# Windows Search/Replace String Table of Contents

General Topics:

Options

## Application Synopsis

This Windows Search/Replace application was built to allow application developers, html writers, system/network administrators, and others to change a key word or phrase in many lines of many text files quickly and efficiently. Application developers can, for example, wire it into the Microsoft C++ visual work bench through its Options/Tools menu to enrich the editing capability.   It can also be used stand-alone by developers, administrators, HTML authors, et. al. who need to change a piece of information in one or more lines of many files located in multiple directories.

**Search/Replace allows you to**:
o        search and replace across multiple lines new in Version 3.2;
o        define the search and replace strings or use previously defined strings;
o        define search/replace strings up to 2000 characters new in Version 3.2;
o        define whether or not the search will be case sensitive (replace is always as entered);
o        define whether or not it must find the search string as a whole word or allow it to be embedded;
o        control whether the replace operation will be global or a confirmation is required for each replace (it will allow you to change from confirm each to global during the confirmation process plus other options);
o        select one or more files you want it to search in one or more directories using an extended file dialog (all customers) or new in Version 3.0 to specify a starting directory and file filter and let the application add the qualifying files to the list (registered customers only);
o        define whether to replace all instances in a line or only the first;
o        define the file extensions you want to **Always Search** or **Exclude** (prompts you when it encounters an extension not on one of these two lists or allows you to add it to one of two additional lists which are search/exclude for this session only;
o        include an extension to search, for this session only, from its **Always Exclude** list;
o        define whether the files it searches conform to the UNIX file type rules for end-of-line (discussed below);
o        abort/stop in the middle of a replace session when confirm each is selected;
o        abort/stop in the middle of a global replace session by double left clicking in the active window during the global replace;
o        control whether or not the back up file that is created to allow abort/restore is retained or automatically deleted;
o        control how to create the backup (by prepending a character to the existing extension or new in Version 3.1 by defining your own replacement back up extension);
o        change from search/replace to insert a string at a specific column in every line of the files you select (discussed below); and
o        use a set of special characters (discussed below) enhanced in Version 3.2.
**Search/Replace also**:
o        remembers its last screen position;
o        remembers the last drive/directory you searched;
o        allows you to define how many previous search/replace strings to remember;
o        allows you to define the character it uses to create a backup of files it modifies or to define your   own replacement extension;
o        allows you to define your own set of file type filters;
o        allows you to define an editor to launch and will launch that editor when you double left click on a file or file line at the conclusion of the search and replace operation;
o        allows you to print the results of the search and replace operator or save the results in a file; and
o        allows you to define how many spaces it will use to expand tabs.

The application was designed to handle a huge number of files from multiple directories.   There is a 128,000 line display limitation that will limit the number of files you can search and replace at one time.   If 32 lines are modified per file (96 display lines), the file limitation is about 1,300 files.   If no changes are made, the application can handle 128,000 files.   The application will stop the search/replace operation when the display line limitation is reached. Search and replace strings are each limited to 2000 characters.

The application expects to find newline characters, as a minimum, at the end of each line (text file) and will not

process files that are not constructed in this manner.   Files generated by word processors may or may not fall into this category unless they are saved in ASCII/text.   When the application encounters such a file, it excludes the file from the session.

Files are generally grouped by extension, and in today's environment, more than one type of file can have the same extension.   As one example, Microsoft Word stores their files, by default, in non-text format using the doc extension while you or others may use the same extension to store files in text format.   **Search/Replace** makes no assumptions about file types except for a few universal ones such as exe, com, etc.   You may define the file extensions you do and do not want included in your search.   You need not predefine the extensions, since the application will prompt you each time it encounters an extension it does not know about.   The application keeps five (5) file extension lists which are **Always Search**, **Always Exclude**, **Search This Session Only**, **Exclude This Session Only**, and **Override** an always excluded extension for this session only.   You may predefine the **Always ...** file extension types by selecting the Options menu and then the File Types tab.

Any time a file is modified by the application, a backup file is generated that contains the original information.   If you choose to Abort a search/replace operation, all files modified during the session up to the Abort point are restored (via the back ups) to their pre-session state.   You may also decide, after the fact, that the changes made were not "as expected" and manually restore them yourself.   By default, a tilde (~) is prepended to the original file's extension.   If a tilde is not to your liking, you may change it to a valid DOS file name character of your choosing by selecting the Options menu and then the Back Ups tab.   Alternately, you may define your own backup extension. The extension must be composed of valid DOS file name characters.   Using this option, the characters beyond the last period are replaced with your backup extension.

In today's networking environment, many files can be manipulated on foreign machines.   The UNIX file type option is available for those who need to remotely alter text files that conform to the UNIX file standard.   For those not familiar with UNIX vs DOS file types, UNIX saves files with just a newline (\n) while DOS saves files with a carriage return (\r)-newline(\n) combination to signify the end of the each line.   The application can process both file types but by default expects the DOS carriage return-newline combination.   If you are processing UNIX files, check the UNIX file types box.   If not checked and the application detects a UNIX file type file, it will inform you and ask if you want to process it as a UNIX file type (new in version 3.2).   This prompt can not only be annoying if you are processing a lot of UNIX files but can mislead the application if the $ special character is specified since a \r\n is substituted for that character by default when for UNIX it should be just the \n..   Be aware of the following:
•   files moved from a UNIX machine to your DOS machine may not contain the carriage return; and
•   some editors allow you to store files in UNIX format on your DOS machine.
You can use this application to change the end-of-line marker in every line from one format to the other.

There have been times when I needed to insert a character or a character string at a specific column of every line in a data file and had to do it manually.   As an added bonus, the application will do that for you if you check the Insert @ Column box in the **Search/Replace Dialog**.   Instead of a search/replace application, the application magically changes to insert at a column.   The search/replace string captions change as well as the functionality of its controls allowing you to define the character or string and the column (1 through 254 minus the insert string length) where you want it inserted.   Be aware, that formerly blank lines will contain the inserted string at the specified column at the conclusion of the operation.

The application handles long file names (256 characters max. for the total of the path, file name, and extension) as long as the files are located on your machine.   If your network does not handle long file names without mangling, they will appear in the dialogs in 8.3 format.

## *Exclude File Extension Override Dialog*

There will be times that you want to search a file type that you have on your **Always Exclude** list. You can accomplish this, for the current session, by clicking the Override button in the **Search/Replace Dialog**. The Override dialog will appear with all excluded file extensions listed. Select the extension(s) you want to search this session and click the Copy button. The selected extensions are copied to the Override list. If you accidentally copied an extension to the Override list, simply select it and click the Delete button to remove it. Be aware, that the Override list is only valid for the current search/replace.

# Search/Replace Dialog

The Search/Replace dialog allows you to type in the explicit **Search** and **Replace Strings** or select a previous search or replace string from the drop down lists. Be aware that selecting a previous special character string does NOT make the current session treat those characters as special until you check the Special Char Session box.

Actions that will result from checking/clicking a box/button are:

Expand Buttons:	Expand buttons are located to the right of the Search and Replace string fields. Clicking the appropriate button causes an extended edit control to pop up that allows you to define loooooooong search/replace strings. If you need to embed special characters, you must type them. You may alternately press Ctrl-Enter to embed literal carriage return newlines in this control only. If you do so, the session will automatically be set to **Special Character Session** with search/replace across line boundaries.

Match Case:	If you want your search to be case sensitive, make sure you type the search string case explicitly and check the Match Case control, otherwise, case is ignored. Replacements are always made exactly as the replace string was typed.

Match Whole Word Only: Checking the Match Whole Word Only control effectively causes a space to be added before the first character and also after the last character during the search. This could cause consternation if the word can end a sentence or is located at the end of a line.

First Instance Only:	If you check the First Instance Only control, the search for replace is suspended after the first instance in a line is found. To replace all instances of the **Search String** in the files selected, check the All Instances in Line control.

All Instances:	If you check the All Instances control, all strings found within a line matching the **Search String** are candidates for replacement with the **Replace String**.

Global Replace:	If you check the Global Replace control all instances of the **Search String** found will be replaced with the **Replace String** for the files you select and there will be no confirmation. If you need to abort during a global replace, double click the right mouse button.

Confirm Each Replace:	As you would expect, you get to confirm whether or not to replace every instance in every file where the application finds the **Search String**. See help on the Replace Query Dialog for your options during the confirmation process.

UNIX File Types:	If you are changing text files remotely and the foreign machine supports UNIX file types, check the UNIX File Type control. You may get unexpected results if you check the UNIX File Type control and are modifying DOS type files. Conversely, you may also get unexpected results if you are saving your files in UNIX end-of-line format in DOS. For those not familiar with UNIX Vs DOS file types, UNIX saves files with just a newline (\n) while DOS saves files with a carriage return (\r)-newline(\n) combination. The application expects the carriage return-newline combination, consequently, it will truncate the last character in every line if the file is a UNIX type. Be aware that it is also possible to have UNIX end-of-line formatted files stored on a DOS machine, so the UNIX File Type control could be valid on a local as well as a network drive.

Inserting a String:	You can change the way Search/Replace acts by checking the Insert String @ Column control. When you check that control, you will notice that the **Search/Replace String** captions change to **Insert String** and **At Column** respectively. Instead of searching each line for the **Search String**, the application will now insert the **Insert String** in every line of every file at the column you specify, including previously blank lines.

Special Characters:	A number of special characters can be included in the search/replace or insert operations. All characters in the **Search** and **Replace Strings** are treated literally until you click the Special Char button and *select* a special character or you type in one or more of the supported special characters and check the Special Char Session box. Clicking the Special Char button displays a pop up list of special characters supported for the string in

focus (has the arrow to the left of the edit box).   Be aware that the lists contain different character sets based on whether the **Search** or **Replace String** is in focus and only those characters in the list are supported.   Selecting a character from the list will cause the application to append the special character to the end of the **Search** or **Replace String**.   Special characters are displayed as \t-tab, \f-formfeed, \n-newline, \r-carriage return, ^-beginning-of-line, $-end-of-line...   Once you have added a special character from the pop up list, the session automatically becomes a **Special Character Session** and any of the characters encountered in the **Search** or **Replace String** that are on the list will be treated as special characters whether the characters were appended or typed by you.   If you mean the character string literally, add an extra \ to the string (e.g., \\t means to look literally for string fragment \t not the tab character).   If you are familiar with the special characters, you can simply type the literal characters into either control where you want them and check the Special Char Session box.   If you change your mind, you can delete the special characters and uncheck the Special Char Session box to revert back to a normal session.   If you do not delete the special characters, they will be treated as literal characters.

Override:                          If you wish to override one or more file extensions on the **Always Exclude** list for this search/replace session, click the Override button and add the extension(s) to the list.

Via File Dialog:              If you wish to select files individually from one or more directory's check this box which will enable the Select Files button and disable the Begin button until you have added files to the **Search List**.

By Directory and Filter:    If you wish to let the application automatically select the files to add to the **Search List,** check this box.   When checked, the Select Files button is disabled and the Begin button is enabled.   When you select the Begin button, you will get a **Select Files to Search by Starting Directory and Filter** dialog that lets you specify (or select) the start directory and lets you choose a file filter from those you have defined under the **Options/File Filters** menu.   The last directory searched on the previous invocation will be the default starting directory.   Be aware that the Start button on the **Select Files to Search by Starting Directory and Filter** dialog is disabled for non-registered customers.   Your only option is to Cancel which will result in no search since no files are added to the list.

Select Files:                    If you have checked the Via File Dialog box, this button will become active.   Click the Select Files button to display the extended file dialog that lets you select the files you wish to include in the search/replace operation.   The last directory searched on the previous invocation will be the default starting directory.   You may include files from multiple directories in the operation.   To do so, select the appropriate files and click the Add button to add them to the list.   Change directories and repeat the process until you are done. You need not add the last directory's files, just click the OK button after making your selections.   The Cancel button does **NOT** cancel any file additions.   You must remove any unwanted files from the search list by selecting them and clicking the Remove button.

Begin:                            This button will be active if you have checked the By Directory and Filter box or the Via File Dialog box and selected at least one file.   This button will be begin the Search/Replace operation.   Before selecting the Begin button you must specify a search string, optionally a replace string, and select the various available options.   If the By Directory and Filter box is checked at the time you select the Begin button, the Select Files to Search by Starting Directory and File Filter Dialog will be displayed that lets you enter/select a starting directory and specify a file filter.

Aborting a Global Replace:          While the application is making global changes to the selected files, you may abort by double clicking the left mouse button which has the same effect clicking the Abort button in the **Query** dialog .

## *Select Files to Search by Starting Directory and File Filter Dialog*

If the By Directory and Filter check box is checked when the Begin button is clicked, you are allowed to add additional files to the **Search List** or all the files you want searched to the **Search List**.   This dialog allows you to specify a starting directory and file filter to use for automatic file addition.   If you check the Search Subdirectories box, all subdirectories below the start directory are also searched for files to add.   Only files meeting one or more of the file filter specifications are added.

Starting Directory:
The last directory searched on previous operations will be the default directory listed when this dialog appears.   You may enter a new starting directory or select the Browse button to invoke the **Select Start Directory** dialog which allows you to navigate the available drives on your system to find and select the start directory.

Browse:
Invokes a the **Select Start Directory** dialog which allows you to navigate the available drives on your system to find and select the start directory.

File Filter:
By default the last file filter you used will be displayed in this control.   To change the filter to one you have defined under **Options/File Filters**, click the drop down button to the right of the field and select the new filter.   You are NOT restricted to file filters on that list.   You may define, from scratch, one or more filters by entering their wildcard based specifications or you may extend an existing filter by the entering additional filter specifications, separated by semicolons (no spaces) anywhere it is appropriate in the filter field.

Search Subdirectories:
Check this box when you want all subdirectories below the start directory searched for files meeting the file filter specifications.

Start:
When you are ready to begin, click the this button.   **Note:** The Start button is disabled for non-registered customers.

## *Replace Query Dialog*

The replace query dialog allows you to make judgments about whether or not you wish to replace each instance of the **Search String** found in the selected files.   The dialog displays the current file name and line number where the **Search String** has been found and highlights the search characters.   By clicking one of the following buttons you will get the following results:

Replace It:          causes the current instance of the **Search String** to be replaced by the **Replace String**;

Do Remainder:     causes this occurrence and all future occurrences of the **Search String** encountered to be replaced by the **Replace String (**Clicking it is like checking the Global Replace control after the fact);

Replace All this File          causes all occurrences of the search string in the current file to be replaced without confirmation.   Confirmation will restart with the next file.

Skip This One      causes the current instance to be skipped, that is, not replaced;

Skip this File       causes all remaining lines in the current file to be ignored as if you pressed the Skip This One button for each instance found.   Confirmation will restart with the next file.   All changes made to the point where the button was pressed are preserved.

Stop Now:          causes the current occurrence to be skipped, all future occurrences in the current file to be skipped, and cancellation of any further searching, however, all previous operations are *preserved*.

Abort:               causes all changes made to all lines in all modified files searched to this point to be *reversed* (files restored to their original state) and cancels any further searching.   If you have selected global replace, double clicking the left mouse button will abort the operation.

## *File Extension Query During Replace Dialog*

During a search/replace operation when the application encounters a file not on the **Always Search**, **Always Exclude**, **Search This Session Only**, or **Exclude This Session Only** lists, you will be presented with this dialog allowing you to dictate to the application how to deal with the extension.   You must check one of its buttons or accept the default.   The four options you have are:

Add to Always Search List:
Adds the file extension to the **Always Search** list and will search the extension in this and all future sessions!

Add to Exclude List:
Adds the file extension to the **Always Exclude** list so, henceforth, all files with that extension will NOT be searched!

Add to Search This Session Only list:
Doesn't add the file extension to the **Always Search** list but will search files with that extension during *This session ONLY!*

Add to Exclude This Session Only list:
Doesn't add the file extension to the **Always Exclude** list and will NOT search files with that extension during *This session ONLY!*

## *File Filter Page*

The **File Filter** page allows you to customize the types of files you typically search.   It will allow you to add new, replace existing, or remove old file types from your search options.   Additionally, by moving a specific filter to the top, you can dictate to **Search/Replace String** which files types will appear by default in the Select Files Dialog when you click the Select Files button on the Search/Replace Dialog.   To add a new file filter, type an appropriate description in the Description control then move to the Filter control and enter the file type filter appropriate for the description.   Alternately, you may double left mouse click an existing filter (which causes that filter to appear in the Description and Filter controls) where you can make changes and either replace the existing filter or make the modified filter a new option.   To remove or move a filter, left mouse click on the appropriate filter which will highlight it and then click the appropriate button.

Actions that will result from clicking a button are:

Up:                    Causes the selected file filter to take the place of the filter just above it.

Down:                Causes the selected file filter to take the place of the filter just below it.

Add:                  Adds the filter in the edit controls to the bottom of the list.

Replace:             Replaces the selected filter in the list box with the filter defined in the edit controls.

Remove:                           Causes the highlighted filter in the list box to be deleted.

**Filter definition rules**:
**o**          Generally the file type description should not be more than 20 characters.   Most applications use the common file dialog for display and so does this application although it has been extended.   Any characters entered beyond 20 may **NOT** appear in the drop down list;
**o**          You must define at least one File Filter (e.g., *.cpp) per Description (e.g., C++ Source);
**o**          File Filters should contain one or more wild cards (* or ?); and
**o**          Multiple File Filters (e.g., *.txt;*.c;*.htm) are allowed for a single description (e.g., My Std Files) but they **must** be delimited by a semicolon (New with Windows 95) and contain **no** leading/trailing spaces.

## *File Types Page*

The file types' page allows you to add extensions to the **Always Search** or **Always Exclude** lists.   Always is probably a poor choice of words since one of the options is to delete file extensions from either list.   However, its intent is allow you to semi-permanently define file extensions that you typically search so you won't be nagged by the dialog that appears every time the application encounters an extension it doesn't know about.

Adding a File Extension:   To add an extension, simply type the extension into the control and press Add.   You can add to both lists at the same time if you type an extension into both controls.   If the extension already exists, it will not be duplicated.   If the extension exists in the other list, you will get a warning that it is already on the other list but will have the option of adding it anyway.   Note that the decision precedence for searching /excluding is search first.   If the extension is allowed to remain on both lists, it is, therefore, SEARCHED.   There no limitations on the file extension except those imposed by the operating system.

Moving Extensions:          To move one or more extensions from one list to the other, simply select the extensions by clicking on the extension and clicking the appropriate Move button.

Deleting Extensions:          To delete extensions, select the extension you want to delete and click the appropriate Delete button.

## *Preferences Page*

By File Dialog:                  Check this box if you want the Via File Dialog box on **Search/Replace Dialog** to be checked by default:

By Start Directory and Filter:        Check this box if you want the By Start Directory and Filter box on **Search/Replace Dialog** to be checked by default:

Tab Characters:                  When a tab character is encountered in a line being displayed in the Replace Query dialog, the tab character is expanded using spaces to preserve appearance.   If the Special Char button was pressed, all special characters are displayed and since they are not printable, they appear as a solid vertical bars in the display which allows you to see that a special character exists at that point.   Since the tab is a special character, it is expanded in normal displays to eliminate the unsightly and possibly confusing resulting character.   You may define how many spaces will be displayed in lieu of the tab by entering the number of your choice between 1 and 24.   The default is 4.   The space substitution for   tab characters is for display only.   The tab character is preserved in the modified file, unless of course, you are using special characters to change tabs into spaces.

Strings to Remember        You may define how many search/replace strings you want the application to remember. The default is 20.   The max. is 100.

Display Frame Thickness  You can dictate to the application how thick you want the display frame that encloses the output.   The minimum is 1 pixel and the maximum is 20 pixels.   It is set by default at 3.

## *File Back Up Page*

Retain Backup: All files, that are changed, are backed up during the search and replace process to allow an abort capability.   If you do not want to retain the back up files, check the No and the application will remove them at the conclusion of the search and replace.   If you wish to retain the back ups then check Yes.

If you check Yes to retain the backed up files, you may either define your own backup extension or prepend a backup character to the existing extension.   For those of you developing C or C++, you will probably want to prepend a backup character to prevent your source code and include files from overwriting each other during the back up process.   For those of you managing other file types (having unique root file names) you may select either back up method.   To select the back up method, check either the Prepend character to existing extension or Replace Extension check box.   When either is checked, the respective edit control will become active and the other will deactivate.

Back Up File Character:    You may choose any valid file name character as the prepend file extension character.   It must be a single character.   By default the back up character is a tilde (~).

Backup Extension: You may choose any sequence of valid file name characters to replace the original extension.   The back up extension is defaulted to bak.

## *Editor Page*

Double clicking on a file or modified file line causes **Search/Replace String** to launch an editor.   By default the editor is notepad.

Editor Application:              You may change the editor to the one of your choice by typing in the full path and file name or pressing the browse button, finding the editor on your hard drive, and selecting that editor.

Two tokens are recognized in the editor application line.   The tokens are %f and %l (f & l are both lower case letters) representing the file name and line number respectively.   You may use the %f token to tell **Search/Replace String** where to place the file name if you need to specify additional command line parameters.   By default, the file name is placed after the editor application string.   Your editor may allow you to specify the line number where it will position the cursor when started.   If so, you can take advantage of that option by specifying both the %f and %l tokens. **Search/Replace String** will supply that line number if you double click on a line it found.   The following are examples of how the Editor Application line may be configured.

- c:\windows\editor                      (in this case line numbers are not supported)
- c:\windows\editor %f /g /r                      (in this case the command line switches follow the file name)
- c:\windows\editor %f %l                      (in this case no switch is required to specify go to line number)
- c:\window\editor %f /l %l                      (in this case a /l tells the editor a line number follows)
- c:\window\editor /G %l /N %f  (in this case a /G tells the editor a line number follows)

If you specify a %l in the line and do not double click on a found line, **Search/Replace String** will supply a one for the line number, consequently, you will start at the beginning of the file.

## *Registration Form*

Your Name: _____

Note:    Type/print your name and company below **EXACTLY** as it appears in the **Registration** dialog in
the **Help Menu** of the Application.

Registration Dialog Name: _____

Registration Dialog Company:_____

Please type or print clearly the following information:

Address: _____

City: _____          State: _____          Zip: _____

E-Mail Address: _____

Check the programs you wish to Register.

| | | |
|---|---|---|
| Search/Replace String | _____ | $15.00 |
| Find String | _____ | $15.00 |
| Touch File Date/Time | _____ | $10.00 |
| Both Search/Replace & Find String | _____ | $25.00 |
| All (Search/Replace,   Find String, & | _____ | $30.00 |
|  Touch File Date/Time) | | |

I have enclosed a
___ Check           ___Money Order            ___Cash (Check One)

Preferred Registration Code delivery:
___ Mail           ___ E-mail        (Check One)

Please include a self addressed envelope for mail delivery to speed up the response.
--------------------------------------------------------------------------------------------------------------------------------
Please make checks payable to Richard Floersch.
Mail this form and your check or money order to:

Richard Floersch
7307 W 89th Terr
Overland Park, Ks           66212

_____

## *Select Files Dialog*

You may search for a string or string fragment in files located in multiple directories.   When you have selected the files in the current directory that you want to search/replace, press the Add button to add the selected files to the Search/Replace File List.   Change to the next directory and repeat the process.   If you are searching files in a single directory, simply select the ones you want and click OK.   Clicking the OK button automatically adds any selected files to the Search/Replace File List, consequently, you need NOT add the files by clicking the Add button when you are in your last directory.   If you do inadvertently click the Add button in the last directory, click the Cancel button to terminate the Select Files Dialog.  Be aware that once files have been added to the Search/Replace List they will remain on the list until removed by you, the Search/Replace operation is initiated, or the Search/Replace operation is canceled.

The buttons to the right of the Search/Replace File List do the following.

Remove:                              Removes any selected files from the Search/Replace File List.

Clear:             Deselects all files on the Search/Replace File List that are selected..

All/Invert:          Selects all files in the Search/Replace File List   if nothing is selected.   Once one or more search files are selected, the button will change to Invert which deselects files currently selected and selects files that were previously deselected.

Help:             Got you here!

The buttons below the **File Names List** do the following.

Add:             Adds all the files selected in the file name list to the Search/Replace File List.

All/Invert:          Selects all files in the File Name List   if nothing is selected.   Once one or more file names are selected, the button will change to Invert which deselects files currently selected and selects files that were previously deselected.

Clear:             Deselects all file names that are selected.

NOTE:   Windows reports files/directories containing space(s) in the old 8.3 format in this common dialog.