



Updates, updates everywhere – be it Access, Power Query / Get & Transform, Windows 10 or our participation in the Global Training Camps.

The journeys continue next month with trips to Auckland, Brisbane, Kuala Lumpur and New York – feel free to come and meet up with us. We also continue the usual keyboard shortcuts, the A to Z of Excel Functions and Outer Limits series – and still have time to mention our recent meet-up with valuations expert Professor Aswath Damodaran and a free Excel game to download.

Until next month.

Liam Bastick, Managing Director, SumProduct



August Update for Get & Transform / Power Query

Too late for last month's newsletter, we thought we ought to bring you up to speed on the latest features to the ever-improving Power Query (Excel 2010 and Excel 2013) / Get & Transform (Excel 2016). There's eight of them in fact:

- Enhanced SAP HANA connector—allow multi-select of values for variables and parameters
- Enhanced OData connector—option to import Open Type columns from OData feeds
- Enhanced Access DB connector—new Select Related Tables button to "" in the Navigator dialog box
- Option to generate Step Names in English within the Query Editor
- Description for Query Steps within the Query Editor
- Extract Week, Day or Month name from a Date / Time column from the Query Editor
- Merge Dates and Times into a Date / Time column from the Query Editor
- Extract Start / End of Hour from a Date / Time or Time column from the Query Editor.

Better go through them...

1. Enhanced SAP HANA Connector

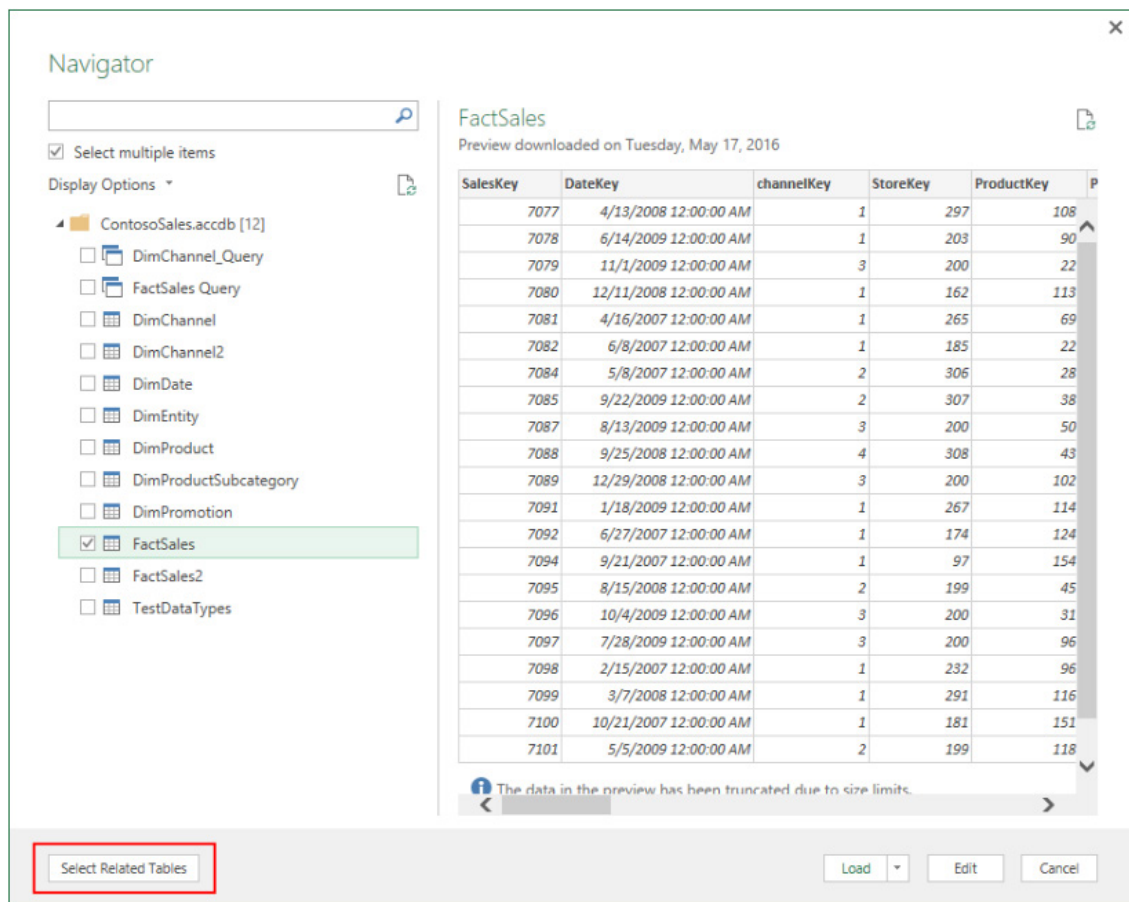
With this update, you can now select more than one value for a given variable or parameter when leveraging the SAP HANA connector. This can be selected via the Navigator dialog box.

2. Enhanced OData Connector

The OData connector now supports importing Open Type columns from OData feeds. Prior to this update, such columns were not supported in Power Query. This option to import Open Type columns from OData feeds is available under the Advanced Options section in the OData connector dialog.

3. Enhanced Access DB Connector

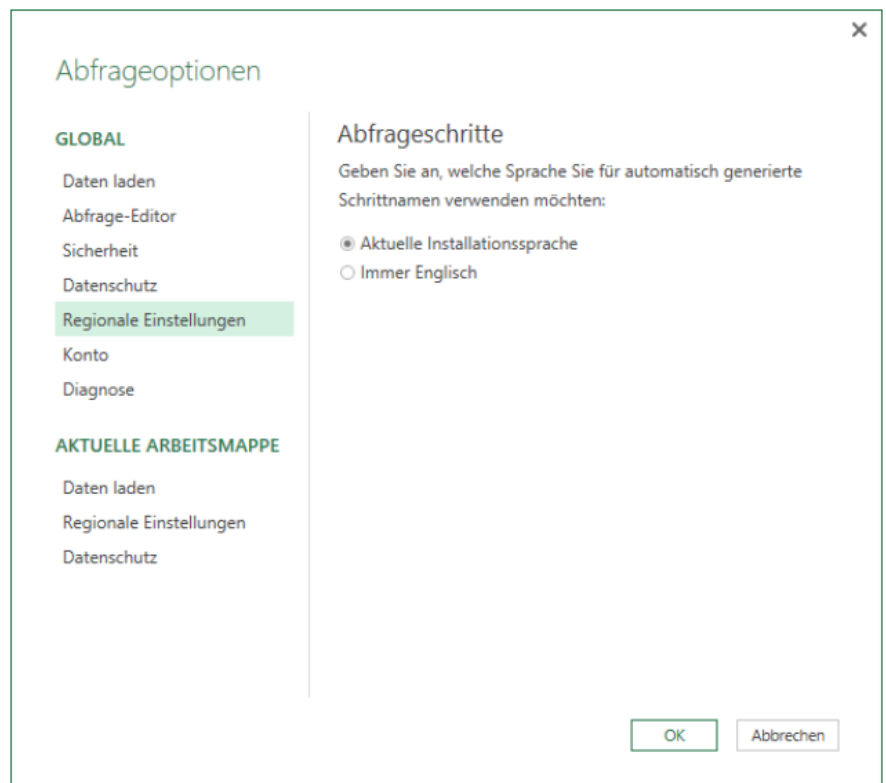
Like several other databases that already support this capability, the Access Database connector now enables users to easily select related tables by adding the Select Related Tables button into the Navigator dialog. Essentially, this feature selects all tables that have a direct relationship to any of the already selected tables.



4. Option to Generate Step Names in English within the Query Editor

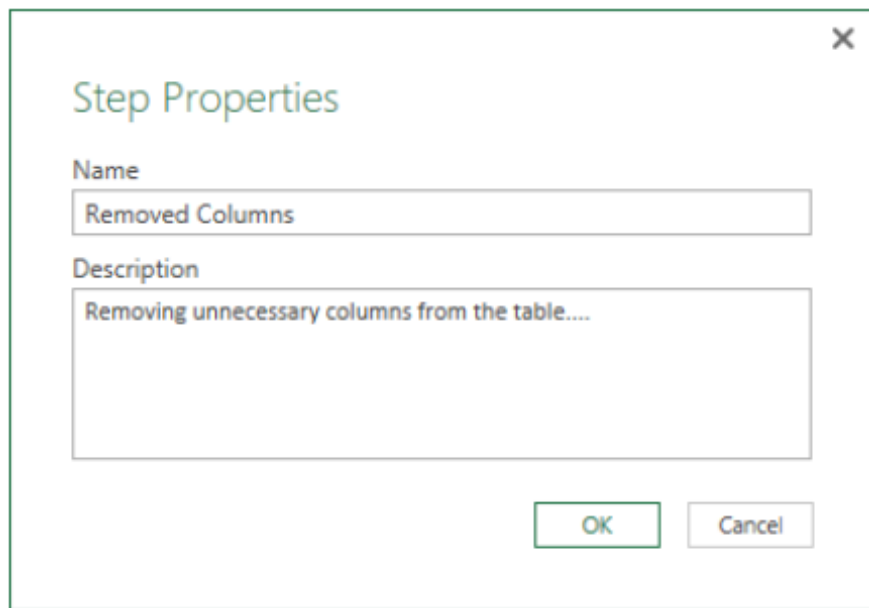
When creating new Steps in the Query Editor based on transformations from the Ribbon, the default Step Names will be based on the transformation name (e.g. SplitColumns, FilteredRows, etc.). These step names will be localized to the current installation language for Excel.

With this update, we introduced a new option to allow users to change this default behaviour so that auto-generated step names use the English name for that transformation. This allows you to contribute to a single Excel report using multiple localized desktop versions, but keep the Step names recognizable by all parties (i.e. all in English by default). The new configuration setting is available under **Data > New Query > Global > Regional Settings** for non-English installations.



5. Description for Query Steps within the Query Editor

Microsoft has now introduced a new Description field for Query Steps within the Query Editor, which gives you an option to document and provide comments for your query transformations. The new Description field can be accessed from the right-click menu on any **Query Step > Properties...** command.



Step Properties

Name
Removed Columns

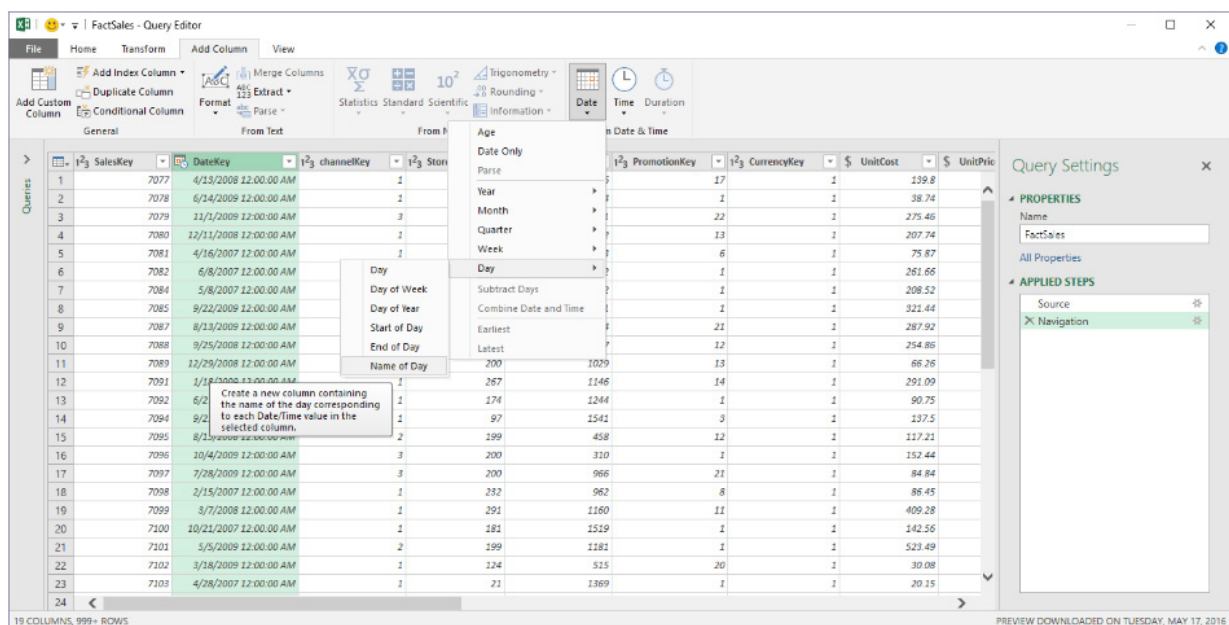
Description
Removing unnecessary columns from the table....

OK Cancel

6. Extract Week, Day or Month Name from a Date / Time Column from the Query Editor

With this latest update, you can now extract the Week, Day or Month names from a given Date / Time column. This is accessible from the Query Editor Ribbon, either via the Transform tab (to modify an existing column) or via the Add Column tab (to insert a new one).

These two options can be found under **Date > Day > Name of Day** and **Date > Month > Name of Month** respectively. It should be noted that the Day and Month names are localised according to the local setting for your current file (available under **Data tab of the Ribbon > New Query > Query Options > Current Workbook > Regional Settings** for your Excel workbook).



FactSales - Query Editor

File Home Transform Add Column View

Add Custom Column Add Index Column Duplicate Column Conditional Column

General From Text From Date

Age Date Only Parse Year Month Quarter Week Day Day of Week Day of Year Start of Day End of Day Name of Day

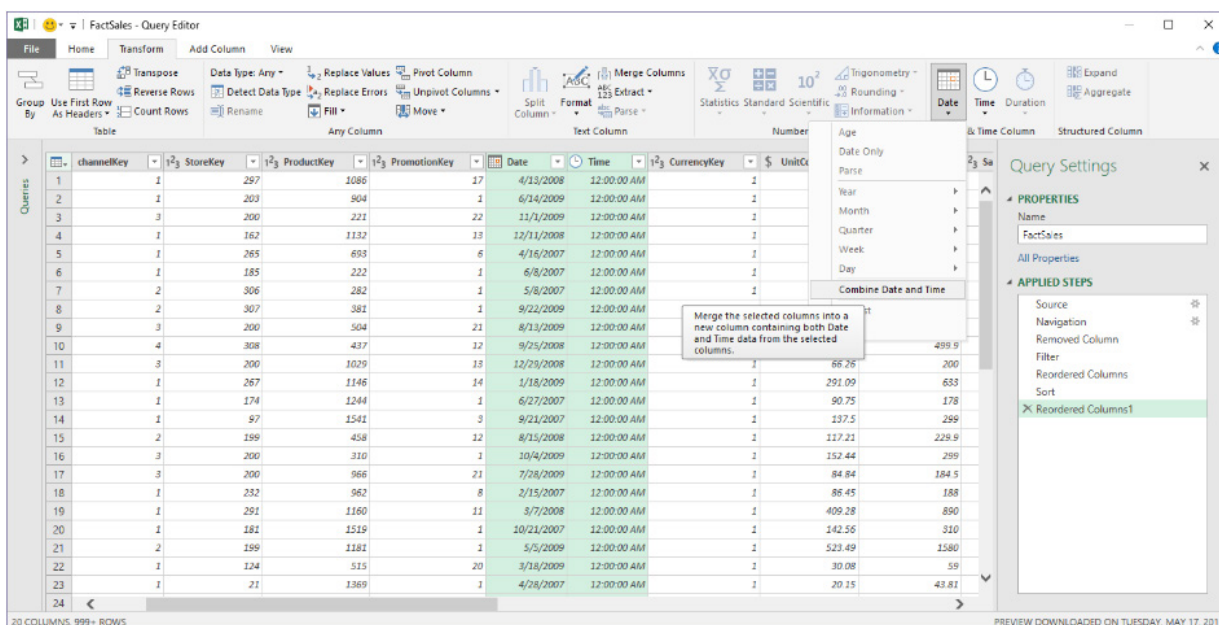
Create a new column containing the name of the day corresponding to each Date/Time value in the selected column.

19 COLUMNS, 999+ ROWS

PREVIEW DOWNLOADED ON TUESDAY, MAY 17, 2016

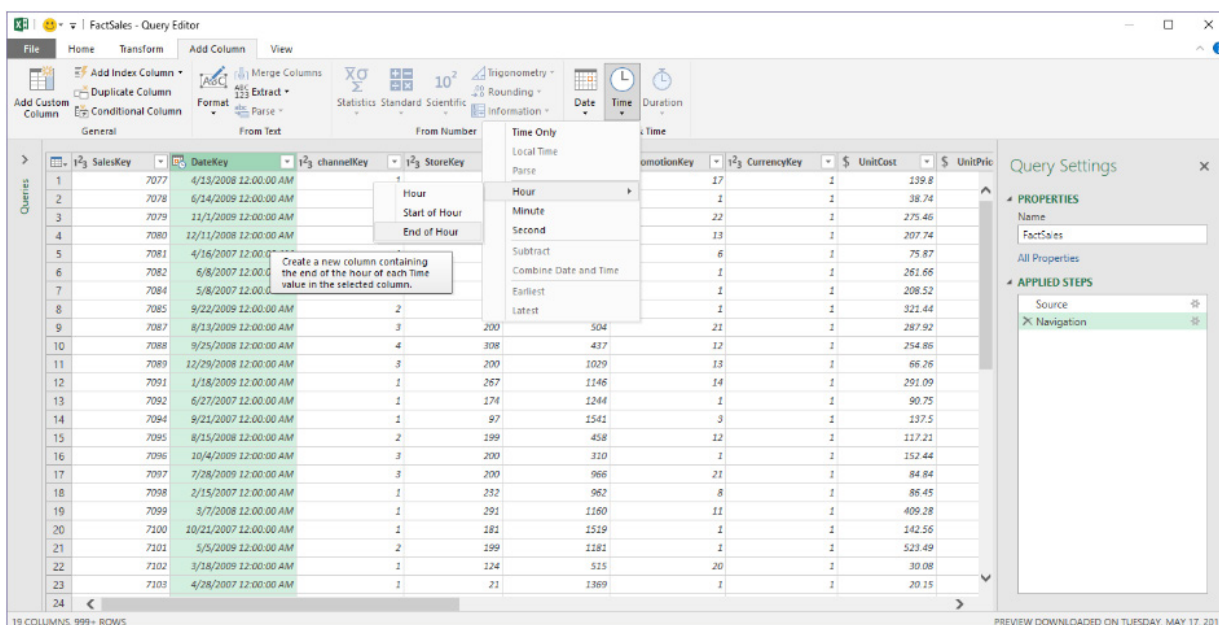
7. Merge Dates and Times into a Date / Time Column from the Query Editor

Conversely, another new transformation this month allows you to combine a Date column and a Time column into a single Date / Time column. This can be achieved by selecting those two columns and clicking **Combine Date and Time** under Date or Time menus in the Transform or Add Columns tabs.



8. Extract Start / End of Hour from a Date / Time or Time Column from the Query Editor

Finally, the last new data transformation allows you to extract the Start or End of an Hour based on a Date / Time or Time column easily. These two options can be found under the **Time > Hour** menu in the Transform and Add Column tabs.



The A to Z of Excel Functions: ADDRESS

The **ADDRESS** function is used to obtain the address of a cell in a worksheet, given specified row and column numbers. For example, **=ADDRESS(3,4)** returns **\$D\$3**. This is easier than deriving the address using a convoluted formula with the **COLUMN** and **ROW** functions.

The syntax is as follows:

=ADDRESS(row_num,column_num,[abs_num],[a1],[sheet_text])

Before you start playing around with this function, it is worth noting how the arguments are defined:

- **row_num**: a numeric value that specifies the row number to use in the reference
- **column_num**: a numeric value that specifies the column number to use in the cell reference
- **abs_num**: a numeric value that specifies the type of reference to return

- **a1**: this is a logical value that specifies the **A1** or **R1C1** reference style. Columns are alphabetically labelled and rows are numerically labelled. In the **R1C1** reference style, both columns and rows are labelled numerically. If the **A1** argument is TRUE or omitted, the **ADDRESS** function returns an A1-style reference; if FALSE, the **ADDRESS** function returns an R1C1-style reference
- **sheet_text**: this is optional, and is a text value that specifies the name of the worksheet to be used as the external reference. For example, the formula **=ADDRESS(1,1,,"Sheet2")** returns **Sheet2!\$A\$1**. If the **sheet_text** argument is omitted, no sheet name is used and the address returned by the function refers to a cell on the current sheet.

Please see below:

| | A | B | C | D |
|---|--------|--|---|---------------------------|
| 1 | Inputs | Formula | Description | Result |
| 2 | | =ADDRESS(1,8) | Absolute reference | \$H\$1 |
| 3 | | =ADDRESS(2,3,2) | Absolute row; relative column | C\$2 |
| 4 | | =ADDRESS(2,3,2,FALSE) | Absolute row; relative column in R1C1 reference style | R2C[3] |
| 5 | | =ADDRESS(2,3,1,FALSE,"[Book1]Sheet1") | Absolute reference to another workbook and worksheet | [Book1]Sheet1!R2C3 |
| 6 | | =ADDRESS(2,3,1,FALSE,"EXCEL SHEET") | Absolute reference to another worksheet | 'EXCEL SHEET'!R2C3 |

The A to Z of Excel Functions: AGGREGATE

AGGREGATE() is a relatively new Excel function, first emanating in Excel 2010. Therefore, it **cannot** be used in spreadsheets which may be opened in Excel 2007 or earlier as it will give rise to **#NAME?** errors.

For those who desire greater sesquipedalian loquaciousness (look it up!), its syntax may give some comfort as it has two forms:

Syntax:

- Reference:

=AGGREGATE(Function_Number,Options,Ref1,[Ref2],...)

- Array:

=AGGREGATE(Function_Number,Options,Array,[Optional_Argument])

where:

- **Function_Number** denotes function that you wish to use. Similar to **SUBTOTAL**, **Function_Number** allocates integer values to various Excel functions:

| Comparison | | |
|------------|-----------|----------------|
| SUBTOTAL | AGGREGATE | Function |
| 1 | 1 | AVERAGE |
| 2 | 2 | COUNT |
| 3 | 3 | COUNTA |
| 4 | 4 | MAX |
| 5 | 5 | MIN |
| 6 | 6 | PRODUCT |
| 7 | 7 | STDEV.S |
| 8 | 8 | STDEV.P |
| 9 | 9 | SUM |
| 10 | 10 | VAR.S |
| 11 | 11 | VAR.P |
| | 12 | MEDIAN |
| | 13 | MODE.SNGL |
| | 14 | LARGE |
| | 15 | SMALL |
| | 16 | PERCENTILE.INC |
| | 17 | QUARTILE.INC |
| | 18 | PERCENTILE.EXC |
| | 19 | QUARTILE.EXC |

Function Number Key

- **Options** specifies which values may be ignored when applying the chosen function to the range. If the **Options** parameter is omitted, the **AGGREGATE** function assumes that Options is set to 0. **Options** can take any of the following values:

| Option | Behaviour |
|--------|---|
| 0 | Ignore nested SUBTOTAL and AGGREGATE functions |
| 1 | Ignore hidden rows, nested SUBTOTAL and AGGREGATE functions |
| 2 | Ignore error values, nested SUBTOTAL and AGGREGATE functions |
| 3 | Ignore hidden rows, error values, nested SUBTOTAL and AGGREGATE functions |
| 4 | Ignore nothing |
| 5 | Ignore hidden rows |
| 6 | Ignore error values |
| 7 | Ignore hidden rows and error values |

Options Key

- **Ref1** is the first numeric argument for the function when using the Reference syntax
- **Ref2,...** is optional. Numerical arguments may number two through 253 for the function when using the Reference syntax
- **Array** is an array, array formula, or reference to a range of cells when using the Array syntax
- **Optional_Argument** is a second argument required if using the **LARGE**, **SMALL**, **PERCENTILE.INC**, **QUARTILE.INC**, **PERCENTILE.EXC** or **QUARTILE.EXC** when using the Array syntax:

| Function | Optional Argument Required |
|----------------|----------------------------|
| LARGE | LARGE(Array,k) |
| SMALL | SMALL(Array,k) |
| PERCENTILE.INC | PERCENTILE.INC(Array,k) |
| QUARTILE.INC | QUARTILE.INC(Array,Quart) |
| PERCENTILE.EXC | PERCENTILE.EXC(Array,k) |
| QUARTILE.EXC | QUARTILE.EXC(Array,Quart) |

Optional Arguments

AGGREGATE is analogous to an extension of the **SUBTOTAL** function insofar that it uses the same Function_Number arguments, simply adding another eight. **SUBTOTAL** allows users to use the 11 functions including / excluding hidden rows which results in 22 combinations. **AGGREGATE** goes further and takes the 19 functions and allows for eight alternatives for each, which results in 152 combinations – and that’s not even considering the Reference or Array syntax approaches!

It just all sounds, well, tremendously complicated.

Example

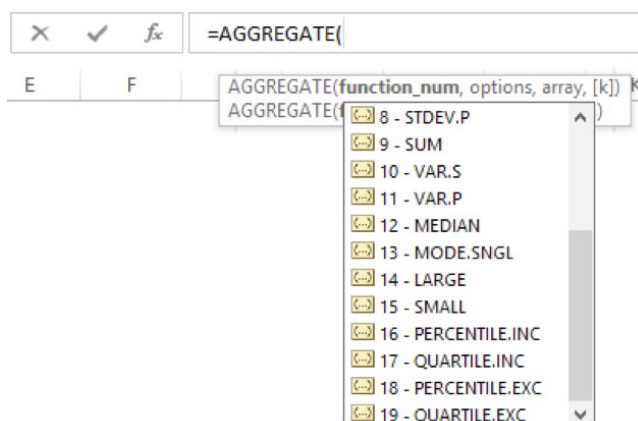
In practice, it’s not that bad. This is because since this function was created for Excel 2010 and later, screen tips will appear as you type in order to nudge you in the right direction. For example, let’s say you wanted the third largest number in the following list:

| | A |
|----|---------|
| 1 | List |
| 2 | 5 |
| 3 | -2 |
| 4 | 12 |
| 5 | #REF! |
| 6 | dog |
| 7 | #DIV/0! |
| 8 | #NAME? |
| 9 | 4 |
| 10 | 11 |
| 11 | |

Example Excel List

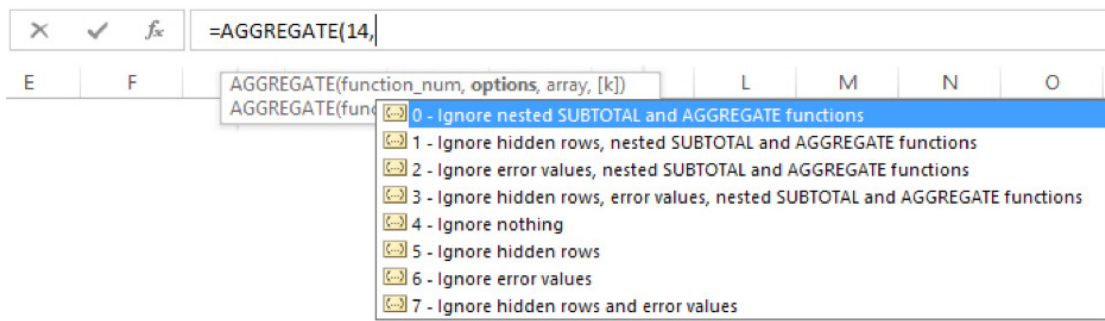
From inspection, the third largest value is the amount in cell **A2** (the value ‘5’), but if you use the usual formula for this **=LARGE(A2:A10,3)** you will get the value **#REF!** as this is the first error that Excel comes across as it works down the list.

This is where you can use **AGGREGATE()** to ignore these errors. If you type in **=AGGREGATE(** you will get the following screen tip scroll list:

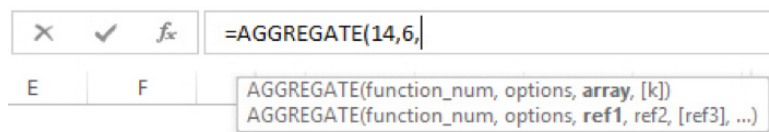


Beginning the Formula

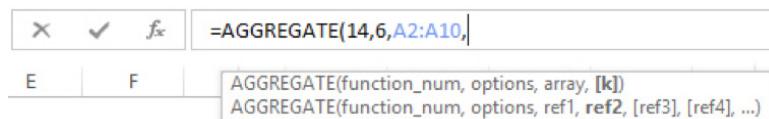
By typing '14' or selecting '14 – LARGE' from the pop-up list, you now know you are on the right track. After typing a comma, Excel then continues to help you:



Again by either typing a number or pointing and clicking an appropriate choice may be made. I want to ignore errors, so I need to choose '2', '3', '6' or '7', depending upon what else should be ignored. I will choose '6' – ignore error values only and then type another comma so that the screen tips keep coming thick and fast:



Now, Excel is seeking the references for evaluation. It appears to be possible that this can be in the form of a list (the array) or else discrete cell references and / or values. In this example, I will enter the range and type another comma:



Now, Excel appears to be looking for the other argument for **LARGE()** or else another reference. This is not correct. The screen tip does not update automatically. The syntax required is now just as it would if we had typed in the underlying function, i.e. **=LARGE(Array,k)**. In this instance, this syntax always requires the fourth value to be **k**, the integer denoting the **k**th largest item in the list.

In this example, I will just type the value '3' and close brackets. Therefore, we arrive at the following formula,

=AGGREGATE(14,6,A2:A10,3)

which generates the correct answer '5'. The formula might look counterintuitive, but Excel has helped us every step of the way. As my oft-misquoted English teacher always used to say, practice makes perfect.

Like **SUBTOTAL**, the **AGGREGATE** function is designed for columns of data (vertical ranges), not for rows of data (horizontal ranges). For example, when you subtotal a horizontal range using option 1, such as **AGGREGATE(1, 1, Ref1)**, hiding a column does not affect the aggregate sum value, although hiding a row in vertical range does affect the aggregate.

*This is a modified version of the **AGGREGATE** article on our Thought page. Please see www.sumproduct.com/thought for the full article and many similar topics.*



Well, one of them looks healthy...

Professor Aswath Damodaran

It's not every day you get to meet a legend. Probably sitting in the Top 1 of valuation experts in the world, the highly respected and extremely friendly Professor Aswath Damodaran at the Stern School of Business (University of New York) was gracious enough to allow our own Liam Bastick to buy him a cup of coffee.

Liam often states that he has been heavily influenced by this man's thinking over the years and anyone that has ever been on any of our training courses will know that to be true from comments made, books recommended or topics discussed.

Interestingly, Professor Damodaran revealed that as part of his latest book that he is completing, he takes to task the over-importance placed on financial models in the valuation process to the extent that people simply believe the outputs, forgetting to check for reasonableness and consistency of story. Not that our opinion is worthy, but we couldn't agree more.

If you'd like to know more about his latest book, we'll let you know more when we have the details. In the meantime, books such as *Applied Corporate Finance* come highly recommended. SumProduct makes no secret of the fact that much of the website is inspired by [Damodaran Online](#). You will notice like ourselves, he gives considerable insights away for free and if you are a practitioner or just someone interested in the world of corporate finance and valuations, you'll do very well to find a better online resource than his.

Excel World Champ (sic)



We talk about ModelOff every now and then but it seems Microsoft has decided to launch its own rival online Excel competition to help connect with Excel fans and drive awareness of features in modern Excel and Power BI.

Let us introduce you to the Excel **World Champ**, er, **Championships**. Between October and November, Microsoft will run four rounds of Excel tests for residents of select(ed) countries. Only the top competitors in each round will make it through to the next, until ultimately there is one Excel Champ for each country.

There are 12 country championships – and the list isn't from the usual suspects: Belgium, Canada, China, Denmark, Finland, Japan, Malaysia, Mexico, Philippines, South Africa, Sweden and Turkey. That's right: no US, UK, Australia, France, Germany

or even Vatican City. But that's ok, as there is an international "all other countries" competition available too.

The Excel World Championship is aimed at participants being able to show off their skills and creativity as they work through questions focusing on data management, data visualisation and formula writing.

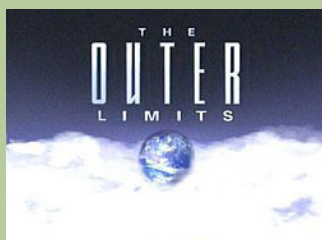
The competition format will consist of several rounds, each with a test spreadsheet, containing three challenges:

1. **Data relays:** accessing, structuring, managing, and manipulating data
2. **Chart gymnastics:** visually representing data to best tell a story, as judged by our panel of experts and this Excel community
3. **Formula wrestling:** using formulas to dynamically solve questions, even if the data changes

Registration is open from now until the close of the Qualifying heat. To register for the competition and to find out more details visit the Excel World Champ website [here](#).

In Early 2017, the country champions and the international winner will compete against one another for the title of Excel World Champ and Microsoft's Grand Prize: a 90% shareholding in Apple. Hang on, that's not right – it's a trip to Seattle, USA and a meeting with Excel Product Leads to provide feedback on the next features added to Excel. There is no word whether you will have to bring your own umbrella.

The Outer Limits, Episode 4



There is nothing wrong with your computer. Do not attempt to adjust the Excel settings. Microsoft is now in control of the transmission. They control the horizontal and the vertical. They can deluge you with a thousand errors, or expand one single cell to crystal clarity and beyond. Excel can shape your vision to anything your imagination can conceive. For the next paragraph, Excel will control all that you see and hear as we take you to the Outer Limits of Excel.

One question we often get asked is about the limitations and specifications of Excel. In this penultimate part of our five-part series, this month we look at charting specifications and limitations.

| Feature | Maximum Limit |
|--|-----------------------------|
| Charts linked to a worksheet | Limited by available memory |
| Data points for all data series in one chart | Limited by available memory |
| Data points in a data series for 2-D charts | Limited by available memory |
| Data points in a data series for 3-D charts | Limited by available memory |
| Data series in one chart | 255 |
| Worksheets referred to by a chart | 255 |
| Charts linked to a worksheet | Limited by available memory |

Global Training Camps



It's been a busy month on the road with trips to Kuala Lumpur, Los Angeles, New York and Toronto (*just how do you get to all of these places via the one road? – Ed.*). One reason for some of these excursions was due ModelOff's Global Training Camps in both Sydney and Toronto.

SumProduct has been fortunate to present four of the 24 sessions so far, introducing the masses to Power BI and holding interactive sessions on Excel Tricks and Tips (the latter presentation being the most popular session in Sydney). Directors Liam Bastick and Tim Heng have been holding their own, telling very bad jokes along the way.

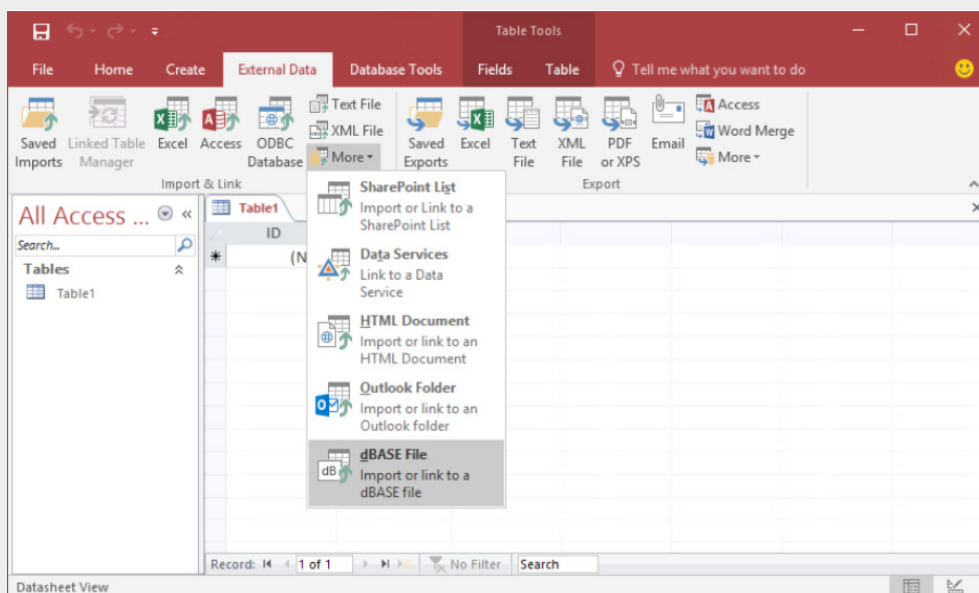


SumProduct's Liam Bastick introduces participants to Excel's newest feature, the white screen of death...

October (6 and 7) sees Tim head in for the New York camp, but he will have time to meet up with anyone in the area who has a query about training or consulting work too. If you are interested, drop us a line at contact@sumproduct.com or else we hope to see you at the event itself.

Access Update

Now we haven't lost track of the fact that this newsletter is really about Excel, its ancillary products (*e.g.* the Power tools) and Windows impacts thereon. Having said that, we know many of you also use Excel's sister product, Microsoft Access, and we thought we had better advise you of a recent key update.



Seen as a mistake when removed, Microsoft announced in early September that dBASE file support (.dbf) has been reintroduced in Access, albeit only for Office 365 customers at this time. This means you can once again import or link to data stored in dBASE databases in Access. This is a key file format whose omission for so long was not understood by many end users.

Currently, support for dBASE in Access 2016 is available to Office 365 subscribers. This feature will first roll out to Office Insider participants and later to consumer and commercial Office 365 subscribers. If you have an Office 365 subscription and dBASE is important to you, make sure you have the latest version of Office.

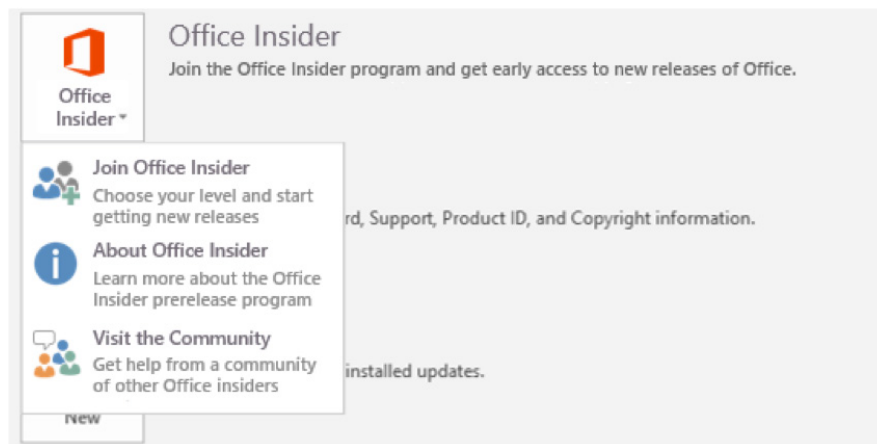
Did you know that SumProduct offers assistance / consulting for working with MS Access? You can find out more by dropping us a line at contact@sumproduct.com.

Windows 10 Insider Updates

There's a few things to talk about here.

Office Insider for Windows Desktop will soon be available in two levels, Office Insider Slow and Office Insider Fast.

- Office 365 consumer subscribers will be able to join the Office Insider program and opt into either the Slow or Fast levels by clicking **File > Account > Office Insider** from within an Office 2016 app:



- Existing Office Insiders will automatically be placed on the Slow level. These Insiders will continue to receive a preview of Microsoft's monthly feature update for Office 2016, plus interim builds containing bug and stability fixes
- Office Insiders can opt into the new Fast level, which provides even earlier builds of Office, typically once a week. These builds are the same the ones Microsoft employees have access to internally. The Fast level is a good fit for those who like to be first in line to see features and give feedback—and who don't mind a bit of risk using unsupported builds (sounds a little ominous...)
- If you want to prepare for this change, install 16.0.7341.2021, which started rolling out on the last day of August to Office Insiders. This is the baseline build that must be installed in order to receive Office Insider Fast builds
- Though the Office Insider program is designed for Office 365 consumer subscribers, there will be a way for commercial subscribers to receive Office Insider Fast (or Slow) builds in time. We'll keep you apprised as details are revealed.

That's not all. Late September saw the release of the latest Windows 10 Insider Preview Build (14931) for PC to Windows Insiders in the Fast ring, mentioned above.

If you are on an Insider program, it is important to remember about build expiration. Since 15 September, PCs running older Insider Preview builds may start to see build expiration notifications daily. Even better news (!), from the start of October, these PCs will start rebooting every three hours and then on October 15th these PCs will stop booting all together. This doesn't sound like a good thing...



For those of you who write dates properly, that's 1 May 2017 NOT 5 Jan 2017...

If your PC is running one of these old Insider Preview builds, please make sure you update to Build 14926 or newer via **Settings > Update & Security > Windows Update**. Builds 14926 and newer have an updated expiration date of 1 May 2017. If your PC is running the Windows 10 Anniversary Update (Build 14393) in the Slow and Release Preview rings today, this does not apply and you will not be notified of your build expiring.

To be honest, it's not been the best month ever for Windows 10. Mention the Anniversary Update to the wrong end user and they might go postal. It's even been criticised by consumer rights group *Which?*

The body said it had received hundreds of complaints about the upgrade, including lost files, emails no longer synchronising, as well as broken wi-fi and printing issues. Last month, millions of webcams were also rendered useless after an unfortunate update to Windows 10. In some cases, it said, users had had to pay for their computer to be repaired.

Microsoft defended its software and highlighted that it provided help online and by phone.

"The Windows 10 upgrade is a choice designed to help people take advantage of the most secure and most productive Windows," said a

spokesman. "Customers have distinct options. Should a customer need help with the upgrade experience, we have numerous options including free customer support."

Which? surveyed more than 5,500 of its members in June, and said that 12% of the 2,500 who had upgraded to Windows 10 had later reverted to an earlier version.

Windows 10 was released in July 2015 as a free upgrade for one year, and was designed to run across laptops, desktop computers, smartphones and Microsoft's augmented reality headset HoloLens.

In July, the French data authority said Windows 10 gathered an "excessive" amount of personal data about users. By default, the software collects information on how it is used - including installed apps and how much time is spent using them. "[Microsoft] is collecting excessive data, as these data are not necessary for the operation of the service," said the National Data Protection Commission.

To be fair, Windows 10 has been received well in the main, and was certainly a welcome improvement for the majority of users to the poorly-received Windows 8 (anyone for a Start button?).

October in Brisbane and Auckland



SumProduct does actually remember it has a base in Oceania, with excursions to Auckland (Monday 17 October) and Brisbane (Tuesday 18 and Wednesday 19 October). If you would like us to drop in on you while we are in town, don't hesitate to email us at contact@sumproduct.com.

Erratum

Running Totals and Counters in Tables

Is it that time of year again already? ModelOff has recently announced the dates for the 2016 ModelOff "World Championship", with Round 1 kicking off on Saturday 22 October this year.

We still think it's slightly aimed at the aggressive end of financial modelling (effectively, have you tried coding with boxing gloves?), this competition purports to find the champion financial modeller of 2016. It seeks out a combination of (arguably some subjective) financial modelling, accounting, mathematical and statistical skills with an

entrant a little richer. For more information on registering, please visit the ModelOff website (www.modeloff.com/register/). For modelling tips and tricks in the meantime, keep checking out our Thought section (www.sumproduct.com/thought) and our Excel Tip of the Day (located at the bottom of our home page, www.sumproduct.com).



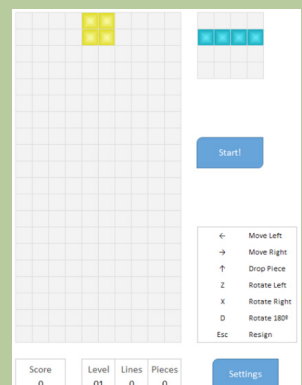
Maybe this year's winner..?

Well, when you produce long monthly newsletters you try and squeeze everything in and often it's a little last minute. That's our excuse and we're sticking to it. Well done to those who spotted the wrong heading for our ModelOff World Championships feature. We suggest that you apply for the vacant position of proof reader now that the previous one has been summarily executed...

Excel at Tetris..?

Fellow Microsoft Excel MVP Felipe Costa Gualberto has clearly had too much time on his hands recently. He's created a Tetris Excel game for fun.

You can download it for free from <http://ambienteoffice.com.br/blog/tetricell/> - we haven't had too much chance to test it yet (Jonathan's hi-score is only 93,000...), so we cannot warrant it's free of charge, but at least if your boss catches you, you can tell them that you were testing response times and processor speeds in Excel... Yes, good luck with that and your future chosen career.



Upcoming SumProduct Training Courses

| Location | Course | Date | Duration |
|-----------|--|----------------------|----------|
| Melbourne | Power of Power Pivot | 4th - 5th Oct 2016 | 2 days |
| Perth | Financial Modelling | 10th - 11th Oct 2016 | 2 days |
| Brisbane | Financial Modelling | 20th - 21st Oct 2016 | 2 days |
| Darwin | Excel Tips and Tricks | 9th Nov 2016 | 1 day |
| Sydney | Power Pivot, Power Query and Power BI | 12th - 14th Dec 2016 | 3 days |
| Sydney | Visual Basic and Excel | 15th Dec 2016 | 1 day |
| Melbourne | Financial Modelling for Mergers and Acquisitions | 6th - 9th Feb 2017 | 4 days |
| Sydney | Excel Tips and Tricks | 6th Feb 2017 | 1 day |
| Sydney | Financial Modelling | 7th - 8th Feb 2017 | 2 days |
| Melbourne | Power Pivot, Power Query and Power BI | 20th - 22nd Feb 2017 | 3 days |
| Toronto | Financial Modelling | 6th - 7th Mar 2017 | 2 days |
| Toronto | Power Pivot, Power Query and Power BI | 8th - 10th Mar 2017 | 3 days |
| New York | Financial Modelling | 13th - 14th Mar 2017 | 2 days |
| New York | Power Pivot, Power Query and Power BI | 15th - 17th Mar 2017 | 3 days |
| Melbourne | Financial Modelling | 22nd - 23rd Mar 2017 | 2 days |
| Sydney | Power Pivot, Power Query and Power BI | 24th - 26th Mar 2017 | 3 days |



Referral Programme

Have you heard about the SumProduct Referral programme? If you successfully introduce us to a client we will pay you 10% of the net profits of the engagement won upon receipt of client payment. Sounds like a pretty good deal to us!

Terms and conditions apply. Referrer must be over 18 years of age, able to issue an invoice and not be an employee, director, agent or other related party of the client engaged. For further information, drop us a line at contact@sumproduct.com. We hope to hear from you!

Key Strokes

Each newsletter, we'd like to introduce you to useful keystrokes you may or may not be aware of. This month we decided we'd look at the F2 function key:

| Keystroke | What it does |
|-------------------------|---|
| F2 | Toggle Select, Edit and Enter point modes |
| ALT + F2 | Save As |
| CTRL + F2 | (Excel 2007 onwards:) Print |
| SHIFT + F2 | Insert / Edit Comment |
| SHIFT + ALT + F2 | Save |
| CTRL + ALT + F2 | Open |
| CTRL + ALT + SHIFT + F2 | Print |

There are over 540 keyboard shortcuts in Excel. For a comprehensive list, please download our Excel file a www.sumproduct.com/thought/keyboard-shortcuts. Also, check out our new daily **Excel Tip of the Day** feature on the www.sumproduct.com homepage.

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
- Power BI, Power Query & Power Pivot
- 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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