Advanced Remedy Topics

Advanced Remedy Topics
Training Notes

This document is maintained on the Web at:
http://remedy.ncsu.edu/training/

1.0   Introduction

The Remedy AR System has been in place at NC State since early 1999, and has met with great success. As of this writing, over a dozen support organizations on campus use Remedy to log, track, and resolve issues involving campus issues, both computing-related and others. As the use of Remedy spreads, so does the need for some of the more advanced features of Remedy. For this reason, the Advanced Remedy Topics course was written. This course is designed to pick up where *Using the Remedy AR System 4.5 at NC State* left off, going into greater detail about searching, macros, and reporting. A basic knowledge of Remedy and its implementation is required before participating in this training.

2.0   Searching for Calls

The Remedy Implementation team has done a fine job of setting up the Calls form so that several of the more common search methods are available at the click of a button, including searching your default workgroup, your owned calls, etc. But, try as they might, the team can only devise so many generic searches, and there is only so much room on the form for buttons. You will eventually need to search Remedy for something unique, whether it is calls you logged over the past week, or all calls logged into your workgroup that were resolved in less than an hour, etc. Remedy AR User is equipped to allow you to make these sorts of highly flexible searches.

You can search the database behind the Calls form (or any form, for that matter, but for sake of brevity, we'll concentrate on the Calls form) by using the Search window of Remedy AR User. You do this by bringing up the Calls…Find view, similar to how you probably check Remedy on a regular basis:

Once the view appears, do not click on any of your usual buttons. This is the Search window, and you want it as empty as possible. To locate specific calls, you must specify certain search criteria. You can specify search criteria in one of three ways – **query-by-example** (or **QBE**), by using the **Advanced Search Bar**, or by using a combination of both of these methods.

2.1   Query-by-example (QBE)

The quickest and easiest way to search for calls is to fill in fields in the form that match the calls you want to find, and click Search. This is query-by-example.

In the above example, the search would find all calls with Priority "High" that the Remedy user "chking" had been the last user to modify. Workgroup, Owner, and Status would not matter, since those were not listed as criteria for the search. Keep in mind that since Remedy searches for calls that match *all* of the fields you gave values for (this is a logical AND operation), the more criteria you fill in, the more specific your search becomes.

One thing to note – the Search Calls form must be completely empty before a QBE search is performed, to avoid searching for criteria you did not intending on searching for. Even though you can't see a space in a field, for example, doesn't mean Remedy won't search on it. To make absolutely sure, click on the Clear All button (or use the shortcut Ctrl-E) to clear all fields before beginning your search.

Also, the standard Calls form cannot be used to search using customer data as search criteria. For this, you will need to use a special form, the "Calls_Cust" form, which is detailed below.

2.2   Advanced Search Bar

Another method for specifying search criteria is to use the advanced search bar. The advanced search bar is used when you want to define a search that is more complex than simple query-by-example, such as searching on a range of criteria. To display the advanced search bar, click on the Advanced button, or select Advanced Search Bar from the View menu.

There are three parts to search criteria within the advanced search bar: the field name, the operator, and the field value.

Field names are the names of the fields in the Calls form that you are searching on, such as 'Workgroup', 'Status', etc. Field names are always put into the advanced search bar in single quotes. You can enter a field name into the advanced search bar either by typing its name, selecting it from the Fields menu on the right-hand side of the advanced search bar, or by clicking on the field label in the Calls form.

An **operator** is the comparative symbol you will use with your search criteria. The third palette at the top of the advanced search bar has the operators more commonly used with searches.

= (is equal to)   <= (is less than or equal to)
!= (is not equal to)   >= (is greater than or equal to)
< (is less than)   **LIKE** (this is used for a pattern search,
> (is greater than)   and is often used with the % character)

These operators are great for doing comparative searches, such as finding calls logged on or after a certain date, calls logged by everyone in a workgroup but a specific person, and so on. The LIKE operator seems the odd man out in this list, and it is a bit more complicated. The LIKE operator is used to perform a pattern search with a wildcard character (for AR User, the wildcard character is %). For example, 'Problem Description' LIKE "Alb%oss" would find all calls with a Problem Description that began with the letters "Alb" and ended with the letters "oss", such as <u>Albatross</u> or <u>Alby gave his computer a toss</u>. Now, since this is a comparative text operator, it is only good in text fields within the Calls form (and would not work on 'Create-date', for example).

Field values are the meat of your search – they are the values you are comparing against the larger list of calls in the database. Some field values are listed in the Fields menu on the right-hand side of the advanced search bar, but you will probably want to enter your own field values into the advanced search bar. All non-numeric field values are put into the advanced search bar in double quotes. Some fields in the Calls form, although they look like text fields, are actually numeric behind the scenes, and you can use this to your advantage. 'Status' 'Priority', 'Origin', and 'Impact' are four such fields, and their listing in the drop down menu is in descending numerical order. For example, the 'Priority' menu items have the following values: Low = 0, Medium = 1, High = 2, and Critical = 3. So, if you wanted to search on which calls had a Medium, High, or Critical priority, you

could search for 'Priority' > "Low" or 'Priority' >= "Medium". Also, there are several keywords that you can use for variable searches – use the keyword, and Remedy fills in the appropriate corresponding value.

Keyword	Substituted Value
$DATE$	Current date. In a date/time field, the time defaults to midnight (00:00:00)
$NULL$	A null value, basically a place where no value was given
$TIME$	Current time. In a date/time field, the day defaults to the current date.
$TIMESTAMP$	Current date/time stamp.
$USER$	Name of the currently logged in user.

The other operators listed on the top of the advanced search bar are for expanded searches, where more than one comparison is needed.

Operator	Action
( )	Parentheses are used to separate individual comparisons used in a search.
AND &&	The search will only find calls where both conditions joined by AND are met. For example, 'Status' = "Assigned" AND 'Agent' = "nlil" finds all Assigned calls logged by user nlil. You can also use the symbol && instead of the word AND.
OR ||	The search will find calls matching either condition joined by OR. For example, 'Status' = "New" OR 'Status = "Waiting" will find all calls that are either New or Waiting. You can use the symbol || (two pipes, usually above \ on a keyboard) instead of the word OR.
NOT !	The search will find all calls where the condition is not met. For example, NOT 'Origin' = "WWW" will find all calls not originating off the Web. You can use the symbol ! (sometimes called bang) instead of the word NOT.
+	- Adds two integer or real values - Adds an integer interval to a time value - Concatenates two character strings
-	- Subtracts two integer or real values - Subtracts two time values - Subtracts an integer value from a time value
*	Multiplies two integer or real values
/	Divides two integer or real values

Operators have precedence over one another (anyone remember PEMDAS from Algebra?), and the following list shows operator precedence in order.

1. ( )
2. !, NOT, - (negative numbers)
3. *, /, %
4. +, -

5. <, <=, >, >=, =, !=
6. && (AND)
7. || (OR)

Here are some examples of searches in the advanced search bar. Can you tell what calls they will find?

'Status' = "New" OR 'Status' = "Assigned"

'Agent' != "mapittm2"

('Problem Description' LIKE "%policy%" OR 'Workgroup' = "POLICY") AND 'Priority' = "High"

2.3   Time and the Advanced Search Bar

You can also use the advanced search bar to search for ranges or comparisons in date and time. There are two ways to specify time in a search: absolute time and relative time. **Absolute time** is the simple way to search using a time or date, since you are comparing to a specific time or date. For example,
'Modified Date' > "10/27/00"

would find all calls modified since October 27, 2000. Keep in mind that Remedy assumes you mean midnight (00:00:00) of the absolute date you give.
Relative time is used when you do not want to give a specific time or date in a search. Most often, this is used in **macros** (explained later), where a search is saved for later use. In these cases, you would give Remedy a time/date keyword and a range of *seconds* that you want to search on. Yes, that's right – seconds. Remedy keeps time and dates stored in **epoch time**, which is defined as the number of seconds since January 1, 1970 at 12:00 am. So, when you want to search for all calls logged in the past 24 hours, you would use:

'Create Date' >= $TIMESTAMP$ - (60*60*24)

This finds the calls logged in the last 86,400 seconds (86,400 seconds = 60 seconds in a minute * 60 minutes in an hour * 24 hours). And, since no specific date is given, this search pattern can be used in a macro later without having to change the text of the search.
Here are examples of commonly used time/date searches:

'Agent' = "tmfarwig" AND ('Resolved Date' - 'Create-date') <= (60*60)

This finds all calls logged by "tmfarwig" that were closed/solved in less than one hour.

'Workgroup' = "CONSULT" AND 'Create-date' >= $TIMESTAMP$ - (60*60*24*7)

This would find all calls in CONSULT logged in the past week.

2.4   Status History

Sometimes, it is nice to know more specific details about a call's Status. For example, when a call was set to Owned status, and even who set that status. Remedy has a **core field** (a field that is in every Remedy AR User form, no matter what the administrator changes) called **Status History** that keeps track of these things – specifically, the times and agents involved whenever the status of a call changes. To view the complete Status History, select Status History from the View menu in Remedy.

Unfortunately, our workflow allows us to revisit a status – a call that was Closed can be made Active again, for example. Status History overwrites itself, and only keeps track of the most recent status change for a particular status.

To use Status History in a search, you must enter it in a specific format. For example, to find the last User to change the status of a call to Owned, you would use the field name:

'Status-History.Owned.USER'

You can replace Owned with any of the options in the Status drop-down menu, and you can search for USER or TIME.

## 2.5   My Searches and Recent Searches

As you get more and more familiar with the advanced search bar, you will see that your searches are long and convoluted, and a pain to retype. Remedy thought ahead of you on this one – Remedy keeps track of your recent searches, and it is possible to save common searches in Remedy for later use. In the Search Calls view, notice the arrow next to the Search button. This is a drop-down menu with a list of your recent and saved searches.
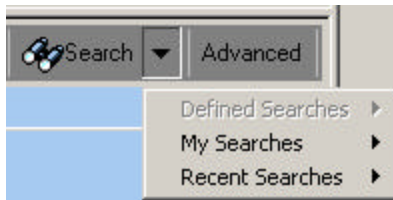
There is also a place here for searches defined by the Remedy administrator (Defined Searches), but at this time, there are no administrator-defined searches.

Recent Searches will show you the last few searches that you've performed in the Calls form (or whatever form you are currently working on), which is convenient for repeating a search you've just done. However, the menu can only hold a few searches, and eventually you will end up overwriting your searches. For the important ones, you'd be better off saving them.

My Searches shows a list of the searches that you've saved. To save a search, first define your search by filling in your QBE fields and/or any searches in the advanced search bar. Then, choose Save Search from the Actions menu, and give your search a name.
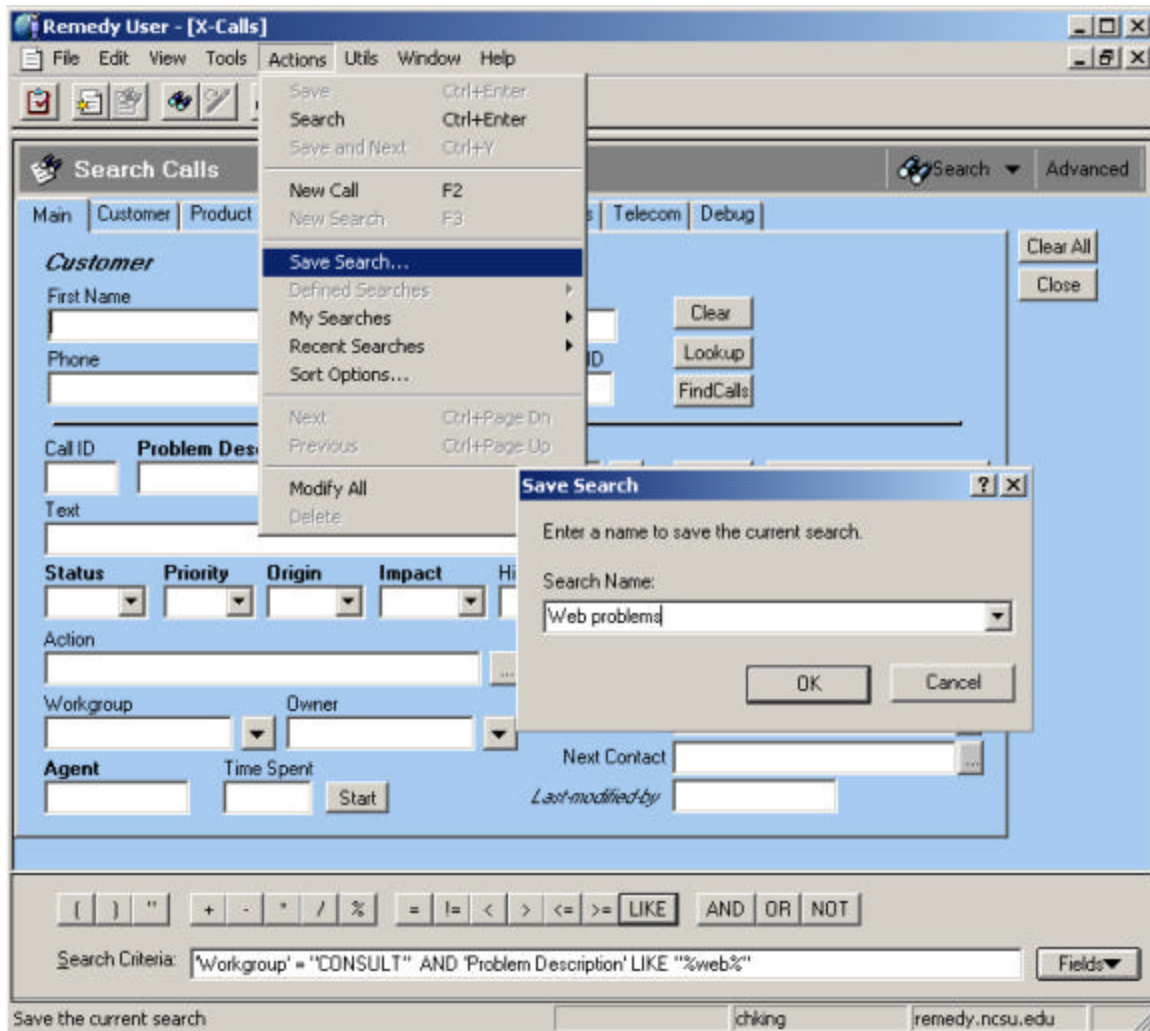
The search will be saved into your AR Home folder (defined by going to the Accounts option in the Tools menu), and can be used from any Remedy client that uses that same AR Home folder by choosing the search from the My Searches option.

2.6   Using customer data as search criteria

The Calls form is a *join* form, which means that it extracts data from two sources, in this case data from the Calls database and data from the Customer database. The Customer data is in a read-only format, and is only linked to the Calls themselves – the customer data is not part of the Calls database itself. For this reason, the Calls form cannot be used to search based on customer data. If you would like to run a search based on customer data (such as how many calls did a certain person report, or how many calls originated from the same department [and OUC]), you will have to use another form. The "Calls_Cust" form is used for this purpose. Except for the layout of the form itself, it can be searched the same as the Calls form, and will get you the data you need for your subsequent reporting.

3.0   Reporting

While a search can generate a window full of calls, most of the time a user will only want a summary of those calls. That is where **reports** come into play. Remedy's report generation allows you to export a file containing only certain fields in those calls, allowing for easy summarization of the activity in a given group of calls. The reporting feature also allows for sorting and grouping, but for reasons we'll discuss later, this is not suggested.

3.1   Creating a new report

Your first step is to create a new report. To do this, choose Reporting… from the Tools menu. Then, double-click on the <<New Style>> heading to bring up the default report properties.

First, click on the General tab, and give your report a name. Reports are saved, and can be used repeatedly. Next, click on the Fields tab, and begin selecting the fields you want to appear in your report. As you select fields to enter into your report, notice that you can put fields before or after others, and that you can also modify the Report Label (the heading for that field in your report) and Width (the number of characters displayed for that field). Keep in mind that some fields take more or less characters than the default 20 – the Agent and Owner fields in Remedy, for example, will never be over 8 characters in

length, while Problem Description can be over 30 (and don't even bother with Text unless you deem it necessary).
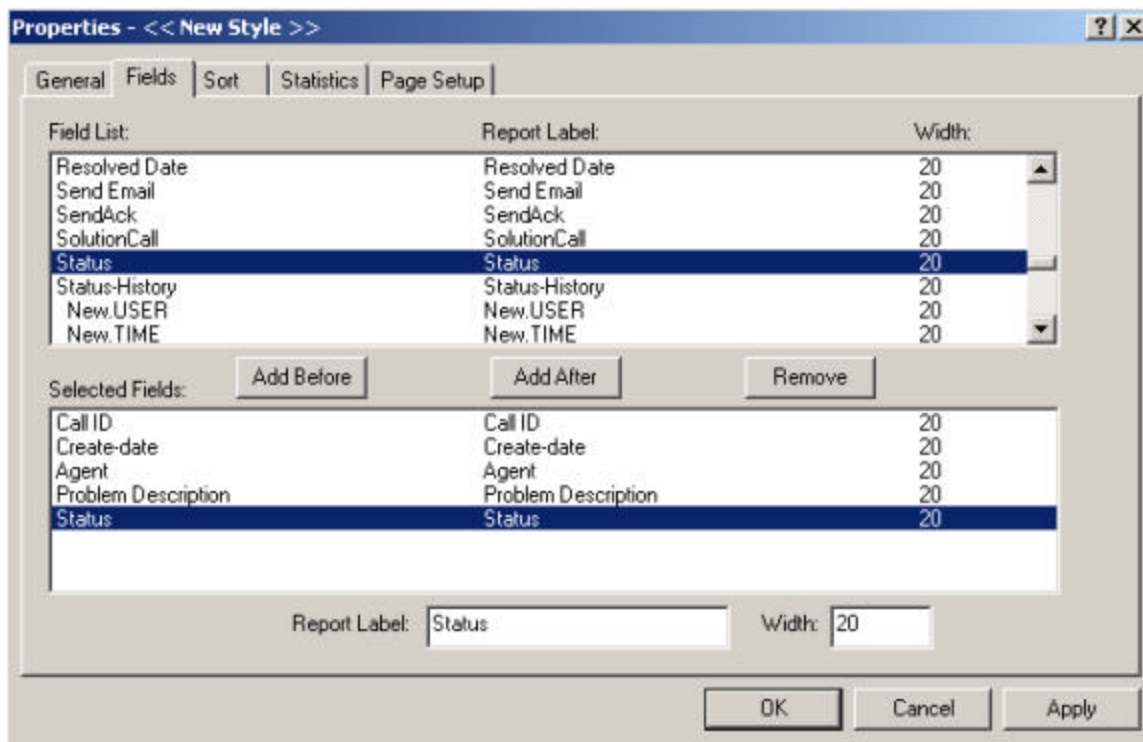
If you add a field and later want to change its place in the order of the fields, you will have to remove it and place it again later. Once you have your fields as you like them, click Apply to get a preview of how the report will generate – the Style Preview will appear in the bottom half of the main Remedy report window.

The next two tabs are Sort and Statistics. Remedy has the option of letting Remedy itself sort and analyze the data. However, Remedy does not behave as it should with our Sybase database, and the SQL statements that Remedy uses to perform sorting and collating are problematic. It is better to export your data as a raw file, and use another program (such as Microsoft Excel) to sort and summarize your data.

For now, go to the Page Setup tab to define the format of your report.

How you make these settings is entirely up to what you want to do with the report. The above report has been made for ease of reading (columned format, relative header and footer, titles every page, etc.), but not necessarily for exporting into Excel (titles every page would skew your data). The Style Preview window will show you the basics of what you are doing, so take time to get your report exactly how you (or your target audience) would like it to format, clicking Apply to see your most recent changes. Also keep in mind how these settings affect others in your report. For example, the Chars per line setting (in the above example set to 92) should at last be as long as the sum of the Widths for your fields in the Fields tab, so that they display properly. Otherwise, you should go back to the Fields tab and shorten some Field Widths to match.

One important setting in Page Setup is the Report Format. How your report is formatted is determined by what you intend to do with the report after it is generated. Formatting by record lists the calls in order, with field labels for every listing.

```
Remedy User - [Report Preview -- X-Calls (remedy.ncsu.edu)]          _ □ ×
File  Edit  View  Tools  Report  Window  Help                        _ 8 ×

Report run on 10/31/2000


                    CONSULT resolved in one hour


Call ID : 235931
Agent : Demo
Problem Description : Fwd: request
Status : Closed
Last-modified-by : nlil

Call ID : 235932
Agent : Demo
Problem Description : unity account
Status : Closed
Last-modified-by : mcsimpso

Call ID : 235946
Agent : mcsimpso
Problem Description : Are the Unity Computing survival guides I have up-to-date?
Status : Closed
Last-modified-by : mcsimpso

Call ID : 235948
Agent : lmgilber

Ready                                        chking      remedy.ncsu.edu
```

This style of formatting is good when you want a summary of the calls for review and analysis, since multiple pages are easier to read when divided. Formatting by columns lists the calls in order, and has field labels every page.

```
Remedy User - [Report Preview -- X-Calls (remedy.ncsu.edu)]            _ □ ×
 File  Edit  View  Tools  Report  Window  Help                         _ 8 ×

Report run on 10/31/2000                                              ▲


                        CONSULT resolved in one hour


Call ID                    Agent      Problem Description  Status       Last-mod
------------------------   --------   -------------------  ------------ --------
235931                     Demo       Fwd: request         Closed       nlil

235932                     Demo       unity account        Closed       mcsimpso

235946                     mcsimpso   Are the Unity        Closed       mcsimpso
                                      Computing survival
                                      guides I have
                                      up-to-date?

235948                     lmgilber   over imap quota      Solved       lmgilber

235958                     Demo       hardware address???  Closed       mcsimpso

235967                     mcsimpso   method road unit 3   Closed       mcsimpso

235968                     jmriehle   Download antivirus   Closed       jmriehle

235972                     lmgilber   kerberos library     Closed       nngenzel
                                      error                                    ▼

Ready                                          chking        remedy.ncsu.edu
```

When formatting by column, you should pay attention to the Long Field Format from the Page Setup tab in the Report Properties. If you select Wrap, a field longer than the Field Width you set under the Fields tab will wrap to conform to the column width.
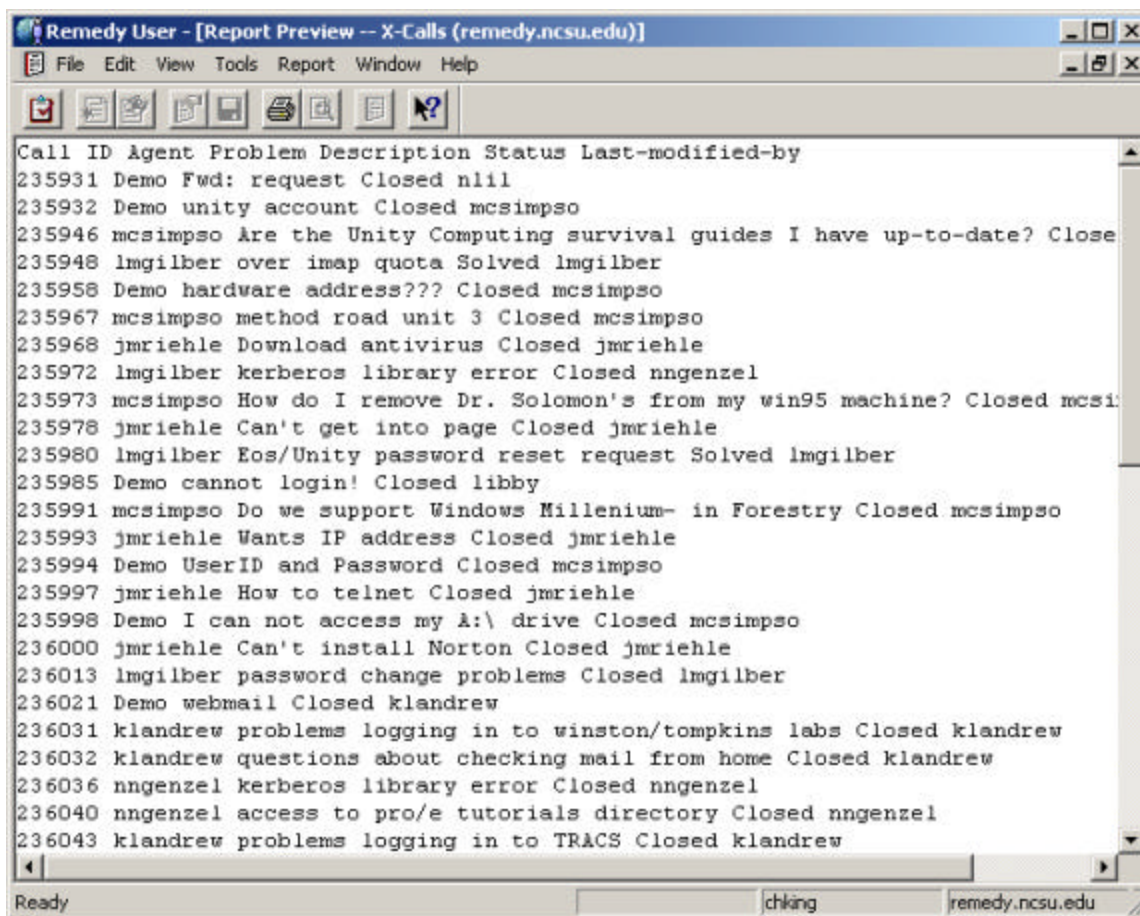
```
235946                mcsimpso Are the Unity      Closed       mcsimpso
                               Computing survival
                               guides I have
                               up-to-date?
```

If you would rather the column cut off the extraneous text, select the Truncate option, and the text will stop once the column Width has been reached.
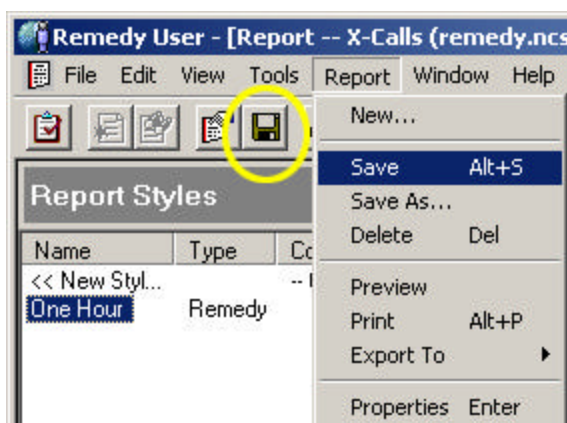
```
235946                mcsimpso Are the Unity Comput Closed       mcsimpso
```

Formatting by column is useful when you want a quick list of calls for viewing, or when you want to export the file into another application.

Formatting by Compressed Text is most useful when exporting data into another application. It is not very friendly to the eye, but can easily be read by another program.

```
Remedy User - [Report Preview -- X-Calls (remedy.ncsu.edu)]
File  Edit  View  Tools  Report  Window  Help

Call ID Agent Problem Description Status Last-modified-by
235931 Demo Fwd: request Closed nlil
235932 Demo unity account Closed mcsimpso
235946 mcsimpso Are the Unity Computing survival guides I have up-to-date? Close
235948 lmgilber over imap quota Solved lmgilber
235958 Demo hardware address??? Closed mcsimpso
235967 mcsimpso method road unit 3 Closed mcsimpso
235968 jmriehle Download antivirus Closed jmriehle
235972 lmgilber kerberos library error Closed nngenzel
235973 mcsimpso How do I remove Dr. Solomon's from my win95 machine? Closed mcsi
235978 jmriehle Can't get into page Closed jmriehle
235980 lmgilber Eos/Unity password reset request Solved lmgilber
235985 Demo cannot login! Closed libby
235991 mcsimpso Do we support Windows Millenium- in Forestry Closed mcsimpso
235993 jmriehle Wants IP address Closed jmriehle
235994 Demo UserID and Password Closed mcsimpso
235997 jmriehle How to telnet Closed jmriehle
235998 Demo I can not access my A:\ drive Closed mcsimpso
236000 jmriehle Can't install Norton Closed jmriehle
236013 lmgilber password change problems Closed lmgilber
236021 Demo webmail Closed klandrew
236031 klandrew problems logging in to winston/tompkins labs Closed klandrew
236032 klandrew questions about checking mail from home Closed klandrew
236036 nngenzel kerberos library error Closed nngenzel
236040 nngenzel access to pro/e tutorials directory Closed nngenzel
236043 klandrew problems logging in to TRACS Closed klandrew

Ready                                              chking        remedy.ncsu.edu
```

Now that your report is like you want it, it is time to save it. You can save your report by selecting Save from the Report menu in the Report Styles window, or by clicking on the diskette icon.

```
Remedy User - [Report -- X-Calls (remedy.ncs
File  Edit  View  Tools  Report  Window  Help

                                  New...
Report Styles                     Save       Alt+S
                                  Save As...
Name        Type        Co        Delete     Del
<< New Styl...    -- |
One Hour    Remedy                Preview
                                  Print      Alt+P
                                  Export To         ▶

                                  Properties  Enter
```

3.2   Generating a Report

Once you have your report formatted, you should generate a real report. First, you must have data to report on, either by defining search criteria in the Calls window or by

selecting calls from the results of a search. The first is the most expedient – just enter your search criteria into a blank Search Calls window (either QBE or in the advanced search bar), then go to the Reporting window (Tools… Reporting). In this case, especially when using the advanced search bar, make sure that your search will run without errors, or else this quick method will take longer than you might like. A safer but slower way is to run a search, and highlight the calls you want to report on (or leave them all unselected, and it will still search on all records), and then go to the Reporting window (Tools… Reporting). If you want all the calls in your report, the easiest thing to do is to highlight the first call in the search, then Shift-click the last call in the search, which will highlight all the calls. Once in the Reporting window, right-click on your report, and you will be given a set of options. You can Preview the output or send the report straight to the printer using the Print command, but most likely, you will want to save a copy. For that, you would Export the file.
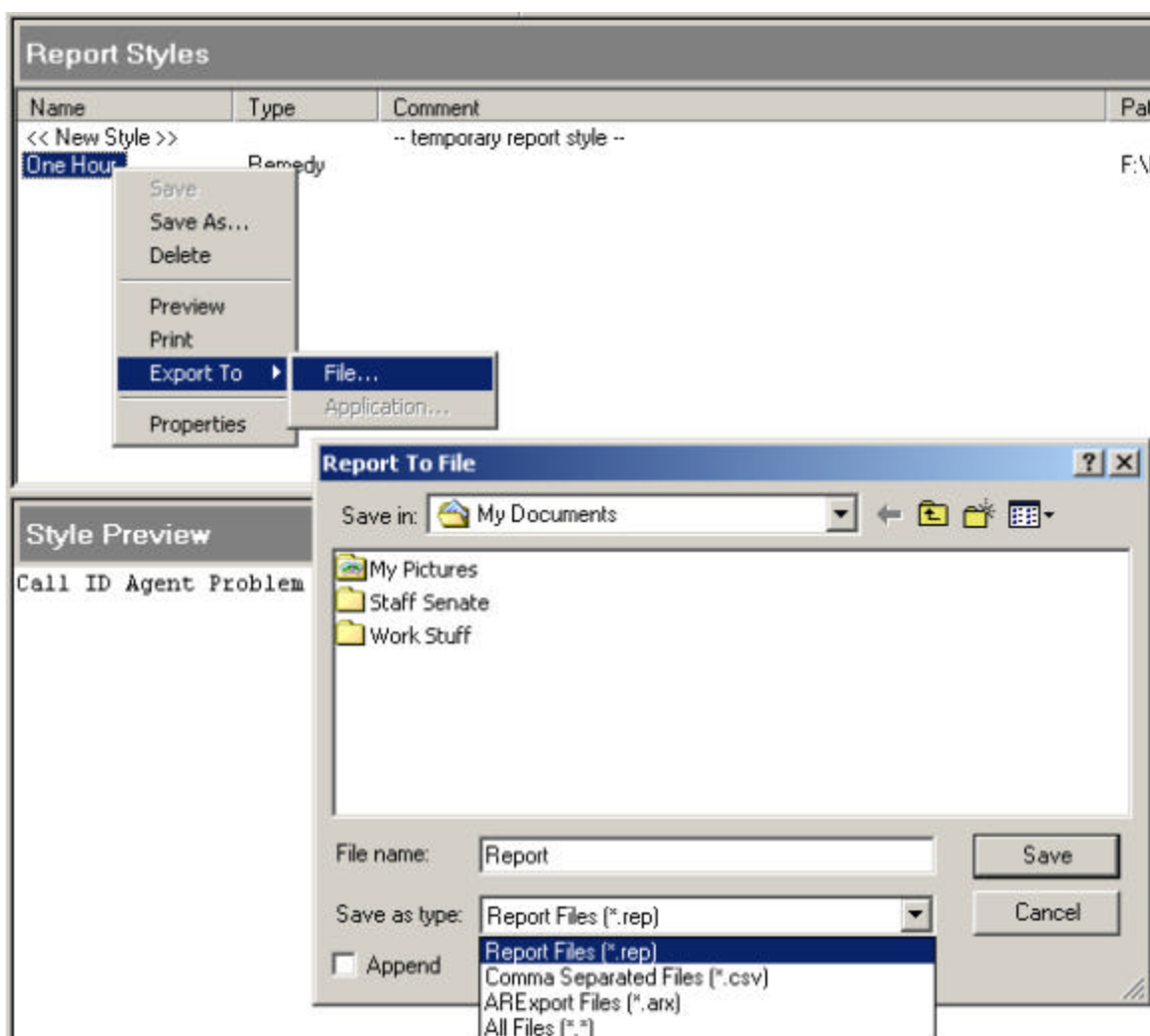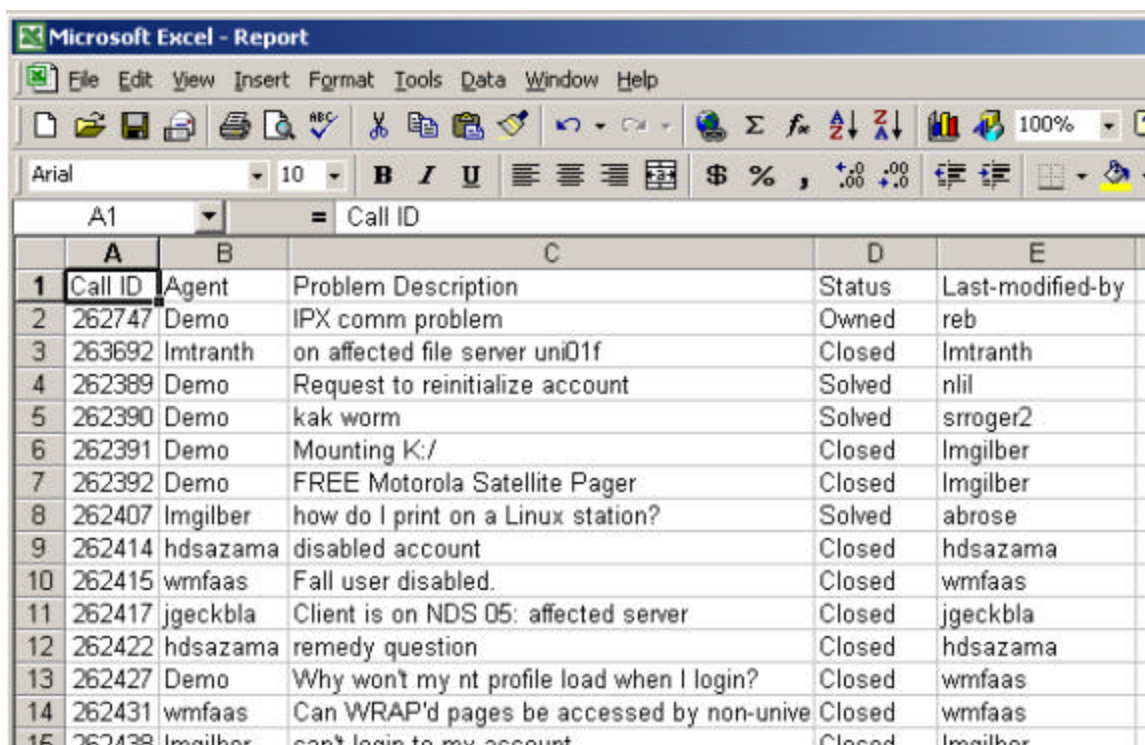
When saving reports, as with selecting formatting options, what you select depends on what you intend to do with the results. Saving as Report Files will save the output to a text file in the format you saw in the Style Preview window. Comma Separated Values is

a good format if you are going to use another application to manipulate your data. AR Export files are for when you want to import report data back into another form within Remedy, so you likely will have no real need for that option.

3.3   Manipulating report data

As was mentioned before, the built-in sorting and manipulating features of Remedy are somewhat lacking in our implementation here at NC State, due to the programming used by Remedy to interface with the Sybase database we use. For this reason, another program is needed to get any real quantitative data out of Remedy reports. Although you can use whatever program you work best with, we will demonstrate some common methods of data manipulation within Microsoft Excel. (For the examples below, Excel 2000 is used.)

When using Excel, it is better to have your report as Comma Separated Values, since that is one of the more common file formats for Excel. Open the file with Excel, and Excel should (depending on which version of Excel you have, among other factors) open the file in a spreadsheet:

From here, what you do with Excel to manipulate your data is limited only by what you can squeeze out of Excel. In the example below, we will use the **Sort** and **Subtotals** features (from the Data menu) and the **Chart Wizard** to get a graph of the number of calls in this report for each Agent.

First, with the report open in Excel, we need to sort the data by Agent. So, select all the calls in Excel by click-and-dragging the column headers for all the columns your data

uses. (Or, you can cheat and use Ctrl-A to Select All.) Now, go to the Data menu and select Sort, and a dialogue box will come up:
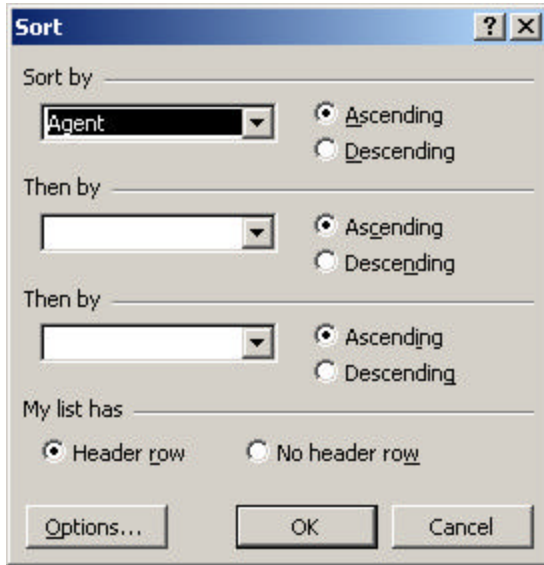
Select Agent for "Sort by", and click OK.

Now we need to get a count. Excel is a number cruncher, so we need to get a count of the calls logged by each Agent. To do this, select the column you want to count (in this case column B). Then, go to the Data menu and select Subtotals. (Excel may give you an error about not knowing what the header of the column is. The Remedy report should have given you a header in row A, so just click OK to the error message.)
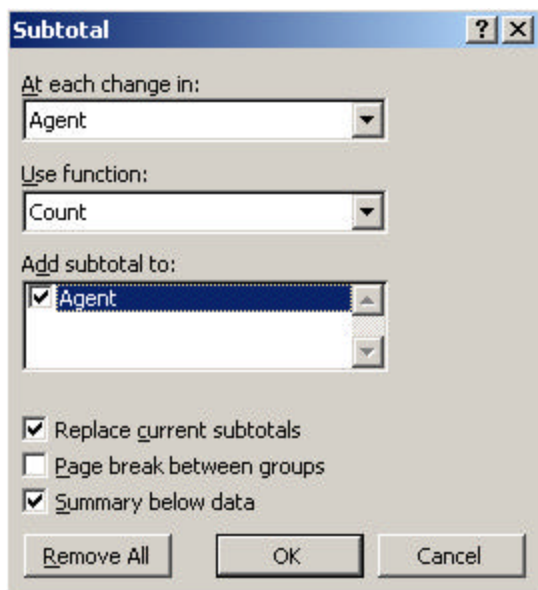
Make sure that you're counting changes in the right column (in this case Agent), and click OK. Excel will count the number of rows, and provide subtotals at the end of each Agent's calls.

With the subtotals now available, we can use the Chart Wizard to get the numbers into a nicer format. First, we need to get the numbers out of this spreadsheet and into another one. Scroll down in your spreadsheet, and look for the subtotal lines. They will be in bold, and will have the word Count in the field. In addition, there will be a small – (minus sign) icon beside each subtotal.


Click on each minus sign, (or the number 2 at the top above the minus signs) and that will group all of the subtotals together at the top of the spreadsheet. Once you have them all, select all of the subtotals (and the subtotal names). Since there are hidden rows here, you will then have to go to the Edit menu and select Go To… On the next popup box, click on Special, and check Visible Cells Only. That will ignore the rows that aren't shown, and select just the summary fields that we want to chart. Now, copy them, either by using Ctrl-C or by selecting Copy from the Edit menu. Next, insert a new worksheet into the spreadsheet by choosing Worksheet from the Insert menu. Paste the values of your copies subtotals into this new worksheet. Be sure to use the Paste Special option from the Edit menu for this, and choose the Values option:
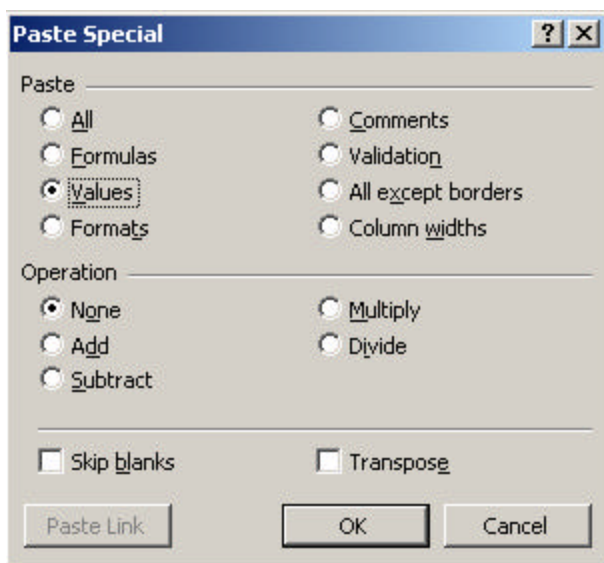
This will make sure that the numbers in the fields, and not the subtotal Excel formula, get pasted. (Depending on your version of Excel, you may need to sort this second page, as it may paste too many rows, forcing you to sort for the Count fields). Select these fields, and click on the Chart Wizard button:
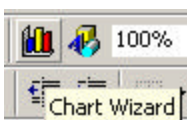
Select the chart you would like, and any extras you want to add to the chart, and Excel will do the rest. In this example, the Pie chart was selected, with values shown, and the result is this:
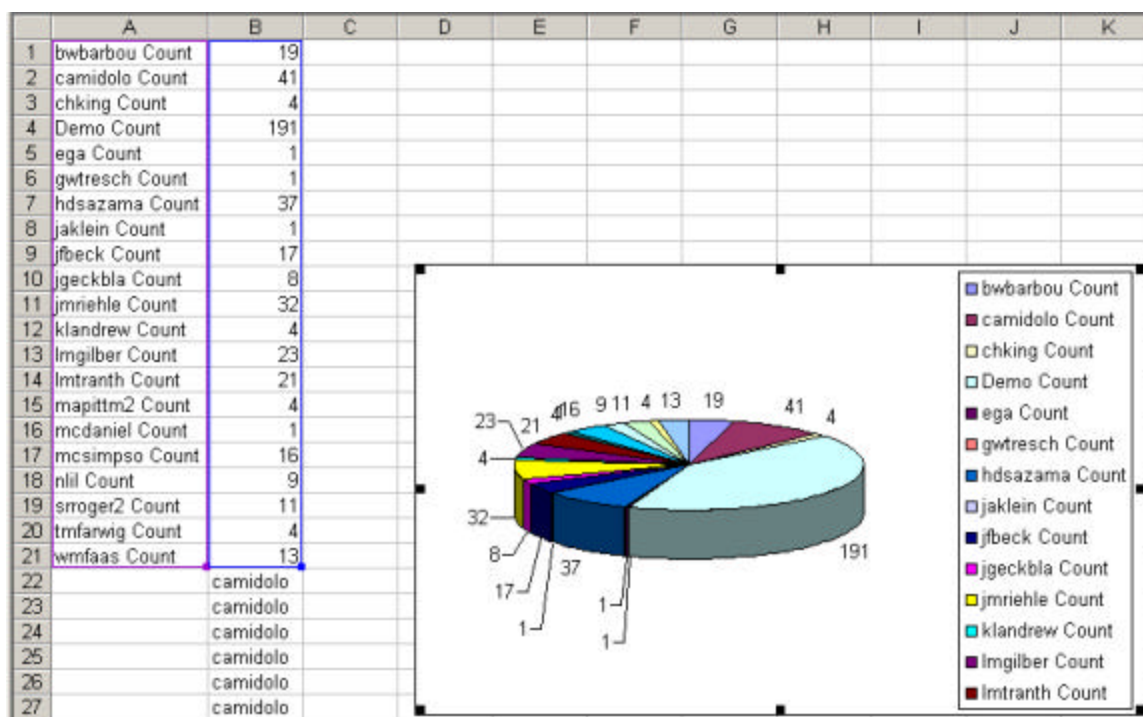

Depending on your needs, experiment with Excel, and you can easily get the charts you need. For more information on Excel, you should check out:

http://www.microsoft.com/office/support.htm

4.0   Macros

As you use Remedy more and more, you will likely find that there are a few series of tasks that you do over and over again. For example, you might come in on Monday morning and search for all calls in your workgroup. Then, you make a report out of that search, and export it to a file. With Remedy, it is possible to automate this process using a **macro**. A macro is a preset list of operations that Remedy will perform whenever you ask. Remedy makes this even easier by having the option to record the macro – that is, Remedy will watch you do something, and keep track of everything you did. Then, it will do things exactly like that whenever you ask.

Before you create a macro, it is a good idea to close all windows within Remedy. That way, you will open all necessary Remedy forms while recording the macro, and you won't have to rely on forms being open when the macro is run. Once Remedy is clear, you can start recording the macro by selecting Record Macro from the Tools menu:
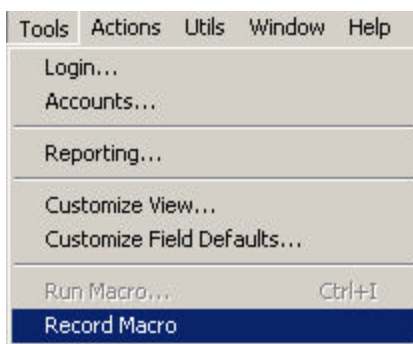
Then, immediately begin performing your normal actions. If you make a mistake, you can select Cancel Recording from the Tools menu and start over. Once you've done everything you need to do, select Save Macro from the Tools menu, and give your macro a name. That's it! Whenever you want to run your macro, select Run Macro from the Tools menu, select the macro you want (you can have multiple macros), and click OK. Remedy also makes it possible to add variables to your macro, so that the macro prompts you for field values every time you ran the macro. From the Help index of AR User:

You can record a macro that enables you to change certain values when you run the macro. That is, when the macro is running, you can enter variable values in the appropriate fields. For example, you could create a macro that finds and displays assigned requests that have a critical priority, but you would also specify a different submitter each time you run the macro.

To create this macro with variables, you record the search operations as usual; but for the information that varies, you enter prompt text enclosed by dollar signs ($). In this example, to be able to specify the submitter each time you run the macro, enter the prompt text `$User Name$` instead of a specific name in the Submitter field.

As you continue recording the search, you are prompted to enter a sample value for this variable. The values you enter are used in the recording session but are not retained as part of the macro.

Note:

You cannot include dollar signs ($) as part of the variable.

For selection fields (radio button and drop-down lists), you must use the advanced search bar to specify variable values.

5.0   Conclusion

This should hopefully give you the additional knowledge you need to make full use of the potential and capabilities of Remedy. As you use Remedy more and more, you will get used to its basic features as well as get introduced to its more advanced capabilities. For more information on the Remedy implementation at NC State, please send email to:

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