

M3 Report Writer

Article ID: 753, Product: Millennium 3, Last Updated: 5/6/2005

Millennium Report Writer

The report writer can be used for most of your reporting needs, including employee and personnel listings. You also can access current, MTD, QTD, and YTD values for any earning, deduction or tax code. Various formatting options are provided to facilitate the creation of a variety of output files.

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Creating a simple report

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Reporting data is a key to being able to satisfy customer needs. As a means of reporting, there are two options to use. Option 1 is to create a report in a reporting utility such as Crystal Reports, and Option 2 is to create a Millennium Report Writer Report. Option 2 is what we are working with in this article as often times the case is that you need to produce a quick report without getting into all the details of using Crystal. Or often the case, we are all not skilled in the knowledge of writing reports in Crystal.

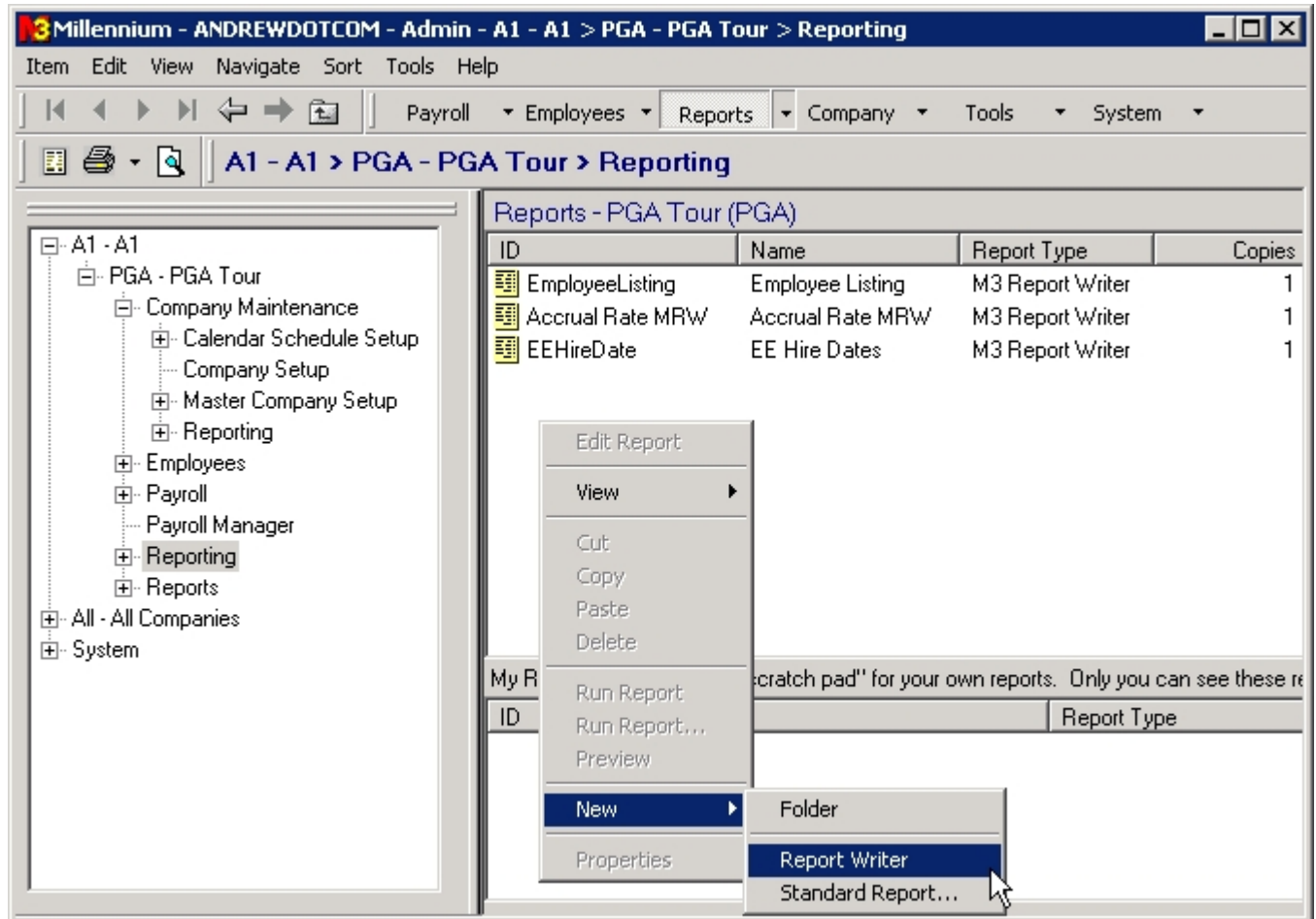
To create a Millennium Report Writer report, you can do this in multiple places within the software. The options are (all are based on the Tree):

- Company > Reporting
- Company Maintenance > Reporting
- System > Reporting

Note: when creating Report Writers at the system level, you cannot access certain information that is available in the company level.

Step 1: Creating the Report

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Navigate to the section of Millennium where you want to create the report. For example purpose I am in the Company > Reporting section. Above you will see a screen shot of how to add a new Report Writer. Right click on the window to select New, which opens up a little sub menu to select Folder, Report Writer, or Standard Report. Select Report Writer.

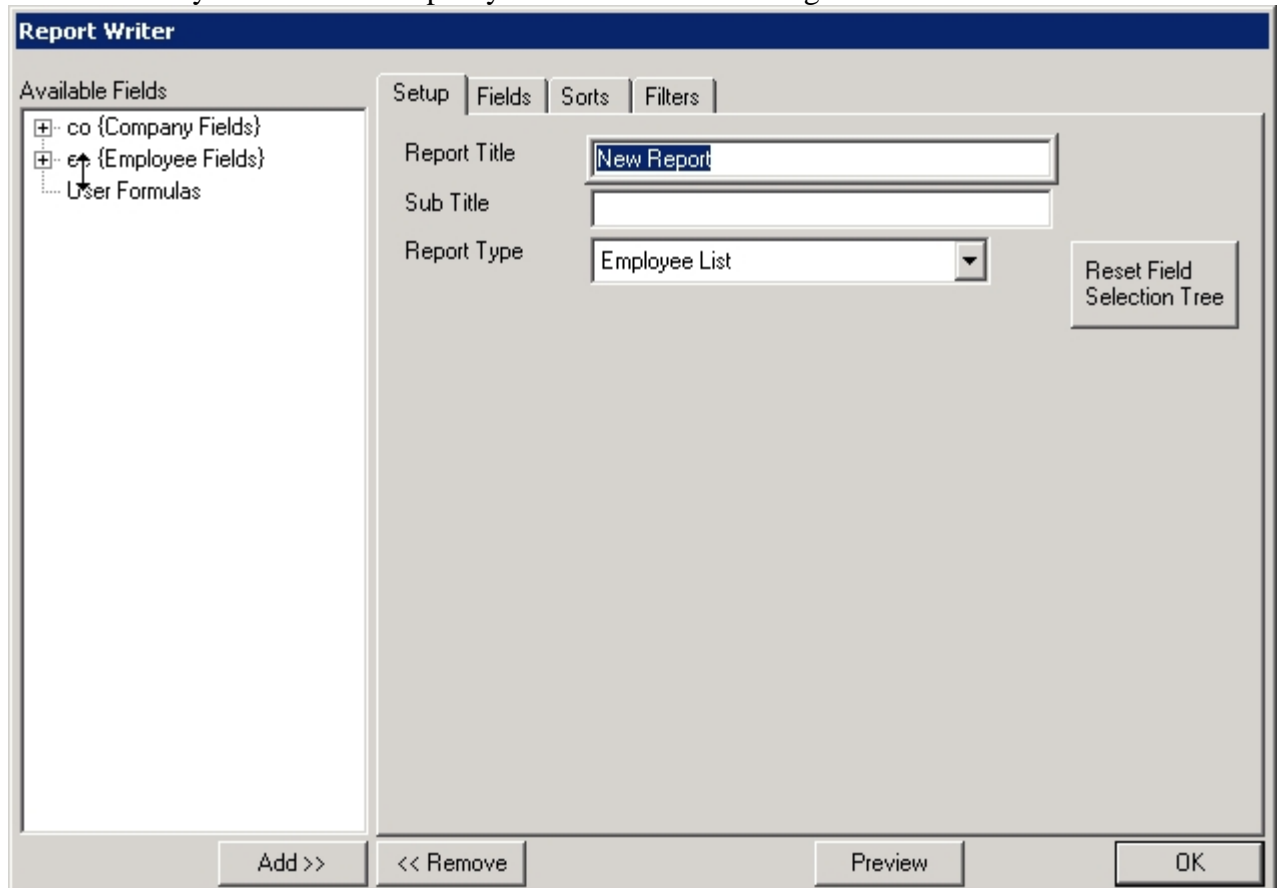
Step 2: Naming the Report

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When the report is added to the screen the Default ID and name are both "New Report", it is a good idea to give your report an ID and a name. First do the ID, select a short one word description to call your report. Save the longer description for the name/title of the report. To set the id, you should just click once on the ID and it should allow you to rename the item, just as if you were renaming a file within windows.

Editing The Report

Now that the report has an ID, right click on the ID just as you had to do to create the report, and select Edit Report. Edit Report will allow you to make the report and define the information. If Edit Report is grayed out, you are not selecting a Millennium Report Writer. When you select Edit Report you will see the following window.



The window shown above is the same for new reports and editing existing reports. The Edit Report Writer window has four parts to it.

- **Setup** - Basic Information that describes the **Title**, **Sub Title**, and **Report Type**.
- **Fields** - Specifies the fields and headings that appear in the report. This section is the content of the report.
- **Sorts** - Specifies how the report is sorted. **This section is optional.**
- **Filters** - Specifies any filtering done in the report. **This section is optional.**

Now that we are familiar with the basic sections of the report we can discuss each section and the implications it has on the report.

Step 3: Setting up the Report

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The setup tab as mentioned and shown above contains three fields. The Title is just the heading of the report and sub title is a sub heading. The Sub Title is an optional field. The

Title is also the Name that will appear in the Reporting Section. The important field is the Report Type. The report type is used to tell the system what to display as the detail items on your report. For example, if you choose a report type of "Employee List" Millennium will display one line per employee.

If you choose a report type of "Employee Paychecks", one line per check will be displayed. When you have finished setting up the setup information, you can chose the Fields tab.

If you decided to change the Report Type, you will need to press the reset field selection button. This will refresh the tree view to include the newly select Report Type. Employee Listing is the default and is available to be used on any of the Employee Report Types. If you decide to use a company level report type, the Employee Listing is not available. One thing to note at this time as of M3 Version 3.6.5 you are restricted to using only one report type at a time. Meaning you cannot create your report in one type, then change the report and add info from that new type. Only the selected Report type will appear in the data.

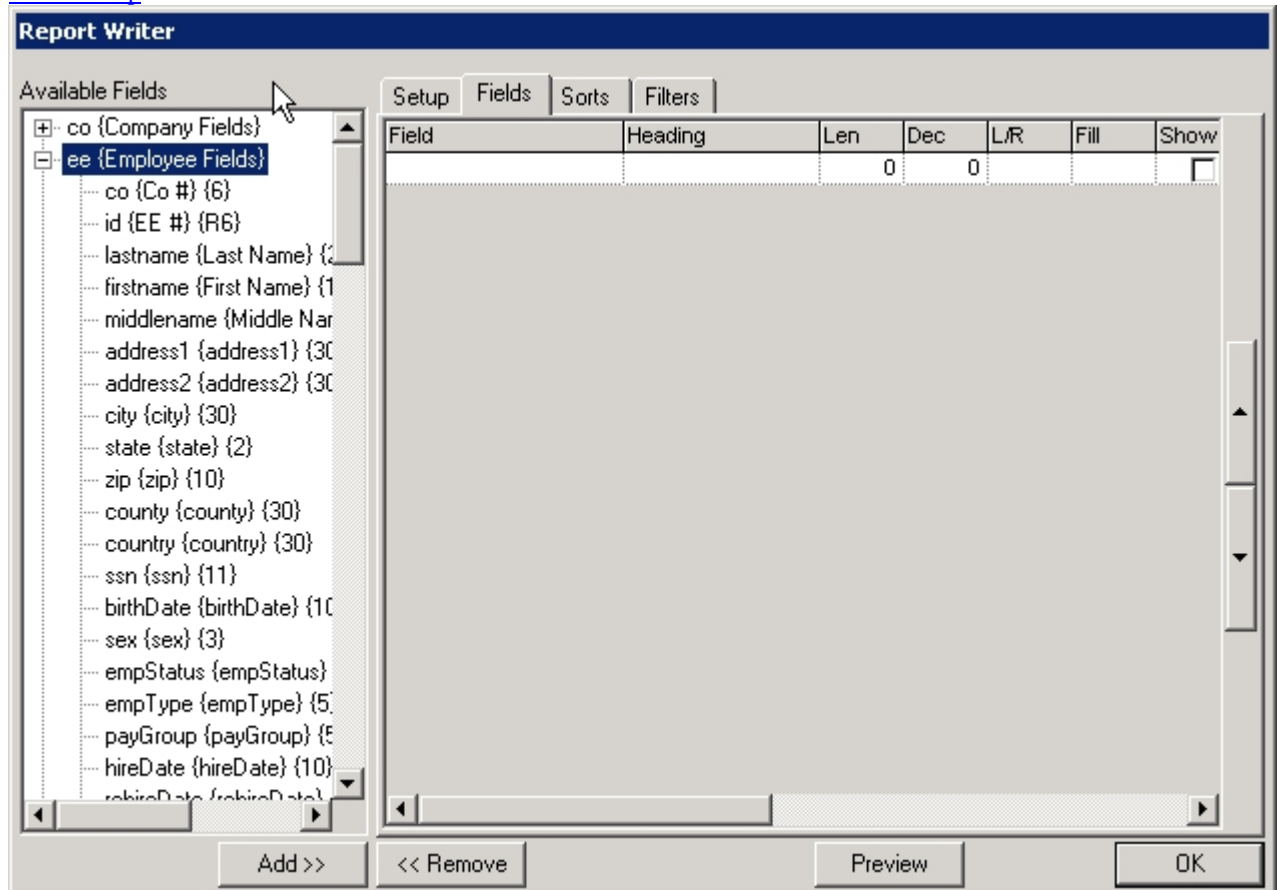
General Notes

Additional Functions (Can be used from any tab in the Report Writer)

- **Add:** Adds the highlighted field to the tab in use.
- **Remove:** Removes the highlighted field from the tab in use.
- **Preview:** Allows you to quickly print preview the report.

Step 4 : Entering the Needed Fields for the Report

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The Fields tab as noted before will allow you to decide what information goes into the report. The allowable information that you are able to put into the report is decided by the Report Type you have selected on the Setup Tab. If after doing some work you decide that you want to change the data in the report there is no need to delete the report and start over, you can simply change the Report Type on the setup tab and press Reset Selection Tree. There are two designations of the information you see on this tab: The field and the formatting.

Entering the fields and other info for the report

You can enter several different types of data into the Field column, as if the report was a Spread Sheet.

- **Fixed Values:** If you need a fixed value to appear on your report, simply enter that value in the “fields” column. The value must be enclosed in quotes. This can be used for entering a plan ID or record identifier in a 401(k) output file. Examples: "100" "ML71"
- **Database Values:** You can enter values from your database by selecting them from the list of available fields. The list will vary based on the Report Type that you selected. Simply double click on the desired value to add it to the report.

There are more complicated things that can be done to a report. Those will be discussed in further sections of this article and knowledge base.

Special Notes about Employee Listing Report Type

There are special sections under the list of Employee fields for the following information.

- **Deductions** - Employee deduction setup information.
- **Rates** - Employee's rate information.
- **CYTD** - Current year YTD values for all codes and code groups
- **CQTD** - Current quarter QTD values for all codes and code groups
- **CMTD** - current month MTD values for all codes and code groups.
- **Current** - current payroll values for all codes and code groups

The above mentioned special sections use the year, month, quarter, and time frame of the report.

Formatting the Fields

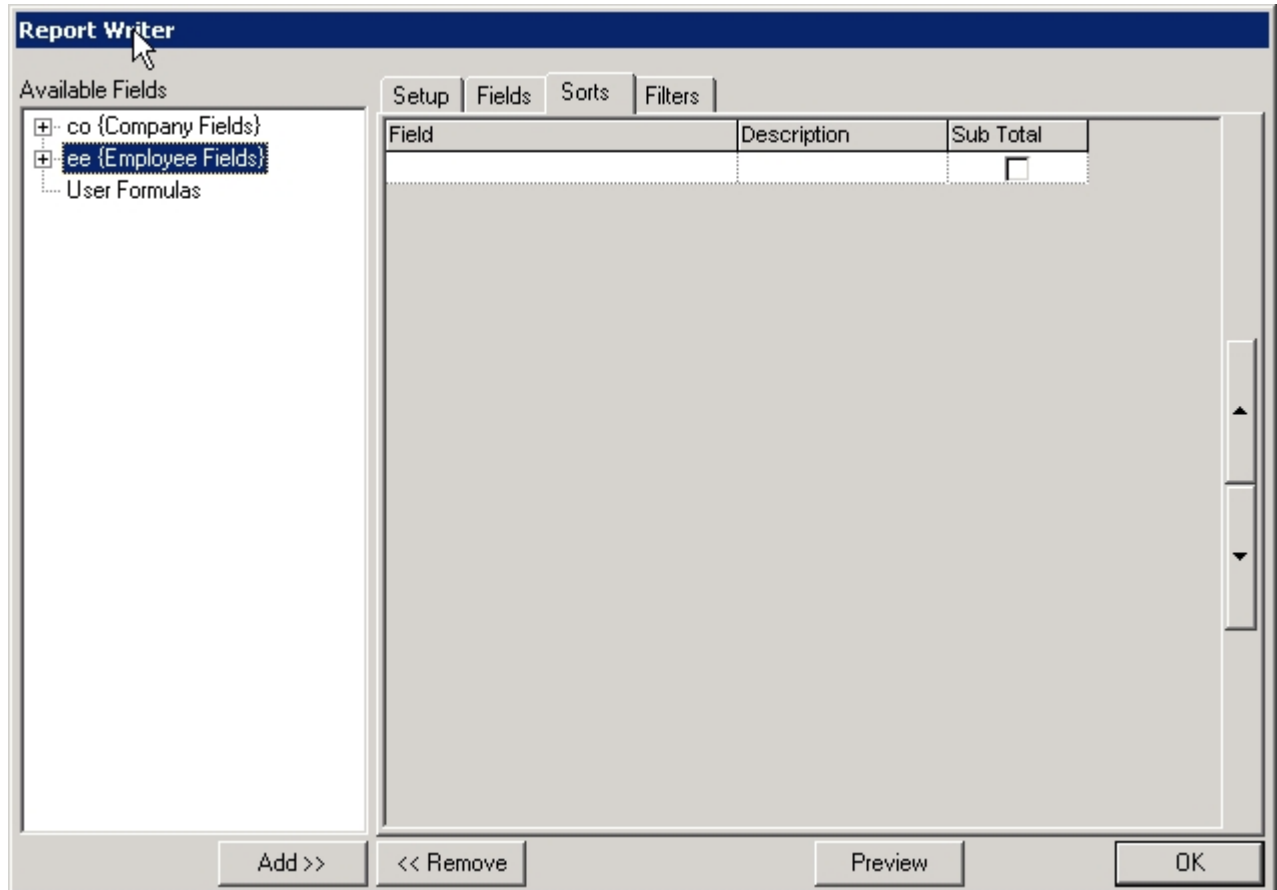
Several formatting options are available to control the appearance and display of each field on the report for more info on the Formatting options and output options please refer to the advanced topics.

- **Heading:** This is the column heading that will appear above the field.
- **Len:** Maximum number of characters to display. If this field is set to 0, (zero) the field will not display.
- **Dec:** This is the number of decimal places to display
- **L/R:** Determines the field justification L = left justified R = right justified
- **Fill:** The value entered here will be the fill character. Most commonly used to zero fill fields on output files
- **Show 0:** If checked, zero values will display (0) zero.
- **Total:** Check this box to create totals for this field in the group footers.
- **No Punct:** (No Punctuation) Check this box to remove all punctuation from the value being displayed
- **No .:** (No Periods) Check this box to remove all decimals from number fields.
- **No ,:** (No Commas) Check this box to remove all commas from number fields.
- **Overpunch:** Check this box if you want numbers to be displayed using the overpunch format. The last digit of the number will be changed to a letter to differentiate between positive and negative numbers.
- **UPPERCASE:** Check this box to convert the data to all UPPERCASE characters.

Now that we have created the content portion we can move onto the optional sorting and grouping as well as the filtering of the report data.

Step 5: Sorting and Grouping Options in the Report

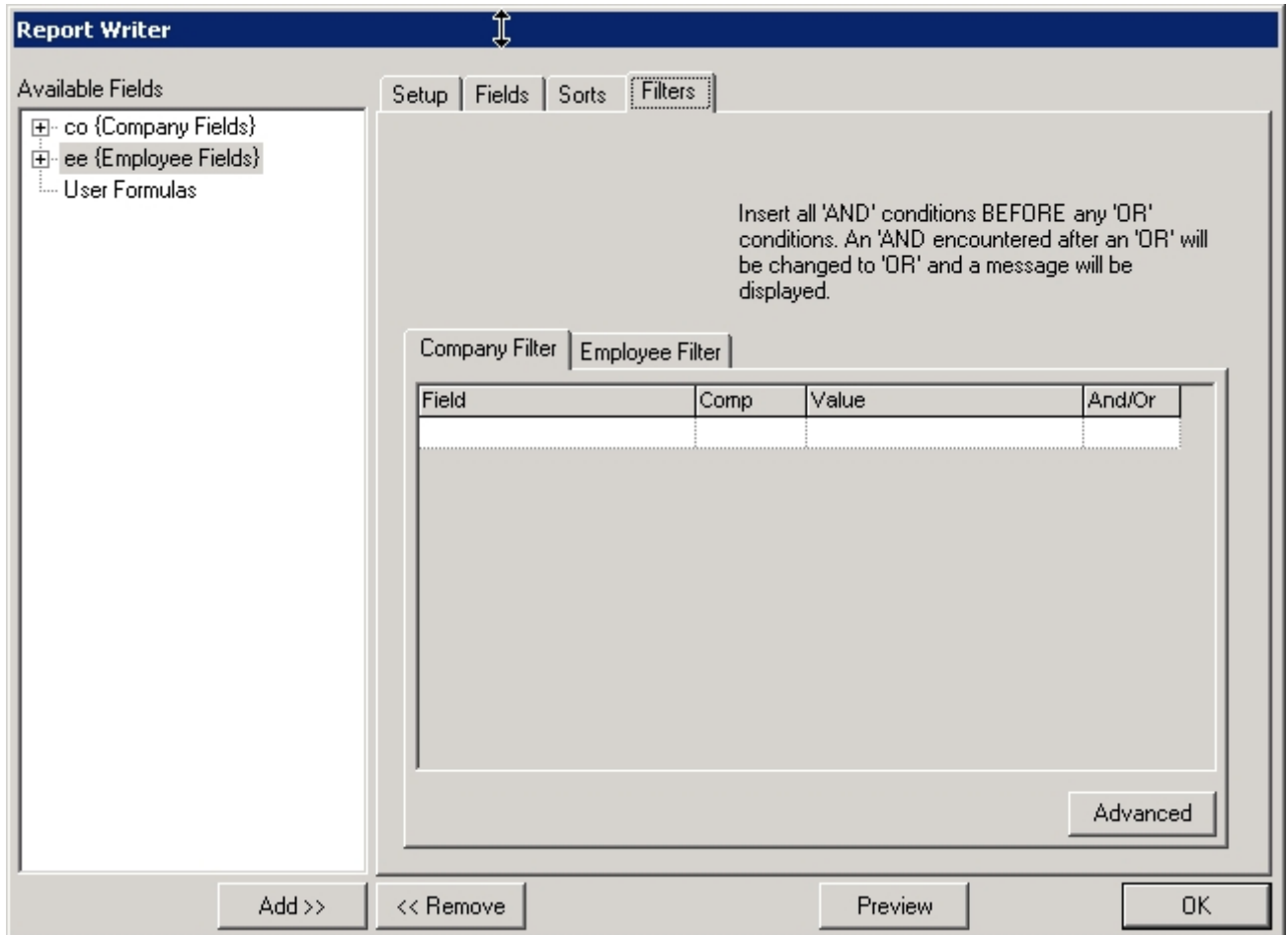
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The Sort screen as you will see is similar to the Fields screen. Overview: Sorting options are provided to control the display order of the report. Additionally, totals may be generated at each sort break by checking the Sub Total field. These subtotals are in addition to any field level total defined in the Fields tab. Totals will be generated for each selected field that can be mathematically summarized. Double click on field(s) in the Available Fields list to add fields to the Sort table.

Step 6: Filtering the Report

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Filters allow you to control which data is included on or excluded from the report. Fields used as filtering elements do not need to appear on the report. Each report will have a Company and Employee filter option. Some reports will have a third filter which is determined by the report type selection.

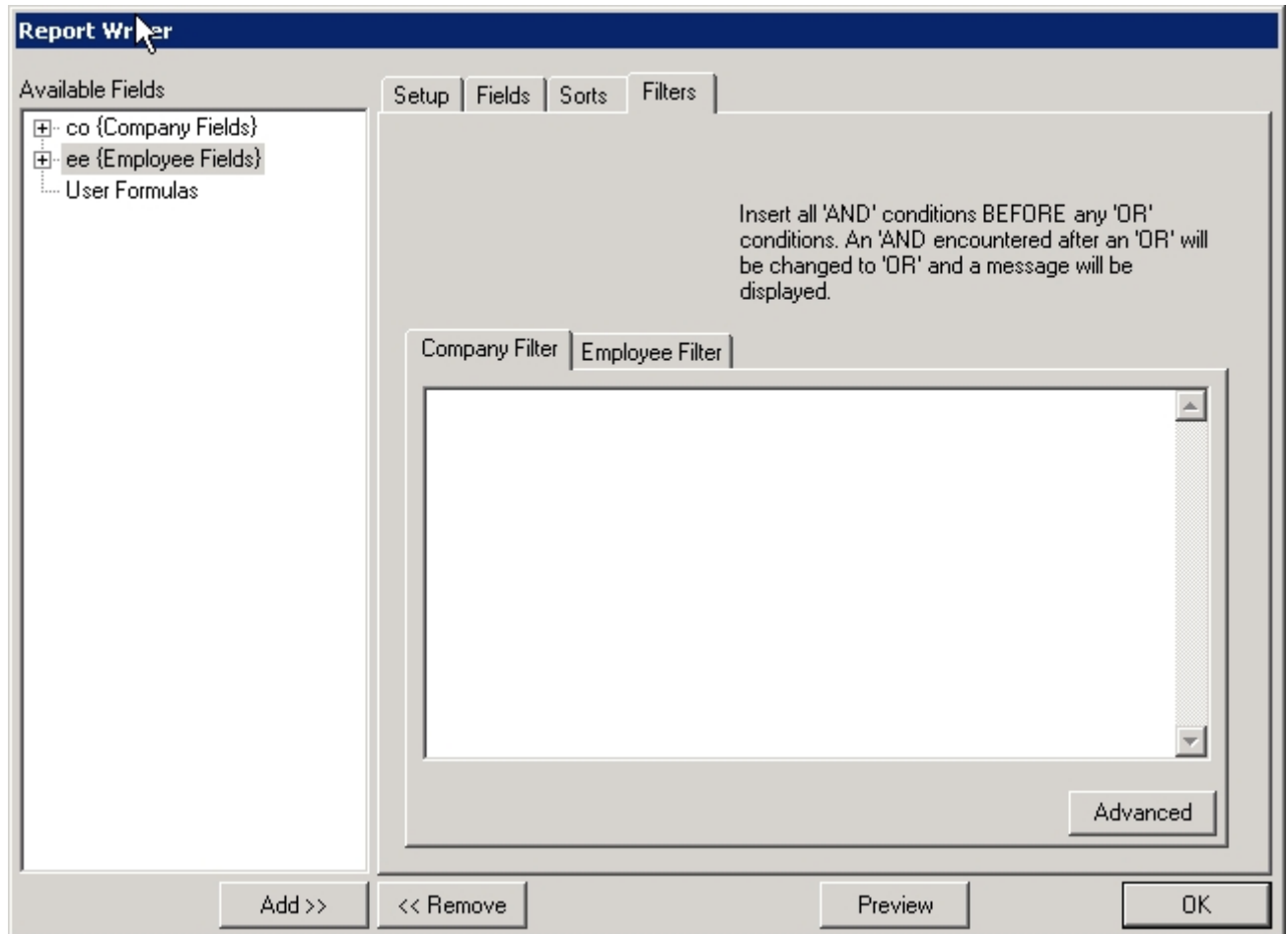
Method 1

Please note that filter statements should be setup on the Employee Filter tab for filtering of data that is related to employee listings. Use the Company Filter tab to filter company based reports.

Filter definitions are composed of four (4) parts

- **Field:** This is a field from the database. Double click on the field in the Available Fields list
- **Comp:** Used to specify how the Field is compared to the Value. Several options are available to control the comparison.
- **Value:** This is the value that is being compared to the database field
- **And/OR:** Used if you have multiple filtering statements.
If you use AND, all of the filter conditions must be met for the data to display.
If you use OR, any one of the filter conditions must be met for the data to display.

Method 2



Method 2 allows you to filter your content by a SQL statement. Syntax is important when using this method.

Now that you have created the content and setup, you can press Ok at any time to save your changes. To preview you can press preview and the report should run for the last process payroll if it is based on date ranges.

While you are creating your reports it is important to constantly test how the report looks after running to verify you get the right data.

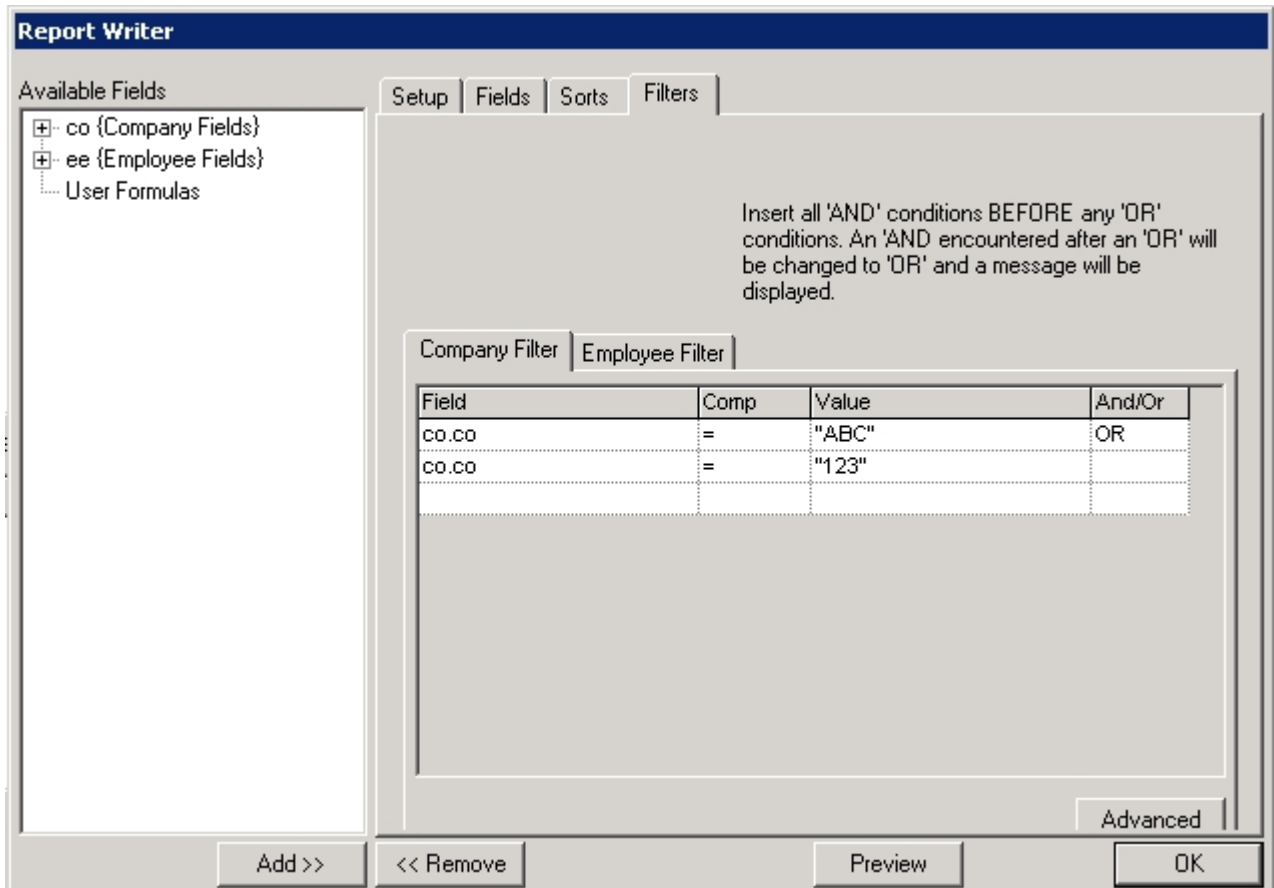
Running Reports Across Multiple Companies

As of Q1 2004, MRW reports need to be configured to be run across multiple companies or a company set. MRW Reports cannot be setup to run across ALL Companies or a company set by using the Data Selection tab of the report's properties, they need to be setup from within the Report Writer itself by using Filters.

If you are writing a report and are using the pay history sections from with the EE report type, you must first setup your report from within one of your companies. Reason for this is that the Current, Deductions, CYTD, CQTD, CMTD, and Rates sub sections reference

the location the report is created from to populate the available choices. Once you have created your report and it is working on the company created, you can right click on the report from its location and copy the report. Then in system > reports, you can paste in the new report.

Now, you must setup your filters on the report to include whatever companies you wish to include. This can be done on the Company Filters. For example your filter would resemble the following:



Advanced Topics for Report Writer

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One of the nice things that the Report Writer has to offer is that there is a vast array of things that can be done with it. For instance, you can utilize VB Script to manipulate data, or to retrieve data from non Millennium sources.

To get more info on VB Scripting, please refer to Microsoft's Scripting documentation available at the following [site](#). It is important to note that you can use VB Script functions, but not programming.

In this section you will find some examples of what you can do inside the report writer.

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[Accessing the employee annual salary](#)

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Current Date & Length of Service in Millennium Report Writer

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Length of Service is a calculated field in Millennium and is not stored. The formula provided in this article explains how to take the current date and subtract the hire date to get the number of days the employee has been employed.

PLEASE NOTE: The LOS figure returned on the report may not be accurate for all employees if they have an adjusted seniority date or rehire date.

Millennium, when calculating LOS, considers if the Adjusted Seniority and Rehire date fields are entered and will first look to adjusted seniority, then rehire, then hire date. Therefore, the figure on the report may vary from the LOS amount in the software.

Current Date

Enter `Now()` to return the current date within the system.

Length of Service (Based on Hire Date)

Enter `Now()-ee.hiredate` to report the amount of days between the hire date and the current date.

For LOS in years, rather than days, simply divide by 365. **(Now()-ee.hiredate)/365**

The example above does some basic math to return the Length of Service. Other ways to do this include using VB Script's **datediff** function, which has the option of returning a variety of different intervals.

The syntax for the DateDiff function is as follows.

```
DateDiff(interval, date1, date2 )
```

The available arguments as explained in the Windows Scripting help files are as follows.

- Interval - String expression that is the interval you want to use to calculate the differences between date1 and date2.
- date1, date2 - Date expressions. Two dates you want to use in the calculation.

Available Intervals that can be returned and the parameter required for them.

- yyyy - Year
- q - Quarter
- m - Month
- y - Day of year
- d - Day
- w - Weekday
- ww - Week of year
- h - Hour
- n - Minute
- s - Second

When using the datediff in MRW, you will need to use quotes around the interval. If you use a fieldname, that does not need quotes around it for date values.

An example of using DateDiff to return the LOS in Months is as follows.

```
DateDiff("m", ee.Hiredate, Now())
```

This syntax will return the number of months the employee has been employed. Like the first set of calculations this ignores the rehire dates and adjusted length of service dates.

Accessing the employee annual salary

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Enter the following expression in a field box to calculate the annual salary for an employee:

```
ee.AnnualSalary( co.safecheckdate )
```

Using VB script Report Writer field box to reformat and display dates from the default format of dd/mm/yyyy

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Using ee.hiredate of 01/03/2002 as an example:

Format as: Jan 3, 2002

```
Monthname (Month(ee.hiredate), True) + " " + Cstr(Day(ee.hiredate)) + ", " +  
Cstr(Year(ee.hiredate))
```

Format as: January 3, 2002

```
Monthname (Month(ee.hiredate), False) + " " + Cstr(Day(ee.hiredate)) + ", " +  
Cstr(Year(ee.hiredate))
```

Format as: 01/03/02

```
Right("00" + Cstr(Month(ee.hiredate)),2) + "/" + Right("00" + Cstr(Day(ee.hireDate)),2)  
+ "/" + Right(Cstr(Year(ee.hireDate)),2)
```

Format as: 132002

```
Cstr(Month(ee.hireDate)) + Cstr(Day(ee.hireDate)) + Cstr(Year(ee.hireDate))
```

Format as: 01032002

```
Right("00" + Cstr(Month(ee.hireDate)),2) + Right("00" + Cstr(Day(ee.hireDate)),2) +  
Cstr(Year(ee.hireDate))
```

In report writer there is no way to write an if statement or use an If function like in Excel.

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If you need to use an If /like function, you can use the **Replace** statement which is a VB function. The basic syntax is as follow:

```
Replace(Field,"LastName", "XXX")
```

Example: Replace(ee.Lastname,"Smith", "XXX")

When the report runs, the above statement will replace any employees having a last name of Smith with XXX.

What if I need to do multiple replacements (i.e. if the value = 1 then show A, if the value = 2 then show B)?

In order to accomplish this you will need to use nested Replace statements.

The basic Syntax is as follows:

Replace({RS} , search text, replace text)
where {RS} is a replace statement.

Example: Replace(Replace(ee.lastName,"Smith","YYY"),"Jones","XXX")

When the report runs the above statement will replace Smith with YYY and Jones with XXX.

How to Use the Date Range of the Report

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Each time you run a report in Millennium, you are passing in a date range for the report to run. Often is the case that the report is not using the date range. You can access the dates by using the following syntax.

co.currentreportingstart - is the start date
co.currentreportingend - is the end date

When using these variables, it will return a number that looks like the process number. To properly use the variable you may need to use some string manipulation using common vb scripting string modifiers.

To get the date in MM/DD/YYYY format the following syntax can be used.

```
CDate(CStr(mid(co.currentreportingstart,5,2) + "/" +  
mid(co.currentreportingstart,7,2) + "/" +  
+ left(co.currentreportingstart, 4)))
```

These variables can be used in any of the fields, or can be filtered off of.

How to Use the Dates of the Most Recently Processed Payroll

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If you are running a report and need to use the dates of the most recently processed payroll. It is probably easier to use the following syntax than use the reporting dates. This way you can set the report to run for the last payroll processed and not have to worry about the date ranges being passed in.

co.mostrecentcheckdate.process - is the Process Number for the date
 co.mostrecentcheckdate.periodbegin - is the Period Begin date
 co.mostrecentcheckdate.periodend - is the Period End date
 co.mostrecentcheckdate.checkdate - is the Check Date

The different variables will return different formats of dates. For example the process number will look like a process number YYYYMMDD##.

These variables can be used in any of the fields, or can be filtered off of.

Explanation of Formatting Options and MRW Output Formats

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This is a listing of the formatting options available to each output format in M3 Report Writer.

How to select an output format

Once a report has been created, right-click "Properties" and select the far-right tab, "Output". Then select an output format from the 5 listed in the drop-down box.

Which formatting options apply to which output format<

Not every formatting option works for every output format. This is intentional. Some formatting options do not make sense for every output format. For example, overpunch would not make sense for .PDF output. The table below lists which formatting options are available to which output formats.

NOTE: When using a filter, "AND" filters must be listed before any "OR" filters. The user interface enforces this condition.

	CSV	PDF	PNF(same as PDF)	TSV	TXT	
Field	Y	Y	Y	Y	Y	
Heading	N	Y	Y	N	N	
Length	Y	Y*	Y*	Y	Y	*in measurement, not characters
Decimal	Y	Y	Y	Y	Y	
L/R	Y	Y	Y	Y	Y	
Fill	Y	N	N	Y	Y	
Show Zeroes	Y	Y	Y	Y	Y	
Total	N	Y*	Y*	N	N	*subtotals as well
No Punct	Y	Y	Y	Y	Y	
No Periods	Y	Y	Y	Y	Y	
No Commas	Y	Y	Y	Y	Y	

Overpunch	Y	N	N	Y	Y	
Uppercase	Y	Y	Y	Y	Y	

I cannot view Report Types and expand the tree to use the fields.

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When you right click on any Report Writer and attempt to Edit Report you may notice that some fields are not expandable as they do not have a "+" next to them. Article [532](#) discusses this matter.

How do I copy a Report to another company?.

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There is no real way to copy reports from company to company at this time. We have provided an unsupported utility at Knowledge Base Article [625](#). Download the app and follow the instructions.

Security and Millennium Report Writer

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Knowledge Base Article [674](#) discusses Report Security and items pertinent to securing reports setup in your Company or Service Bureau.

Advanced Filtering

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How do I filter using wild card characters in Millennium Report Writer? I want to include only certain records that contain certain text, and am not able to use Wild Card characters like % in SQL.

The answer is to be creative. In Millennium Report Writer, you can use almost any VB Scripting function, and even though there is no LIKE operator in VB Script, there are ways to get around this.

More information on any of this can be found on Microsoft's Scripting Help file or by searching their site.

An Example of Filtering that is similar to a SQL Like statement.

Create an Employee Report that lists only the Tax Information for SUI Taxes. This report will use the Employee Taxes list. On the report include some basic employee Demographics and the tcode from the Etax section. Once you add all the fields you want, and run the report the report will include every tax that the employees have setup. But we want to filter this out. Normally in SQL we would use the tcode like '%SUI' and this would return only tcodes with SUI in the name. In VB we have to be creative and use string functions. In this example we will use INSTR() to get our record results.

INSTR is a common vb and vb script function that has the following parameters.

```
InStr([start, ]string1, string2[, compare])
```

Arguments of INSTR that we will be using and what they mean.

- **start** - Numeric expression that sets the starting position for each search. Should usually be 1, as that is the start of a string.
- **string1** - String expression being searched. In our example, it is the fieldname(etax.tcode).
- **string2** - String expression searched for, in our example the string being searched for is "SUI".

Using the Instr Function.

In our example, we want to look from the beginning of the tcode value, aka etax.tcode. And look for a string of "SUI". If found the function returns a number greater than 0.

In MRW, we go to the filters tab of the report and go to the ETax filters. You can either do this in advanced or regular view of the filter. I did mine in Advanced as it is easier to type. Filter text is as follows :

```
instr(1, etax.tcode, "SUI") > 0
```

This Report will return any tax on an employee with SUI in the name, rather than an unfiltered report that was run and had all employee tax codes.

Reporting off of Custom Views

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To Report off of custom Views you need to make sure that you have properly created your User Properties. For more info on setting up the Custom Views, please refer to article [599](#).

Once you have your Custom Views setup and are entering data for the employees, you can now report off of it using an employee listing report type. The key to this is the fieldname to reference.

In this example, I have created a property called "DriversLicenseNum". On the report writer report, I will use the following syntax.

```
ee.XProperty("FieldName").xValue
```

To get my DriversLicenseNum field to appear I use.

```
ee.XProperty("DriversLicenseNum").xValue
```

For each employee, if there is a value, that value will appear. Provided you set the field up appropriately.

Note: report writer will sometimes show a length of negative one. Check the length of your fields.

Displaying the Employee Paygrade information

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Each employee can have a pay grade assigned to them via their base rate. Presently there is no easy way to obtain the salary rank information in report writer as this information is stored at the company level. The only information accessible on the employee is the grade that they are a member of.

The following can be used to return the various components of the pay grade for each employee that has a pay grade. If an employee does not have a pay grade assigned, they will have a blank value or a zero depending on your report writer.

This will give you the midpoint of the Paygrade

```
co.paygrades.itembykey(ee.paygrade(co.safecheckdate)).midpoint
```

This will give you the Maximum of the Pay Grade

```
co.paygrades.itembykey(ee.paygrade(co.safecheckdate)).Maximum
```

This will give you the Minimum of the Pay Grade

```
co.paygrades.itembykey(ee.paygrade(co.safecheckdate)).Minimum
```

The above examples use the company's current checkdate to obtain the pay grade from the employee. You can replace co.safecheckdate with a different date value or variable, note that if you are using a hard coded value, it must be in double quotes.

To obtain the %Mid and %Max values from the employee's rates/reviews tab, you must compute the annual salary and divide by the value.

Displaying the Department Name for the employee rather than the code

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If you want to display the department name on a report writer report, you will need to use the following as your field on the report.

Employee Dept Field	Field value
ee.cc1	co.l1departments.itembykey(ee.cc1).name
ee.cc2	co.l2departments.itembykey(ee.cc2).name
ee.cc3	co.l3departments.itembykey(ee.cc3).name
ee.cc4	co.l4departments.itembykey(ee.cc4).name
ee.cc5	co.l5departments.itembykey(ee.cc5).name

This will print the name value of the department rather than the dept code.

Notes and Known Issues

At present there are a couple of known issues to report on Report Writer in M3. Development is in the process of resolving some of these issues, but the less important issues are also worth noting.

You can only report off of one Report Type at a time and cannot combine data from multiple report types. The exception is that on most of the employee reports you can include company demographic information.

Presently, system level reports are ignoring the use of the selected company sets on the data selection tab of the report's properties. The current workaround is to add filters for all the companies you wish to include in the report. If you have a lot of companies there are workarounds to add all these quickly, just contact MPI Support via the proper channels and we will be happy to provide assistance. Development tag 2087 will address this issue when resolved.

If any fields are missing, you may want to try re-importing the M3 Online Help file and see if this fixes the issue. If this does not fix the issue, please contact MPI Support.

If there are any pieces of information you are not seeing available in report writer, such as a specific tab is not found in the report types, please let us know through the Support channels and we can forward the requests to development.