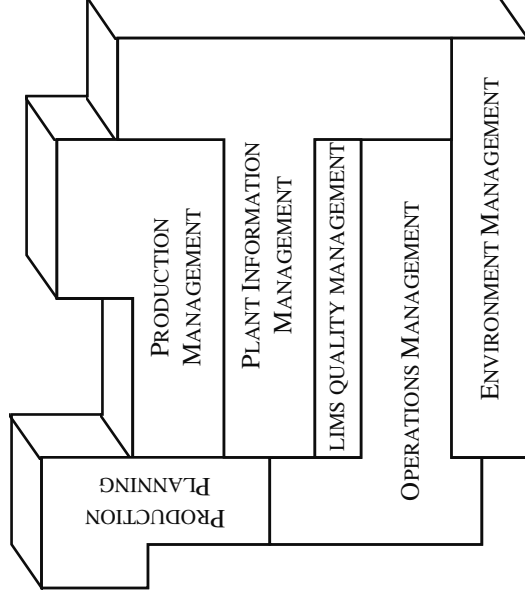


Uniformance Desktop  
**Retrieve Uniformance Data Using  
Excel Companion**



# Lesson Objective

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## Objective

Use the Excel Companion to retrieve Uniformance data into an MS Excel worksheet.

## Topics

- Purpose of Excel Companion
- Loading the Add-in
- Dialog Boxes
  - ‘Get PHD Data’
  - Selecting Tags
  - ‘Get PHD Raw Data’
  - ‘Get Tag Attributes’
  - ‘EM Get Events’ - R150 and later
  - ‘Get Event Data’ - R150 and later
  - ‘LIMS Get Data’
- Output Presentation Formats
- Quick Chart
- View/Edit the Function Call
- Refresh
- Conditional Queries and Calculations
- Set Defaults
- Programmatic Access of Dialogs
- Hands-on Exercise

The Excel Companion is available on R130 and later.

## References

- *Excel Companion online help*
- *Uniformance Excel Add-In User Guide, PIM-250*

## Purpose of Excel Companion

- The Excel Companion is an add-in for retrieving PHD data, Event data, and LIMS data.
- The add-in provides a drop-down menu and an optional tool bar from which you can call a dialog box. You use the dialog box to create a function in a cell that retrieves data. The dialog box makes building the function call very user friendly.

Uniformance Toolbar  
(View/Toolbars/Uniformance)

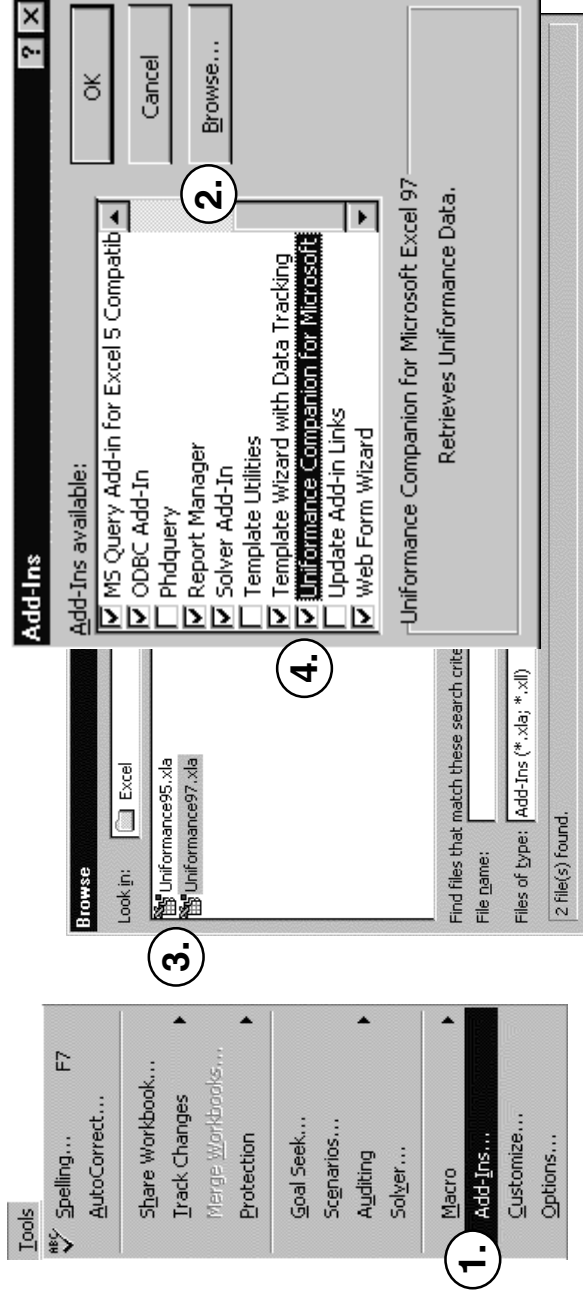
Function Call created  
through dialog

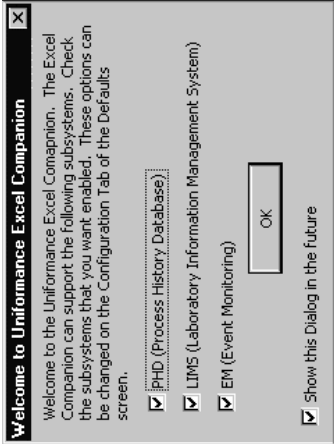
The screenshot shows the Microsoft Excel interface. The 'PHD Raw Att.' toolbar is visible, containing buttons for LIMS, EM, Data, Tags, Units, and a formula icon. The formula bar displays the function: `=PHDGetData("PHD_HOST", Sheet1!$A$7:$A$12, Sheet1!$B$3, "", "Average", Sheet1!$B$4, 90, "Before", UNI_RET_DESC+UNI_RET_VALUE, UNI_RET_HEADERS)`. Below the toolbar, a table titled 'Shift Report' is displayed.

|    | A                           | B                       | C               | D        | E               | F       | G               | H           | I | J |
|----|-----------------------------|-------------------------|-----------------|----------|-----------------|---------|-----------------|-------------|---|---|
| 1  | <b>Shift Report</b>         |                         |                 |          |                 |         |                 |             |   |   |
| 2  | From: yesterday+7h          |                         |                 |          |                 |         |                 |             |   |   |
| 3  | To: today+7h                |                         |                 |          |                 |         |                 |             |   |   |
| 4  | Interval: Overall Reduction |                         |                 |          |                 |         |                 |             |   |   |
| 5  |                             |                         |                 |          |                 |         |                 |             |   |   |
| 6  | Tag                         | Description             | Aggregate Value | AVERAGE  | Aggregate Value | CURRENT | Aggregate Value |             |   |   |
| 7  | FIC21769.OP                 | Steam Flow Controller   | Average         | 15.4535  | Snapshot        |         | Snapshot        | 15.45349884 |   |   |
| 8  | FIC21769.PV                 | Steam Flow Controller   | Average         | 9.272099 | Snapshot        |         | Snapshot        | 9.272099495 |   |   |
| 9  | FIC21769.SP                 | Steam Flow Controller   | Average         | 9.272109 | Snapshot        |         | Snapshot        | 9.272109032 |   |   |
| 10 | TIC21769.OP                 | Reactor Temp Controller | Average         | 15.45351 | Snapshot        |         | Snapshot        | 15.4535141  |   |   |
| 11 | TIC21769.PV                 | Reactor Temp Controller | Average         | 23.18025 | Snapshot        |         | Snapshot        | 23.18025017 |   |   |
| 12 | TIC21769.SP                 | Reactor Temp Controller | Average         | 23.18025 | Snapshot        |         | Snapshot        | 23.18024635 |   |   |

## Loading the Add-In

- Depending on the installation method used, Excel Companion may start when you open Excel, without having to load it as an Excel Add-in. If there is a Uniformance97.xla (or Uniformance95.xla) icon in your MS Office XLStart directory, you do not need to use the add-in manager to load the Excel Companion.
- To use the MS Excel add-in manager to load the Excel Companion, do the steps shown below. (For step 2, the Excel Companion can be located at ..\Program Files\Honeywell TPI\Companions\Excel\Uniformance97.xla and Uniformance95.xla.)



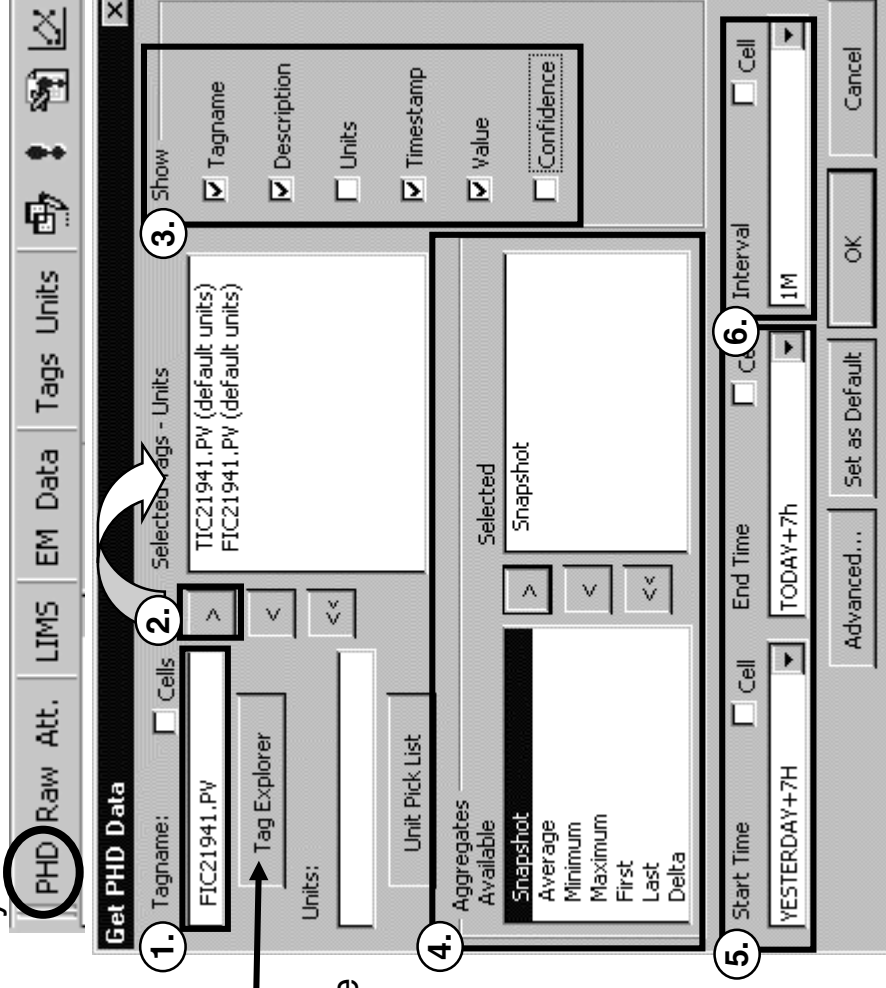
| Excel Companion Startup   |   |           |      |
|---|---|-----------|------|
| <ul style="list-style-type: none"> <li>For R150 and later, upon startup of Excel, the following dialog appears for the Excel Companion.</li> <li>Select the subsystem(s) from which you want to retrieve data.</li> <li>LIMS and Event Monitoring are optional applications that may or may not be present on your Uniformance system.</li> </ul> | <div>  </div> |           |      |
| <p><b>PHD</b> - Provides three dialog boxes for PHD data retrieval:</p> <ul style="list-style-type: none"> <li>Get PHD Data—Returns snapshot or aggregate values at regular intervals</li> <li>Get PHD Raw Data—Returns raw data</li> <li>Get Tag Attributes—Returns tag configuration data</li> </ul>  |   |           |      |
| <p><b>LIMS</b> - Provides a dialog box to retrieve sample results from the Uniformance Lab Information Management System. (R130 and later)</p>  |   |           |      |
| <p><b>Event Monitoring</b> - Provides a dialog box to retrieve Events from the Event database, and a dialog box to retrieve event-related tag data from PHD. (R150 and later)</p>   |   |           |      |
| Retrieve Uniformance Data Using Excel Companion   | PHD 150   | P51777.05 | 8/99 |
|   |   |           | 5    |

## 'Get PHD Data' Dialog Box

Use a dialog box to create the history function call in a cell.

### Basic Steps:

1. Enter the tagnames for the history call. (The Tag Explorer can be used to add one or more tagnames to the dialog box.)
2. Use the arrow button to move the tagnames entry to the Selected Tags list.
3. Select the items you want to be shown in the results.
4. Select one or more aggregates.
5. Specify an absolute or relative-based start/end time.
6. Specify the Interval.
7. Select OK.



## 'Get PHD Data' Dialog Box, continued

You can use cell references in a dialog box:

- You can specify a cell or range of cells containing the desired tagname(s).
- You can specify a cell reference for the start/end time and the interval.

|    | A                   | B                  | C         |
|----|---------------------|--------------------|-----------|
| 1  | <b>Shift Report</b> |                    |           |
| 2  | From:               | Yesterday+7h       |           |
| 3  | To:                 | Today+7h           |           |
| 4  | Interval:           | Overall Reduction  |           |
| 5  |                     |                    |           |
| 6  | Tag                 | Description        | Aggregate |
| 7  | FIC21941.OP         | PMDP FOR TANK 3    | Average   |
| 8  | FIC21941.PV         | PMDP FOR TANK 3    | Average   |
| 9  | FIC21941.SP         | PMDP FOR TANK 3    | Average   |
| 10 | TIC21941.OP         | STEAM FLOW CONTROL | Average   |
| 11 | TIC21941.PV         | STEAM FLOW CONTROL | Average   |
| 12 | TIC21941.SP         | STEAM FLOW CONTROL | Average   |

Helpful Hint: You can use a cell as a reference to multiple functions, so that by changing a single cell, you can change multiple functions at once.

## ‘Get PHD Data’ Dialog Box, *continued*

The interval parameter can be set to one of the following:

Any Valid Time Interval

The time interval between returned data points.

"OVERALL REDUCTION"

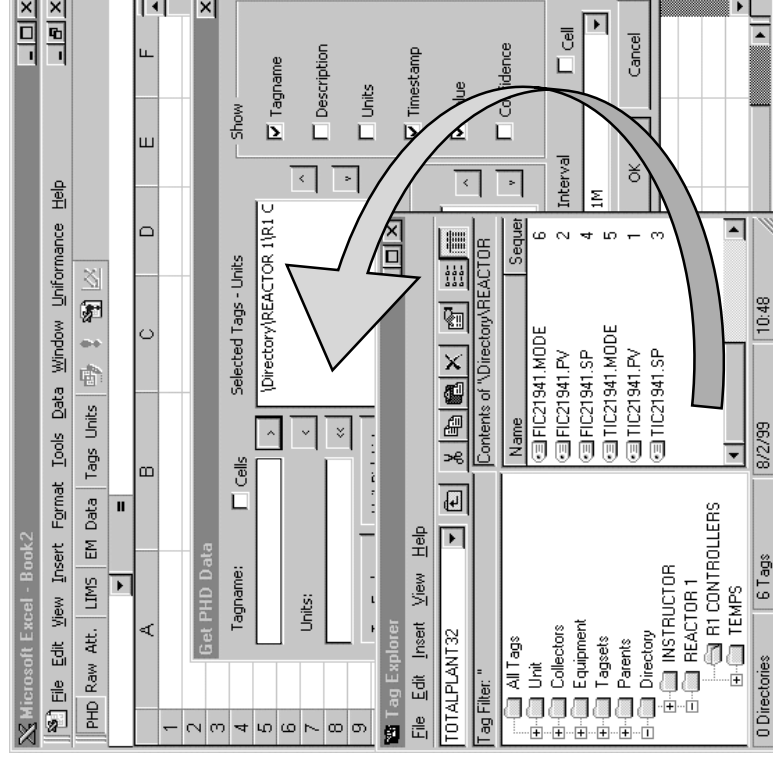
Sets the interval to the end time minus the start time. It can be used to return a single value; that is, the average from start time to end time.



## Selecting Tags

There are four ways to specify the tags for which you want data retrieved in Excel:

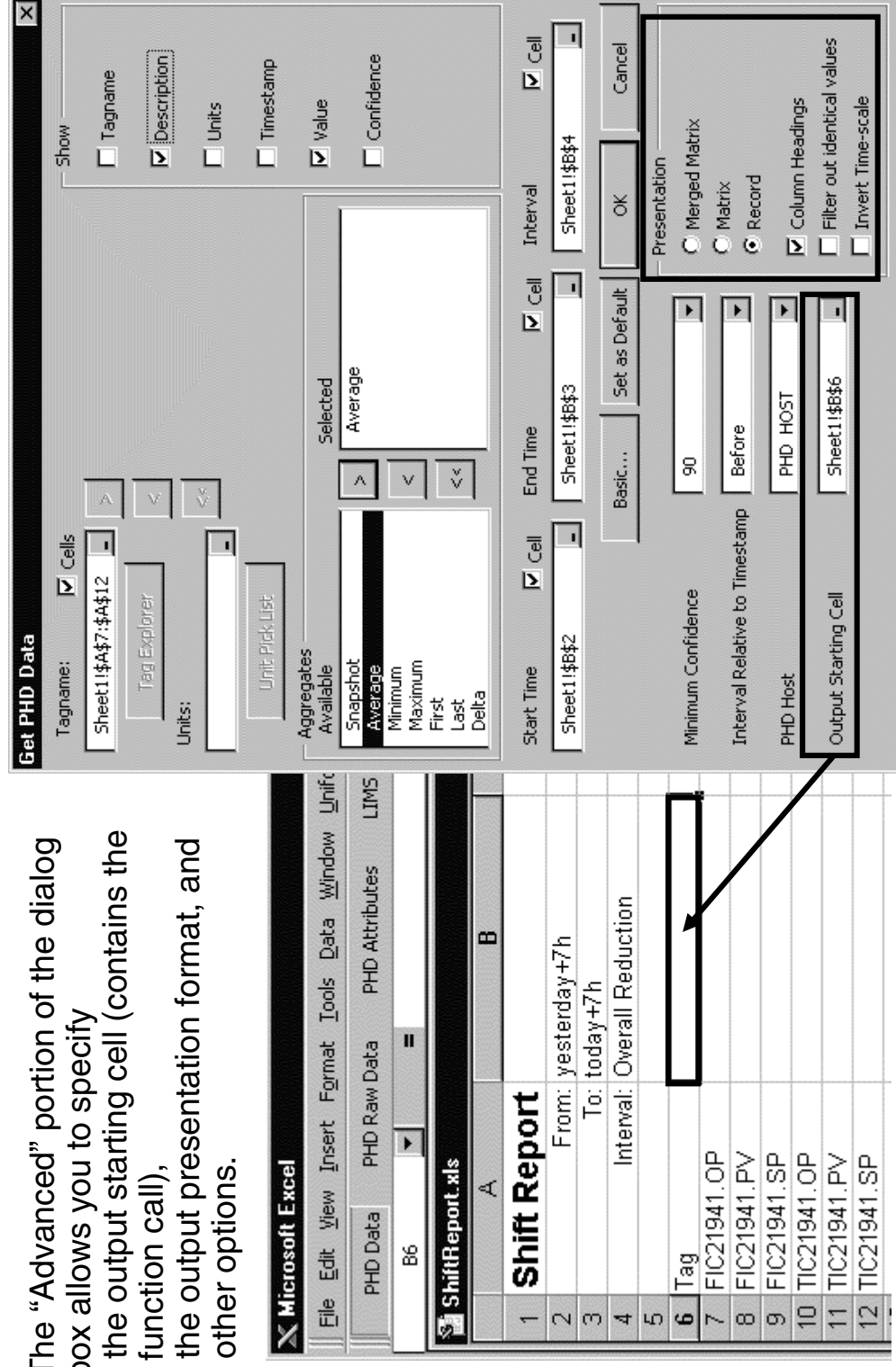
- In an Excel Companion window, select **Tagname Cells**; then, on the worksheet, select a range of tags.
- In an Excel Companion window, type a tagname into the **Tagname box**.
- Using Tag Explorer, select tags of interest, then **drag/drop the tags** into the **Selected Tags** box of an Excel Companion window.
- Using Tag Explorer, **drag/drop a Tag Set or Directory** into the **Selected Tags box** of an Excel Companion window (see example at right).



## 'Get PHD Data' Dialog Box - Advanced

The "Advanced" portion of the dialog box allows you to specify

- the output starting cell (contains the function call),
- the output presentation format, and
- other options.



# Output Presentation Formats

## Matrix

| Tagname     | Timestamp      | Confidence | Value |
|-------------|----------------|------------|-------|
| tic21941.pv | 11/16/98 00:01 | 25.53      | 100   |
| tic21941.pv | 11/16/98 00:02 | 25.38      | 100   |
| tic21941.pv | 11/16/98 00:03 | 30.95      | 100   |
| tic21941.pv | 11/16/98 00:04 | 40.78      | 100   |

Data from each tag is in its own section (matrix).

## Merged Matrix

| Tagname     | Timestamp      | Confidence | Value |
|-------------|----------------|------------|-------|
| tic21941.pv | 11/16/98 00:01 | 25.53      | 100   |
| tic21941.pv | 11/16/98 00:02 | 25.38      | 100   |
| tic21941.pv | 11/16/98 00:03 | 30.95      | 100   |
| tic21941.pv | 11/16/98 00:04 | 40.78      | 100   |

One timestamp on each row—makes it easier to compare data from different tags at the same time.

## Record ('show tagname' specified)

| Tagname     | Timestamp      | Confidence | Value |
|-------------|----------------|------------|-------|
| tic21941.pv | 11/16/98 00:01 | 25.53      | 100   |
| tic21941.pv | 11/16/98 00:02 | 25.38      | 100   |
| tic21941.pv | 11/16/98 00:03 | 30.95      | 100   |
| tic21941.pv | 11/16/98 00:04 | 40.78      | 100   |

Each row contains a single value for a single tag at a single timestamp.



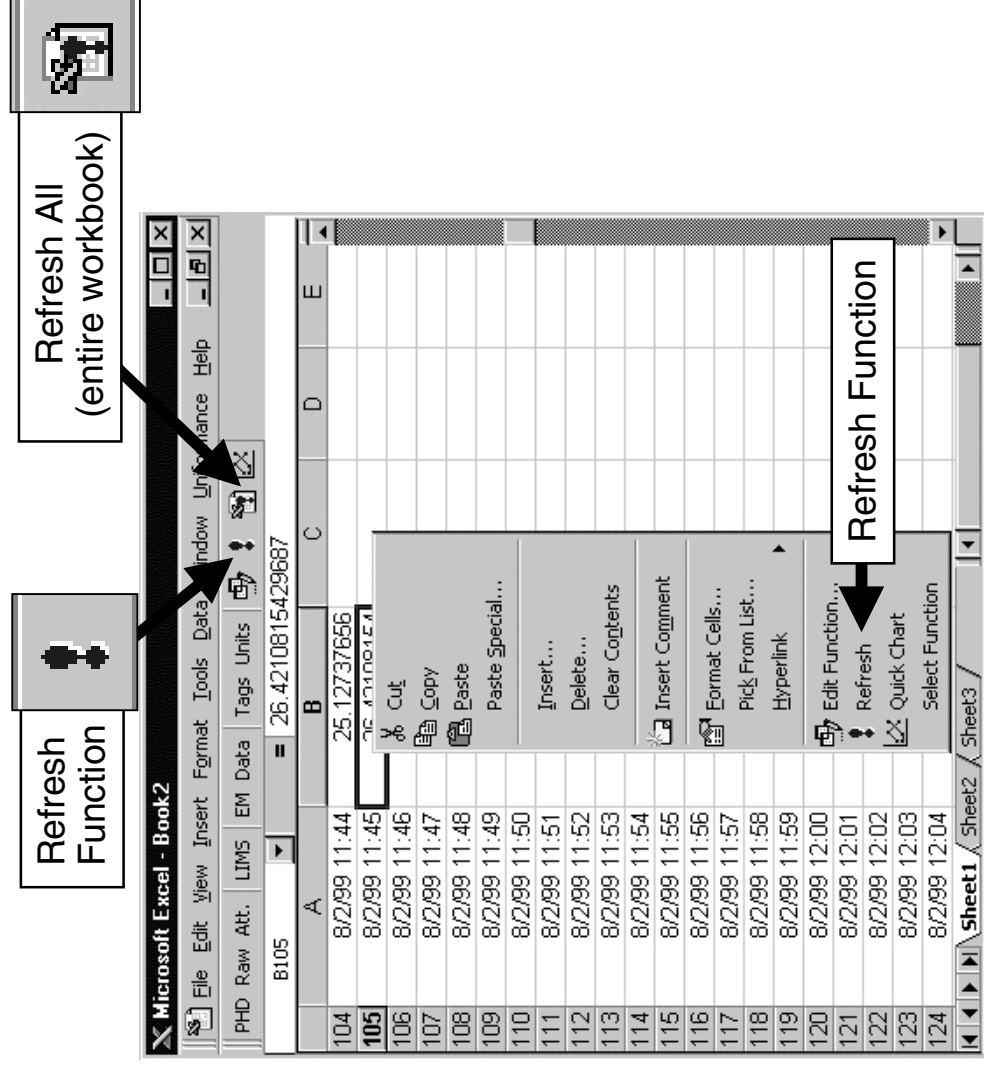


## Refresh (Office 97 only)

You can update (refresh) all the Uniformance data in a workbook, or update the data returned by a selected function call.

Selecting a data item, then 'Refresh Function' updates the data returned by the selected function call.

Selecting a data item, then 'Select Function', highlights all data returned by the selected function.

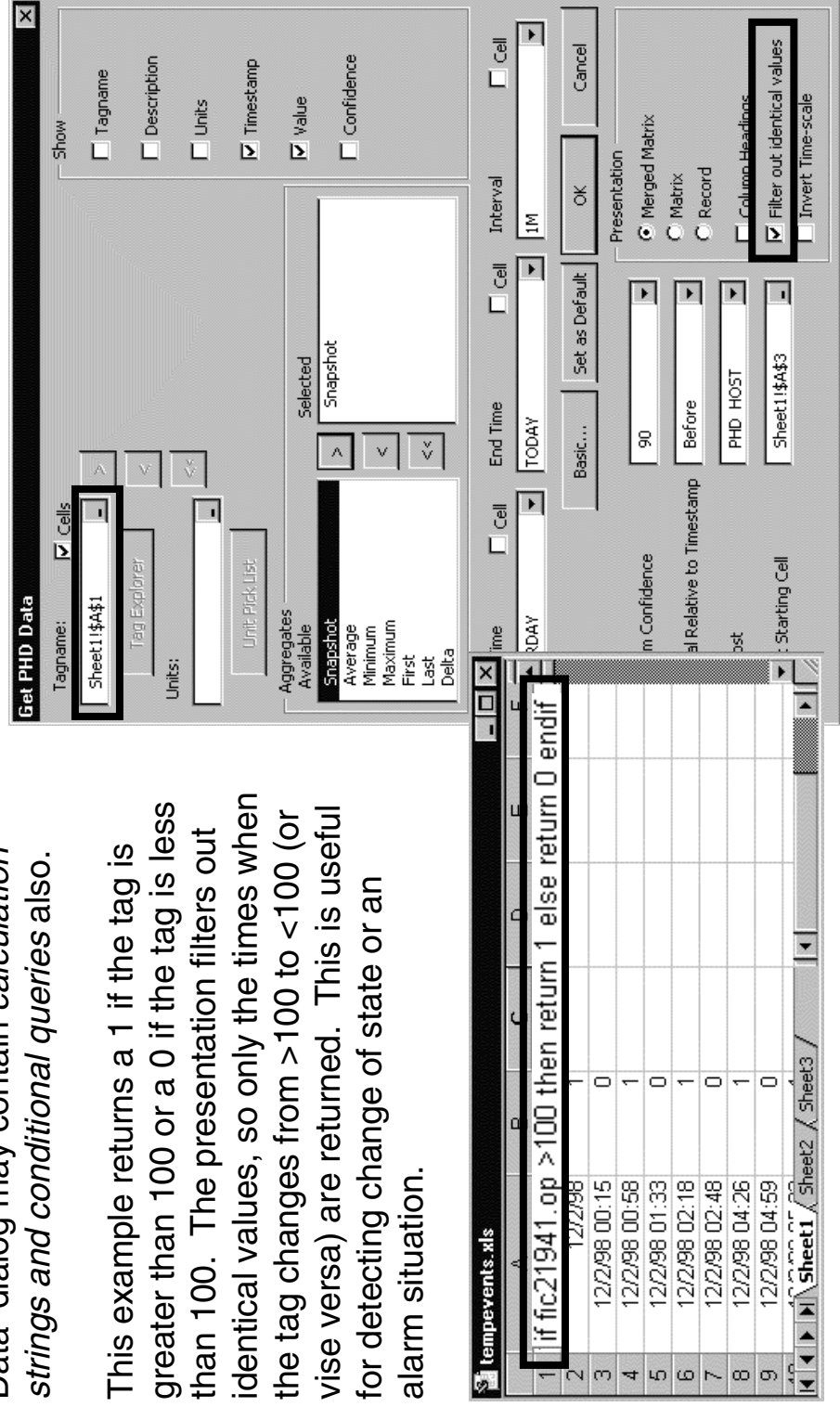


# Conditional Queries and Calculations

The tagname control of the 'Get PHD Data' dialog may contain *calculation strings and conditional queries* also.

This example returns a 1 if the tag is greater than 100 or a 0 if the tag is less than 100. The presentation filters out identical values, so only the times when the tag changes from >100 to <100 (or vice versa) are returned. This is useful for detecting change of state or an alarm situation.

The *PHD System Manual* defines syntax for conditional queries and calculations (Virtual Tags).



## 'Get PHD Raw Data' Dialog Box



**Get PHD Raw Data**

Tagname:  ☐ Cell   ☒ Tagname ☐ Description ☐ Units ☒ Timestamp ☒ Value ☒ Confidence

Start Time:  ☐ Cell ☐ End Time:  ☐ Cell

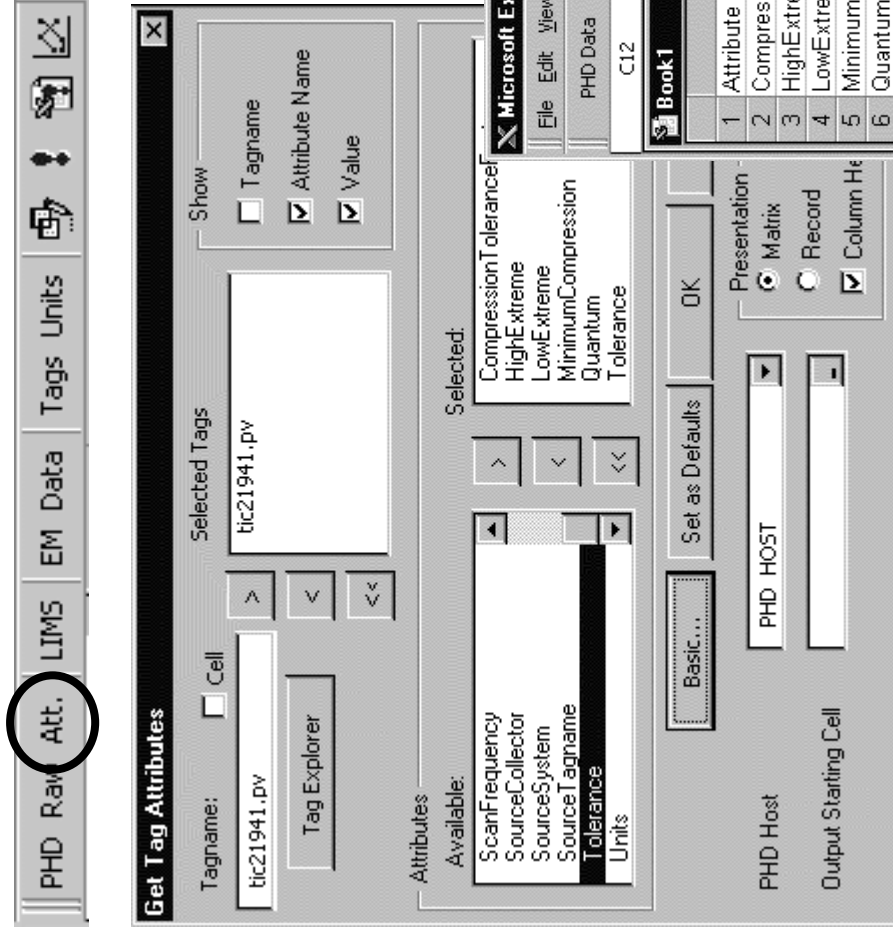
Minimum Confidence:  PHD Host:  Output Starting Cell:

Presentation: ☐ Merged Matrix ☒ Matrix ☐ Record ☐ Column Headings ☒ Outliers ☐ Filter out identical values ☐ Invert Time-scale

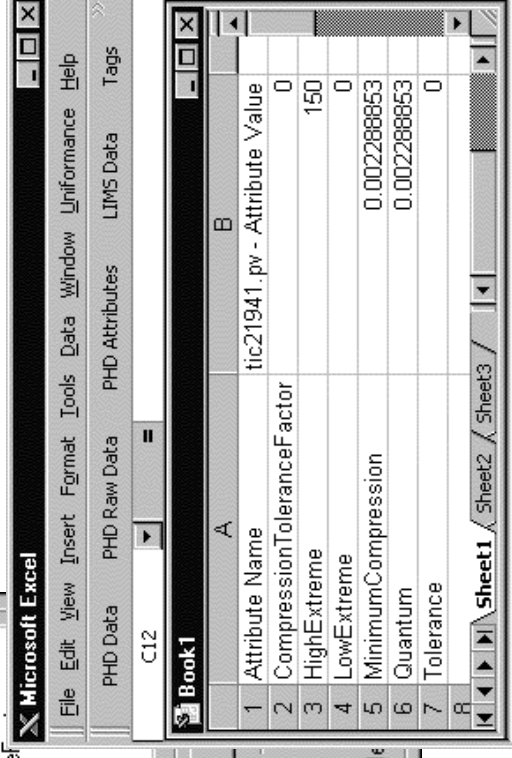
Outliers—Returned data will include the closest data point immediately before your time interval, and the closest data point immediately after your time interval.



# 'Get Tag Attributes' Dialog Box



In this example, the 'Get Tag Attributes' function call returns the tag's compression attributes to the worksheet.



## Event Monitoring Using Excel Companion

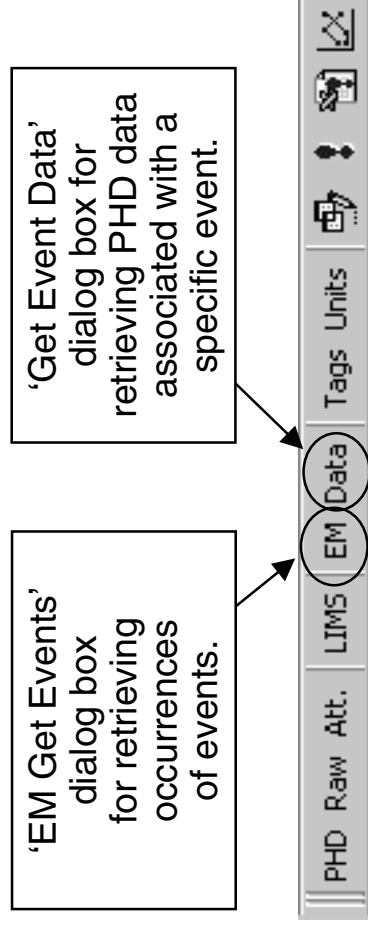
---

Events are defined at a site through the Uniformance Event Monitoring application.

An event is something that happens at a plant to affect data and that warrants further investigation. For example, a site may have an event configured so that whenever a tank goes below a certain level, an event is created.

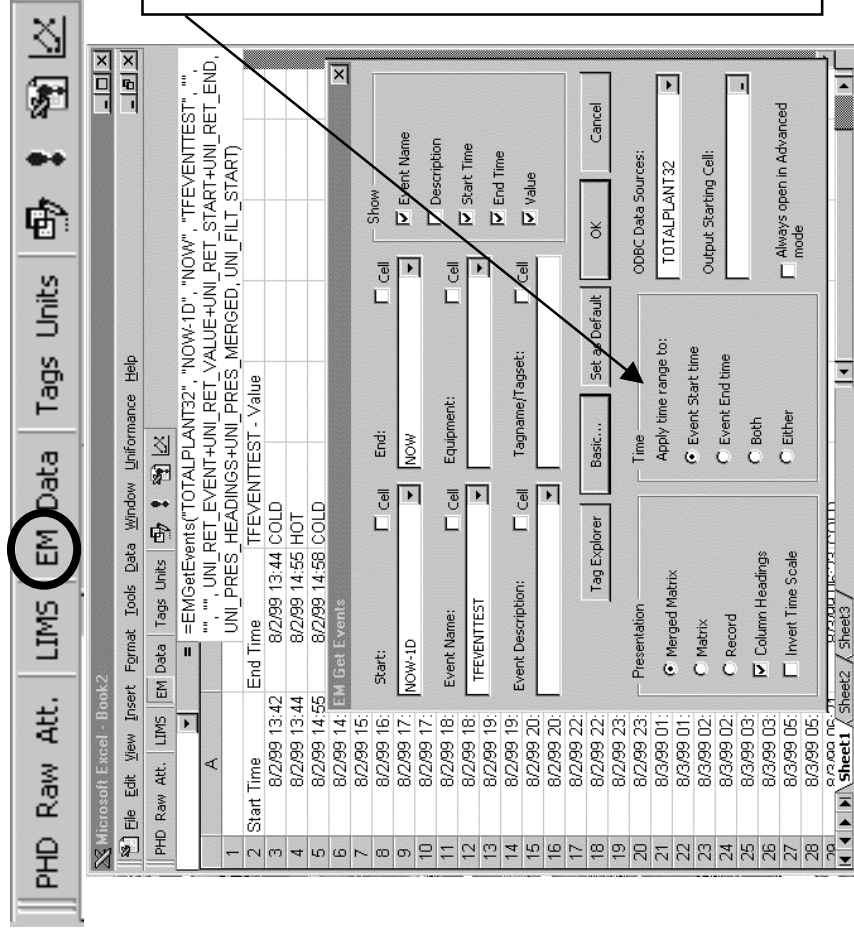
Using the Excel Companion, you can retrieve a list of all events at a plant detected by the Event Monitoring application, then retrieve the related PHD data to find out what happened at a specific event.

Two dialog boxes are available in the Excel Companion for investigating events:



## 'EM Get Events' Dialog Box (requires Event Monitoring application)

In this example, the 'EM Get Events' function call returned occurrences of events named TFEVENTEST. Once you get a list of occurrences, you can use the 'Get Event Data' dialog box to retrieve data for the specific events that you want to investigate further.





## **‘LIMS Get Data’ Dialog Box (requires LIMS application)**

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- The ‘LIMS Get Data’ function call returns data that has been entered into the Honeywell Uniformance LIMS database.
- Lab staff use LIMS to store data resulting from analysis of samples. You can get this data from Oracle and put it into Excel for further analysis of the samples, or for comparison against process data from PHD.
- By combining the ‘Get PHD Data’ and ‘LIMS Get Data’ function calls, you are able to return the following data within the same worksheet:
  - Online analyzer data from the real-time source system that has been stored in the PHD database
  - Lab sample results from the LIMS Oracle database

# Set Defaults

- If you always use the same settings and parameters to retrieve data, you can save your settings as defaults, so you don't have to set them every time you retrieve data.
- You can also customize the Time and Interval pick lists through the Set Defaults window

Uniformance

Help

PHD Data

LIMS Data...

EM Data

Refresh

Quick Chart

Pick Lists

Defaults...

Connection

Help

About

PHD

LIMS

EM

Configuration

Times

Start Time

Interval

End Time

Time Pick List

Time List Items

Interval Pick List

Interval List Items

Oracle

Error Handling

Display Message Boxes

OK

Cancel

Apply

Set Defaults

General

PHD

LIMS

EM

Configuration

Aggregates

Available Items

List Items

PHD Hosts

Host

Associated DSN

Advanced

Minimum Confidence

Interval Relative to Timestamp

PHD Host

PHD Get Data

PHD Get Raw

PHD Get Attributes

OK

Cancel

Apply

## Setting Login Defaults

Each PHD Host requires an associated ODBC DSN to facilitate functions requiring information from both PHD and Oracle. When data is requested from both PHD and Oracle, and only the PHD Host has been specified, the Excel Companion looks up the associated DSN it requires to query Oracle.

Examples of this type of functionality include:

- The 'Get Event Data' function. It queries Oracle for information regarding an event, and queries PHD for process data related to the event.
- Any PHD function that uses a tag set or directory name. It queries Oracle to resolve the tag set or directory name into an actual list of tags, then it queries PHD to retrieve the data on those tags.

### Setting Login Defaults

On the PHD tab of the Defaults window, you can configure the list of PHD Hosts and their associated DSNs.

A PHD Host cannot be associated with more than one Oracle DSN at a time.

If a PHD Host without an associated DSN is used, the default DSN is assumed.

The screenshot shows the 'Set Defaults' dialog box with the 'PHD' tab selected. The 'General' tab is also visible. The 'PHD Hosts' section contains a 'Host' field with 'PHD\_HOST 0' and an 'Associated DSN' field with 'TOTALPLANT32'. The 'List Items' section has a list box containing 'Average', 'Delta', 'DeltaInterval', 'First', 'FirstInterval', and 'Last'. The 'Show' section has checkboxes for 'Tagname', 'Units', 'Description', 'Timestamp', 'Values', 'Confidence', and 'Attribute Name'. The 'Presentation' section has three dropdown menus: 'PHD Get Data' (set to 90), 'PHD Get Raw' (set to Before), and 'PHD Get Attributes' (set to PHD\_HOST). At the bottom right are 'OK', 'Cancel', and 'Apply' buttons.

## Hands-on Exercise

# Instructions

*Use the Uniformance Excel Companion to generate a Shift Report like the one below.*

Microsoft Excel - ShiftReport.xls

File Edit View Insert Format Tools Data Window Unifomance Help

PHD Data PHD Raw Data PHD Attributes LIMS Data Tags Units

B6 =

### Shift Report

From: yesterday+7h  
To: today+7h  
Interval: Overall Reduction

| Tag         | Description        | Aggregate | Value | Units    |
|-------------|--------------------|-----------|-------|----------|
| FIC21941.OP | PMDP FOR TANK 3    | Average   | 31.34 | Snapshot |
| FIC21941.PV | PMDP FOR TANK 3    | Average   | 18.81 | Snapshot |
| FIC21941.SP | PMDP FOR TANK 3    | Average   | 18.86 | Snapshot |
| TIC21941.OP | STEAM FLOW CONTROL | Average   | 31.43 | Snapshot |
| TIC21941.PV | STEAM FLOW CONTROL | Average   | 47.02 | Snapshot |
| TIC21941.SP | STEAM FLOW CONTROL | Average   | 46.97 | Snapshot |

YESTERDAY 7AM  
CURRENT  
AVERAGE

Aggregate Value  
Raw 31.56  
Raw 18.89  
Raw 21.16  
Raw 33.53  
Raw 47.23  
Raw 84.84

Sheet1 / Sheet2 / Sheet3

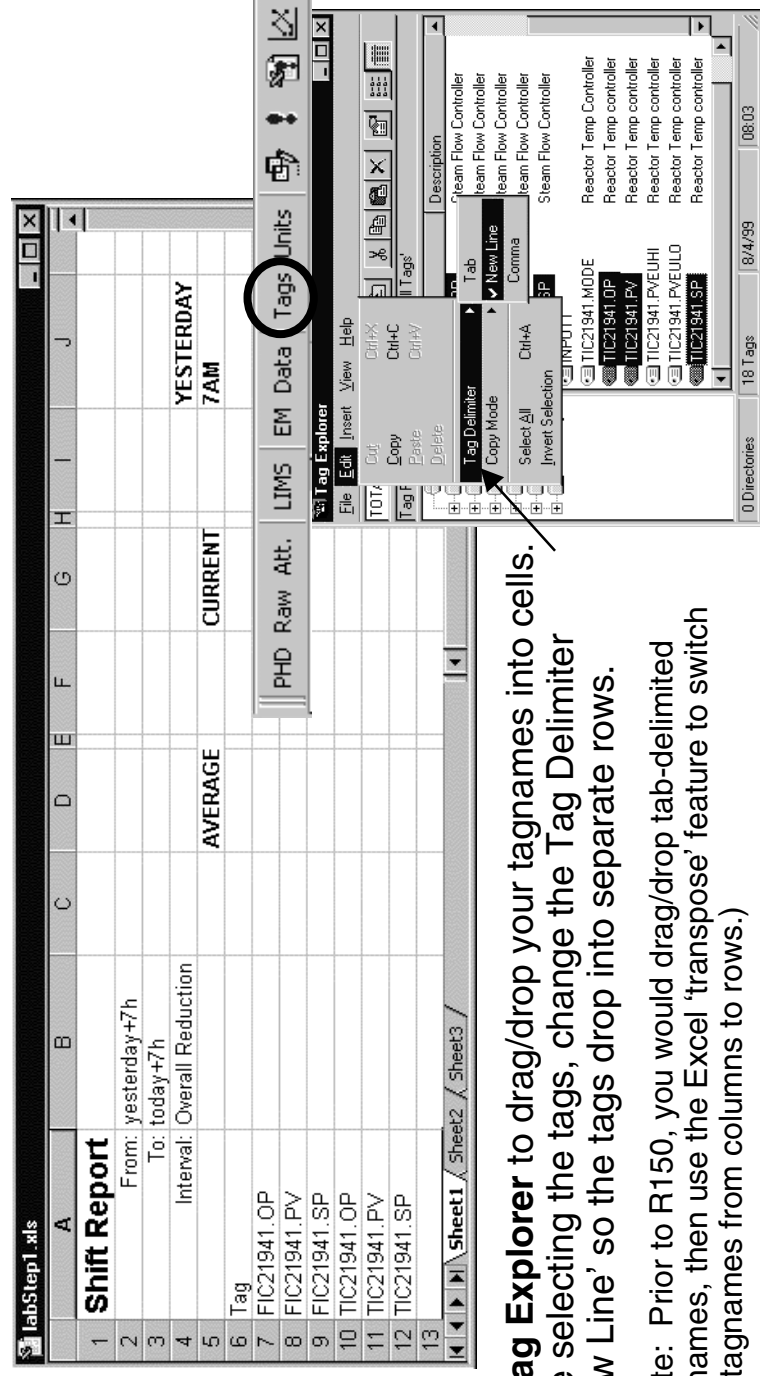


## Hands-on Exercise, continued

## Step 1 - Define Report Format

1. Start the exercise by opening a new Excel worksheet. Enter the Shift Report format shown below.

(Use the same cells as shown below, so that the illustrations and comments in the exercise will reference the same cells as your worksheet.)



2. Use **Tag Explorer** to drag/drop your tagnames into cells. Before selecting the tags, change the Tag Delimiter to 'New Line' so the tags drop into separate rows.

(Note: Prior to R150, you would drag/drop tab-delimited tagnames, then use the Excel 'transpose' feature to switch the tagnames from columns to rows.)

## Hands-on Exercise, continued

**Shift Report**

From: yesterday+7h  
To: today+7h  
Interval: Overall Reduction

**Tag**

| Tag         | Description     | Aggregate | Value     |
|-------------|-----------------|-----------|-----------|
| FIC21941.OP | PMDP FOR TANK 3 | Average   | 31.338036 |
| FIC21941.PV | PMDP FOR TANK 3 | Average   | 18.80631  |
| FIC21941.SP | PMDP FOR TANK 3 | Average   | 18.859891 |

**Get PHD Data**

Tagname: Sheet1!\$A\$7:\$A\$12  
Units: AVERAGE

Aggregates Available: Snapshot, Average, Minimum, Maximum, First, Last, Delta

Selected: Average

Show: ☐ Tagname, ☒ Description, ☐ Units, ☐ Timestamp, ☒ Value, ☐ Confidence

Presentation: ☐ Merged Matrix, ☐ Matrix, ☒ Record

Filter out identical values: ☐

Start Time: Sheet1!\$B\$2, End Time: Sheet1!\$B\$3, Interval: Sheet1!\$B\$4

Minimum Confidence: 90, Interval Relative to Timestamp: Before, PHD Host: PHD HOST, Output Starting Cell: Sheet1!\$B\$6

The above history call returns the tag description and the 24 hour average.

### Step 2 - Define Data Retrieval

1. Move your cursor to the desired 'output starting cell' in the worksheet (B6).
2. Open the 'Get PHD Data' dialog. Select Tagname Cells.
3. In the worksheet, select the range of cells containing your tagnames. This creates the cell reference in the dialog's Tagname control.
4. Complete the rest of the dialog as shown at right, then select OK.

## Hands-on Exercise, continued

**Get PHD Data**

Tagname: ☒ Cells  
 Sheet1!\$A\$7:\$A\$12

Units: ☐ Description  
☐ Units  
☐ Timestamp  
☒ Value  
☐ Confidence

Show  
☒ Tagname  
☐ Description  
☐ Units  
☐ Timestamp  
☒ Value  
☐ Confidence

Aggregates Available  
☒ Snapshot  
☐ Average  
☐ Minimum  
☐ Maximum  
☐ First

Selected Snapshot  
☐ Snapshot

Tag Explorer  
 Unit Pick List

Start Time: ☐ Cell ☐ End Time: ☐ Cell ☐ Interval: 1M  
 NOW NOW

Basic... Set as Default OK Cancel

Presentation  
☒ Merged Matrix  
☐ Matrix  
☒ Record

Column Headings  
☒ Filter out identical values  
☐ Invert Time-scale

Minimum Confidence: 90  
 Interval Relative to Timestamp: Before  
 PHD Host: PHD\_HOST  
 Output Starting Cell: Sheet1!\$F\$6

☒ Always open in Advanced mode

The above history call returns the most recent 1 minute snapshot.

|           | B                  | C                 | D              | E | F         | G              | H |
|-----------|--------------------|-------------------|----------------|---|-----------|----------------|---|
| Report    |                    |                   |                |   |           |                |   |
| From:     | yesterday+7h       |                   |                |   |           |                |   |
| To:       | today+7h           |                   |                |   |           |                |   |
| Interval: | Overall Reduction  |                   |                |   |           |                |   |
|           |                    |                   | <b>AVERAGE</b> |   |           | <b>CURRENT</b> |   |
|           | Description        | Aggregate Average | Value          |   | Aggregate | Value          |   |
|           | PMDP FOR TANK 3    | Average           | 31.34          |   | Snapshot  | 44.50          |   |
|           | PMDP FOR TANK 3    | Average           | 18.81          |   | Snapshot  | 26.92          |   |
|           | PMDP FOR TANK 3    | Average           | 18.86          |   | Snapshot  | 27.12          |   |
|           | STEAM FLOW CONTROL | Average           | 31.43          |   | Snapshot  | 45.28          |   |
|           | STEAM FLOW CONTROL | Average           | 47.02          |   | Snapshot  | 67.31          |   |
|           | STEAM FLOW CONTROL | Average           | 46.97          |   | Snapshot  | 74.75          |   |

6. Move your cursor to the 'output starting cell' for the current values (F6).
7. Open the '**Get PHD Data**' dialog and complete it as shown at the left, then select OK.

This history call returns the value at the beginning of the shift.

- PHD Host

PHD\_HOST

Output Starting Cell

Sheet1!\$1\$6

☒ Always open in Advanced mode

☐ Merged Matrix  
☐ Matrix  
☒ Record  
☒ Column Headings  
☐ Outliers  
☐ Filter out identical values  
☐ Invert Time-scale

|    |             | D | E | F | G | H | I | J |
|----|-------------|---|---|---|---|---|---|---|
| 6  | Tag         |   |   |   |   |   |   |   |
| 7  | FIC21941.OP |   |   |   |   |   |   |   |
| 8  | FIC21941.PV |   |   |   |   |   |   |   |
| 9  | FIC21941.SP |   |   |   |   |   |   |   |
| 10 | TIC21941.OP |   |   |   |   |   |   |   |
| 11 | TIC21941.PV |   |   |   |   |   |   |   |
| 12 | TIC21941.SP |   |   |   |   |   |   |   |
| 13 |             |   |   |   |   |   |   |   |

YESTERDAY

7AM

CURRENT

Aggregate Value

Aggregate Value

Aggregate Value

Raw

Raw

Raw

Raw

Raw

Raw

|       |          |       |     |
|-------|----------|-------|-----|
| 31.34 | Snapshot | 44.50 | Raw |
| 18.81 | Snapshot | 26.92 | Raw |
| 18.86 | Snapshot | 27.12 | Raw |
| 31.43 | Snapshot | 45.28 | Raw |
| 47.02 | Snapshot | 67.31 | Raw |
| 46.97 | Snapshot | 74.75 | Raw |

Sheet1

Sheet2

Sheet3

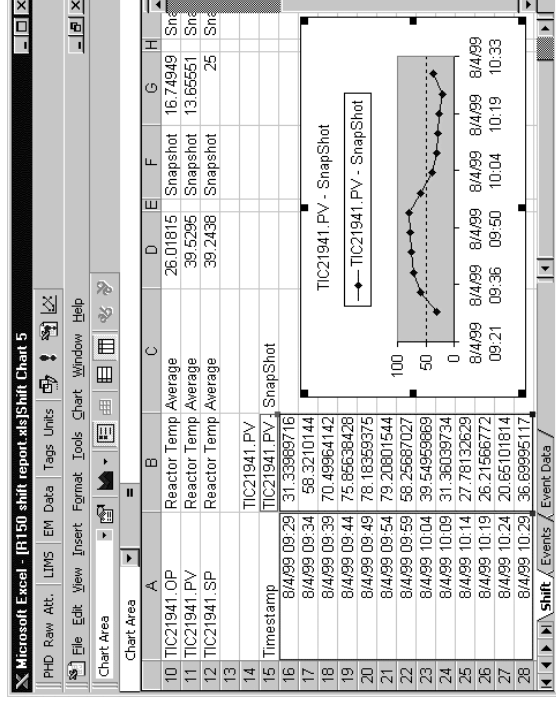
## Hands-on Exercise, continued

### Quick Chart



1. Try to Quick Chart data in your shift report: Select the snapshot values, then select the Quick Chart icon.  
(Quick Chart does not work with this function call, since it did not return timestamps.)
2. Create a new function call that returns timestamps:
  1. Select a cell below the shift report area, then open the 'Get PHD Data' dialog.
  2. Return the past one hour of five-minute snapshots for TIC21###.
  3. Return the tagname, timestamp, and value.
  4. Select the 'Record' format.

3. Try Quick Chart again.  
(Quick Chart does not work with the Record presentation format.)
4. Use 'Edit Function' to change the format to Merged Matrix.
5. With the cell containing the function call selected, try Quick Chart again.



# Hands-on Exercise, continued

## Events

1. Go to the next sheet of your workbook and open the 'EM Get Events' dialog.
2. Retrieve the occurrences of the event named TFEVENTTEST for the past 24 hours.

Microsoft Excel - R150 shift report.xls

File Edit View Insert Format Tools Data Window Uniformance

PHD Raw Att. LIMS EM Data Tags Units

A1

=EMGetEvents("TOTALPLANT32", "UNRET\_EVENT+UNI\_RE", "UNIPRES\_HEADINGS+UNI\_PR

| 1 | Start Time   | End Time     | TFEVENTTEST - Value |
|---|--------------|--------------|---------------------|
| 3 | 8/3/99 20:14 | 8/3/99 20:14 | COLD                |
| 4 | 8/3/99 20:14 | 8/4/99 03:34 | HOT                 |
| 5 | 8/4/99 03:34 | 8/4/99 03:34 | COLD                |
| 6 | 8/4/99 03:34 |              | HOT                 |

PHD Raw Att. LIMS EM Data Tags Units

Events / Sheet3 /

EM Get Events

Start: NOW-12h End: NOW Cell: Cell

Event Name: TFEVENTTEST Equipment: Cell

Event Description: Cell Tagname/Tagset: Cell

Show: ☒ Event Name ☐ Description ☒ Start Time ☒ End Time ☒ Value

Tag Explorer Basic... Set as Default OK Cancel

Presentation: ☒ Merged Matrix ☐ Matrix ☐ Record ☒ Column Headings ☐ Invert Time Scale

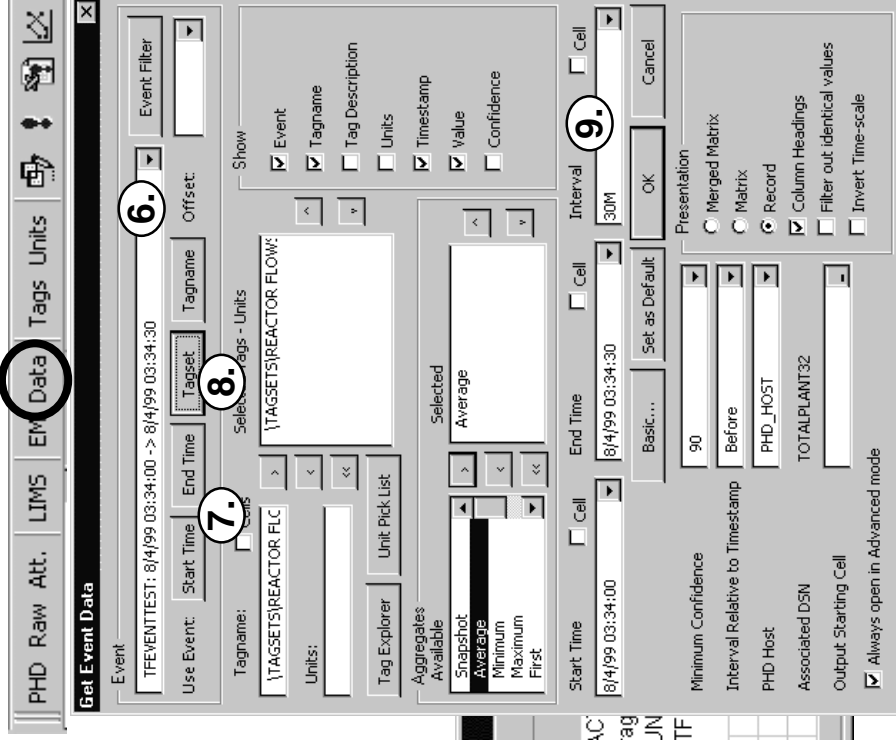
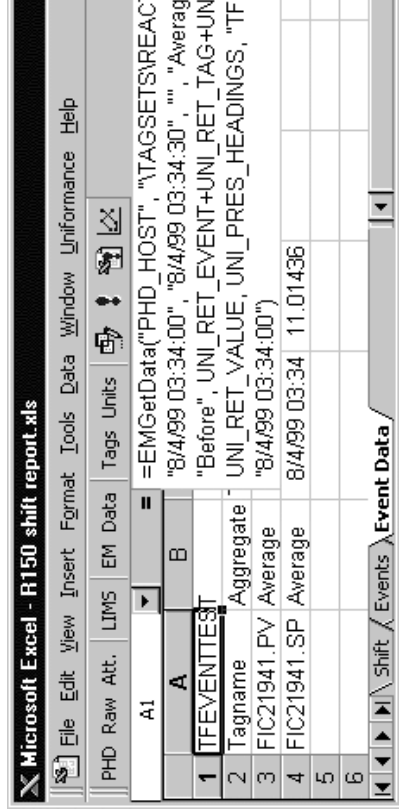
Time: Apply time range to: ☒ Event Start time ☐ Event End time ☐ Both ☐ Either

ODBC Data Sources: TOTALPLANT32 Output Starting Cell: Always open in Advanced mode

3. Right-click on any data item, then select 'Edit Function' from the menu.
4. Change the history call to be for the past 12 hours.

## Hands-on Exercise, continued

- Go to the next sheet of your workbook and open the 'Get Event Data' dialog.
- Select an Event from the pulldown list.
- Use the selected event's Start/End Times.
- Use the selected event's Tag Set.
- Retrieve data in 30 minute intervals.
- Save your workbook.



## **Hands-on Exercise, *continued***

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### **Other Features**

Use the remainder of your lab time to experiment with the following features of the Excel Companion:

- \_\_\_ Refresh
- \_\_\_ Conditional Query
- \_\_\_ Calculation Tag
- \_\_\_ Different Output Presentation Formats (Merged Matrix, Matrix, Record)
- \_\_\_ PHD Attributes Dialog
- \_\_\_ Customized dropdown boxes (Set Defaults)
- \_\_\_ Login to a different server
- \_\_\_ Online Help

**END OF EXERCISE**



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