank cells).



You want your aggregation of values to default to **SUM** but instead they display as **COUNT**. This could be highlighting that some of your data is non-numerical and / or blank. Just a thought.

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 look at some relevant to this month's newsletter:

Keystroke	What it does
HOME	Select the first cell in the row.
CTRL + HOME	Select cell to reset window (or pane).
CTRL + SHIFT + HOME	Extends the selection to the cell that resets the window (or pane).
CTRL + END	Selects the last cell in the worksheet.
CTRL + SHIFT + END	Extends the selection to the last cell in the sheet.

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>. Also, check out our new daily **Excel Tip of the Day** feature on the www.sumproduct.com homepage.

Upcoming SumProduct Training Courses

Location	Course	Date	Duration
Perth	Excel Tips & Tricks	15th Feb 2016	1 day
Perth	Financial Modelling	16th - 17th Feb 2016	2 days
Melbourne	Excel Tips & Tricks	22nd Feb 2016	1 day
Melbourne	Financial Modelling	23rd - 24th Feb 2016	2 days
Melbourne	Introduction to Forecasting	25th Feb 2016	1 day
Melbourne	Valuations Modelling	26th Feb 2016	1 day
Sydney	Excel Tips & Tricks	18th Apr 2016	1 day
Sydney	Financial Modelling	19th - 20th Apr 2016	2 days
Sydney	Mergers & Acquisitions Modelling	21st - 22nd Apr 2016	2 days
Brisbane	Excel Tips & Tricks	16th May 2016	1 day
Brisbane	Financial Modelling	17th - 18th May 2016	2 days
Singapore	Excel Tips & Tricks	23rd May 2016	1 day
Singapore	Financial Modelling	24th - 25th May 2016	2 days
Singapore	Power of Power Pivot	26th - 27th May 2016	2 days
Melbourne	Excel Tips & Tricks	6th Jun 2016	1 day
Melbourne	Financial Modelling	7th - 8th Jun 2016	2 days
Melbourne	Mergers & Acquisitions Modelling	9th - 10th Jun 2016	2 days
Melbourne	Power of Power Pivot	14th - 15th Jun 2016	2 days
Auckland	Excel Tips & Tricks	20th Jun 2016	1 day
Auckland	Financial Modelling	21st - 22nd Jun 2016	2 days

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.

Link to Others

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>.

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