



Creating Summary Reports with Pivot Tables |

BY BILL JELEN

In last month's column, I described how to use Excel's Subtotal function to produce various summary reports. A more powerful tool for creating summary reports is the pivot table command. In many cases, a pivot table will allow you to summarize tens of thousands of rows of data in as few as six mouse clicks.

Start with Detail Data

To create a pivot table, you should start with simple transactional data. You want a single row of unique field headings above the data. There shouldn't be any blank rows or columns in the data, nor do you want any rows or columns with totals or subtotals in them. It's also a bad sign if you have a repeating field that extends across several columns. Instead of having columns like January, February, March, etc., stretching across 12 columns, have one column labeled "Month" and 12 times as many rows.

Creating Your First Pivot Table in Excel 2003

Select one cell within your data set. Choose Data, PivotTable and Pivot-Chart Report. Excel presents the first step of a three-step wizard. Since your

data is in Excel, you can simply click Finish to end the wizard. Excel will insert a new worksheet, and you'll see a list of your fields on the right and a blank report outline with four sections on the left, as shown in Figure 1.

To complete the pivot table, drag fields from the Field List to the report. Using the list in Figure 1 as an example, drag the Store field to the row fields area ("Drop Row Fields Here") in column A. Drag the Date field to the column fields area in row 3. Drag the Sales field to the data items area. If you want to be able to filter by Region, drag the Region field to the page fields area in row 1.

Excel will calculate the unique list of stores, dates, and the total sales for each cell in the report. Figure 2 shows the pivot table. You can use the dropdown in cell B1 to filter the report to a particular region.

Creating Your First Pivot Table in Excel 2007

Microsoft simplified the pivot table interface in Excel 2007. Select one cell in the data set. From the Insert tab of the ribbon, choose PivotTable. Click OK to accept the settings in the Create Pivot Table dialog that appears.

The new PivotTable Field List dialog has the list of fields at the top and four drop zones at the bottom of the dialog. Instead of dragging fields to the report, you now drag fields to the drop zones at the bottom of the dialog. To build an equivalent report, drag the date field to the Column Labels drop zone. Drag the Region field to the Report Filter drop zone. Drag Store to the Row Labels area. Drag Sales to the Σ Values area. Figure 3 shows the completed Field List dialog. Note that because the Region field dropdown in cell B1 is filtered to the East region, the funnel icon appears next to the Region field in the top half of the PivotTable Field List. You can click on this filter icon to access several new filters available only in Excel 2007.

Pivot Tables Tricks

I use pivot tables because they are easy to create, but some of the real



Figure 1

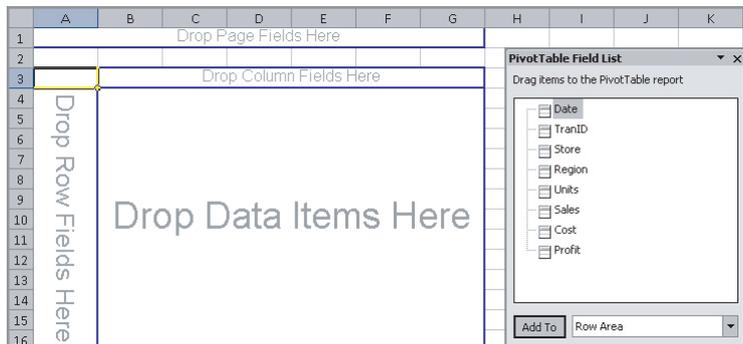


Figure 2

1	Region	(All)					
2							
3	Sum of Sales	Date					
4	Store	6/2/2008	6/3/2008	6/4/2008	6/5/2008	6/6/2008	Grand Total
5	Aventura, FL	507	820.5	789	1304	1376	4796.5
6	Bellevue, WA	522	1075	1039	1495	1457.5	5588.5
7	Bethesda, MD	327	75.5	480.5	640.5	1145	2668.5
8	Chandler, AZ	320.5	846.5	771	1158	892.5	3988.5
9	Destin, FL	261.5	324.5	694	211.5	971	2462.5
10	El Paso, TX	528	816	1567.5	867.5	1978	5757
11	Huebner Oaks, TX	607.5	1035	962.5	670.5	920	4195.5
12	Huntsville, AL	731	331	345	921	1197	3525
13	Paramus, NJ	1020.5	486.5	938	627	1945.5	5017.5
14	Perimeter, GA	740	689.5	931.5	890	1032.5	4283.5
15	Richmond, VA	927	907.5	1641	1325	2517.5	7318
16	Grand Total	6492	7407.5	10159	10110	15432.5	49601

power comes after the pivot table is complete. For example, if someone needs to see the detail behind any number in the pivot table, simply double-click that number to produce a drill-down report.

If you want to create a pivot table for every Region, add the Region field to the Page area. In Excel 2003, open the PivotTable dropdown on the PivotTable toolbar. Choose Show Pages and click OK. Excel will add

new worksheets, each containing a similar pivot table for each region. (In Excel 2007, this feature is a bit hidden. Go to the PivotTable Tools Options tab of the ribbon. Open the dropdown next to the Options icon on the left side of the ribbon. Choose Show Report Filter Pages and click OK.)

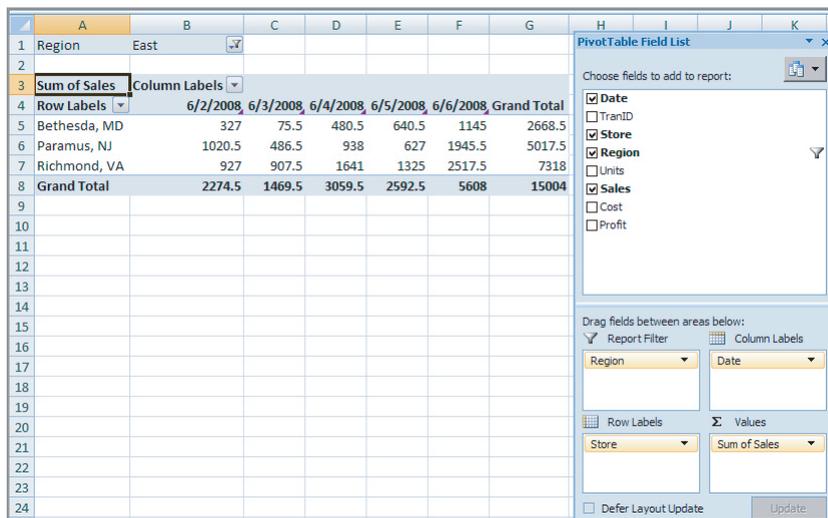
You can also add multiple fields to the Row area and use the Expand and Collapse buttons to quickly change the level of detail shown in

the report.

If you include a date field in your report, you can quickly summarize daily dates up to months, quarters, and years. Choose one of the cells containing a date. In Excel 2003, right-click the date, choose Group and Show Detail, Group. Select months, quarters, or years. In Excel 2007, select a date field and click Group Field in the Options tab of the ribbon.

To rearrange the pivot table, simply drag field headings to a new section of the report in Excel 2003 or to a different drop zone in Excel 2007.

Figure 3



Pivot Table Traps

Be aware of two potential traps when using pivot tables. First, you aren't allowed to insert any rows or columns in a pivot table. I frequently create a pivot table, copy the pivot table, then Paste Values to get around this limitation. Second, pivot tables don't automatically recalculate when you change the underlying

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data set. Excel is able to create pivot tables quickly by reading the data from the worksheet into a pivot table cache. If you change the underlying data, you need to force Excel to pull the new data into the cache. In Excel 2007, use the Refresh button on the Options tab. In Excel 2003, click the red exclamation icon on the pivot table toolbar.

Pivot tables are often the fastest way to reduce thousands of rows of data to a summary report and then have the flexibility to rearrange the report as needed. ■

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