



From "The Rules Guys" ...  
**Automated QA and Beyond !**

## Pivot Tables (Incidents & Patients)

The Rules Guys have configured 3 sets of "Pivot Tables in-a-box" that remove the user from the technical aspects of:

- creating the underlying data of a Pivot Table
- dealing with the Database Connection
- and the Pivot Table Layout.

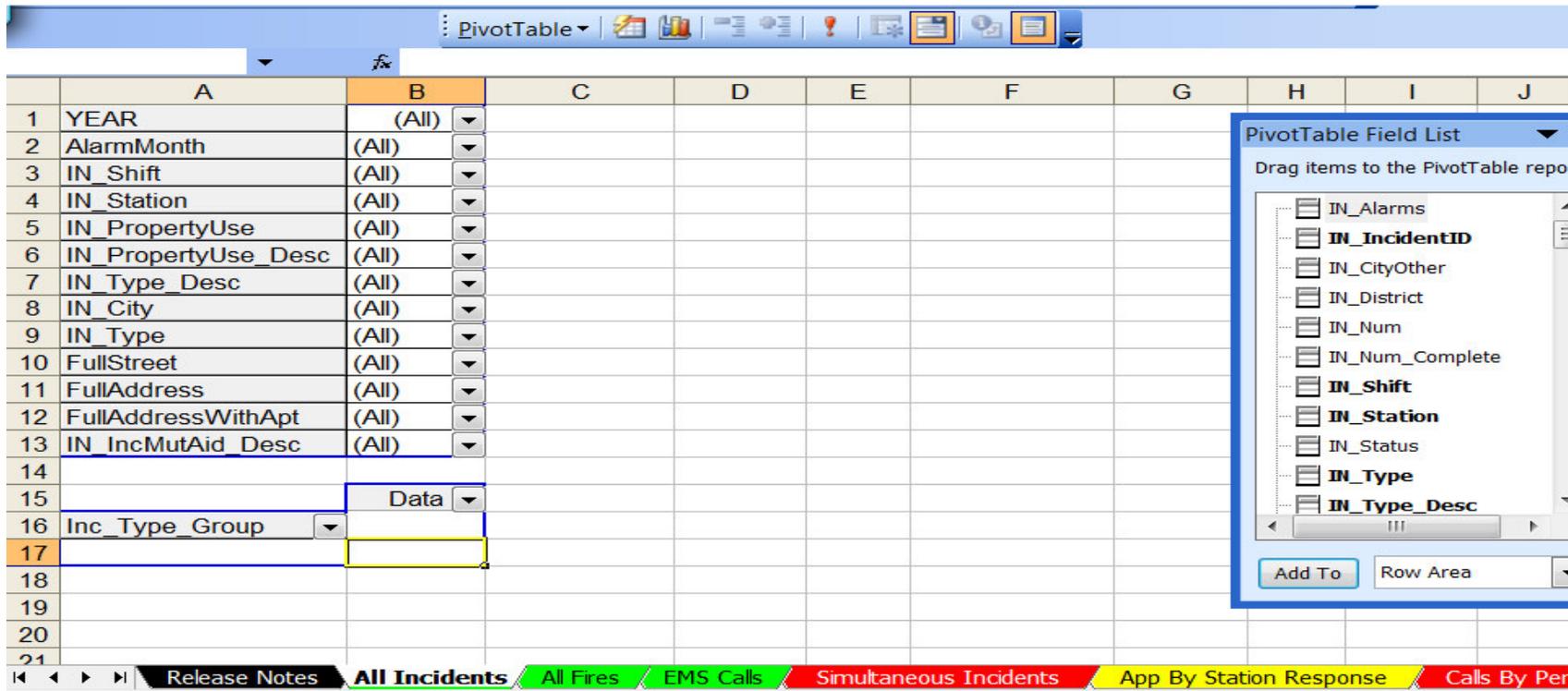
This document is an Overview and does not go through each item of each Pivot Table but hopes to get you familiar with how a pivot table works in general and how our "Pivot Tables in-a-box" are configured.

Each of the Pivot table Modules has a First TAB named "Release Notes" that contains a basic description of the TABS/Sheets that are included in the Pivot Table – this should be the up-to-date information about each Module. The Color Coding of the TABS/Sheet are significant in the amount of time it takes to "Refresh the Data" in that tab.

**Green**=Relatively Quick (less than a minute), **Yellow**=Moderately Quick (several minutes), **Red**=Extended Time (go to lunch...), **Black**=Release Notes (no Refreshing), and **White**=No Refresh (only found on 90<sup>th</sup> Percentile Workbook) or New Tabs/Worksheets. NOTE: The initial "Refresh of Data" will take considerably longer than subsequent Refreshes.

| A19 |   | fx   |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
|-----|---|--|---------------|-----------|-----------|------------------------|-------------------------|--------------|---|---|---|---|---|---|--|
|     | A | B  | C             | D         | E         | F                      | G                       | H            | I | J | K | L | M | N |  |
| 19  |   |  |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 20  |   |  |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 21  |   |  |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 22  |   | <b>All Incidents</b>   |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 23  |   | Incident Cost: based on a blended rate of \$125.00 per hour x the number of apparatus plus the number of personnel on scene times \$20.00 per hour |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 24  |   |  |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 25  |   | <b>All Fires</b>   |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 26  |   | The All Fires Pivot Table is a combination of the Wildland Module and the Fire Module. This allows you to search both modules for related data.    |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 27  |   | For example you can look for heat source = fireworks for both modules historically through your data.  |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 28  |   |  |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 29  |   | <b>EMS Calls</b>   |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 30  |   | The EMS Cause of Illness is specific to King County Washington and may not function against all FireRMS Databases                                  |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 31  |   |  |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 32  |   | <b>Simul(taneous) Calls</b>  |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 33  |   | The Simultaneous Calls allows you to see All Calls you had where there were other calls while that call was going on. This can be a bit confusing  |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 34  |   | because if the First Call was of a long duration there could have been several calls, and there can be nested calls of this type.                  |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 35  |   |  |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 36  |   | <b>Apparatus By Station</b>  |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 37  |   | Displays call loading for each station   |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 38  |   |  |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 39  |   | <b>Calls By Personnel</b>  |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 40  |   | This will take quite a while to refresh based on your data. It displays calls responded to by each person in your department                       |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 41  |   |  |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
| 42  |   |  |               |           |           |                        |                         |              |   |   |   |   |   |   |  |
|     |   | <b>Release Notes</b>   | All Incidents | All Fires | EMS Calls | Simultaneous Incidents | App By Station Response | Calls By Per |   |   |   |   |   |   |  |

By design, our Pivot Tables are opened without any data, they will look something like this when you first open them. We have done the initial Pivot Table Layout for you, all you need to do is “Refresh the Data”. For ZOLL Data (Sunpro) customers, the data connection relies upon the RNS5SQL\_DSN data source (basically having FireRMS loaded on the computer)



The Rules Guys has configured the SQL Connection so that you don't have to worry about how to make the connection; many people have been turned off of Pivot Tables because of the difficulty getting what you want from the database.

## ***PivotTable Primer***

To rearrange the worksheet, simply drag and drop column headings to a new location on the worksheet, and Microsoft Excel crunches the data accordingly. The diagram below depicts the "All Incidents" PivotTable and highlights its moveable elements as well as the "Refresh Data" buttons.

The screenshot shows Microsoft Excel with a PivotTable titled "All Incidents". The PivotTable is located in the range A16:K26. The PivotTable Fields task pane is open on the right, showing "AlarmMonth" and "RespTm" in the Row Area. The PivotTable Tools ribbon is visible, with the "Refresh Data" button highlighted. The PivotTable data is as follows:

| Row field | Data field  | Column field  |
|-----------|-------------|---|
| 16        | #           | Avg Resp Tm %<=6Min Dur Total Loss Avg Loss Civ Inj Civ Fatal FS Inj FS Fatal Inc Cost Avg # App Avg # Pers |
| 17        | EMS         | 15839 0:05:23 67.50% 0:37:16 \$0.00 \$0.00 0 0 5 0 \$3,101,464.25 1.75 3.33                                 |
| 18        | False       | 2418 0:05:22 65.17% 0:17:39 \$161,000.00 \$95.49 0 0 0 0 \$135,281.93 1.06 2.79                             |
| 19        | Fire        | 1559 0:05:57 54.19% 1:26:26 \$9,647,786.00 \$7,114.89 23 0 7 0 \$1,750,619.64 3.25 3.71                     |
| 20        | Good Int    | 715 0:06:16 53.88% 0:23:39 \$0.00 \$0.00 0 0 0 0 \$95,833.03 1.65 3.01                                      |
| 21        | HazMat      | 519 0:06:47 53.15% 0:32:44 \$3,285.00 \$9.05 0 0 0 0 \$82,736.20 1.68 3.39                                  |
| 22        | Other       | 374 0:07:18 74.77% 2:13:04 \$0.00 \$0.00 0 0 0 0 \$214,941.49 0.88 0.80                                     |
| 23        | Pub Asst    | 949 0:07:31 40.75% 1:11:10 \$136,650.00 \$216.90 0 0 0 0 \$234,611.89 1.26 3.03                             |
| 24        | RupWExp     | 52 0:06:19 57.69% 0:47:38 \$1,905.00 \$48.85 0 0 3 0 \$40,229.43 2.85 4.25                                  |
| 25        | Weather     | 42 0:11:28 15.63% 0:22:31 \$25,000.00 \$625.00 0 0 0 0 \$4,464.86 1.38 3.07                                 |
| 26        | Grand Total | 22467 0:05:36 64.52% 0:41:03 \$9,975,626.00 \$649.54 23 0 15 0 \$5,660,182.73 1.74 3.24                     |

The above diagram might look a little confusing at first, but lets "eat this Elephant one bite at a time". Let's start in the middle of the Pivot Table and then work around the outsides. There are "Area Labels" on the picture above, bring your attention to the "Data area".

### ***Pivot Table Layout:***

**Data Area:** This is the area of the Pivot Table that has all the "important stuff"

and revolves around the "how much", "how many", "how long" calculations.

The fields show the following calculations for Records that are in the Item-Selection based on the "Items" in the "Row fields":

- **#** - This is the Number of Incidents for the Item.
- **Avg Resp Tm** - This is the Average Response Time (difference of Alarmdate to for the Incidents for theItem.
- **%<6 min** - This is the Percent of the Incidents for the "Row Field ITEM" that have an Responding Time of Less than 6 Minutes for the Item. This is calculated from [Incident]Alarmdate to [Incident]Arrivaldate.  
(The same thing is done for 4 thru 10 minute increments.)
- **Dur(ation)** - This is the Average Duration Time calculated from [Incident]Alarmdate through [Incident]LastUnitClearedDate for the Item.
- **Total Loss** - This is the SUM of the Incident Loss field for the Item.
- **Average Loss** - This is the Average of the Incident Loss field for the Item.
- **Civ(ilian) Injuries** - This is the SUM of the Civilian Injuries reported for the Item.
- **Civ(ilian) Fatalities** - This is the SUM of the Civilian Fatalities reported for the Item.
- **Firefighter Injuries** - This is the SUM of the Firefighter Injuries reported for the Item.
- **Firefighter Fatalities** - This is the SUM of the Firefighter Fatalities reported for the Item.
- **(Total) Incident Cost** - This is calculated on a "National blended rate" of \$125.00 per hour x the number of apparatus plus \$20.00 per hour x the number of personnel on scene for the Item.
- **Average # of Apparatus** - This is the Average of the Number of Apparatus used at Incidents.
- **Average # of Personnel** - This is the Average of the Number of Personnel that were at the Incident.

**Page Field List:** These items are Fields from the Database that are available to "Group" incidents by; you may "Group" the Data by any combination of the Fields. If the Field that you want to "Group" the data by is not in the Page Field List you may also search the "Pivot Table Field List" (the Blue Box on the right side of the Pivot Table, if the Blue Box is not shown, you may bring it up using the Rightmost Button on the "Pivot Table Toolbar". Fields that are **BOLDED** are already in use, those fields that are NOT Bold are NOT currently used in the Pivot Table.

**Pivot Table Toolbar:** Items that are handy for use on the Pivot Table Toolbar are;

- The "Refresh Data BUTTON" (The Red Exclamation Mark - ! )
- The "Pivot Table Menu"
- And the "Pivot Chart Wizard"

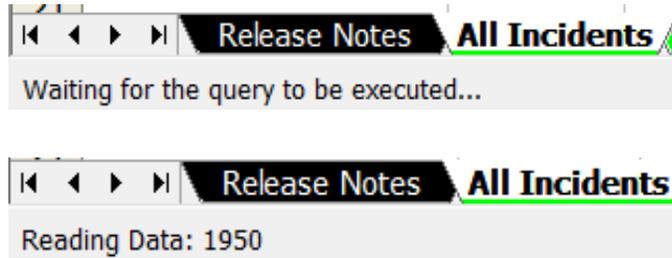
**Of Special Note:** Items that are in the Page Field List usually have multiple values, those values may be selected individually or by whatever choices you desire, but to do this you must drag the Field down to the Left Side of the Data Area and then use the "Down Arrow" beside the field to expose the Values. By unselecting the "All" value you can individually select any of the values that you want to see in the Pivot Table. If you then Drag the Field back UP without changing the Selected Values the Data Values will be limited to those Values; to select &/or clear the selected Values you must drag the Field back to the Left of the Data.

## ***Dragging and Dropping Data***

As you drag and drop the Field Items (from the Page Field or the Pivot Table Field List), the resulting report is display is changed "on the fly" to represent the Data. Basically, your view of the Data can be sliced and diced a million different ways.

## ***Refreshing the Data***

The data contained in the Pivot Table report can be as up to date as the last time that the Data was Refreshed. Since the Data is contained in a SQL View, when the Data is Refreshed it is "Up to the Minute Data". While updating, the following messages will be displayed in the Lower Right corner of the Excel Program Window (as shown below).



### ***Drilling Down into the Data***

When you find some interesting Data contained in the Pivot Table report and want to explore the underlying Data you can simply "Double-Click" on the Data Field (the Number in the Data Area) and another Worksheet will be created – Named "Sheet1" or "Sheetn" (or "Chartn") where n is the number of times you have double-clicked in the Data area. The recommendation is to "Right Click" and Delete these TABs/Sheets when you no longer need the data.

### ***Saving the Pivot Table Data***

When you are done with the Pivot Table you may save the Pivot Table by clicking "Save", but there is no guarantee that the Workbook will remain the way you left it. When the "Metric Toolkits" are updated and an Updated Pivot Table is released, the Pivot Table that resides in the "Metrics Toolkit directory will be Updated the next time it is launched from the "Metrics Toolkit Launcher".

### **Pivot Table Training Links**

<http://office.microsoft.com/training/training.aspx?AssetID=RC010136191033>

<http://office.microsoft.com/training/training.aspx?AssetID=RC010286901033>

<http://office.microsoft.com/training/training.aspx?AssetID=RC010381561033>