

CHAPTER 13

GROUPING AND OUTLINING**INFocus**

Grouping and outlining is the process of creating a hierarchy within your worksheet. By grouping various cells together you can create levels of information that can be hidden or displayed as required. Outlining enables you to view a summary of the data or expand it to see the detail.

In this session you will:

- ✓ gain an understanding of grouping and outlines
- ✓ learn how to create an automatic outline
- ✓ learn how to work with an outline
- ✓ learn how to create a manual group
- ✓ learn how to manually group by columns.

UNDERSTANDING GROUPING AND OUTLINING

Analysing large lists of data can prove difficult when all of the details are displayed on the screen along with the summary cells. The clutter of all this information can make it hard to

overview the data. However, by **grouping** the data and **outlining** it, you are able to show and hide varying levels of detail. This then enables you to display just a summary of totals or all the details.

1 Applying an Outline

When you apply an outline to data, Excel looks for groups of information, based on cells containing summary formulas. For instance, as shown below, the details associated with each subtotal are grouped and another group is created from those rows and columns represented by the total cells. For both the rows and the columns, this creates 3 levels in the resulting outline, indicated by the outline level buttons.

	Jan	Feb	Mar	1st Qtr	Apr	May	Jun	2nd Qtr	Total
Staff	45,766	56,334	45,221	147,321	45,334	33,233	34,222	112,789	260,110
Wages	123,889	166,547	128,776	419,212	199,870	644,345	333,421	1,177,636	1,596,848
Contractors	1,244,567	1,432,233	1,326,677	4,003,477	2,315,643	1,986,754	1,123,876	5,426,273	9,429,750
Total Labour	1,414,222	1,655,114	1,500,674	4,570,010	2,560,847	2,664,332	1,491,519	6,716,698	11,286,708
Vehicles	342	453	234	1,029	342	543	221	1,106	2,135
Supplies	123,342	125,443	132,477	381,262	155,433	333,287	553,321	1,042,041	1,423,303
Leased	1,266,543	1,544,328	1,123,786	3,934,657	2,166,455	3,111,366	634,556	5,912,377	9,847,034
Total Equipment	1,390,227	1,670,224	1,256,497	4,316,948	2,322,230	3,445,196	1,188,098	6,955,524	11,272,472
Total Expenses	2,804,449	3,325,338	2,757,171	8,886,958	4,883,077	6,109,528	2,679,617	13,672,222	22,559,180

Grouped rows

2 Working with an Outline

Once an outline is applied, you can use the outline buttons and the collapse and expand buttons to manipulate the display of data. Clicking on the outline buttons will show or hide the detail to a specific level, so that clicking on the level 1 **1** button for instance, would display the least amount of detail and clicking on the highest numbered buttons would display all the data sheet detail.

The expand **+** and collapse **-** buttons enable you to hide or show the detail of just one group within an outline level. To achieve the display of data shown in the example below, the level 1 **1** button for rows and the level 2 **2** button for columns was first clicked, hiding all but the total expenses for 1st Qtr and 2nd Qtr. Then the expand button was clicked for 1st Qtr, enabling you to see the totals for each month of this quarter, but leaving the 2nd Qtr details hidden.

	Jan	Feb	Mar	1st Qtr	2nd Qtr	Total
Total Expenses	2,804,449	3,325,338	2,757,171	8,886,958	13,672,222	22,559,180

CREATING AN AUTOMATIC OUTLINE

Excel can create an **automatic outline** for your worksheet by basing the structure on the existing formulas and their dependent ranges. References in formulas must consistently point in

the same direction, that is, all refer to cells above or all to the left and so on. Summary rows usually refer to detail rows above and summary columns usually refer to detail columns to the left.

Try This Yourself:

Open File

Before starting this exercise you **MUST** open the file *E843 Outlining_1.xlsx...*

1 Ensure that the **Automatic Outline** worksheet is active

2 Click on **A2** to ensure that only one cell is active

You only need one cell selected for Excel to outline the entire worksheet. If a range is selected, Excel will outline the cells in that range only...

3 Click on the **Data** tab of the **Ribbon**, then click on the bottom half of **Group** in the **Outline** group and select **Auto Outline**

The outline will be created and the outline level buttons will appear

	Jan	Feb	Mar	1st Qtr	Apr	May	Jun	2nd Qtr	Total
Staff	45,766	56,334	45,221	147,321	45,334	33,233	34,222	112,789	260,110
Wages	123,889	166,547	128,776	419,212	199,870	644,345	333,421	1,177,636	1,596,848
Contractors	1,244,567	1,432,233	1,326,677	4,003,477	2,315,643	1,986,754	1,123,876	5,426,273	9,429,750
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Supplies	123,342	125,443	132,477	381,262	155,433	333,287	553,321	1,042,041	1,423,303
Leased	1,266,543	1,544,328	1,123,786	3,934,657	2,166,455	3,111,366	634,556	5,912,377	9,847,034
Total Equipment	1,390,227	1,670,224	1,256,497	4,316,948	2,322,230	3,445,196	1,188,098	6,955,524	11,272,472
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1

	Jan	Feb	Mar	1st Qtr	Apr	May	Jun	2nd Qtr	Total
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For Your Reference...

To **apply automatic outlining**:

1. Click in a cell (to outline the entire worksheet) or select a range of cells (to outline the range only)
2. On the **Data** tab, click on the bottom half of **Group** and select **Auto Outline**

Handy to Know...

- When you apply outlining to data, the black lines indicate which cells belong to a group. These cells will be hidden if you click on **Collapse** that appears at the end of the black line.

WORKING WITH AN OUTLINE


The purpose of the **outline** is to provide tools to improve the readability of a worksheet. It is especially relevant for worksheets with large volumes of data where the totals would usually

reside in many rows down or many columns across the sheet. The collapse and expand buttons enable you to **work with an outline** to summarise the data or drill down to explore the details.


Try This Yourself:

Same File


Continue using the previous file with this exercise, or open the file *E843 Outlining_2.xlsx...*

1 Click on level 1  for the vertical outline, at the left of the worksheet


The row details will collapse, leaving the *Total Expenses* row only...

2 Click on level 1  for the horizontal outline, above the worksheet


Only the *Grand Total* will be visible...

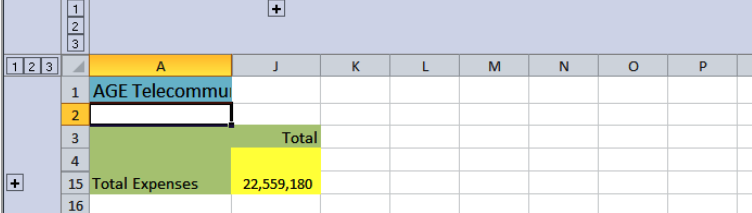
3 Click on level 2  for the vertical and horizontal outlines

The second level headings will be displayed...

4 Click on  to the left of **Total Labour**

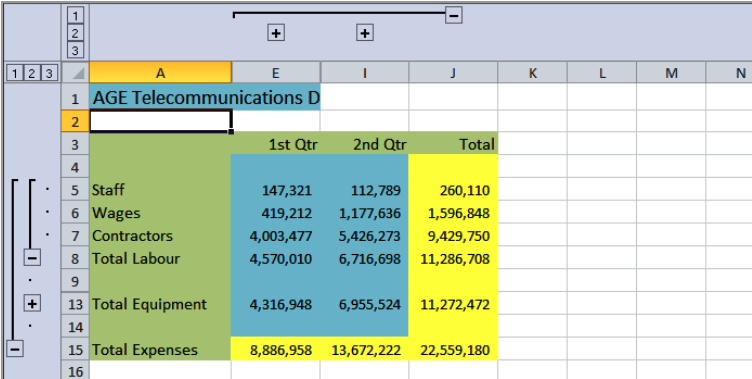
The details for the labour costs are displayed...

5 Click on  above **1st Qtr** to expand the details for each month within that group



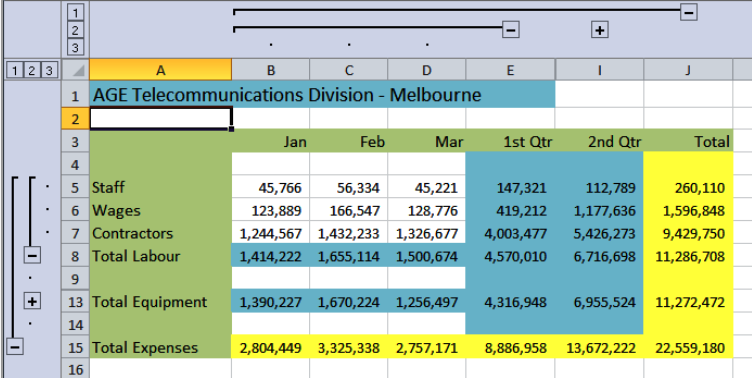
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For Your Reference...


To **work with** the **outline**:

1. Click on the required tool from these options:

   – display level 1, 2 or 3

  – expand/collapse the group

Handy to Know...

- You can clear (delete) an outline by clicking on the **Data** tab then clicking on the bottom half of **Ungroup**  and selecting **Clear Outline**. To remove it from the entire worksheet, click on any one cell first. To clear only a part of an outline, select only the cells you want to clear.

CREATING A MANUAL GROUP


An alternative to creating an automatic outline is to **group the data manually** for the outline. This is great if you have a special purpose for your worksheet that automatic outlining can't deal

with. For example, you may want to print only specific parts of your worksheet. By grouping and collapsing parts of your data, you can manipulate the appearance of your worksheet.



Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file *E843 Outlining_3.xlsx...*

- 1 Click on the **Manual Outline** worksheet tab to make it active
- 2 Click on any cell to ensure only one is selected
- 3 On the **Data** tab of the **Ribbon**, click on the bottom half of **Group**  in the **Outline** group and select **Auto Outline**

This creates some of the groupings required, but we still want to be able to hide all of the individual division totals...

- 4 Select rows **6 to 14**
- 5 On the **Data** tab, click on the top half of **Group**  to group the rows
- 6 Click on **Collapse**  for the new group to hide the divisional detail

Now you can view the subtotals for Labour and Supplies without revealing the figures for the divisions

	A	B	C	D	E
1	AGE Telecommunications Division - Melbourne				
2					
3	Divisional Expenses				
4					
5			2003	2004	2005
6	Admin				
7	Labour	245,700	257,985	270,884	
8	Supplies	132,600	135,915	139,313	
9	Total	378,300	393,900	410,197	
10	Marketing				
11	Labour	185,650	194,933	204,679	
12	Supplies	164,590	168,705	172,922	
13	Total	350,240	363,638	377,601	
14					
15					


4

	A	B	C	D	E
1	AGE Telecommunications Division - Melbourne				
2					
3	Divisional Expenses				
4					
5			2003	2004	2005
15					
16	Total Divisions				
17	Labour	431,350	452,918	475,563	
18	Supplies	297,190	304,620	312,235	
19	Total	728,540	757,538	787,798	
20					

6

For Your Reference...

To **create a manual group**:

1. Select the rows/columns to be grouped
2. Click on the **Data** tab of the **Ribbon**
3. Click on the top half of **Group** 

Handy to Know...

- Manually grouping data in a large worksheet would enable you to create a report suitable to share across the business, without revealing sensitive divisional information.

GROUPING BY COLUMNS



As well grouping information by rows, if you need to hide or collapse data contained within columns, you are able to **group by columns**. In this example, grouping enables you to hide the

yearly details summed in the total cells – this enables a user to clearly see a summary of expenses. The technique used to group columns is the same as the one applied to group rows.

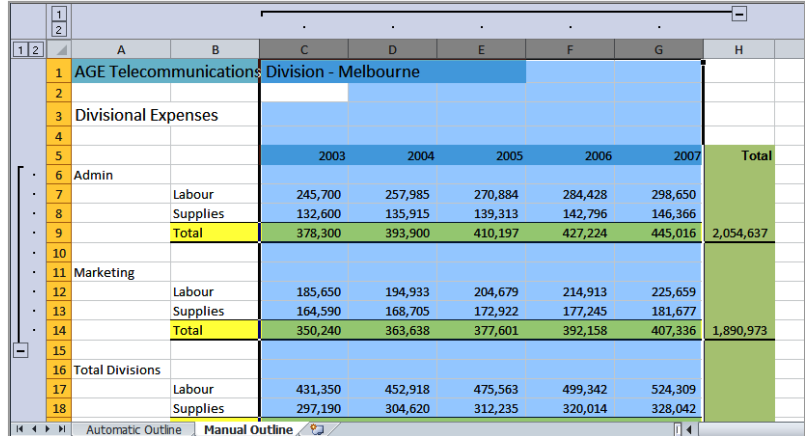
Try This Yourself:

Open File

Before starting this exercise you **MUST** open the file *E843 Outlining_4.xlsx...*

- 1 Ensure that the **Manual Outline** worksheet is currently active
- 2 Select columns **C to G** by clicking and dragging across the column headers
- 3 On the **Data** tab of the **Ribbon**, click on the top half of **Group**  to group the columns
- 4 Click on **Collapse**  for the new group to hide the yearly details

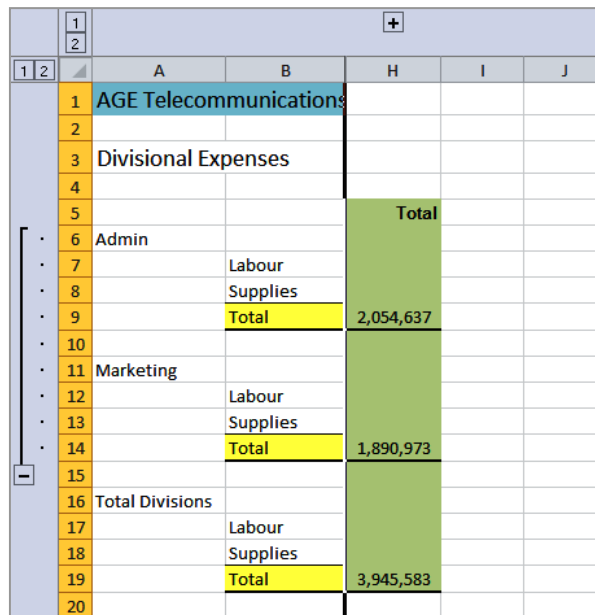
This will display the total for each division, without showing the breakdown for each year



		2003	2004	2005	2006	2007	Total	
1	AGE Telecommunications	Division - Melbourne						
2								
3	Divisional Expenses							
4								
5		2003	2004	2005	2006	2007	Total	
6	Admin							
7	Labour	245,700	257,985	270,884	284,428	298,650		
8	Supplies	132,600	135,915	139,313	142,796	146,366		
9	Total	378,300	393,900	410,197	427,224	445,016	2,054,637	
10	Marketing							
11	Labour	185,650	194,933	204,679	214,913	225,659		
12	Supplies	164,590	168,705	172,922	177,245	181,677		
13	Total	350,240	363,638	377,601	392,158	407,336	1,890,973	
14								
15	Total Divisions							
16	Labour	431,350	452,918	475,563	499,342	524,309		
17	Supplies	297,190	304,620	312,235	320,014	328,042		
18	Total							

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
		Total
1	AGE Telecommunications	
2		
3	Divisional Expenses	
4		
5		Total
6	Admin	
7	Labour	
8	Supplies	
9	Total	2,054,637
10	Marketing	
11	Labour	
12	Supplies	
13	Total	1,890,973
14		
15	Total Divisions	
16	Labour	
17	Supplies	
18	Total	3,945,583
19		
20		

For Your Reference...

To manually **group by columns**:

1. Select the columns
2. On the **Data** tab, click on the top half of **Group** 

Handy to Know...

- You can create up to eight levels within an outline.
- If your summary columns are to the left of the details, you will need to click on the dialog box launcher  for the **Outline** group on the **Data** tab and click on **Summary columns to right of detail** until it appears without a tick.