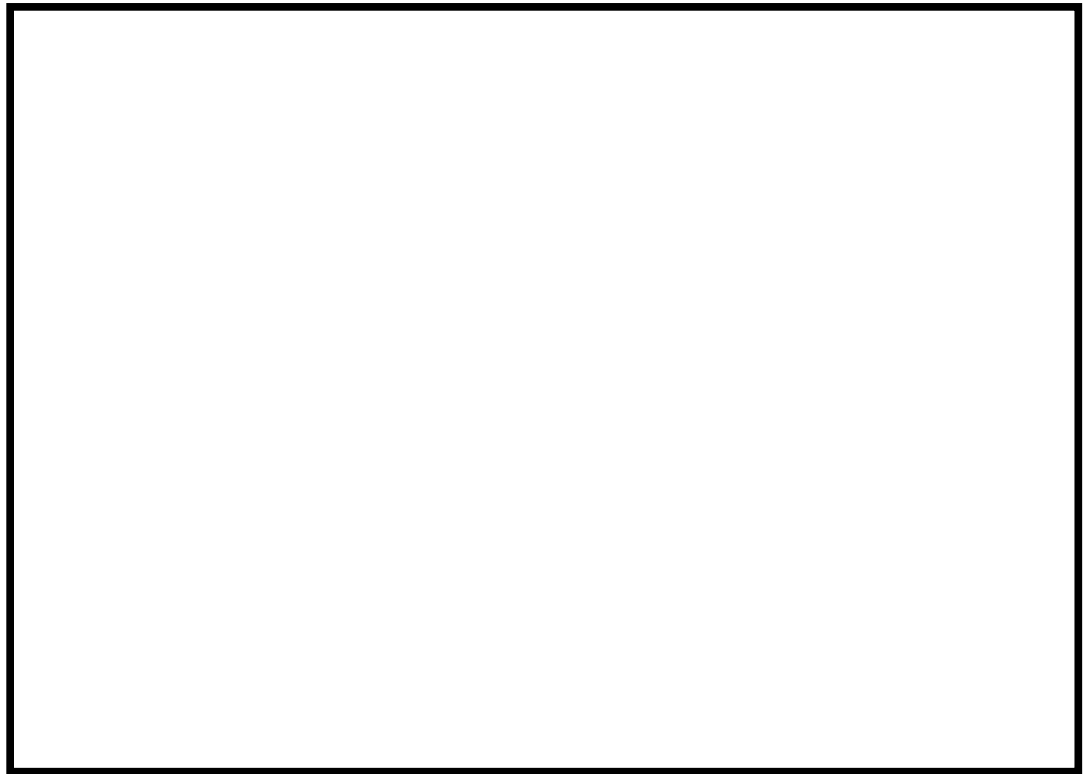


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**SourceGear DiffMerge**

# **3.2 User Manual**

**By SourceGear LLC**





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# SourceGear DiffMerge 3.2

Welcome to DiffMerge. DiffMerge enables you to perform three crucial tasks:

- **Compare two files side-by-side and see their differences.** Normally this is used to compare two different versions of a file and see how the file has changed.
- **Compare three files side-by-side-by-side.** Normally this is used to merge the changes from two independent (branched) versions into one file based upon a common ancestor version.
- **Compare two folders side-by-side.** Each file in each folder is shown to be different, identical, or without a match in the other folder.

# SourceGear Contact Information

## Mailing Address

SourceGear LLC  
115 North Neil Street, Suite 408  
Champaign, Illinois, 61820, USA

## Sales

**Web:** <https://store.sourcegear.com/sgstore/>  
**Email:** [sgstore@sourcegear.com](mailto:sgstore@sourcegear.com)  
**Phone:** 1-217-356-0105 x399 (weekdays 9am to 4pm Central United States time)  
**FAX:** 1-217-356-0135.

## Support

**Web:** <http://support.sourcegear.com/>  
**E-mail:** [support@sourcegear.com](mailto:support@sourcegear.com)  
**Phone:** 1-217-356-0105 x700 (weekdays 9am to 4pm Central United States time)

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# Installation

DiffMerge works can be installed on three platforms: Windows, Linux, and Macintosh.

---

## Windows

DiffMerge is distributed for Microsoft Windows as a standard Microsoft Installer .msi package or a .zip archive. The filename of the file contains release and build information; for example, the packages for the 1000 build of the 3.2.0 release are named **DiffMerge\_3.2.0.1000.msi** and **DiffMerge\_3.2.0.1000.zip**.

### Using the .msi:

To install DiffMerge using the .msi file, simply click the .msi file and follow the on-screen instructions. This will install the application in Program Files, register a Windows Explorer shell extension, create menu items in the Start Menu, and create a Desktop Shortcut. This is the preferred method of installing the application.

To uninstall DiffMerge either click the .msi file or use the Add/Remove Programs Control Panel.

### Using the .zip:

If for some reason you cannot use the .msi file or simply prefer to use the .zip file, you may simply unzip the .zip file somewhere on your system and execute DiffMerge.exe. You can create menu items in the Start Menu and Desktop Shortcut if you want. You can register the Windows Explorer shell extension by running **regsvr32.exe** or by using the DiffMerge Options Dialog.

To uninstall DiffMerge after using the .zip file, simply delete the folder containing DiffMerge. If you installed the Windows Explorer shell extension, uninstall it (either using **regsvr32.exe** or the DiffMerge Options Dialog) before deleting the DiffMerge folder.

---

## Linux

DiffMerge is distributed for Ubuntu Linux as a debian .deb package. The filename of the .deb contains release, build, and platform information; for example, the package for the 1000 build of the 3.2.0 release for Ubuntu 6.10 on Intel is named **diffmerge\_3.2.0.1000-1ubuntu610\_i386.deb**

After downloading the most recent .deb file, you can install DiffMerge using the following command from a terminal window:

```
sudo dpkg -i diffmerge_3.2.0.1000-1ubuntu610_i386.deb
```

This completely installs DiffMerge, including an executable in /usr/bin, a man page, and a menu item in the Ubuntu Application|Programming menu.

If you are installing on a 64-bit system, you may have to add "**--force architecture**" to the dpkg install command line.

To uninstall, type the following from a terminal window:

```
sudo dpkg -r diffmerge
```

---

## Macintosh

DiffMerge is distributed for Apple Mac OS X as a standard disk image .dmg file. It contains a Universal binary that can run on both PPC and Intel systems. The filename of the .dmg contains release and build information; for example, the package for the 1000 build of the 3.2.0 release is named **DiffMerge.3.2.0.1000.dmg**

After downloading the most recent .dmg file, click to let OS X open it. Inside you will find the DiffMerge application. Simply drag it to your Applications folder. This application is completely self-contained; copies of the license and manual files are included in disk image folder for your convenience. A sample shell script is also provided to make it easier to use DiffMerge from the command line. You may want to put this folder in your PATH. You may need to edit it to set the DiffMerge application pathname to match where you installed DiffMerge.

To uninstall, open your Applications folder and move the DiffMerge application to the trash.

# The File Diff/Merge Windows

There are two types of file windows – **File Diff Windows** and **File Merge Windows**. They are discussed together here because they share multiple features.

The first is a *two-way view* showing the differences between two files or two versions of the same file; this is called a **File Diff Window**. You can use this window to see the changes side-by-side. And you can edit the file on the right, either interactively as you would with a normal editor or by applying patches (or changes) from the version on the left. You can use this window, for example, when looking at the revision history of a file to see the changes between two revisions.

The second is a *three-way* window that shows the differences between three files; typically this is a common ancestor (in the middle) and two branches that have independently evolved (on the left and right). This is called a **File Merge Window**. You can use this window to see the changes side-by-side-by-side. You can edit the center file and merge in changes from both branches, creating a common/unified version.

---

## Opening a File Window

You can open a File Window by selecting **File|Open Diff Window** or **File|Open Merge Window** from the menu. You are given a brief **Select Files to Compare Dialog** enabling you to type the pathnames of the files you wish to compare; browse buttons are provided that open the standard system **File Open Dialog**.



*Note: if the set of files selected are already open in another window, that window is raised rather than a new, duplicate window.*

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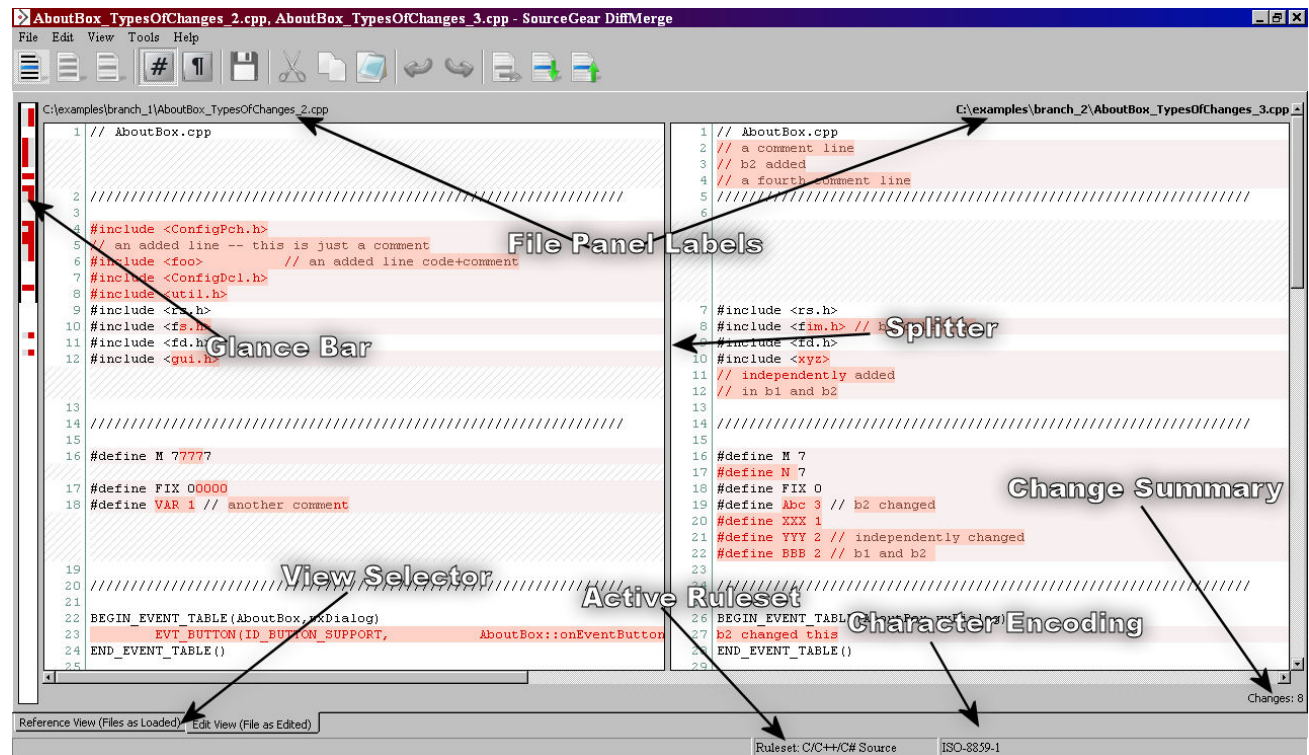
## Toolbar

A toolbar above the File Diff/Merge Window presents the following icons. Some appear only in the 3-Way Merge Window.

	<a href="#">Show All</a>		<a href="#">Undo the Last Edit</a>
	<a href="#">Show Differences Only</a>		<a href="#">Redo the Last Edit</a>
	<a href="#">Show Differences with Context</a>		<a href="#">Apply Change from Left</a>
	<a href="#">Show Line Numbers</a>		<a href="#">Apply Change from Right</a> (3-Way Merge Only)
	<a href="#">Show Invisibles</a>		<a href="#">Jump to Next Change</a>
	Split Windows Vertically		<a href="#">Jump to Previous Change</a>
	Split Windows Horizontally		<a href="#">Jump to the Next Conflict</a> (3-Way Merge Only)
	Save File		<a href="#">Jump to Previous Conflict</a> (3-Way Merge Only)
	Cut		<a href="#">Merge to Center</a> (3-Way Merge Only)
	Copy		
	Paste		

# Window Layout

The File Diff/Merge Window shows two or three files side-by-side. Around these file panels are several important features.

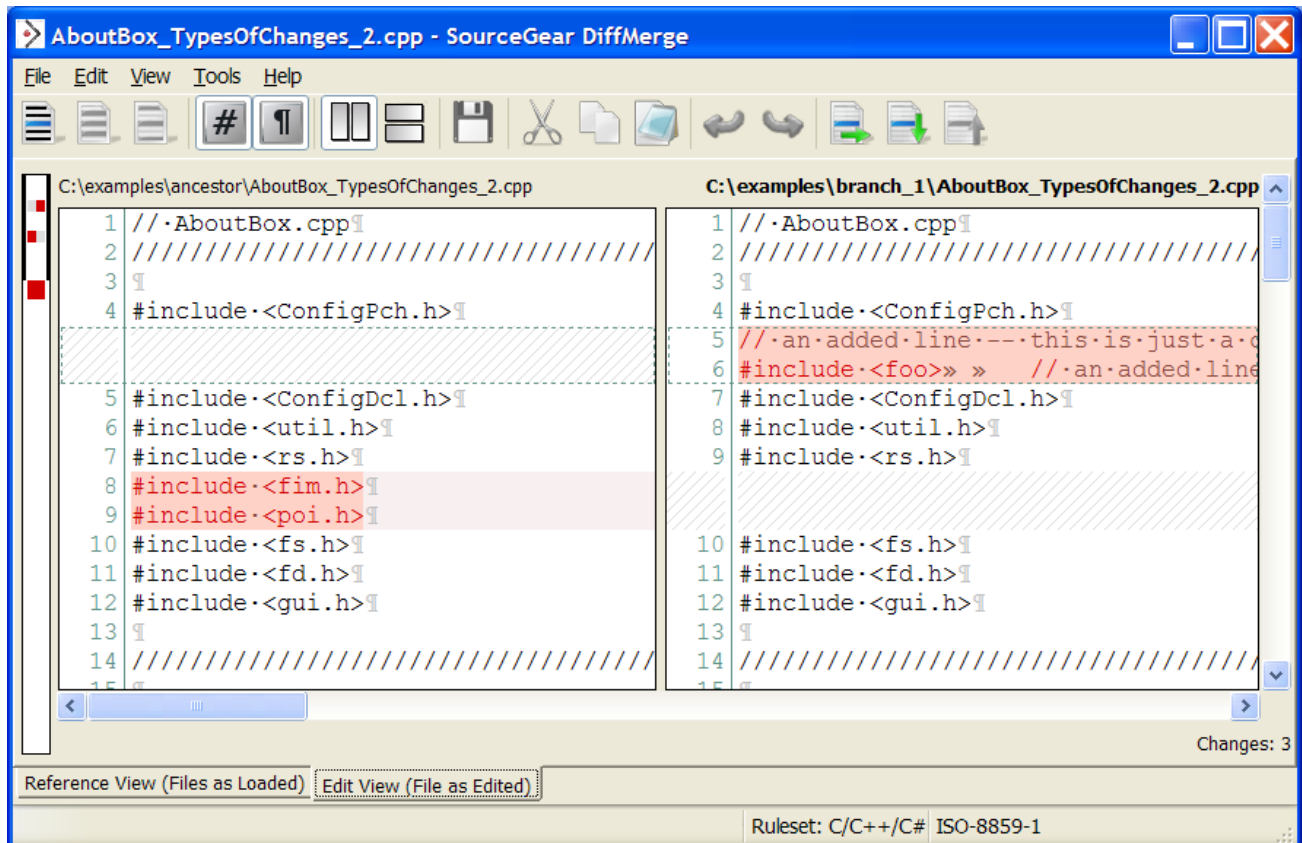


Field	Meaning
File Panel Labels	File panel labels show either the pathnames of the files you're comparing or labels describing the versions of the file.
Glance Bar	<p>The <b>Glance Bar</b> summarizes the differences between the files displayed on screen. The black vertical bars indicate what portion of the files are on screen; they track the vertical scrolling of the files.</p> <p>The colored bars indicate changes in the files; the coloring and shape of the bars reflects the color and shape of the change within the files as though seen from a birds-eye.</p> <p>As the mouse moves over the <b>Glance Bar</b>, the line numbers of the corresponding location are shown in the <b>Status Bar</b>. A star "*" is used when the line represents a <b>Void</b> line in a file panel. Click the <b>Glance Bar</b> to scroll to that line in the file.</p>
View Selector	<p>The view selector enables you to select between the <i>Reference View</i> and <i>Edit View</i>.</p> <p>The <b>Reference View</b> is a static view of the changes in the files as originally read from disk. In this view the files are considered read-only. You may scroll around and view the differences and you may copy things to the clipboard -- but you cannot modify the files.</p> <p>This mode can be useful in various situations, such as when you want to see the changes between two historical versions of a file.</p> <p>The <b>Edit View</b> is an interactive editor and live difference viewer. It enables you to make changes</p>

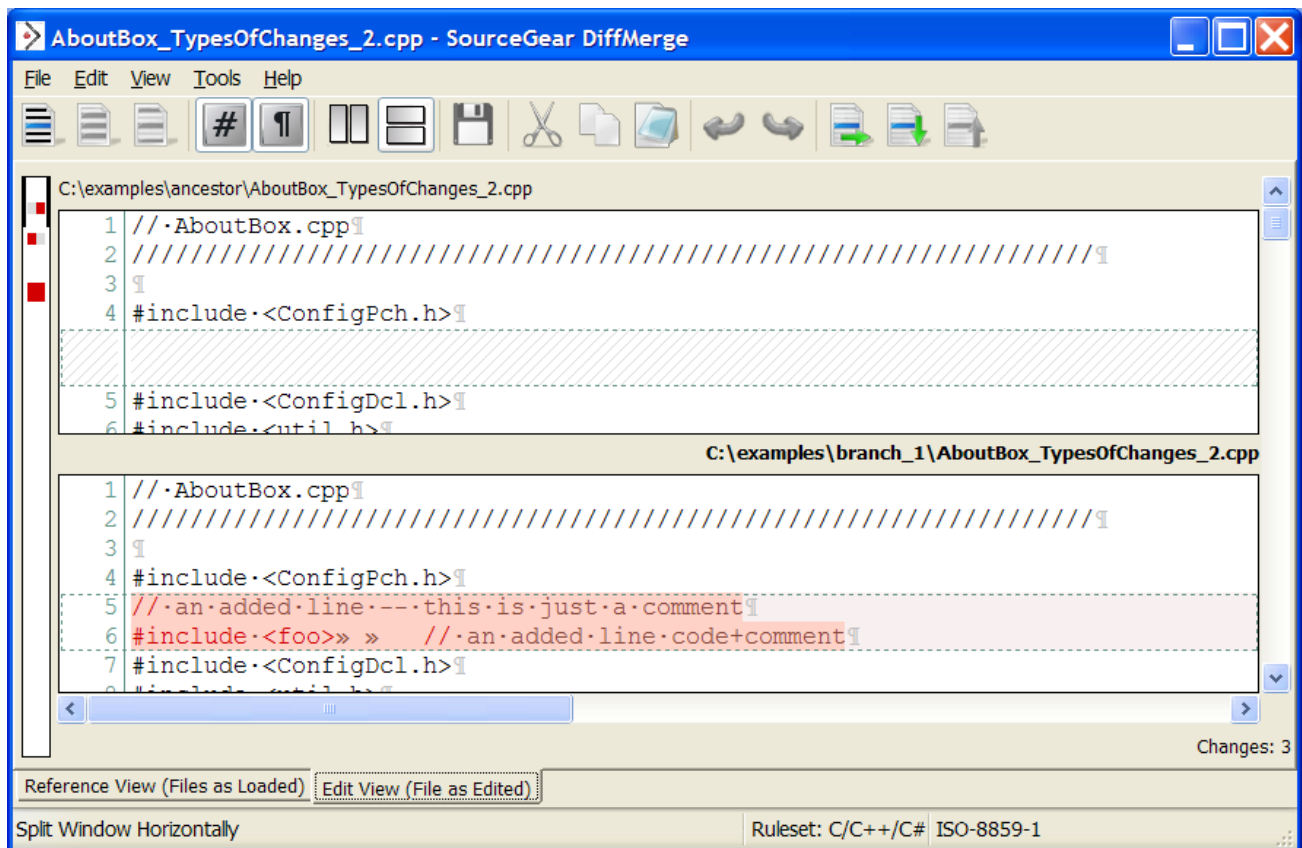
	<p>to the center panel in a <b>File Merge Window</b> and the right panel in a <b>File Diff Window</b>. As you edit, your changes are highlighted, the files are re-compared in real-time, and their changes are displayed.</p> <p>The <b>View Selector</b> is only present when editing is permitted on the files. When not present, the window only shows the <b>Reference View</b> and treats all files in the window as read-only.</p>
<b>Active Ruleset</b>	The <b>Active Ruleset Indicator</b> shows the current <b>Ruleset</b> in use in this window. The Ruleset provides rules for comparing and displaying file content (such as whitespace handling and character encodings).
<b>Character Encoding</b>	The Character Encoding Indicator shows the character encoding of the files. If all 3 have the same encoding, it is listed once. If they are different, each is listed. "(BOM)" is listed with the encoding when a Unicode Byte Order Mark is present.
<b>Change Summary</b>	The <b>Change Summary Indicator</b> shows a brief summary of the number of changes and conflicts in the current View.

## Window Splitter Orientation

By default, DiffMerge shows the files side-by-side with vertical “splitters” between them. This mode allows you to easily see and match up the corresponding lines in the files. However, you may have to scroll horizontally to see parts of a line.



DiffMerge also lets you view the files one above another with horizontal “splitters” between them. In this mode, it may be a little difficult to see the line correspondence, but you should be able to see the entire line in each file. In this mode, the order of the files is the same: editing takes place in the bottom/right file in a File Diff Window and the center file in a File Merge Window.



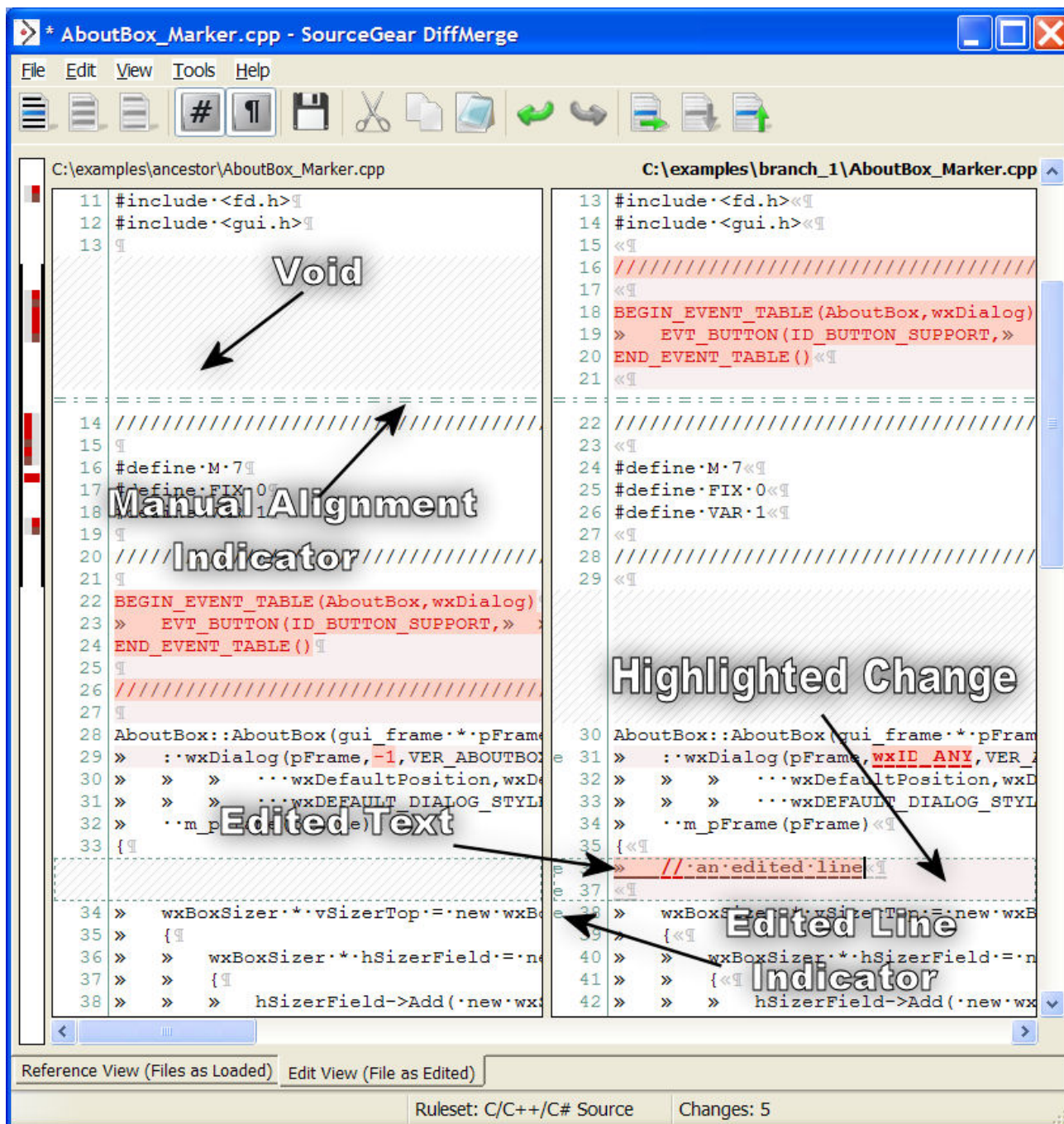
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## Displaying Files

Within a file panel, file content is drawn in a variety of ways to show equal text, non-equal text, edited text, invisible characters, omitted lines, and other information.

### Basic File Display

The following figure and its accompanying chart show some of the most basic features of file panels shown in DiffMerge windows.



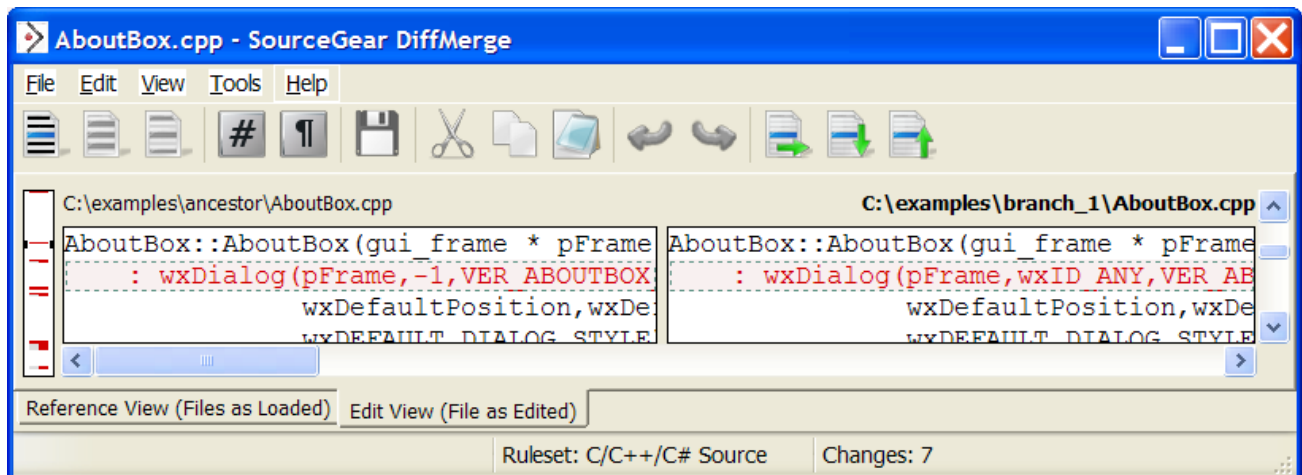
Field	Meaning
Identical Text	Identical text is show in plain black and white. Normal Context Menus are available that include traditional commands for editing text.
Changed Text	Changed text is shown in color. The specific colors used depend upon the <b>Type of Change</b> and the <b>Detail Level</b> setting. Special change-related <b>Context Menus</b> are available that include additional commands for working with changes.

<b>Highlighted Change</b>	<b>Highlighted</b> changes are surrounded by a dotted line. When a change is highlighted, it may be acted upon by the Apply Change from the Left and Apply Change from the Right toolbar buttons.
<b>Voids</b>	<b>Voids</b> are drawn when a change has fewer lines than the corresponding section in another panel.
<b>Edited Text</b>	Edits are shown in bold and underlined.
<b>Edited Line Indicator</b>	Edited lines have an "e" drawn in the left margin when <b>View Show Line Numbers</b> is on.
<b>Manual Alignment Markers</b>	<b>Manual Alignment Markers</b> enable you to force the alignment within the difference analysis. They are drawn as a pair of dashed lines between two lines of text.
<b>Invisible Characters</b>	Tabs, spaces, carriage returns, line feeds are drawn using special characters when <b>View Show Invisibles</b> is on.
<b>Gaps</b>	<b>Gaps</b> are drawn as a horizontal line between rows of text to indicate that chunks of text have been omitted from the display. These are used, for example, when the <b>Display Mode</b> is set to <b>Changes Only</b> .

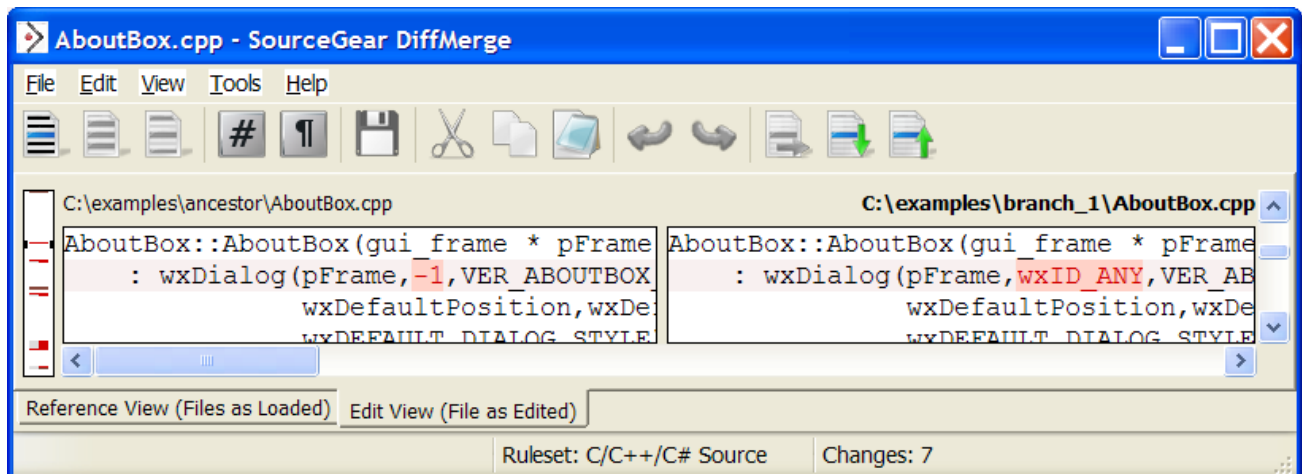
## Detail Level

DiffMerge has two Detail Levels: **Lines Only** and **Lines and Characters**.

- **Lines Only:** DiffMerge only performs difference analysis line-by-line. Changes are indicated based upon equality of the entire line (subject to the **Overall Line Matching** settings in the active **Ruleset**). Lines are colored without intra-line highlighting.



- **Lines and Characters:** DiffMerge performs line-by-line difference analysis and then within each change performs intra-line difference analysis. Lines are colored using the overall line status color and then intra-line highlights are added.



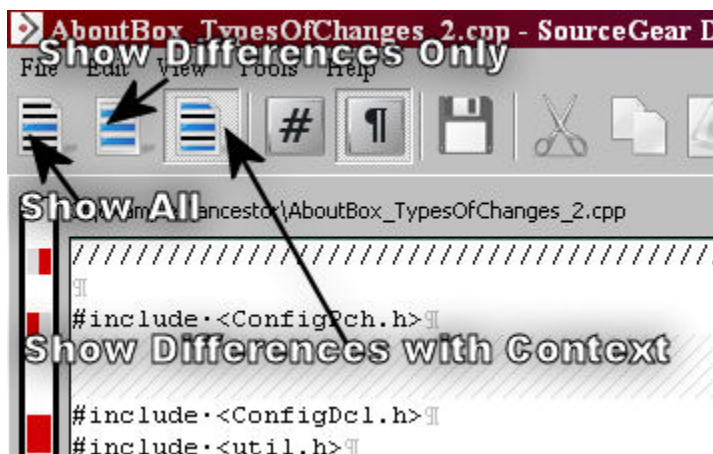
## Filtering Text

DiffMerge can show you all the text, the entire content of your files, or it can hide things that are not currently of interest.

### *The Display Mode*

There are three primary ways to display files. Each is accessible from the View menu as well as through toolbar icons:

- **Show All:** This mode shows the complete text of the files.
- **Show Differences Only:** This mode only shows the changes in the files. **Gaps** are drawn where content is hidden.
- **Show Differences with Context:** This mode shows changes with up to three lines of context around each. **Gaps** are drawn where content is hidden.

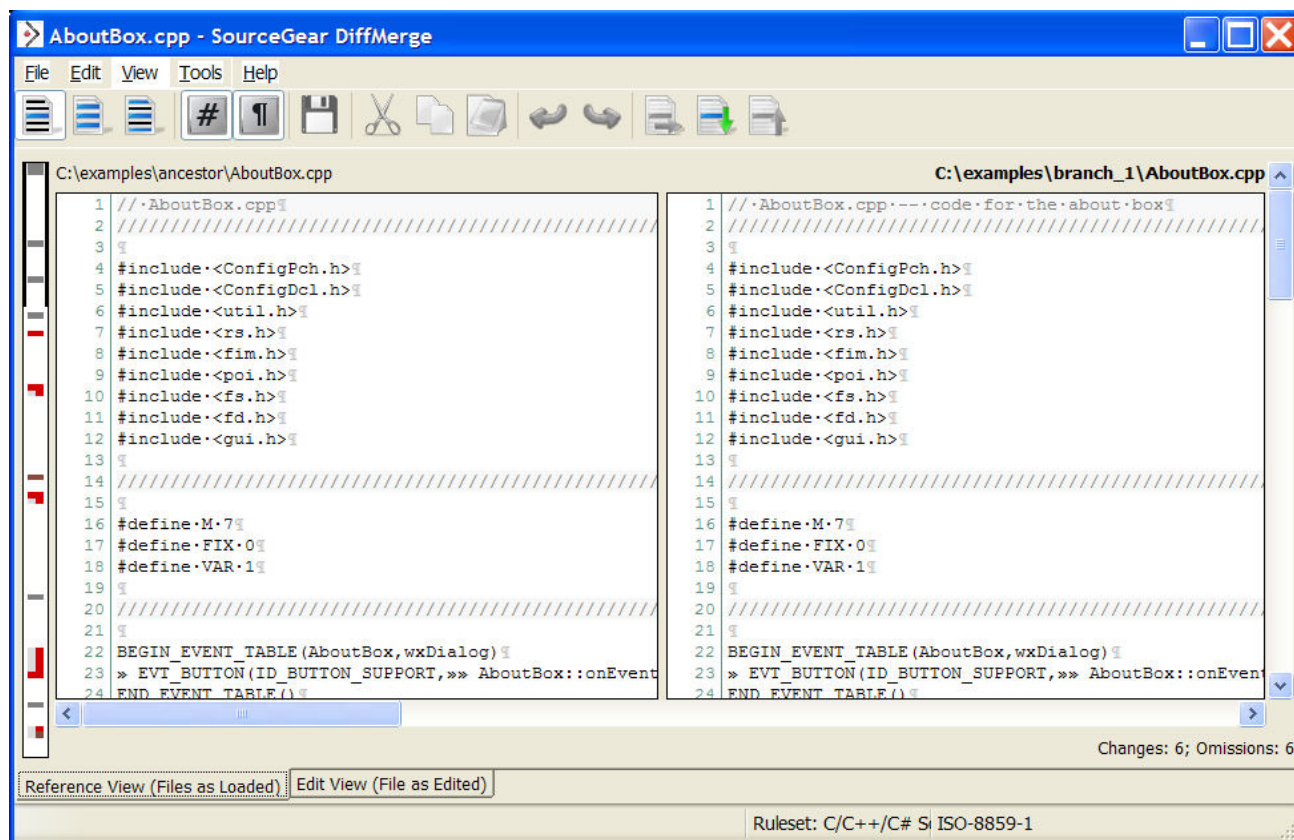


The display modes **Show Difference Only** and **Show Differences with Context** are only available in [Reference View](#).

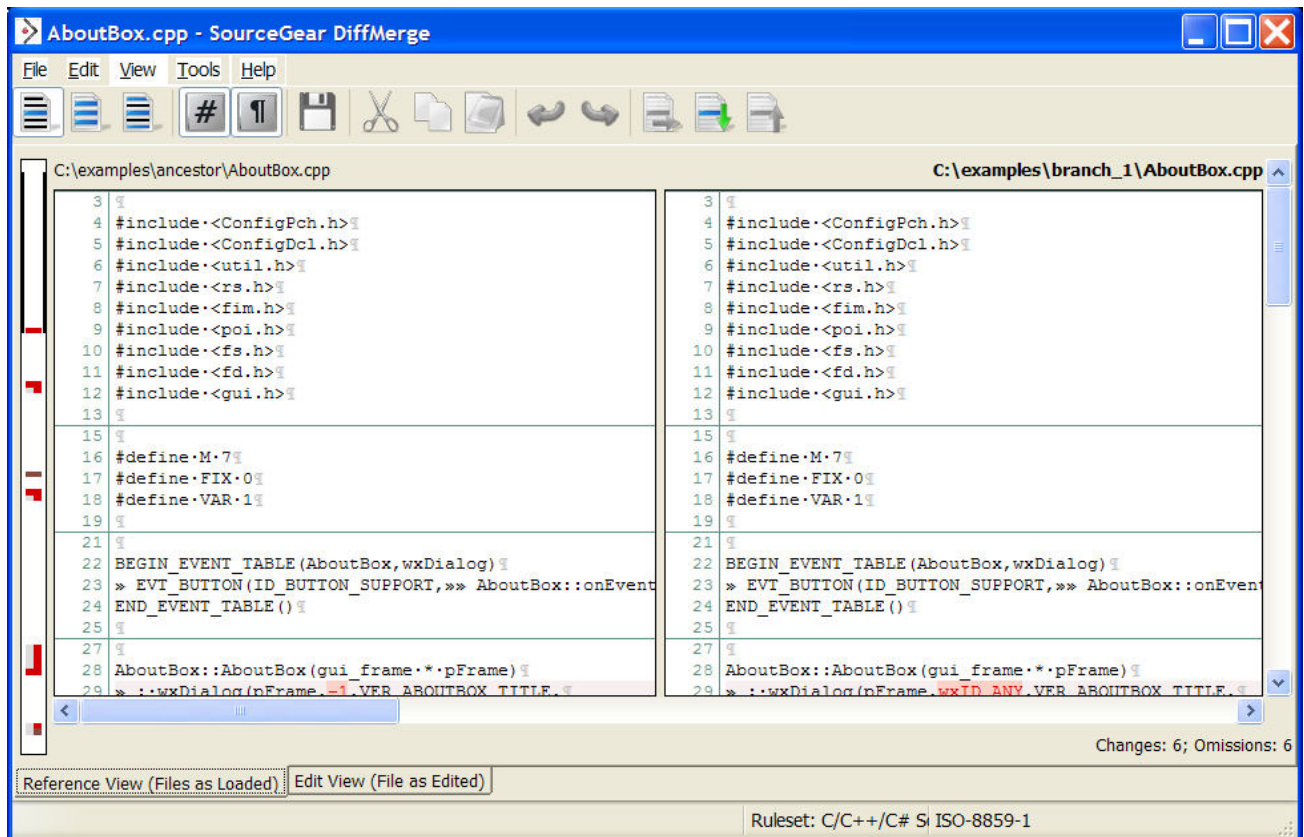
### *Hide Omitted Lines*

This option hides lines that were omitted from the difference analysis. When omitted lines are drawn, they are drawn in a special gray color; when not drawn, a horizontal line is drawn to indicate a **Gap**.

These figures show a pair of C++ source files using a modified version of the C/C++/C# Ruleset that omits lines beginning with "///" from the analysis.



Note how these lines are drawn in gray in the first figure; this indicates that they were excluded from the analysis. In the second figure a Gap is drawn in their place.

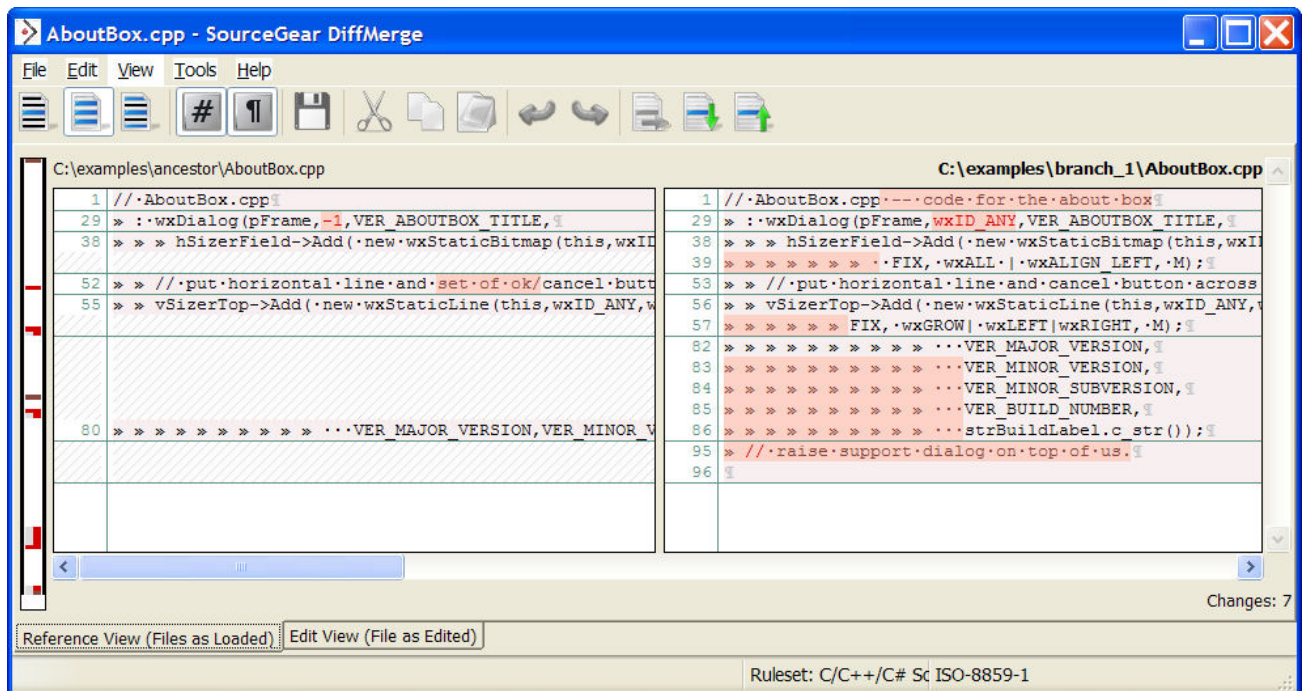


You must be in [Reference View](#) and have the **Display Mode** set to **Show All** to use this feature.

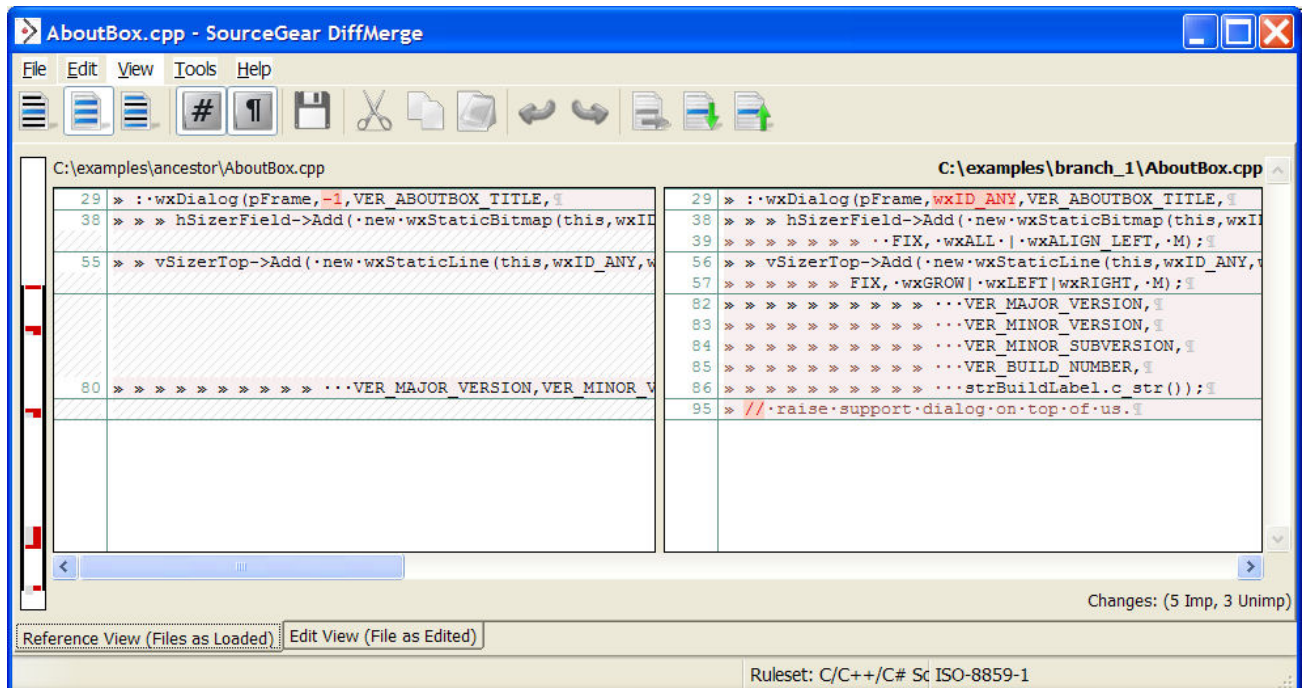
### Hide Unimportant Differences

DiffMerge classifies all changes as *Important* or *Unimportant* based upon information in the current Ruleset. The Hide Unimportant Differences option causes DiffMerge to de-emphasize the coloring and display unimportant changes. When the **Display Mode** is set to **Show All**, unimportant changes are displayed in subdued colors in the file panels and not shown in the **Glance Window**. When the **Display Mode** is set to **Show Differences Only** or **Show Differences with Context**, unimportant changes may be excluded.

These figures show a pair C++ source files using the C/C++/C# Ruleset with **Display Mode** set to changes only.



The first figure shows DiffMerge with **Display Mode** turned on; the second figure shows DiffMerge with **Display Mode** turned off.



You must have the **Detail Level** set to **Lines-and-Characters** to select this feature (**View|Hide Important Differences**).

## Types of Changes

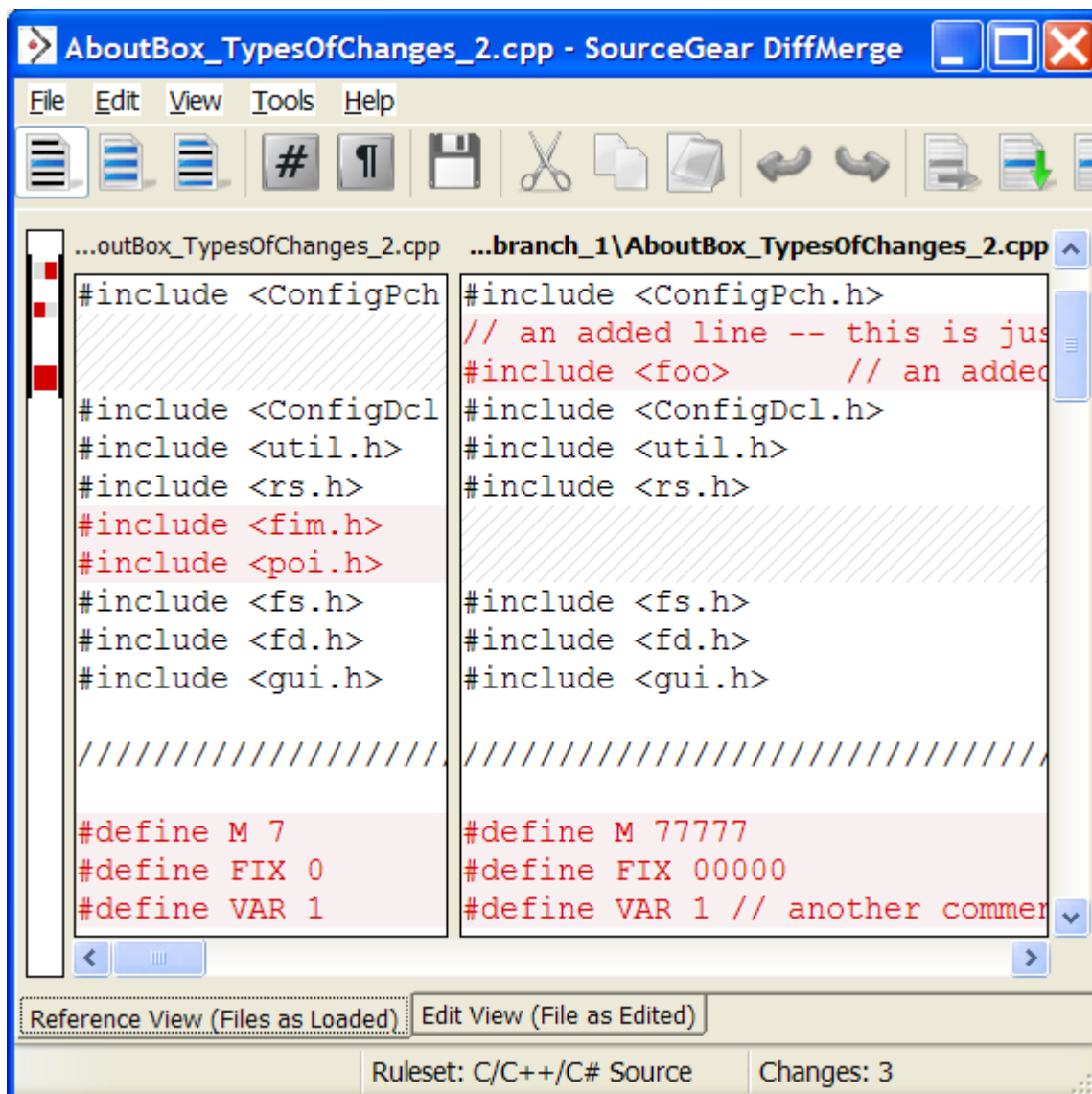
**Changes** and **Conflicts** are highlighted using various text colors, depending on the type of change and the current **Detail Level**.

### *File Diff Window Changes*

There are three types of changes in a **File Diff Window**:

<b>Additions</b>	Lines added to the file on the right that were not present in the original.
<b>Deletions</b>	Lines deleted from the file on the right that were originally present in the file on the left.
<b>Changes</b>	Lines that were changed between the two versions. This can be either changes to an existing line or a deletion and addition at the same point in the file -- either way, it looks like a change.

The coloring is simple. The same color is used to highlight all three types of changes. When the **Detail Level** is set to **Lines Only**, you see something like the following:

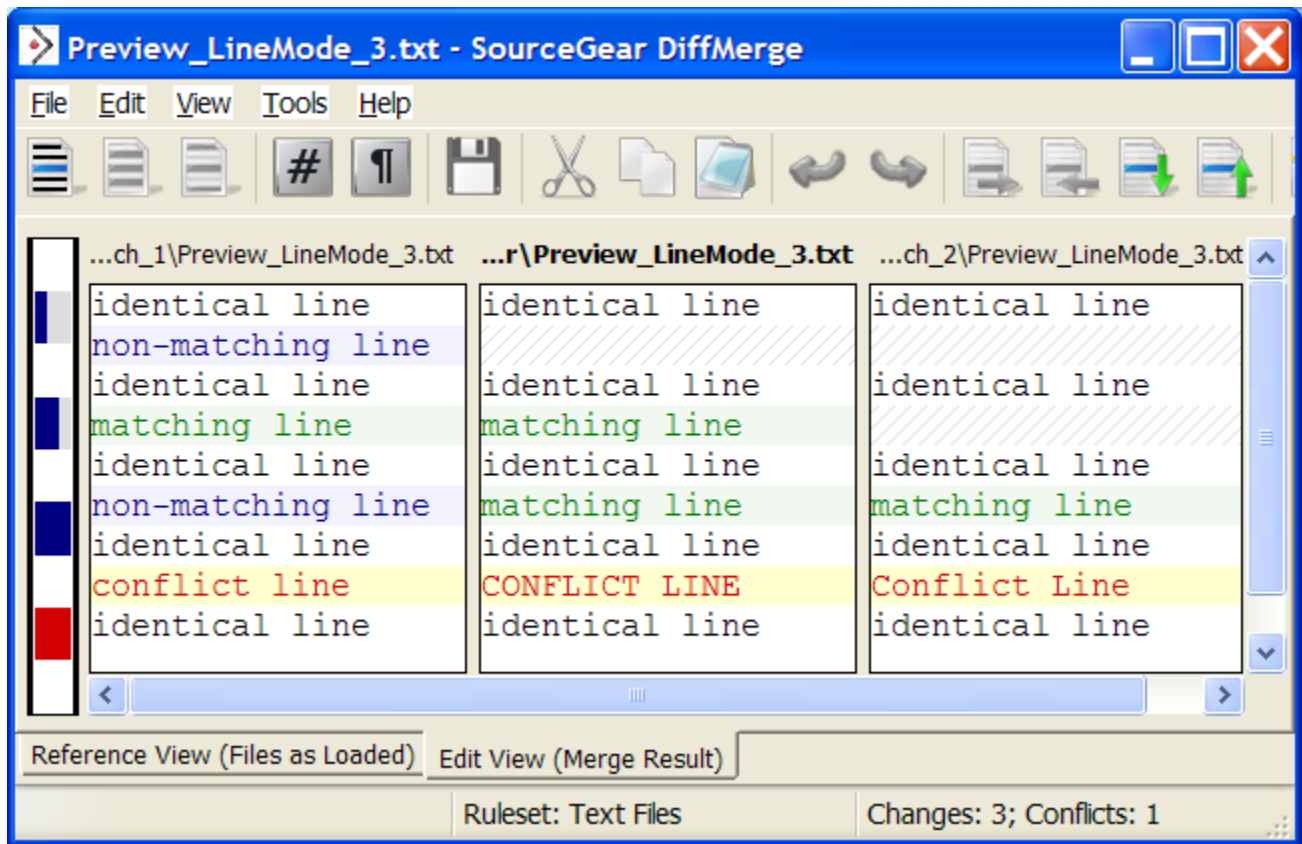


## File Merge Window Changes

There are nine types of **Changes** and four types of **Conflicts** that can occur when three files are compared.

- **Changes** occur on lines where one of the three files is different from the other two. For example, an addition to one of the branches. The **Matching Lines** in the two files are colored using the **Matching Color** and the **Non-Matching Line** in the other file is colored using the **Non-Matching Color**.
- **Conflicts** occur on lines where all three are different.

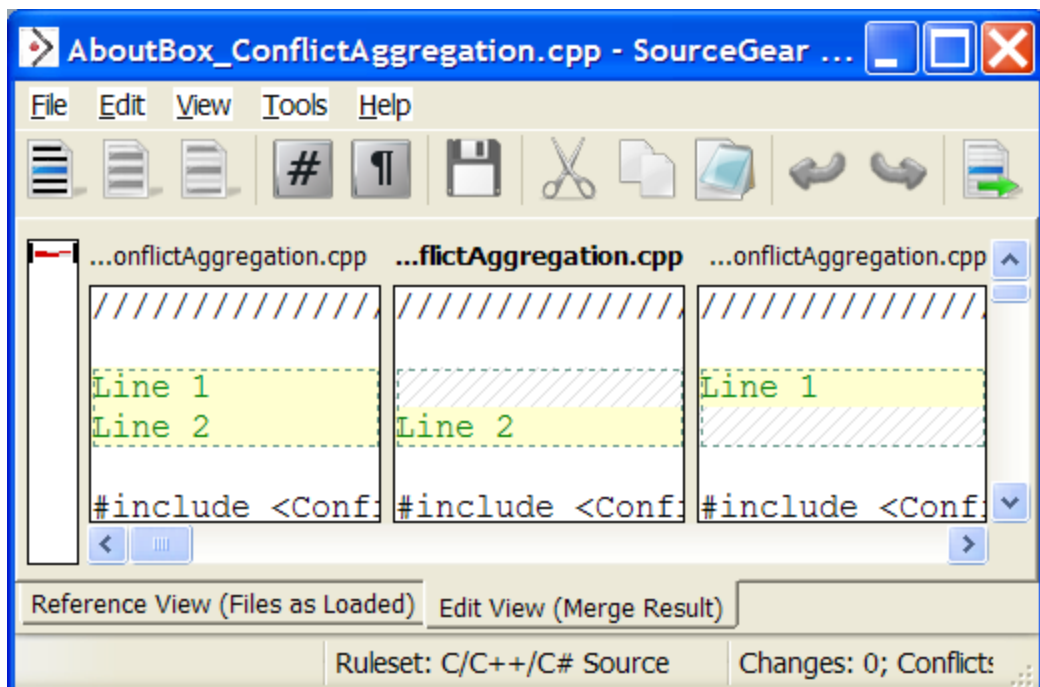
When the **Detail Level** is set to **Lines Only**, you see a screen similar to the following:



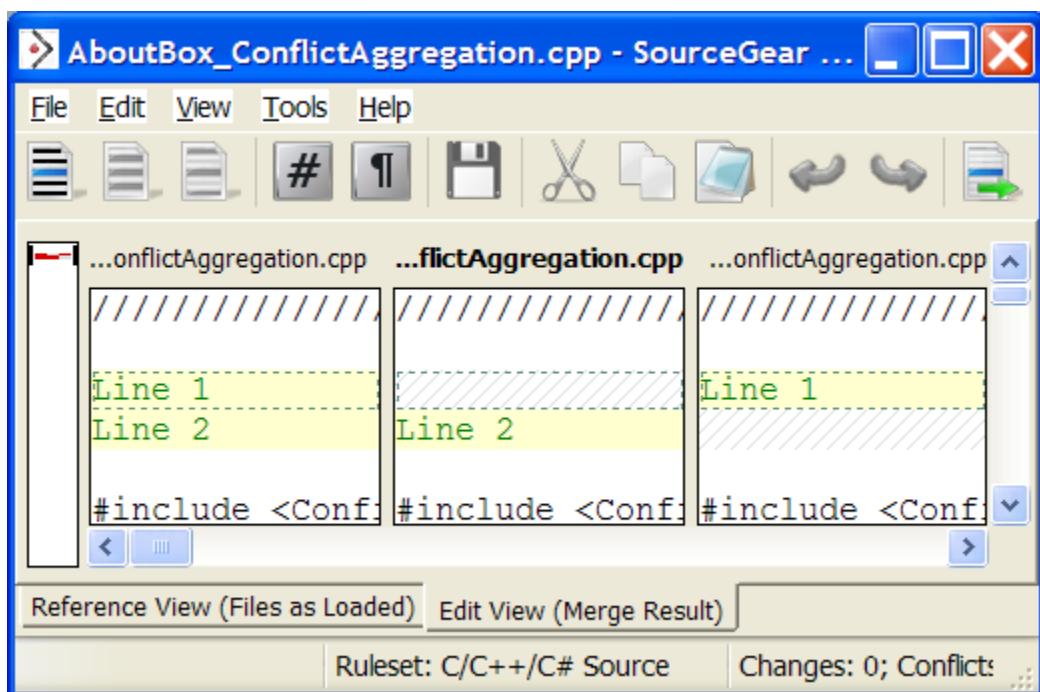
## Conflict Aggregation

As a precaution, adjacent or overlapping changes are aggregated into a single change. Usually this produces a conflict (depending on the individual types of changes in the grouping). When you're merging multiple files, these usually require your attention because DiffMerge cannot automatically determine what to do with them.

For example, in the figure below, "Line 1" was added to both branches (in the left and right panels) and "Line 2" was deleted from the right panel. So what should the merge result look like?



To access an individual line change within a block of changes, hold down the Control key while using the left or right mouse buttons to select the desired line.



---

# Editing

DiffMerge enables two types of editing: **Interactive Editing** and **Patch Operations**.

## Interactive Editing

**Interactive Editing** refers to the normal editing operations found in most text editors and includes inserting/deleting text with the keyboard and mouse and the standard cut/copy/paste clipboard operations.



Editing is only permitted in **Edit View** in the **Editable Panel**. In **File Diff Windows** the **Editable Panel** is the right panel; in **File Merge Windows** the **Editable Panel** is the center panel.

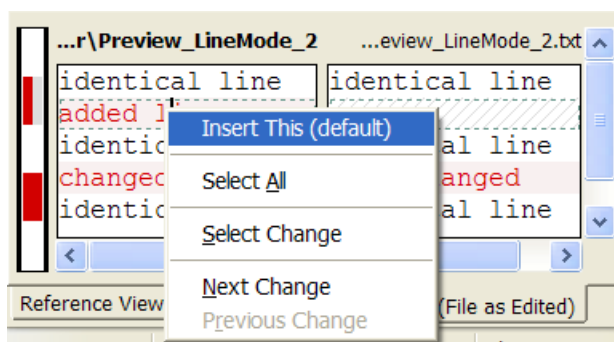
## Patch Operations

**Patch Operations** are a convenience mechanism for applying changes to the **Editable Panel** in the **Edit View** from one of the other file panels. For example, **Apply Change from Left** copies the text from the left panel to the editable panel; depending on the type of change, this can either be an **Insert**, a **Replace** or a **Delete**.

To perform a **Patch Operation**, highlight a **Change** or **Conflict** and raise a context menu over it with the right mouse button. This lists the appropriate **Patch Operations** for the particular type of change.

Most of the time, the first item in the context menu will be labeled with "(default)" -- this is the **Default Action**. To apply the default action you can shift-right-click on the change or select one of the **Apply Change from Left or Right** toolbar buttons to automatically apply the individual change without raising the context menu. For conflicts, there isn't a **Default Action**.

	Apply Change from Left
	Apply Change from Right



*Tip: The exact wording of the menu item depends upon which window the mouse is clicked in -- contrast "Insert This" when clicking on the left panel vs. "Insert From Left" when clicking in the center panel.*

All **Patch Operations** are variations of one of the following verbs and refer to the content of the currently highlighted change or conflict within each file panel.

<b>Insert</b>	This option inserts content from the source panel into the <b>Void</b> in the edit panel.
<b>Replace</b>	This option deletes the content in the editable panel and inserts the content from the source panel.

<b>Delete</b>	This option deletes the content in the editable panel.
<b>Prepend</b>	This option inserts the source content <i>before</i> the existing content in the editable panel.
<b>Append</b>	This option appends the source content <i>after</i> the existing content in the editable panel.

## Merge to Center Panel (Auto-Merge)

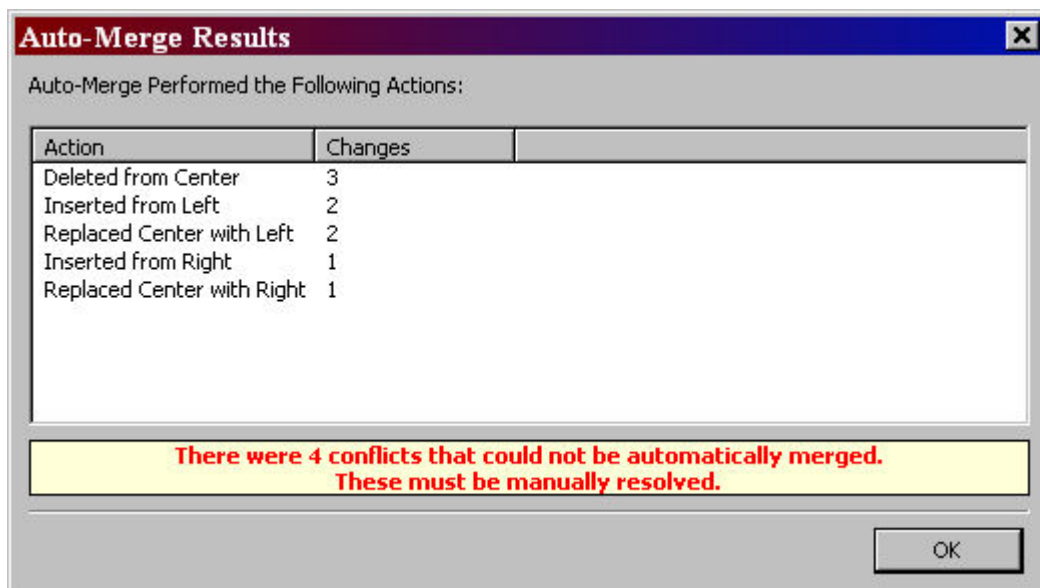
**Auto-Merge** automatically applies the **Default Action** for all of the non-conflict changes in a **File Merge Window**. The goal of **Auto-Merge** is to automatically take care of the easy changes so that you can focus on the conflicts.

For each automatic change made in the right and left panels, the default **Patch Operation** is applied for that type of change. This is done as a batch (in 1 transaction) and may be undone using **Undo**.



To start Auto-Merge, select **Edit|Merge to Center Panel**, or click the toolbar button

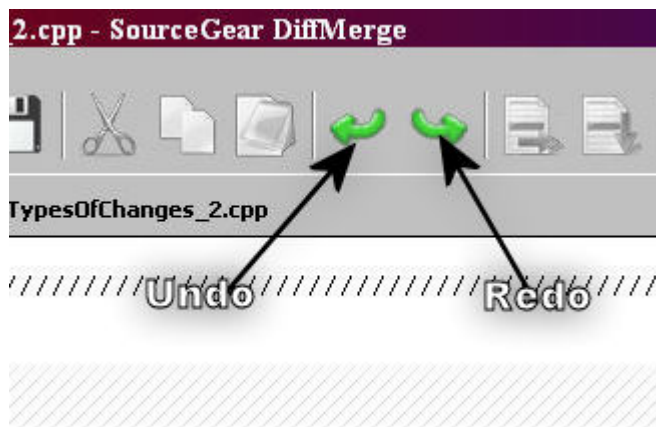
After **Auto-Merge** completes, The **Auto-Merge Results** dialog displays a report on what changes were made, from where they came, and finally a notification about what conflicts could not be merged.



*It is strongly recommended that if you wish to use **Auto-Merge** you use it BEFORE making any other edits in the window. This prevents **Auto-Merge** from possibly reverting some of your edits. Also, after **Auto-Merge** has been applied to a window, it is disabled. This is to prevent **Auto-Merge** from being used twice and possibly reverting some edits made by the first **Auto-Merge**.*

## Undo/Redo

DiffMerge features an unlimited Undo/Redo so that it is possible to undo changes all the way back to the initial state.

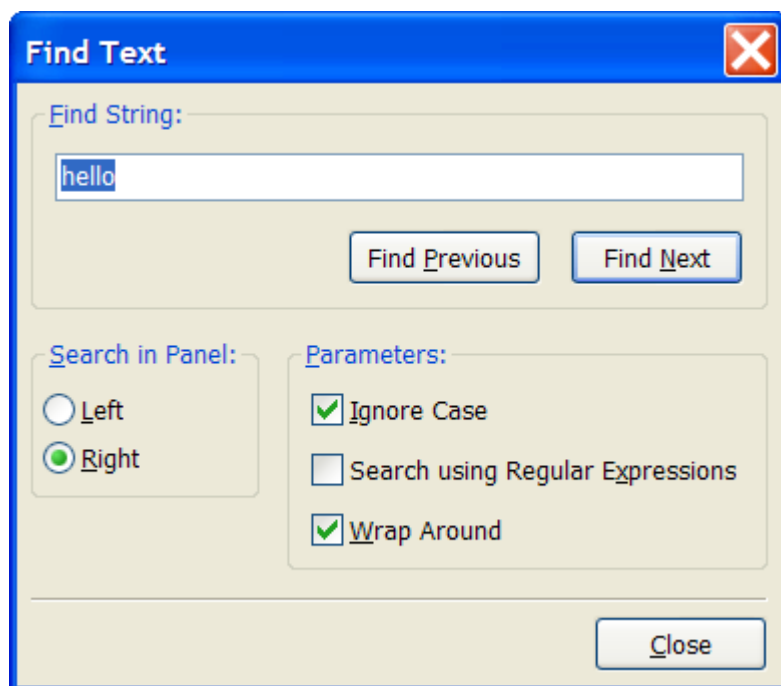


## Moving Around within Files

DiffMerge offers a number of ways to find key text within a **File Diff** and **File Merge Windows**.

### Find...

The **Find Dialog** is accessed from **Edit|Find**. It can be used to search forward or backward for text within the files. Check boxes and radio buttons enable you to ignore case, search using Regular expressions, and choose which file panel you wish to search from.



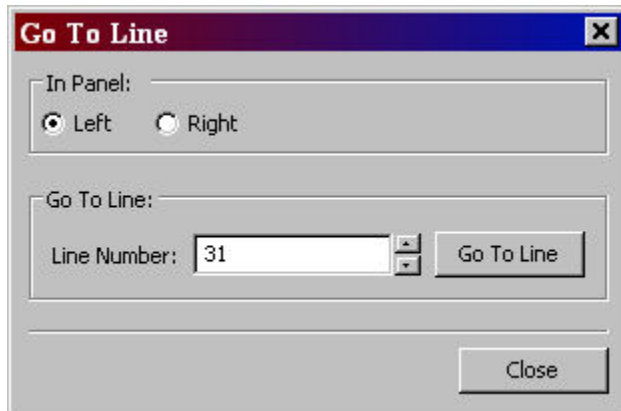
When searching with Regular Expressions, backward searching is disabled.

### Find Next / Find Previous

**Edit|Find Next** and **Edit|Find Previous** repeat the last search performed by the **Find Dialog**.

## Go To Line...


The **Go To Line Dialog** is accessed from **Edit|Go To Line...**. It enables you to jump to a specific line in the file.



## Next and Previous Change

The **Next Change** and **Previous Change** commands enable you to quickly jump between changes in the files.

To jump to the *next* change in the file, click  or select **Edit|Next Change**.

To jump to the *previous* change in the file, click  or select **Edit|Previous Change**.

## Next Conflict and Previous Conflict

The **Next Conflict** and **Previous Conflict** command are available only in the **File Merge** windows and enable you to skip to places where the right panel and left panel have both been changed from the original version, but not in the same way.

To jump to the *next* conflict, click  or select **Edit|Next Conflict**.

To jump to the *previous* conflict, click  or select **Edit|Previous Conflict**.

# The Folder Diff Window

The **Folder Diff Window** enables you to compare two folders and quickly see all of the differences between them. That is, it shows you which files and folders are present in both or only present in one. It also shows you which files are equal in both folders and which are not.

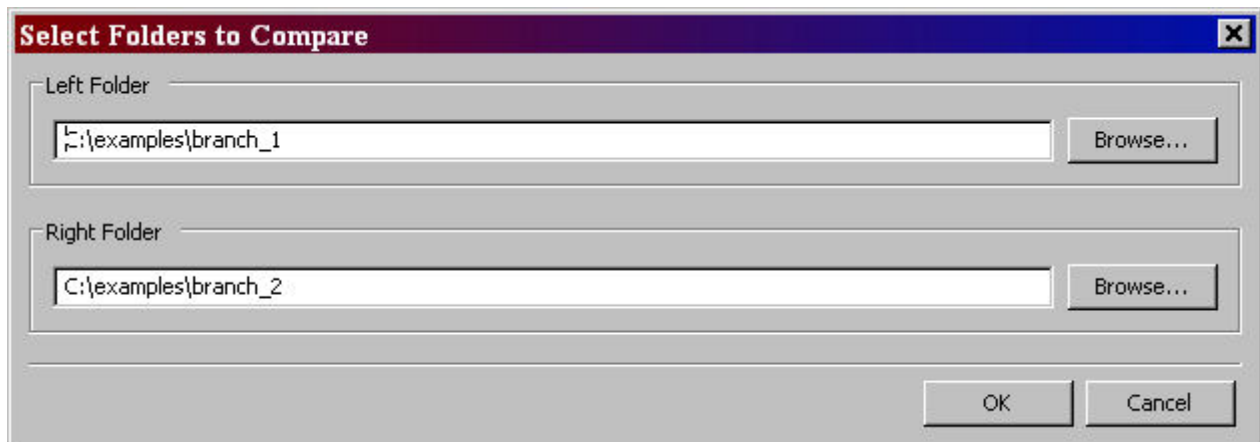
You can use this, for example, to compare two versions of a software project and quickly see an overview of the changes between them. You can then click on individual non-equal files to open a **File Diff Window** and see the individual changes within the files.

The **Folder Diff Window** is a *recursive* listing; that is, it examines all files and folders contained within the given root folders and all sub-folders regardless of how deeply the folders are nested. Producing a listing in a large folder tree can take a significant amount of time.

---

## Opening a Folder Diff Window

To open a Folder Window, select **File|Open Folder Diff**. You are given a brief **Select Folders to Compare Dialog** enabling you to type the pathnames of the folders you wish to compare; browse buttons are provided that open the standard system **Browse for Folder** dialog.

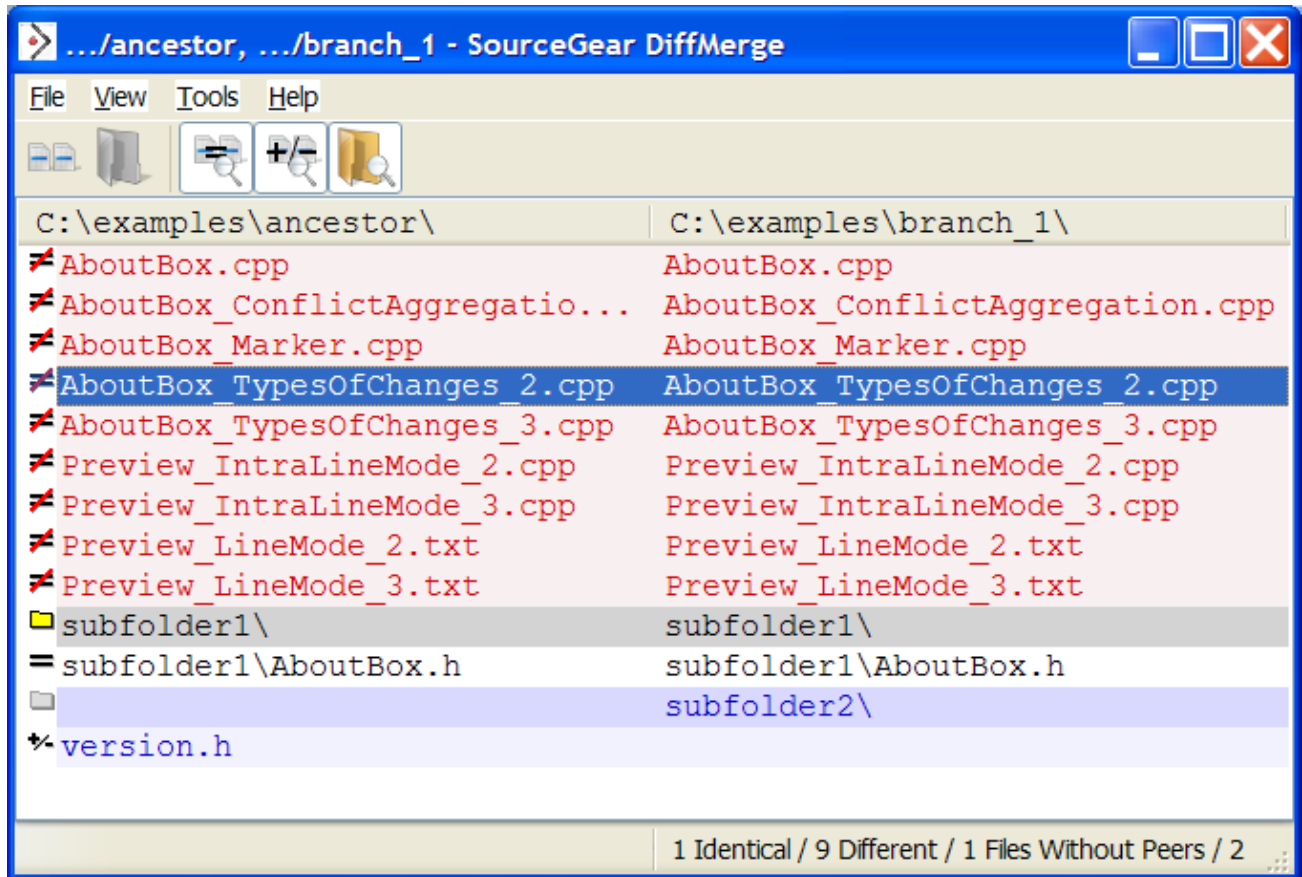


*Note: if the set of folders selected are already open in another window, that window is raised rather than creating a new, duplicate window.*

---

## Folder Diff Windows Layout

The following image shows the key features of a **Folder Diff Window**.



The window has two columns listing the files and folders that are present in the two folders being compared. This is a *recursive* listing; all sub-folders are completely expanded. Lines are colored and an icon is attached to each line based upon the status of the files or folders on the line. The status bar contains a summary of the number of files and folders listed.

For files present in both folders, DiffMerge indicates which are identical and which are different.

---




## Viewing Options

Within the **Folder Diff Window** you can open new **File Diff Windows** or **Folder Diff Windows** by double-clicking a line in the list or using the **View|Compare Selected Files** or **View|Compare Selected Folders** commands.

---

## Display Detail

The **Folder Diff Window** enables you see all files and sub-folders in the folders; alternatively you can have it omit various types of items so that you can decrease clutter and concentrate on the important items more easily.

	<b>View Show Equal Files</b> causes equal files to be shown or hidden.
	<b>View Show Files without Peers</b> causes peerless files to be shown or hidden.
	<b>View Show Folders</b> causes sub-folders to be shown or hidden.

Selecting (or unselecting) **View|Show Errors** causes file system errors to be displayed or hidden.

# The Options Dialog

The **Options** dialog box presents the user with a variety of options, the titles of which are listed on the left side of the **Options** dialog.

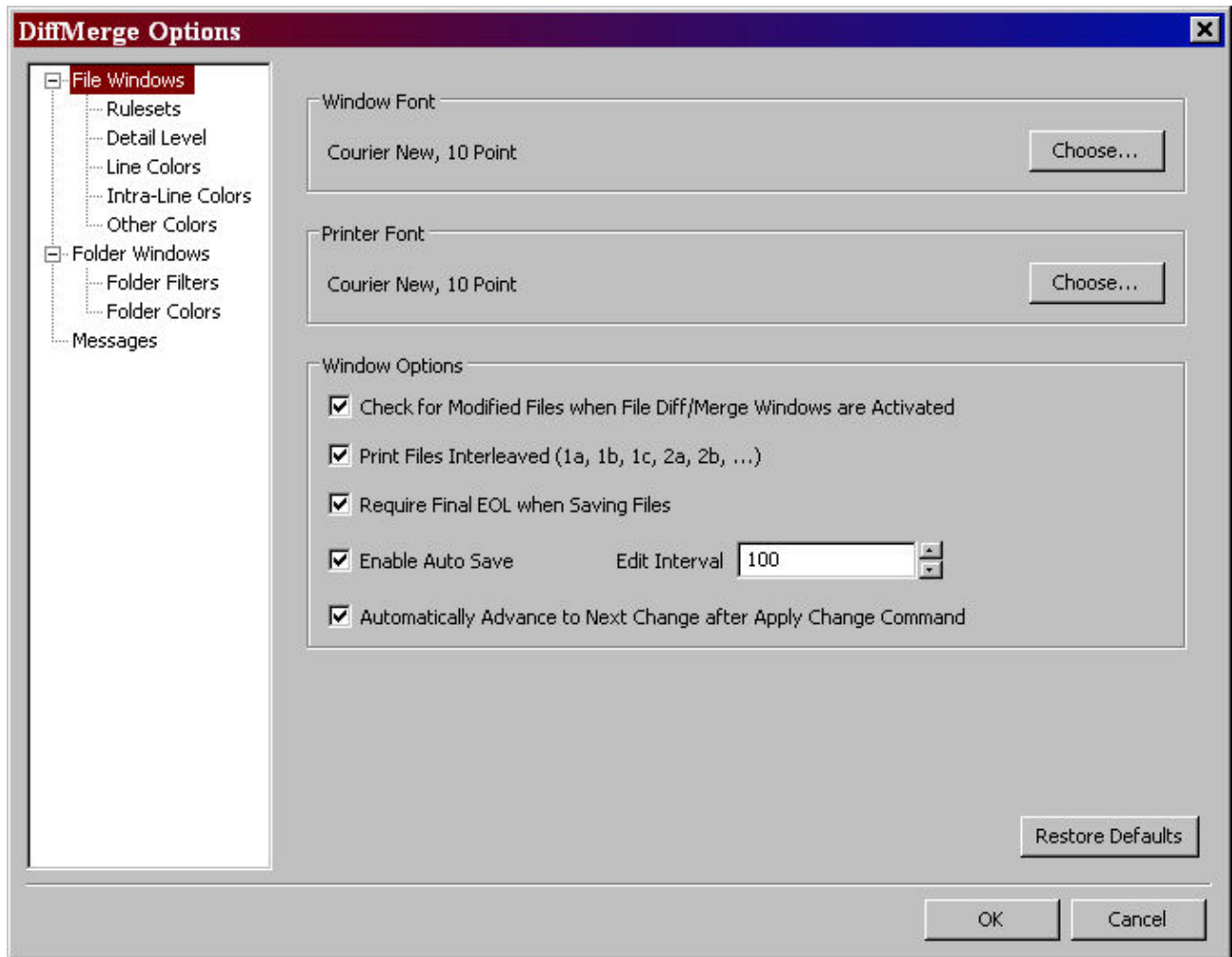
Each section of the Options dialog has three elements in common - the buttons on the bottom of its screen. **OK** and **Cancel** provide their usual functions, and **Restore Defaults** is ideal for turning things back to normal if you've made one change too many and are unhappy with the result. Restore Defaults restores all of the fields **ONLY ON THE CURRENT PAGE** of the dialog to factory settings. If you wish to restore defaults you altered from another page of the **Options** dialog, you'll have to do it from the individual page.

To access the **Options** dialog, select **Tools|Options**.

---

## File Windows

By default, **File Windows** is the first dialog page that opens when you first start DiffMerge and access **Options**. This dialog enables you to change the default fonts for displayed files and printer files by selecting the **Choose...** buttons.



The third portion of the dialog page enables you to click a variety of options on and off.

Field	Meaning
<b>Check for Modified Files</b>	When selected, DiffMerge checks to see if the files were changed by another application while the DiffMerge window was not the front window. A message box informs you if files were changed, offering you a chance to reload them.
<b>Print Files Interleaved</b>	When printing file windows, DiffMerge actually prints 2 (or 3) files simultaneously. When this option is checked, DiffMerge prints all the page 1s first, then all the page 2s, and so on. When this option is off, DiffMerge prints all of the left file pages, then all of the center file pages and then all of the right file pages.

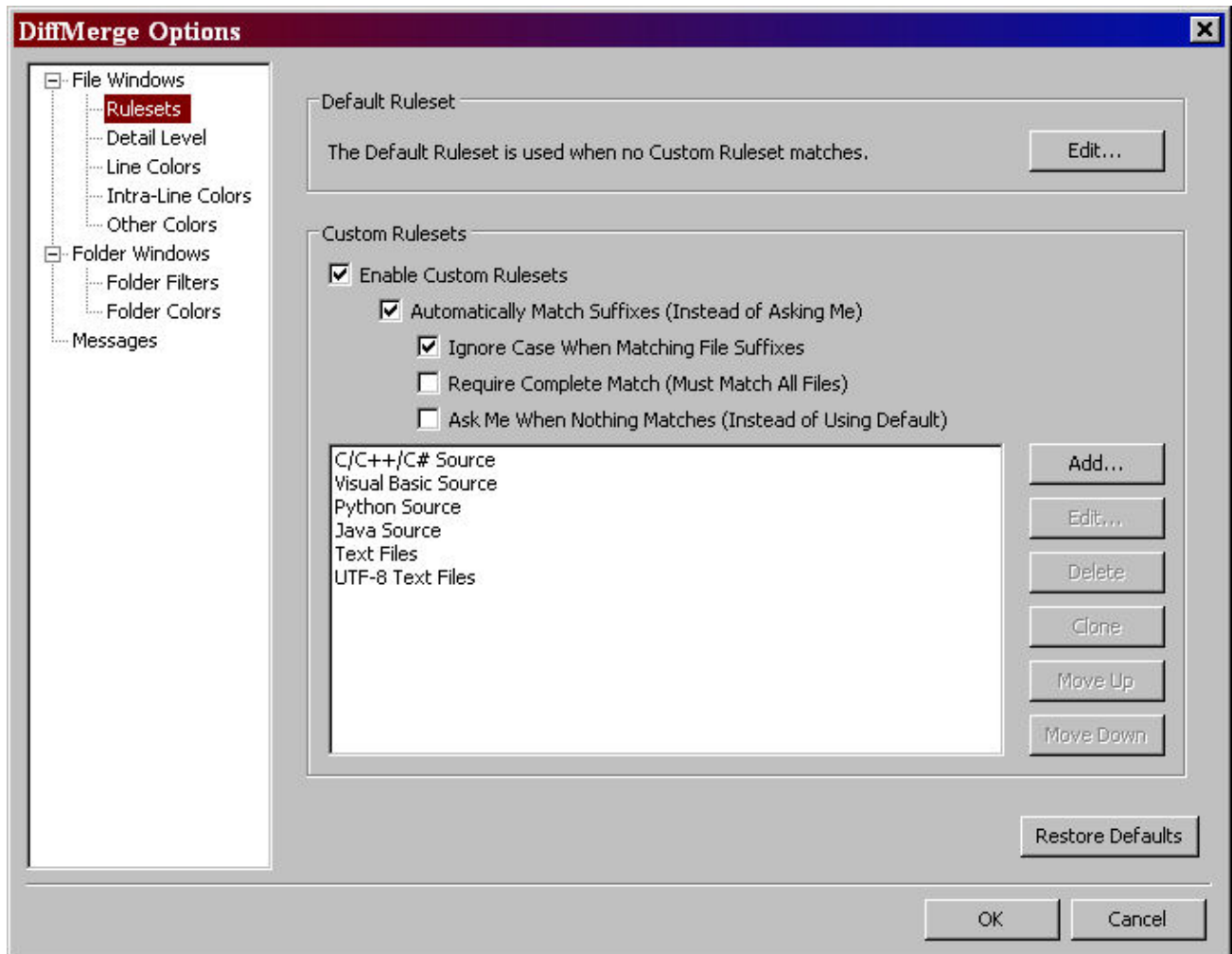
<b>Require Final EOL</b>	When this option is enabled, DiffMerge adds the appropriate end of line character(s), if necessary, to the end of the final line of the file before saving.
<b>Enable Auto Save</b>	<p>This option directs DiffMerge to periodically save the edited file in a special temporary file. In the event of a program or system crash, you can recover your work from the temporary file. Auto save does not modify the original file.</p> <p>The auto-save is performed after a user-adjustable number of edits. For example, if the edit-interval is set to 100, then the auto-save file is rewritten after every 100 changes.</p>
<b>Automatically Advance</b>	<p>If this option is checked, DiffMerge automatically advances the patch-highlight to the next change/conflict when you press one of the "apply change from..." toolbar buttons. This enables you to rapidly apply changes without having to advance using the Next Change toolbar button.</p> <p>If not checked, DiffMerge leaves the caret where it was and does not highlight a change. The user can then use the Next toolbar button to advance.</p>

Clicking **Restore Defaults** restores all the fields on this (and only this) page to factory settings

# Rulesets

The **Rulesets** portion of the **Options** dialog controls whether Custom Rulesets are enabled and if so, how they are chosen when a set of files is loaded into a File Diff or Merge window.

**Rulesets** enable custom per-file-type handling of various DiffMerge features, such as character encoding, end of line conventions, and whitespace handling. These features can be triggered automatically by file suffix or interactively after files are loaded.



Field	Meaning
Edit Default Ruleset	<b>This default Ruleset is used when Custom Rulesets are not enabled or when no appropriate Custom Ruleset exists. This button enables you to edit this default Ruleset, and opens the <a href="#">Edit Default Ruleset dialog</a>.</b>
Enable Custom Rulesets	<b>Turns on Custom Rulesets. When OFF, the default Ruleset is used for all files.</b>
Automatically Match	<b>Each Custom Ruleset includes a list of file suffixes indicating the file types to which it applies.</b>

Suffixes	<p>When set, DiffMerge uses the suffix list of each custom Ruleset (in order) to automatically find a matching Ruleset.</p> <p>For example, if you load a set of files "foo.cpp" and "bar.cpp", DiffMerge automatically selects the "C/C++/C# Source" Custom Ruleset. If you load "foo.py" and "bar.py", DiffMerge automatically selects the "Python Source" Custom Ruleset.</p>
Ignore Case	<p>Ignores the case of the file suffixes when matching.</p>
Require Complete Match	<p>When the files in the set have different suffixes, it's possible to take the first match, or to require all of the files to match the same rule.</p> <p>You probably don't want this turned on. Temp files often get a system-defined temp name rather than the proper suffix. Enabling one file to match enables you to ignore the temp file suffix when it's being compared against a properly named file in your workspace.</p>
Ask Me When Nothing Matches	<p>If no suffix match can be found, DiffMerge either uses the default Ruleset or asks you to pick one from the Choose Ruleset dialog.</p>
List of Custom Rulesets and Buttons	<p>The list box lists all of the currently defined Custom Rulesets. DiffMerge ships with Rulesets predefined for C/C++/C# Source, VB Source, and several others. This list is ordered – DiffMerge searches for a match in the order listed. You can double-click a line item and edit/view the settings for it (or click the Edit button to the right). Other buttons to the right enable you to perform the standard operations Add/Delete/Clone and MoveUp/MoveDown.</p>
Restore Defaults	<p>Restores all of the fields on this (and only this) page to factory settings.</p>

## Editing Rulesets

DiffMerge includes a default Ruleset and a list of named custom Rulesets. The default Ruleset is used when the use of custom Rulesets is disabled and when none of the custom Rulesets match the suffixes of the files being loaded in a window.

The **Edit Ruleset** dialog enables you to modify the settings within a Ruleset. You can edit both the default Ruleset (using the **Edit...** button at the top of the page) and individual custom Rulesets (using the **Edit...** button to the right of the list of custom Rulesets).

When editing a custom Ruleset, the **Edit Ruleset** dialog is entitled "Edit Ruleset: <custom Ruleset name>" and has the following 5 pages:

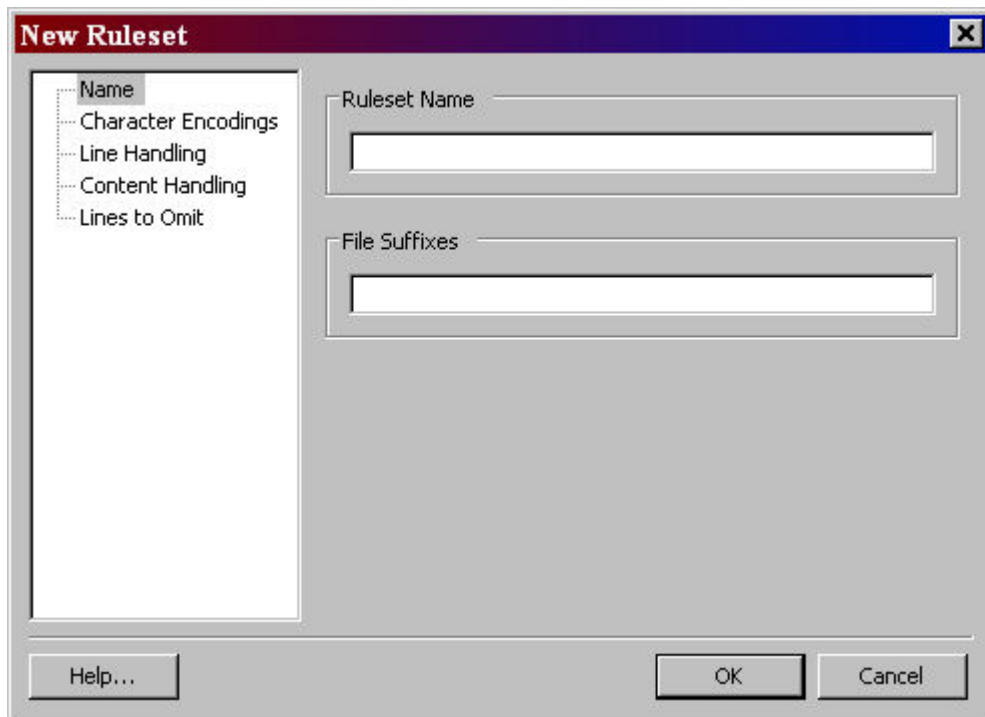
- Name
- Character Encodings
- Line Handling
- Content Handling
- Lines to Omit

When you're editing the default Ruleset the **Edit Ruleset** dialog is entitled **Edit Default Ruleset** and only has the last 4 pages listed above.

### Name

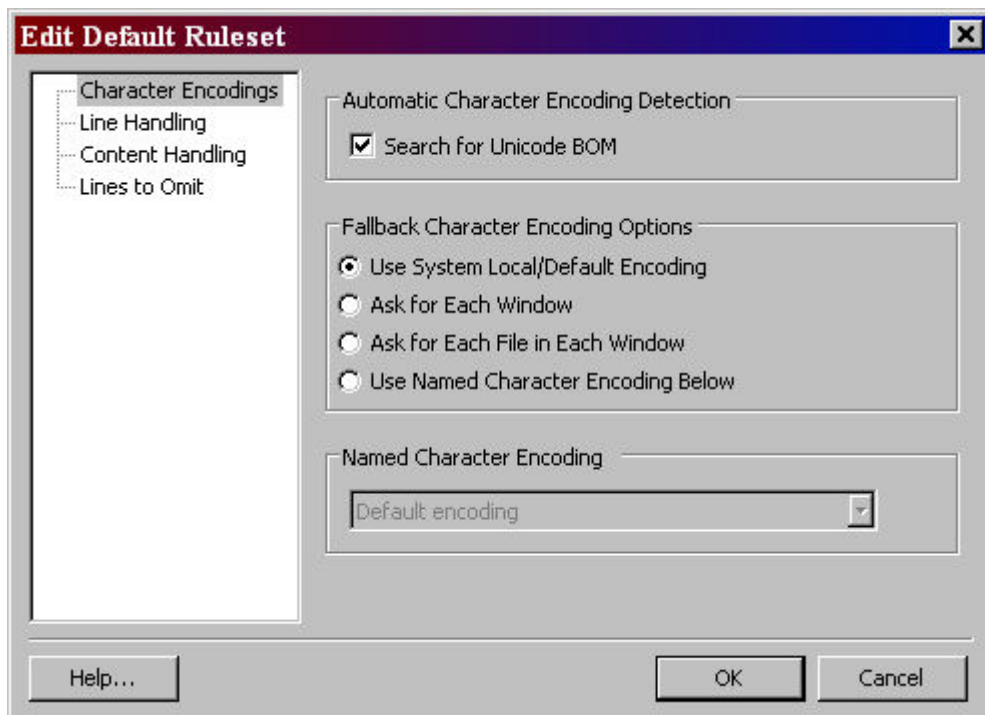
The **Name** page of the **New Ruleset** dialog enables the user to enter a "human-readable" Ruleset name that DiffMerge uses to display on the **Rulesets** page of the **Options** dialog and in the file window's status bar. This name can be entered in the top text box of the **Name** page.

The **File Suffixes** text box is a space-separated list of suffixes. When DiffMerge loads files it tests the suffixes on the files against the ones in this list. If a Ruleset has a matching suffix for a particular file, then that Ruleset might be used.



### ***Character Encodings***

Files on disk can be stored in various character encodings. When loaded, DiffMerge converts them into Unicode(TM) before performing any analysis. This dialog enables you to specify the character encoding for files of this type, and enables you to choose a specific encoding or request to be asked each time a document is loaded.



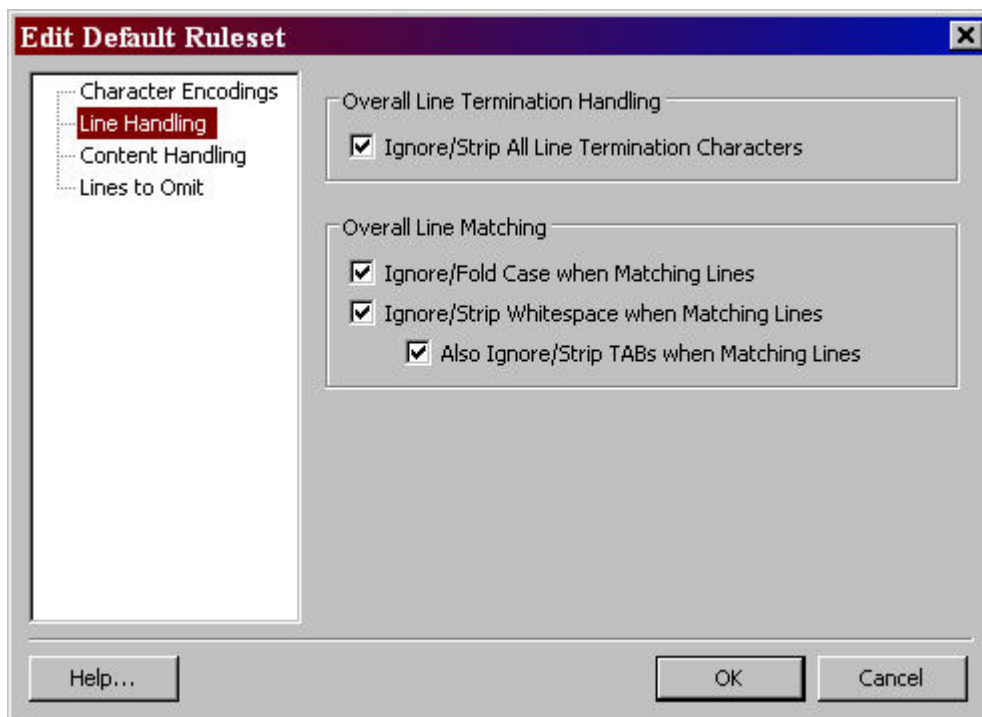
Field	Meaning
<b>Search for Unicode BOM</b>	When this is enabled DiffMerge looks for a Unicode Byte-Order-Mark when loading files; if a Unicode Byte-Order-Mark is present, DiffMerge informs you of the file's character encoding. If the Unicode Byte Order-Mark is not present, DiffMerge uses the existing encoding options.
<b>Use System Local/Default Encoding</b>	Assume that files are encoded using the local system default character encoding. Use this if all files on your system of this type have the same encoding as the local system.
<b>Ask for Each Window</b>	Raises the <b>Choose Character Encoding</b> dialog and asks once for each set of files when a file window is opened. This enables you to have files of this type be in multiple encodings -- but the same within a group of files that you want to compare.
<b>Ask for Each File...</b>	Raises the <b>Choose Character Encoding</b> dialog once FOR EACH FILE in a set of files when a file window is opened. This enables maximum flexibility and lets you pick the encoding on a file-by-file basis. This enables files with different encodings on disk to be compared.
<b>Use Named Character Encoding Below</b>	Enables you to select a fixed character encoding from the drop-down list below it. This encoding is used for all files when this Ruleset is used.

***Note:** If a file is loaded in multiple windows, it will only be read from disk and decoded once. The value of the Character Encoding settings in the active Ruleset of the first window is used. That is, if it is loaded into a second window, it shares the in-memory copy – and NOT the character encoding settings active in the second window.*

After files are loaded, DiffMerge displays the character encoding(s) of the files in the status bar.

## Line Handling

This dialog enables you to adjust Overall Line Termination Handling as well as Overall Line Matching. Unless you have specific needs, BOTH options should always be enabled.



Field	Meaning
<b>Ignore/Strip All Line Termination Characters</b>	<p>Different platforms use different line termination characters. Such differences can cause two otherwise identical files to look like completely different files.</p> <p>When enabled, this option changes all CR, LF, and CRLF characters to generic end-of-line (EOL) markers before the difference analysis begins; line termination differences are not indicated in any way. Therefore, files from different platforms with different EOL conventions can be compared.</p> <p>When disabled, the original CR, LF, and CRLF characters are preserved and used in the analysis; the highlighting of Line Termination differences is context dependent.</p>
<b>Overall Line Matching</b>	<p>These 3 options direct DiffMerge to ignore case and whitespace during the vertical alignment portion of the difference analysis. This allows DiffMerge to achieve the best text alignment. Changes in case or whitespace are still indicated (regardless of the Detail Level), but don't negatively affect overall alignment.</p>

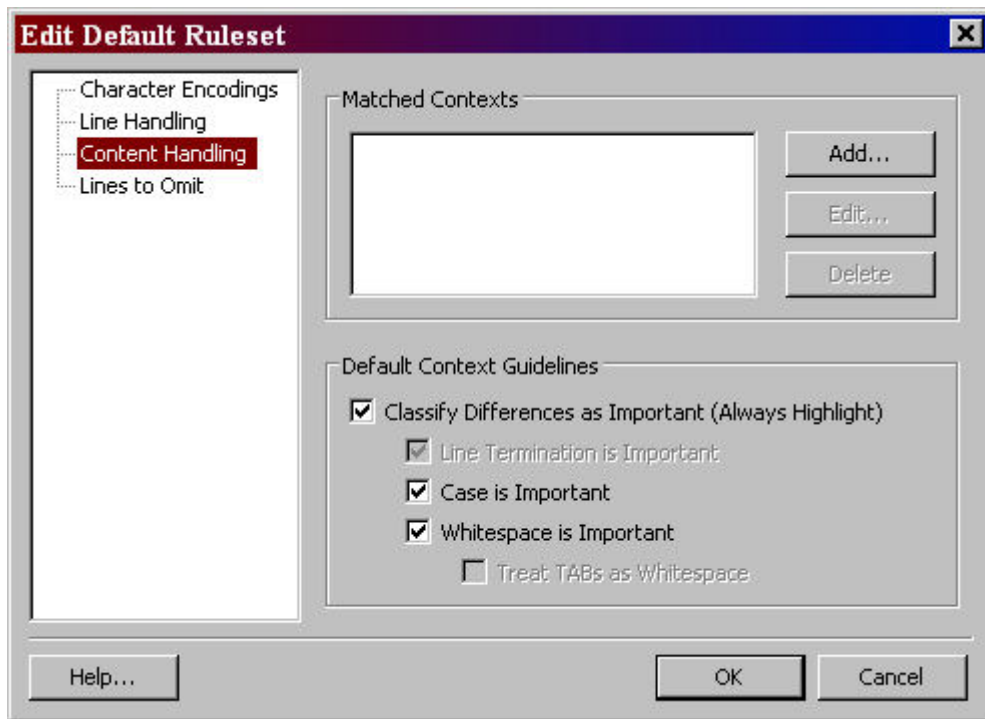
## Content Handling

Within source code there are usually three types of content: string literals, comments, and everything else. Everything else generally includes the functional part of the source code. These different types of content are called *contexts*.

- String literals and comments are generally *Matched Contexts*; meaning that there is a specific pattern of characters that delimit the beginning and ending of the context.
- Content that matches a specific pattern is said to be in that *context*.

- Content that doesn't match a specific pattern (falls into the everything else category) is said to be in the *Default Context*.

The **Content Handling** portion of the **Edit Default Ruleset** dialog enables you to create/edit/delete matched contexts and set the attributes of the Default Context. Clicking **Add...** or **Edit...** takes you to the [Edit Pattern](#) dialog, where matched contexts can be created or edited. The goal of matched contexts is to describe the features of the source code language to identify contexts that should have different properties from the default context. Generally, this includes string literals and comments; string literals should be more strict (everything is important) and comments are probably more relaxed (the body of a comment is usually not as important as code, for example).



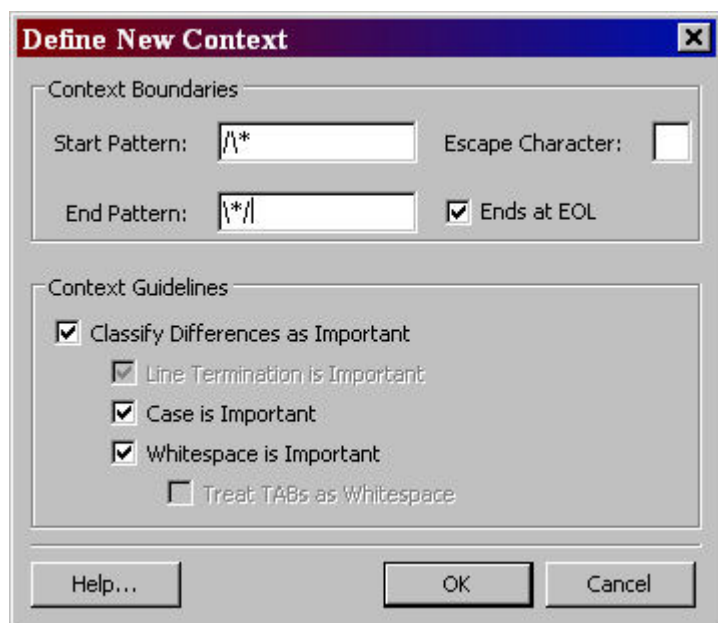
The fields under **Default Context Guidelines** are explained in the following table. These explanations also apply to the **Context Guidelines** area of the [Add/Edit Context](#) dialog.

Field	Meaning
<b>Classify Differences as Important</b>	This option determines if the overall context is important or unimportant. If important, you can refine the context further to make commonly ignored things unimportant. Generally, all changes (except for comments) should be marked important.
<b>Line Termination is Important</b>	This option is only enabled if you elected to keep end-of-line chars in the analysis (not Ignore/Strip EOLs). It determines how DiffMerge highlights differences in the EOL chars on a line. Generally, this option is always disabled (because of the overall EOL handling).
<b>Case is Important</b>	This option determines how DiffMerge highlights differences due to changes in case. Generally, this option should be turned on, unless you're in a case-insensitive language like VB.
<b>Whitespace is Important</b>	This option determines how DiffMerge highlights differences due to changes in whitespace; this can mean SPACES or SPACES and TABS depending on the next field.  In languages like C/C++ you should turn this option <i>off</i> for the default context because whitespace is not significant within code. In languages like Python, you should turn it <i>on</i> , because leading whitespace is significant.
<b>Treat TABs as</b>	This option is only enabled if the overall context is important, and if whitespace is <i>not</i> important. It

<b>Whitespace</b>	determines whether TABs are equivalent to SPACES. Generally, this option should be turned <i>on</i> for most languages.
-------------------	---

## Edit Context

A context is a mechanism for identifying portions of a document that should be specially handled. For example, string and character literals and comments. The Edit Context box, accessible through the [Content Handling](#) dialog, enables you to alter context boundaries and guidelines.



A context is defined as a start pattern and an optional end pattern. All of the text between that matching the start pattern and that matching the end pattern and/or the end-of-line are considered to be in this context.

Patterns must be valid regular expressions. The end pattern may be omitted if **Ends at EOL** is checked. Set the **Escape Character** if this context has a special character (such as a backslash) to prevent premature matching of the end pattern or EOL.

Field	Meaning
<b>Start Pattern</b>	A Regular Expression that describes the start of a context. The text that matches the starting pattern is <i>not</i> considered part of the matched context; only the content following it.
<b>End Pattern</b>	An Optional Regular Expression describing the end of the context. If the context ends at the end of the line, leave this blank. The text matching the ending pattern <i>is</i> considered part of the matched context.
<b>Escape Character</b>	Set if there is a special character (usually <code>\</code> ) that alters the interpretation of the next character.
<b>Ends at EOL</b>	Set if the context is terminated by the end-of-line.

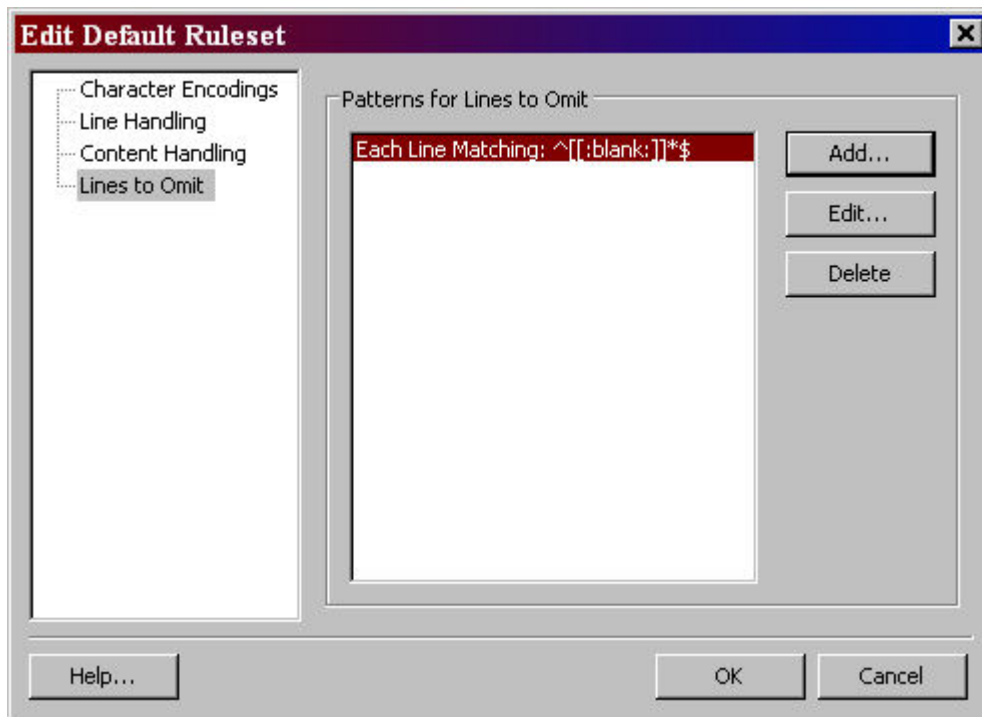
At least 1 choice from End Pattern or Ends-at-EOL must be set; that is, you can either have an ending regular expression, Ends-at-EOL, or both.

For information about Context Guidelines, refer to **Edit** [Content Handling](#) dialog.

*Tip: Contexts and context highlighting are only enabled when in **Lines-and-Character Detail Level mode**.*

## ***Lines to Omit***

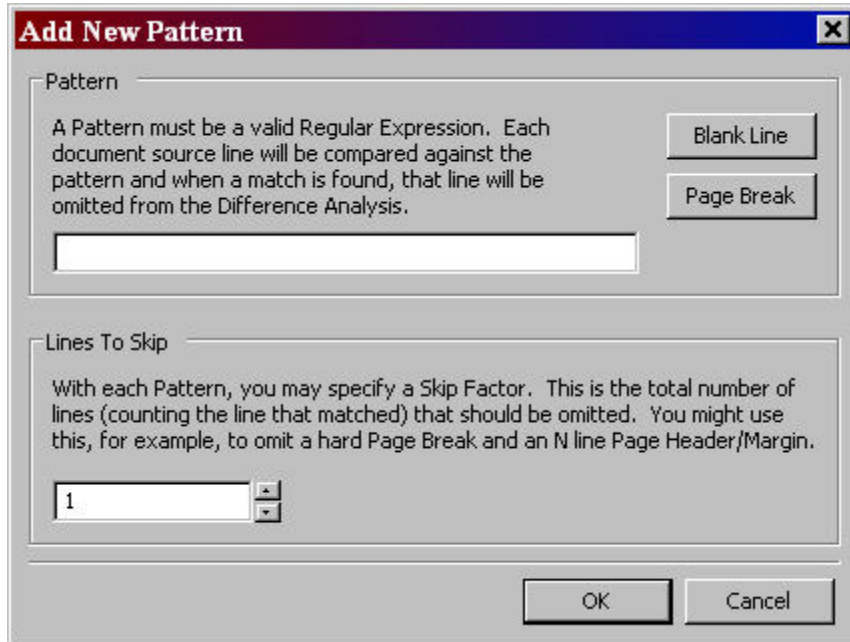
This dialog enables you to describe lines that should be completely omitted from the analysis. For example, this dialog can be used when comparing reports to omit page and column headers and help the synchronization match up data in the report rather than the headers. Everything on this page is optional.



Clicking **Add...** or **Edit...** takes you to the [Edit Pattern](#) dialog.

## Edit Pattern

This page of the **Edit Default Ruleset** dialog presents a list of active patterns.



The dialog box is titled "Add New Pattern" and contains two main sections. The first section, labeled "Pattern", includes a text box for entering a regular expression and two buttons, "Blank Line" and "Page Break", which provide pre-defined patterns. The second section, labeled "Lines To Skip", includes a text box for specifying the skip factor, currently set to "1", and a small spinner control. At the bottom of the dialog are "OK" and "Cancel" buttons.

**Add New Pattern**

**Pattern**

A Pattern must be a valid Regular Expression. Each document source line will be compared against the pattern and when a match is found, that line will be omitted from the Difference Analysis.

Blank Line

Page Break

**Lines To Skip**

With each Pattern, you may specify a Skip Factor. This is the total number of lines (counting the line that matched) that should be omitted. You might use this, for example, to omit a hard Page Break and an N line Page Header/Margin.

1

OK Cancel

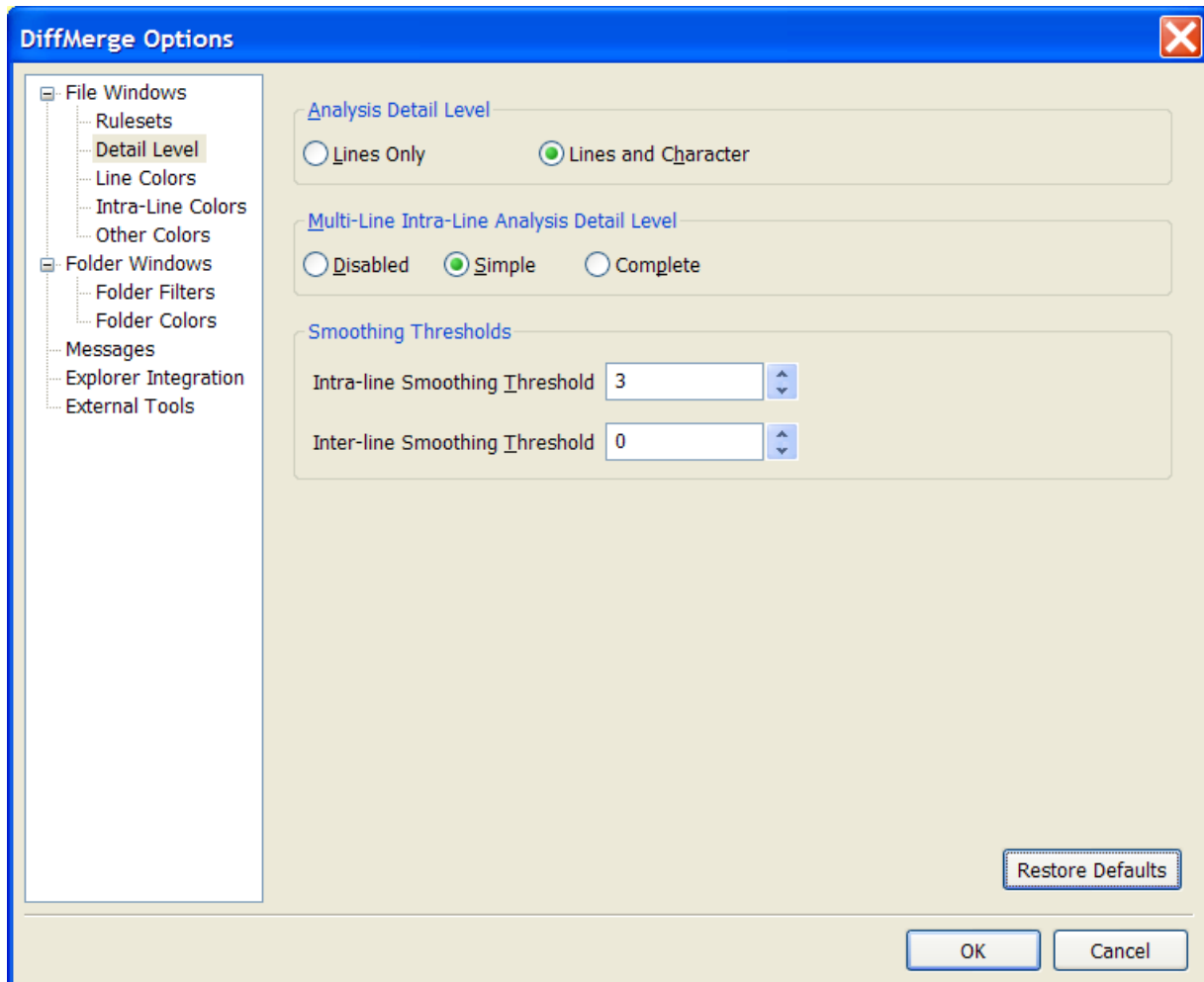
The **Pattern** section of the dialog enables you to enter a regular expression to search for lines to omit. For convenience, there are buttons to the right to supply patterns for commonly omitted items.

The **Lines to Skip** portion of the dialog indicates how many lines should be omitted with each match. Normally, this should be 1.

---

## Detail Level

The **Detail Level** page of the **Options** dialog controls various file analysis parameters.



Clicking **Restore Defaults** restores all the fields on this (and only this) page to factory settings

### Analysis Detail Level

Analysis Detail Level determines how the files are compared:

- If **Lines-Only** mode is selected, DiffMerge compares the files line-by-line and does not perform any intra-line highlighting/analysis.
- In **Lines-and-Character** mode, DiffMerge performs the line-by-line analysis and *then* performs intra-line analysis within the changes. Intra-line analysis is performed over the body of each change.

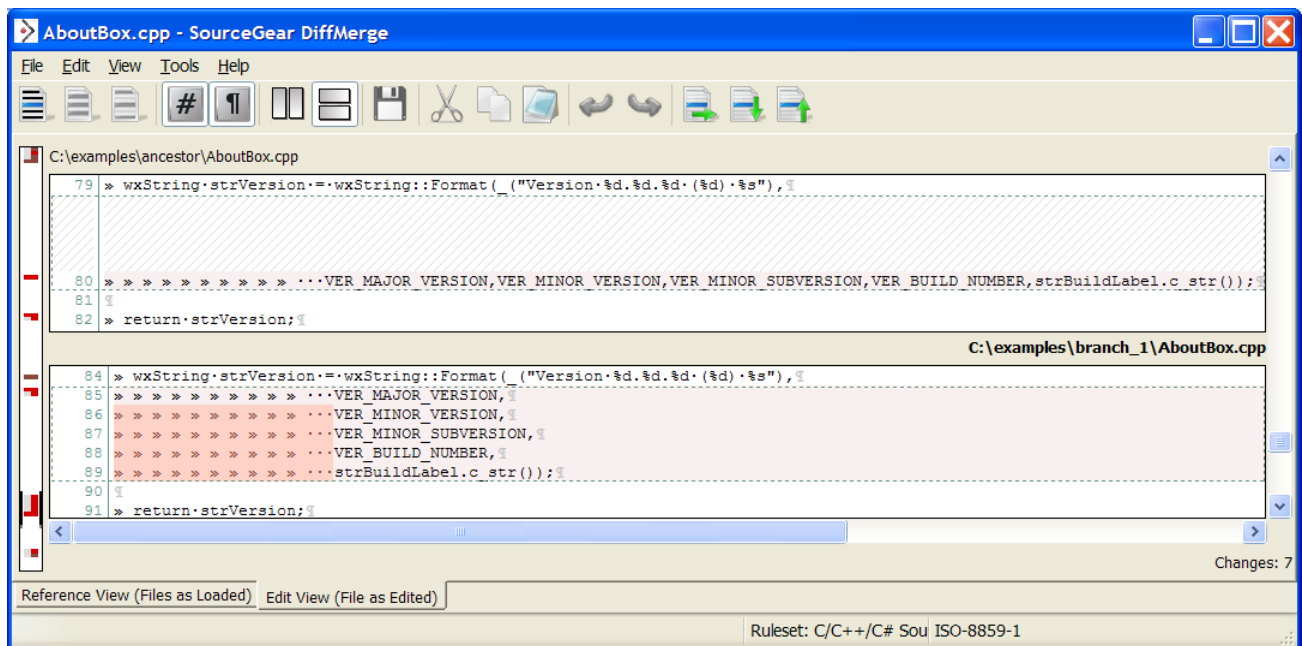
**Tip:** *Line-Only mode is faster than Lines-and-Character mode. Switch to Line-Only mode if you're working with large files and having performance problems.*

## Multi-Line Intra-Line Analysis Detail Level

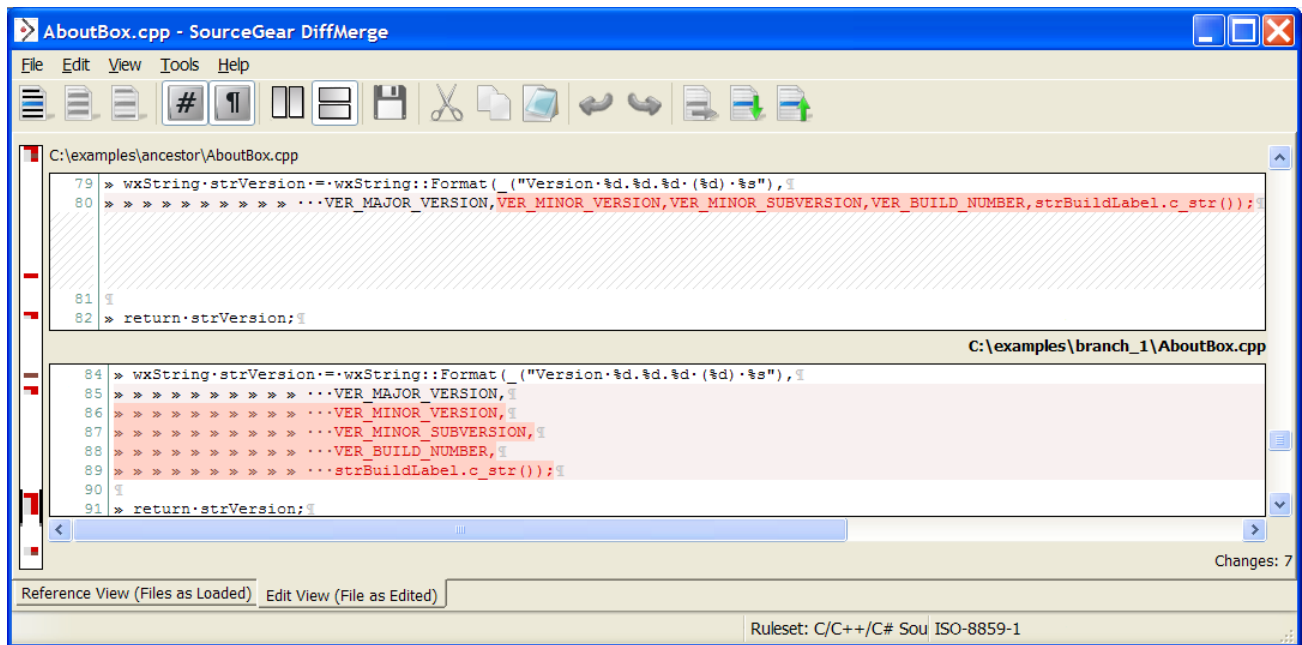
This feature controls how hard DiffMerge works to match up characters within a multiple line change.

- If **Complete** mode is selected, the entire body (spanning all of the lines in the change) are essentially joined into a single line before doing the character level analysis. This allows changes introduced by re-wrapping text to be separated from actual changes to the text.
- If **Simple** mode is selected, lines are joined like in Complete mode, but this is limited to avoid using an excessive amount of time and memory.
- If **Disabled**, DiffMerge does not attempt to join lines before doing the character level analysis.

For example, the following images show where a line of source code was broken across several lines in one version. When **Simple** or **Complete** is enabled, only the whitespace is highlighted because DiffMerge matches up the words by crossing the line boundaries.



When **Disabled**, DiffMerge sees this as five line change: there is a one line change (where text was deleted from the end) followed by an insert of four lines of text. Since DiffMerge does not combine the lines in this mode, the two parts are simply adjacent, but unrelated.



***Tip:** Complete mode was the only mode available prior to version 3.2. This mode is very expensive. If you experience performance problems, switch to Simple or Disabled.*

## Intra-line Smoothing Threshold

This field is only used when the **Analysis Detail Level** is set to **Lines and Character**. It causes small spans of equal text within an intra-line change to be marked as part of the change. For example, if the following two lines

```
abcDEFgHIJklmnopqrstuvwxyz
```

```
abc123g456klmnopqrstuvwxyz
```

are matched up, you see that "DEF" changed to "123" and that "HIJ" changed to "456" with a "g" between them. When the **Intra-line Smoothing Threshold** is set to 1, you see that "DEFgHIJ" changed to "123g456" as 1 change.

This feature doesn't change any results, just the coloring of short spans of text within lines.

## Inter-line Smoothing Threshold

This field causes small groups of equal lines between two changes to be marked as part of the change. Inter-line smoothing can be thought of as "clumping" nearby changes into a single change. In source code a function frequently consists of several lines of text, a blank line, several lines of text, a blank line, and so on. If someone inserts or changes a big chunk of code, the blank lines can sync up and unrelated chunks of code can appear as blocks of changes. Setting the **Inter-Line Smoothing Threshold** to 1 can cause these blocks of change to appear as 1 large change rather than numerous little ones.

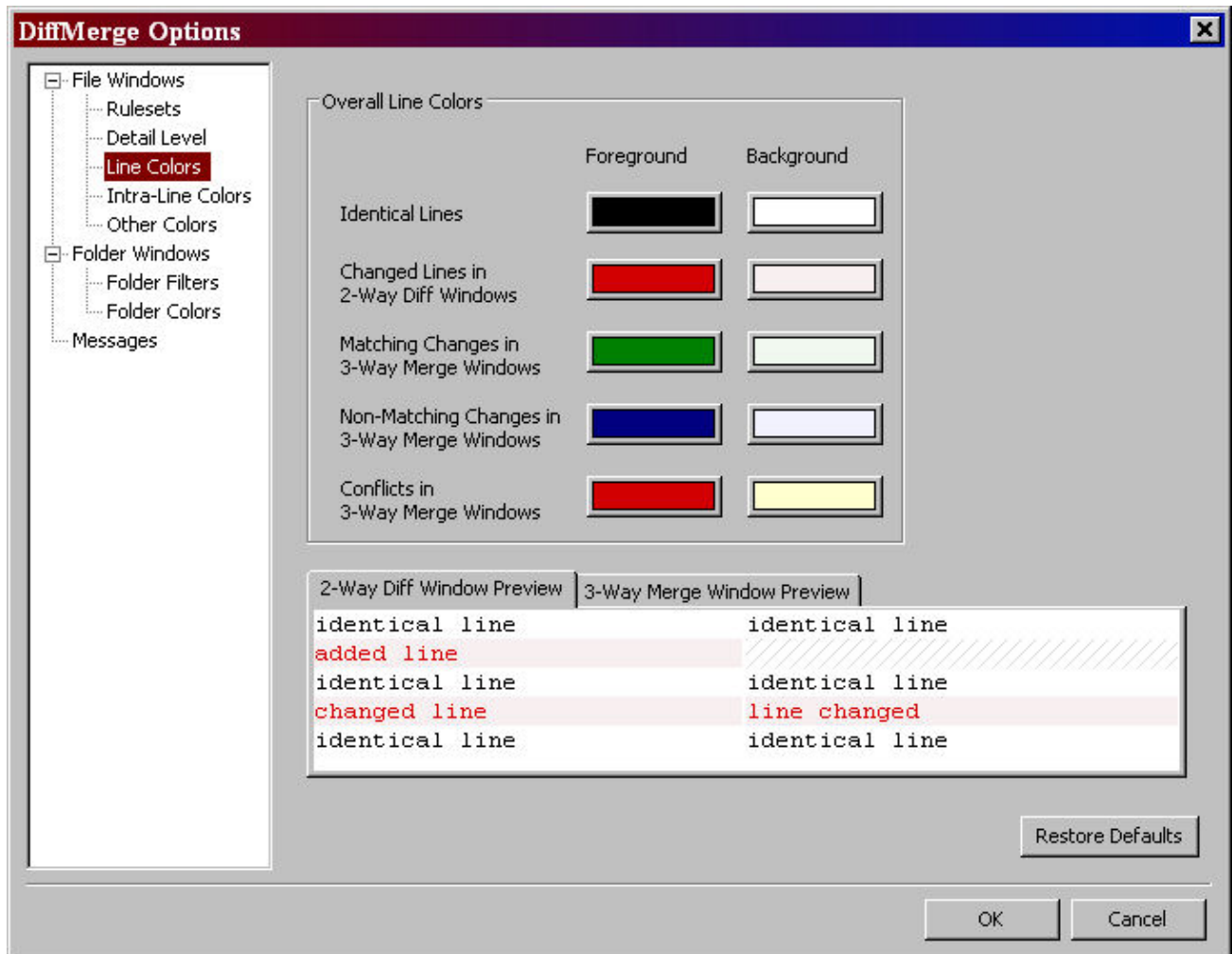
This feature is initially set to 0 (disabling it) because, in File Merge windows, Inter-line smoothing can cause adjacent changes to be considered a conflict when the individual (unclumped) changes would not be. Enabling the feature increases the likelihood that **Auto-Merge** will require manual follow-up, which may or may not be a good thing -- it's somewhat questionable how far apart nearby changes should be to be considered independent changes. By increasing the setting to 1 or 2, you may produce a few conflicts that will cause **Auto-Merge** to complain, but these are areas that you probably want to examine anyway.

This field is used in both detail-level settings: **Lines-Only** and **Lines and Character**.

---

## Line Colors

The **Line Colors** page of the **Options** dialog enables you to change the default foreground and background highlighting colors of each of the five different types of lines in File Windows. It is concerned with overall line coloring in both Lines Only and Lines and Characters detail levels.



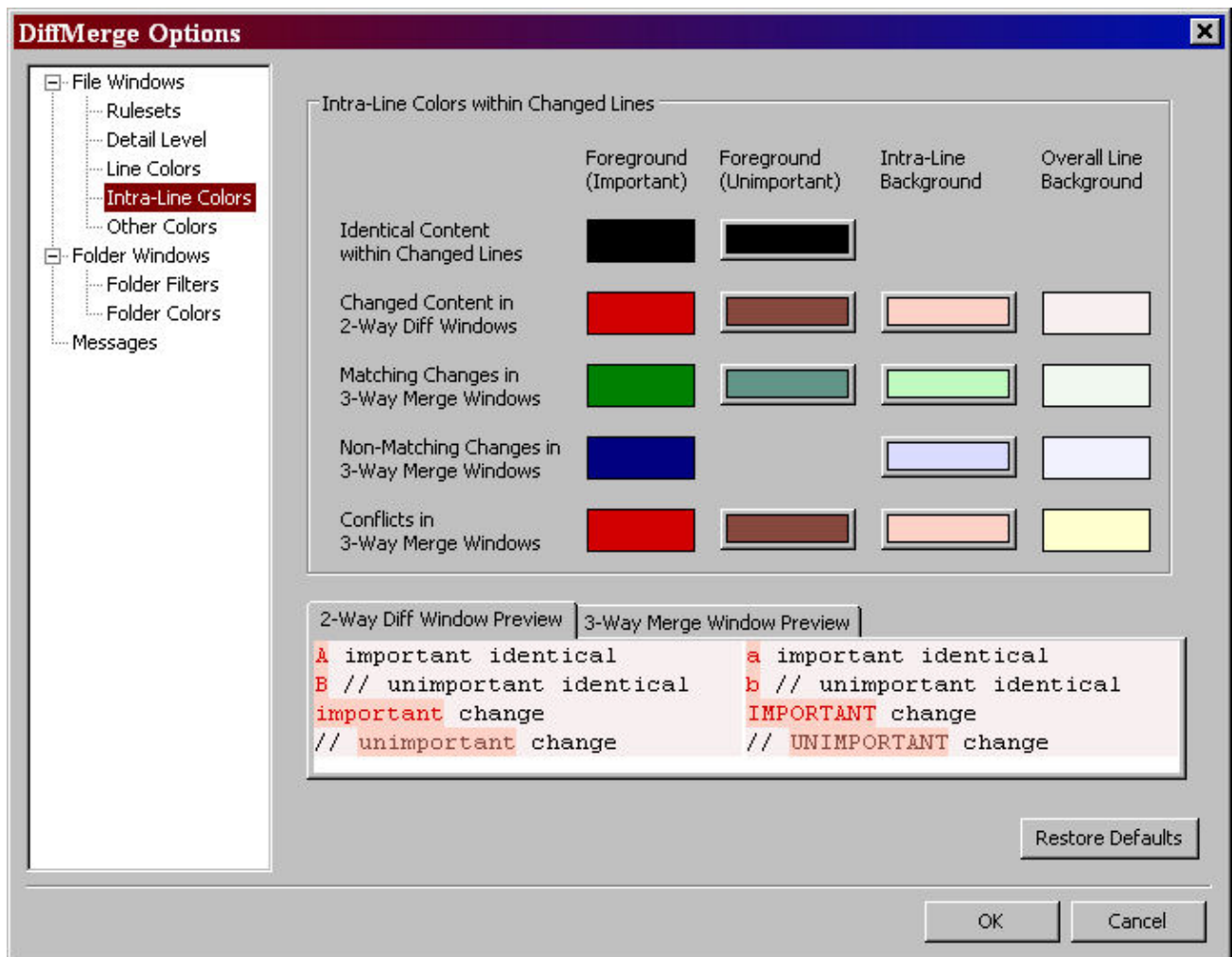
To change a color, all you need do is select the appropriate button. You are then taken to the standard color dialog box where you can choose from pre-selected colors or pick your own.

The preview windows in the center of the page illustrate how your color choices will appear in File Diff and Merge Windows when the detail level is set to **Lines Only**.

Clicking **Restore Defaults** restores all the fields on this (and only this) page to factory settings

# Intra-Line Colors

This page enables you to set the colors used to draw intra-line changes. The overall line colors (from the [Line Colors](#) page) are shown for reference in the first and last columns. The buttons in the Foreground (Unimportant) column enable you to change the de-emphasized foreground color used when an intra-line change is marked as unimportant, such as text within a comment. The buttons in the Intra-line Background column enable you to change the background color of the intra-line highlight.



To change a color, all you need do is select the appropriate button. You are then taken to the standard color dialog box where you can choose from pre-selected colors or pick your own.

The preview windows in the center of the page illustrate how your color choices appear in File Diff and Merge Windows when the detail level is set to Lines and Characters.

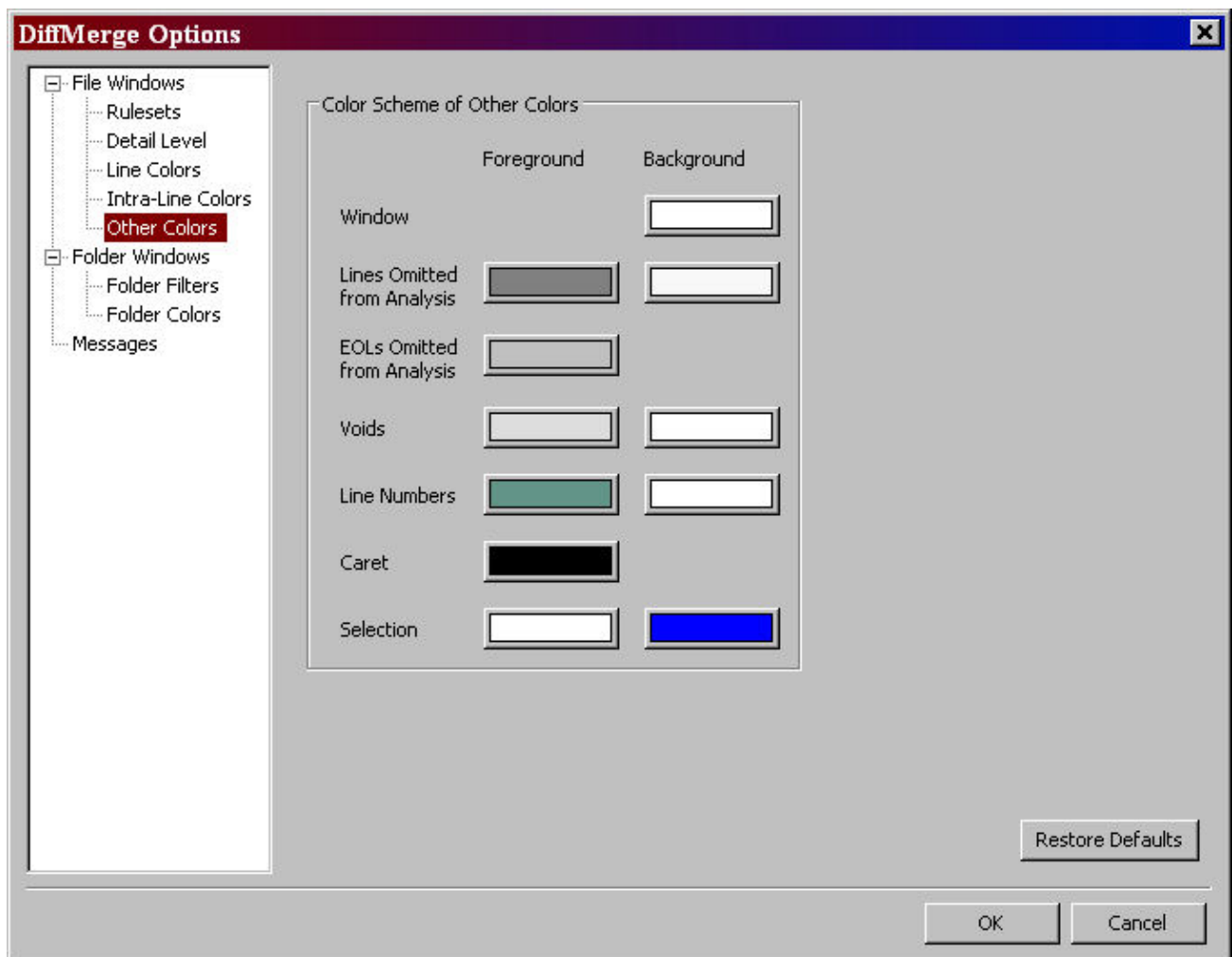
Clicking **Restore Defaults** restores all the fields on this (and only this) page to factory settings

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## Other Colors

This page enables you to set the colors used to draw miscellaneous items in File Diff and Merge Windows.

The **Other Colors** page of the **Options** dialog is accessed by selecting **Tools|Options** and choosing **Other Colors** from the left side of the **Options** dialog.



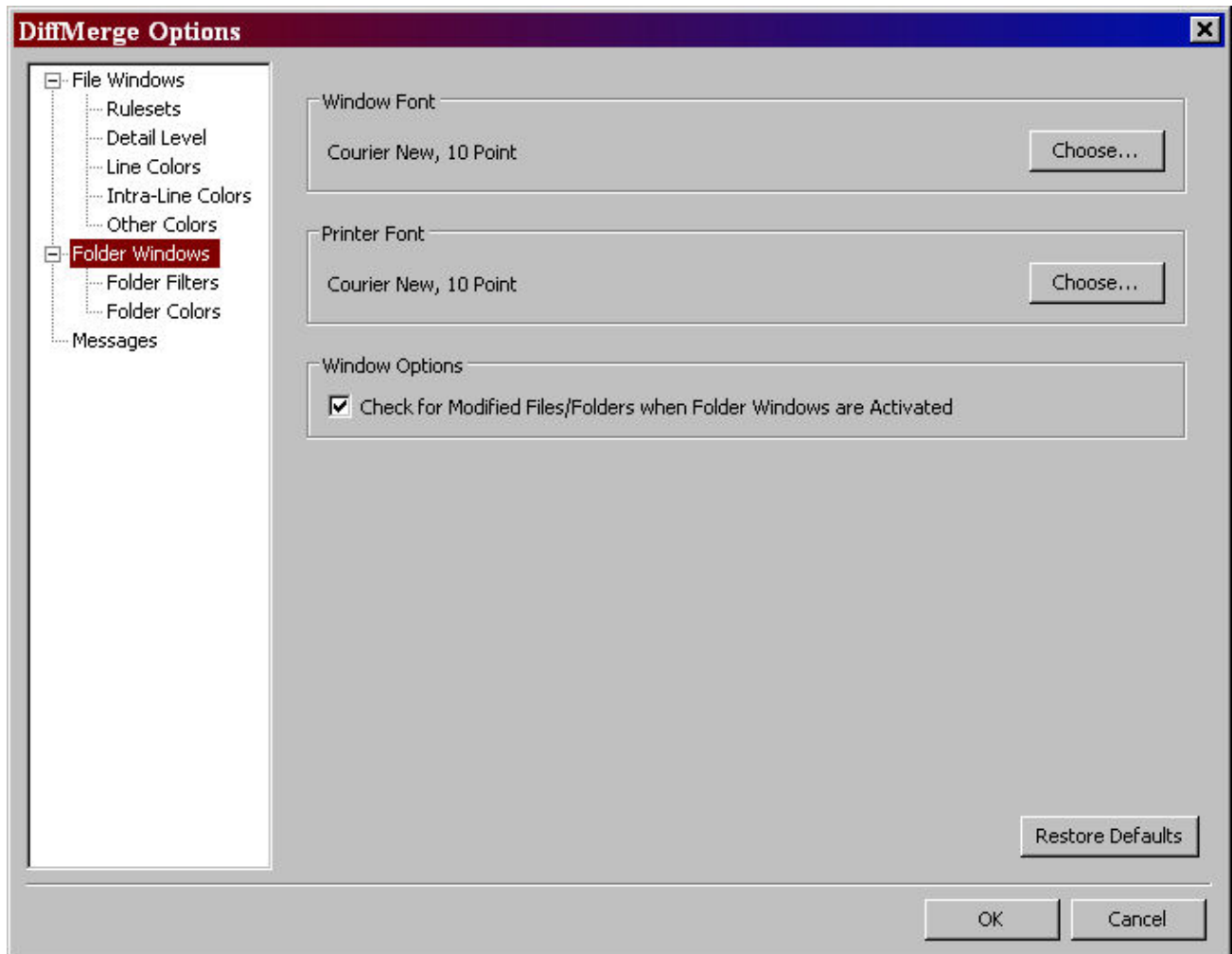
To change a color, all you need do is select the appropriately labeled box. You are then taken to a standard color dialog box where you can choose from pre-selected colors or pick your own.

Clicking **Restore Defaults** restores all the fields on this (and only this) page to factory settings

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## Folder Windows

The **Folder Windows** page of the **Options** dialog enables you to change the font used in windows, the font used when the document is sent to the printer, and to select whether or not you want DiffMerge to automatically check for changed files and folders when folder windows are activated.



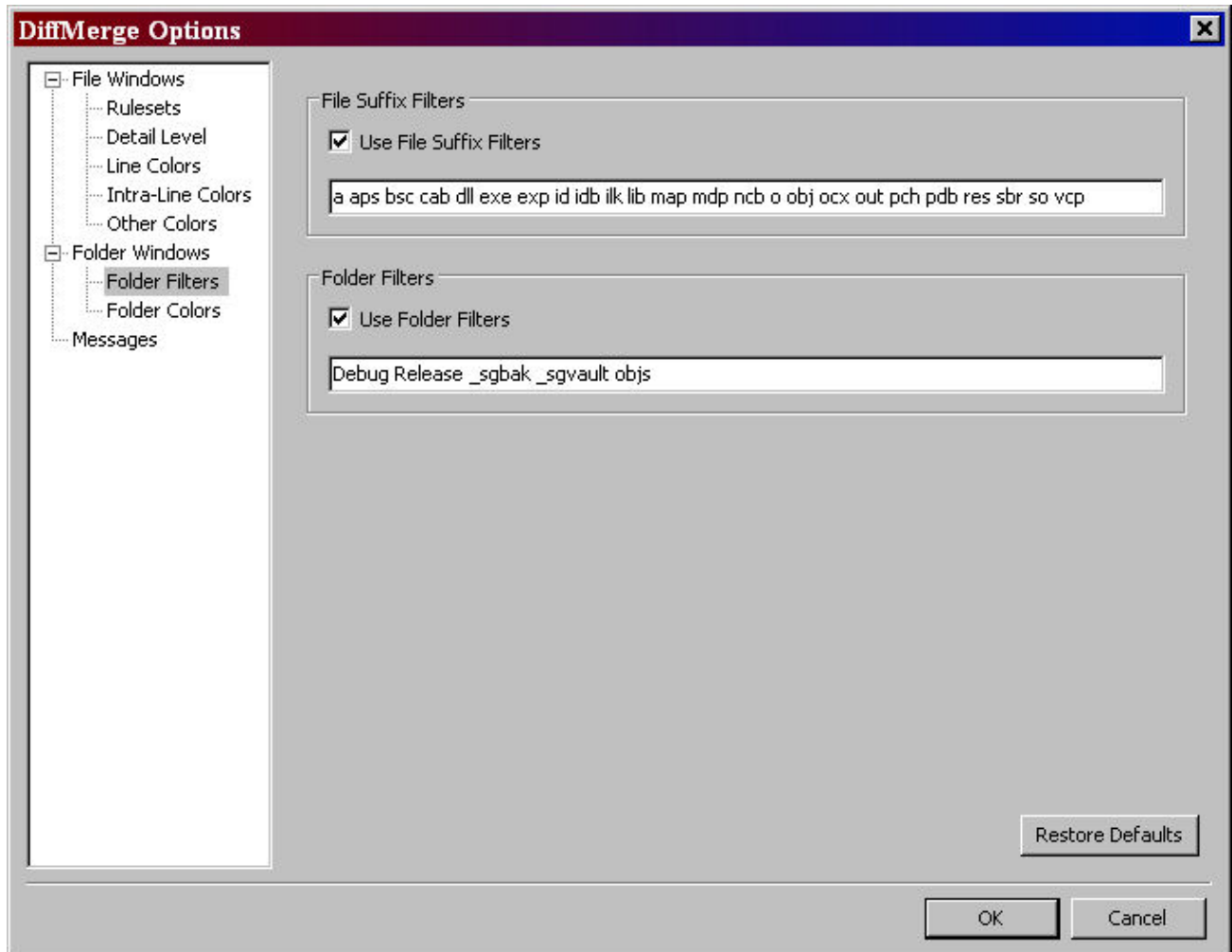
Clicking **Restore Defaults** restores all the fields on this (and only this) page to factory settings.

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## Folder Filters

If desired, **Folder Windows** can filter out temporary, binary, and other machine generated files and folders that are normally produced as a by-product of software development. This page enables you to enable/disable this filtering and set the list of file suffixes and folder names that should be omitted from the **Folder Window** display.

Please note that excluding these types of files and folders greatly increases the file system scanning speed and reduces on-screen clutter.



**File Suffix Filters:** This section handles filtering files by suffix. The text field contains a space-separated list of suffixes of files that should be excluded from the folder window. For example, you should filter out .EXE's and .DLL's because they are binary files.

To turn off file suffix filtering, uncheck the **Use File Suffix Filters** checkbox.

**Folder Filters:** This section handles the filtering of entire sub-folders (and everything contained within them). The text field contains a space-separated list of folder names that should be excluded from the folder window. For example, you should filter out folders containing only binary files, such as a bin, lib, or obj directory generated by your compiler. You should also exclude the SourceGear Fortress or Vault control file folders.

To turn off sub-folder filtering, uncheck the **Use Folder Filters** checkbox.

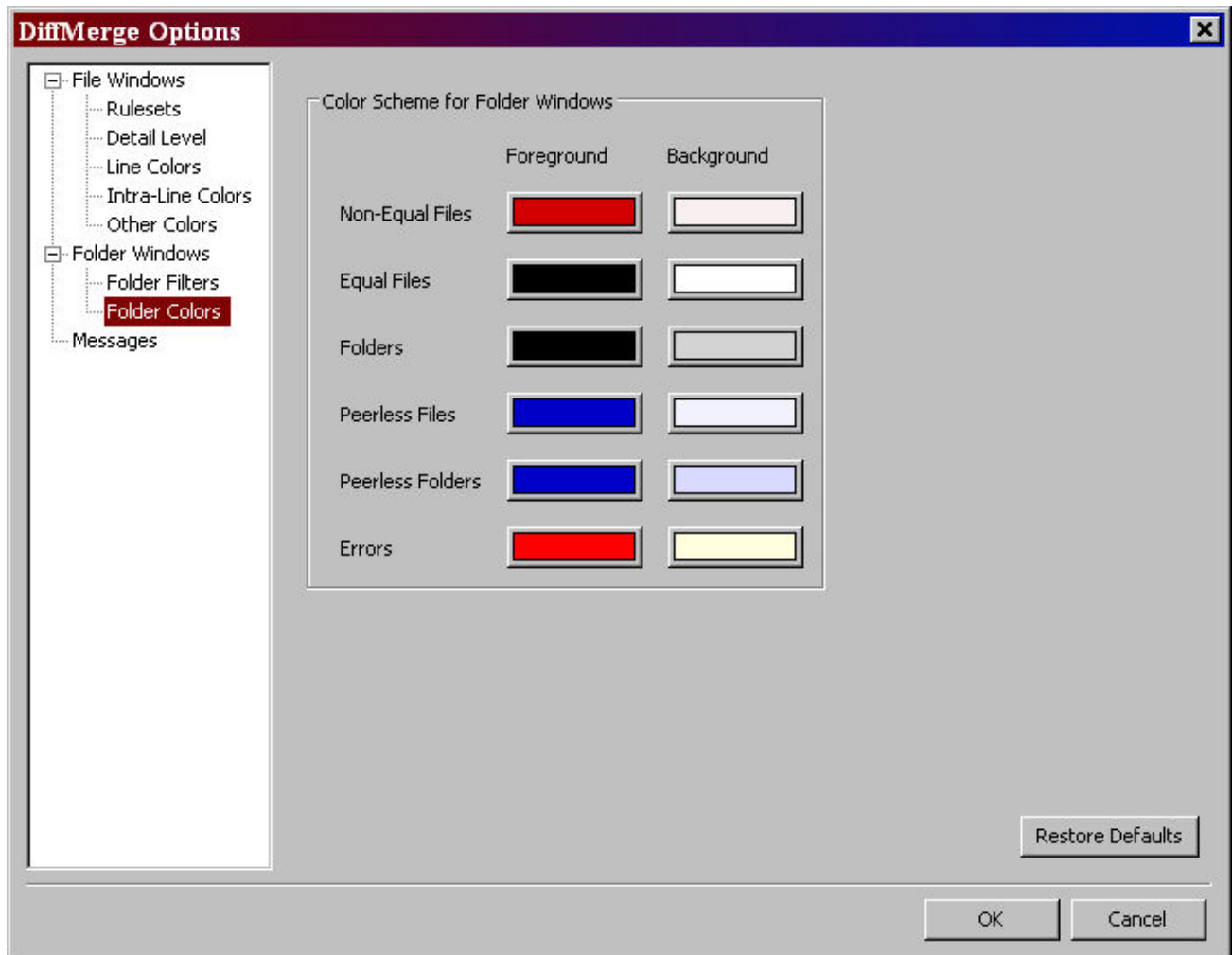
You can turn off folder-filtering by clicking **Ignore Folder Filters**.

The **Restore Defaults** button restores all of the fields on this (and only this) page to factory settings.

---

## Folder Colors

This **Folder Colors** page of the **Options** dialog enables you to change the default foreground and background colors of files, folders, and errors.



To change a color, all you need do is select the appropriate button. You are then taken to the standard color dialog box where you can choose from pre-selected colors or pick your own.

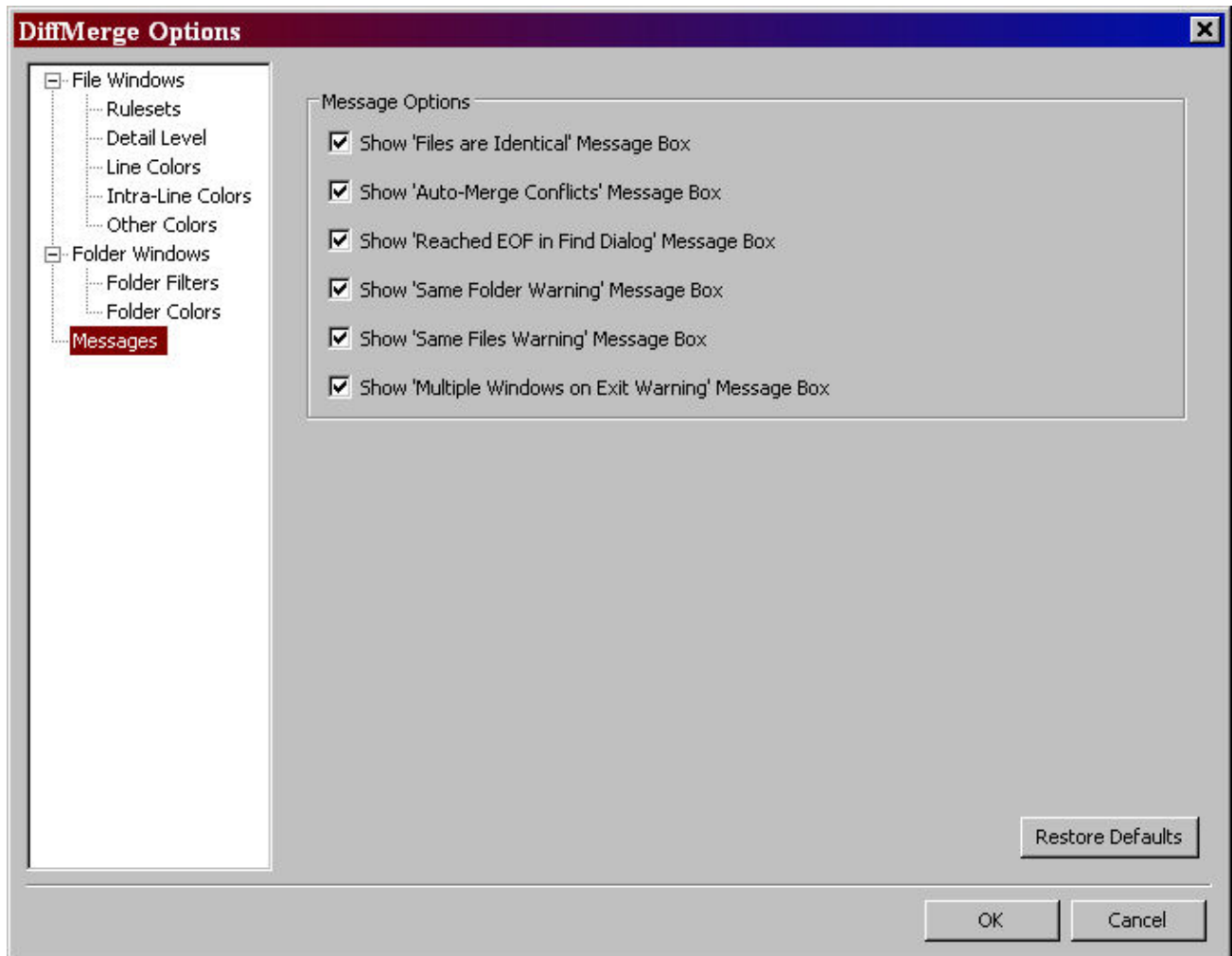
***Note:** A Peerless file or folder is a folder that, when a list of files or folders is being compared, has no file or folder in the comparison window.*

The **Restore Defaults** button restores all of the fields on this (and only this) page to factory settings.

---

# Messages

This **Messages** page of the **Options** dialog enables you to choose which messages you want displayed by selecting them from a list of choices.



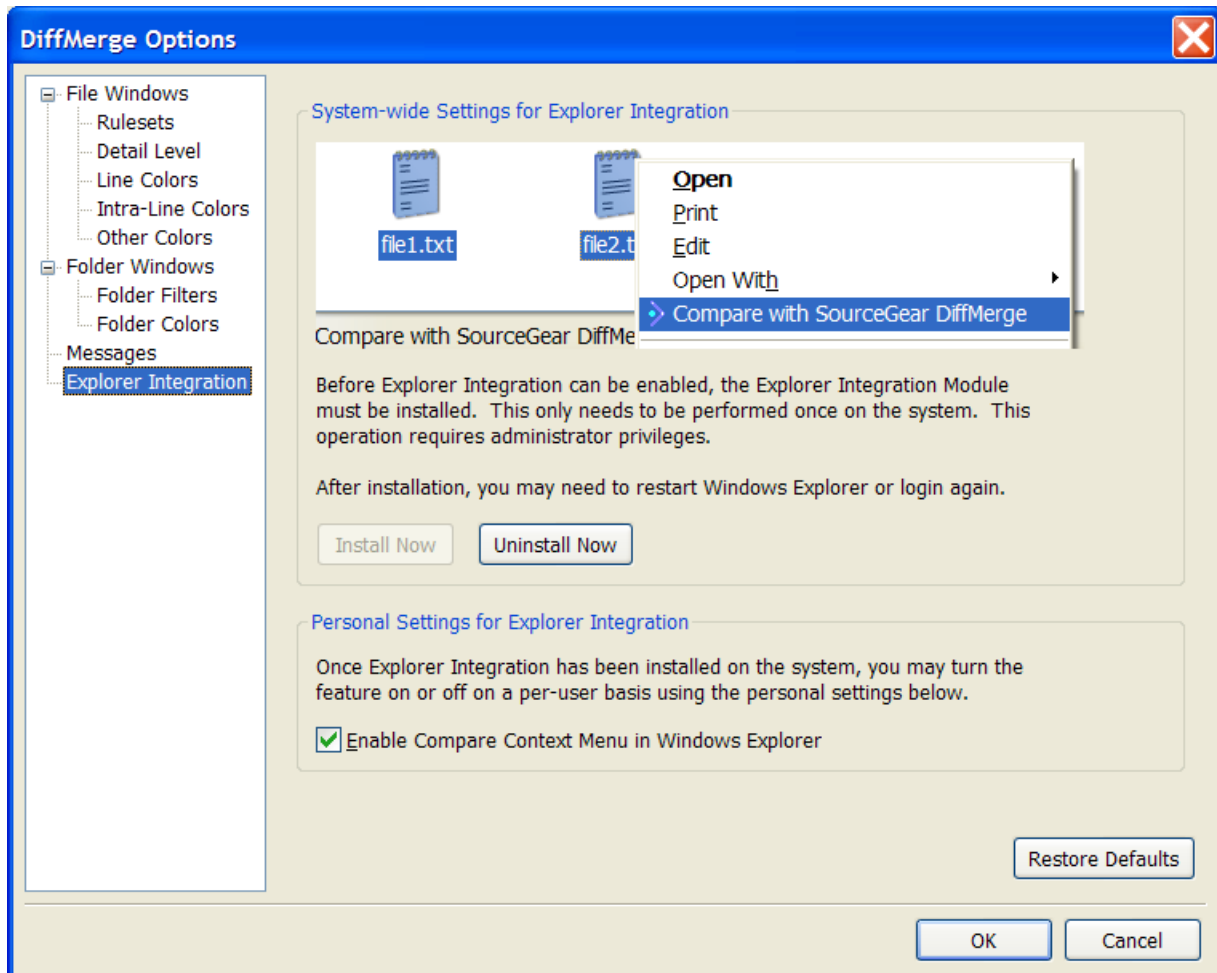
In brief, these checked boxes ensure message boxes that provide either warnings or information display when the labeled events take place. Each message box has a "Do not show again" option. These dialog fields indicate if the warning/message is enabled or suppressed. You can use these fields to turn a message back on if, after the dialog has displayed, you have selected the "Do not show again" option.

Clicking **Restore Defaults** restores all of the fields on this (and only this) page to factory settings.

# Windows Explorer Integration

*This dialog is only available on Windows. It controls the Windows Explorer/Shell Integration feature. This feature is optional and not required to use DiffMerge.*

The Explorer/Shell Integration feature allows DiffMerge to add a menu item to Windows Explorer, the desktop, and the Start Menu that allows you to launch DiffMerge on selected files and folders.



This feature is provided by an Explorer Integration library DLL that is shipped along with the DiffMerge executable. This library must be separately installed (that is, registered with the system) before Explorer will use it.

- This step is automatically performed by the DiffMerge .MSI installer.
- This step is not performed if you installed DiffMerge using the .ZIP distribution.
- This step is not performed if you received DiffMerge as part of a Vault or Fortress package.

If the Explorer Integration library is not registered with the system, the **Install Now** button will be enabled. Press this button to register the library with the system and enable the feature. **This is a system-wide registration and requires administrator privileges.**

***Tip:** If the **Install Now** button fails on Vista because of privilege problems, try launching DiffMerge with administrator privileges. You can do this from Windows Explorer by right clicking on the DiffMerge executable and selecting **Run as Administrator**.*

*For the stand-alone version of DiffMerge, this is*

C:\Program Files\SourceGear\DiffMerge\DiffMerge.exe.

*For the version shipped with Fortress or Vault, this is*

C:\Program Files\SourceGear\Fortress Client\sgdm.exe or

C:\Program Files\SourceGear\Vault Client\sgdm.exe.

**Personal Settings:** Once the Explorer Integration library is installed, you may enable or disable the feature for your individual user account.

---

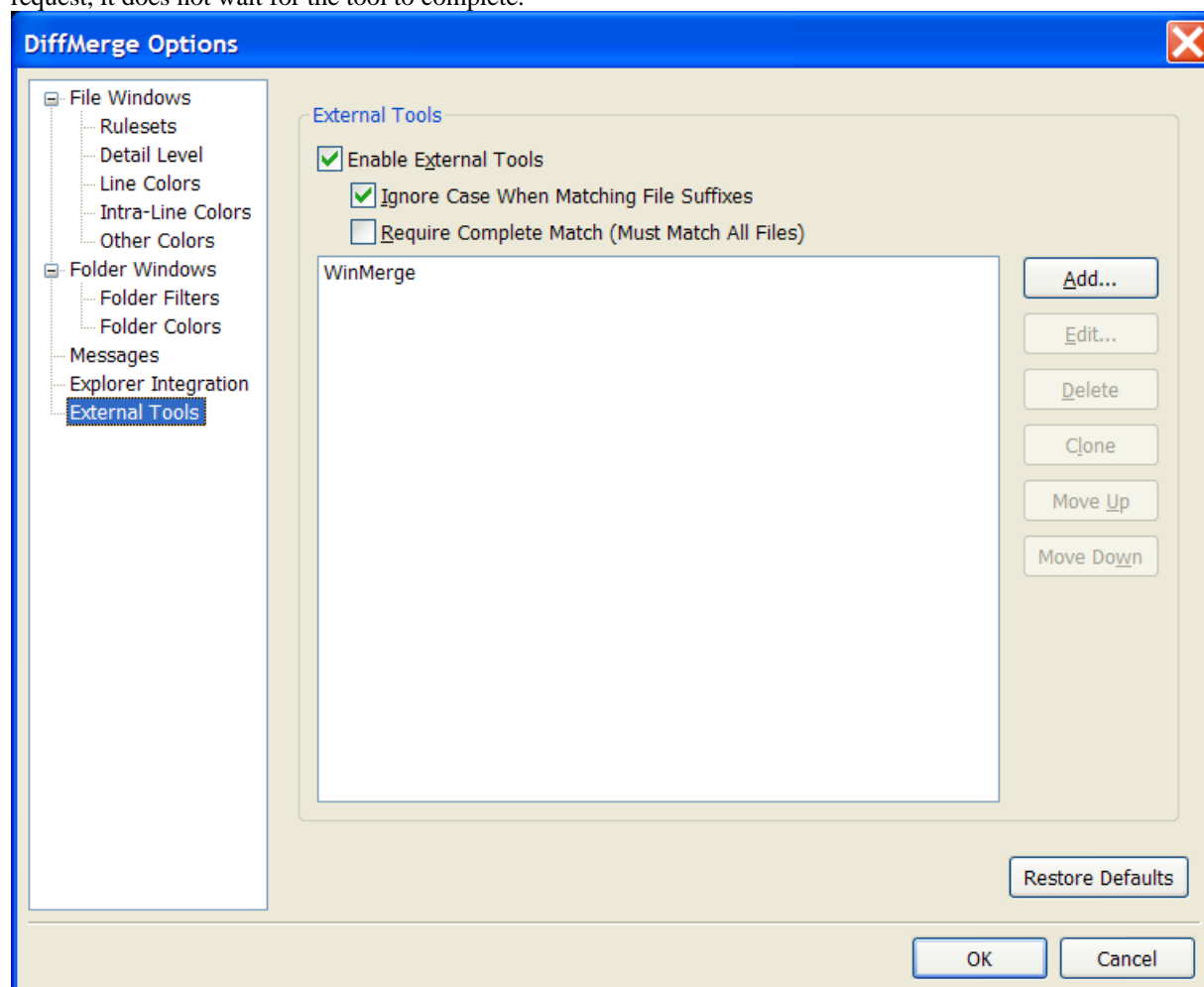
## External Tools

The **External Tools** page of the **Options** dialog allows you to direct DiffMerge to invoke external, third-party tools when comparing and/or merging various types of files. This includes:

- files given on the command line;
- files interactively selected from the **Select Files to Compare Dialog**;
- and files interactively selected from within a **Folder Window**.

External tools are triggered by file suffix so you can use it to configure other tools to handle file types, such as binary files and word processing documents that DiffMerge doesn't support or for which you'd just like to use a different tool for. Tool suffix checking is performed before Ruleset suffix checking. DiffMerge searches for tools in the order listed in the dialog and takes the first match. If no tool matches, DiffMerge creates a normal File Window

When DiffMerge is given a set of files on the command line with a matching tool configured, it will invoke the tool and wait for it to exit before exiting; it will then exit with that tool's exit status. When DiffMerge receives an interactive request, it does not wait for the tool to complete.



**Enable External Tools:** Turns on/off the entire external tools feature.

**Ignore Case When Matching File Suffixes:** Indicates if case should be respected when matching files.

**Require Complete Match:** Indicates if the suffixes for all of the files in the set must match or if only one needs to match.

**Tip:** *You probably don't want this turned on. Temp files often get a system-defined temp name rather than the proper suffix. Turning off 'Complete Match' allows you to ignore the temp file suffix when it is being compared against a properly named file in your workspace.*

**Restore Defaults:** Restores all of the fields on this (and only this) page to factory settings.

The listbox in the center lists all of the **External Tools** that are configured. By default, no external tools are configured. You can use the buttons to the right of the list to create, edit, delete, and reorder tools.

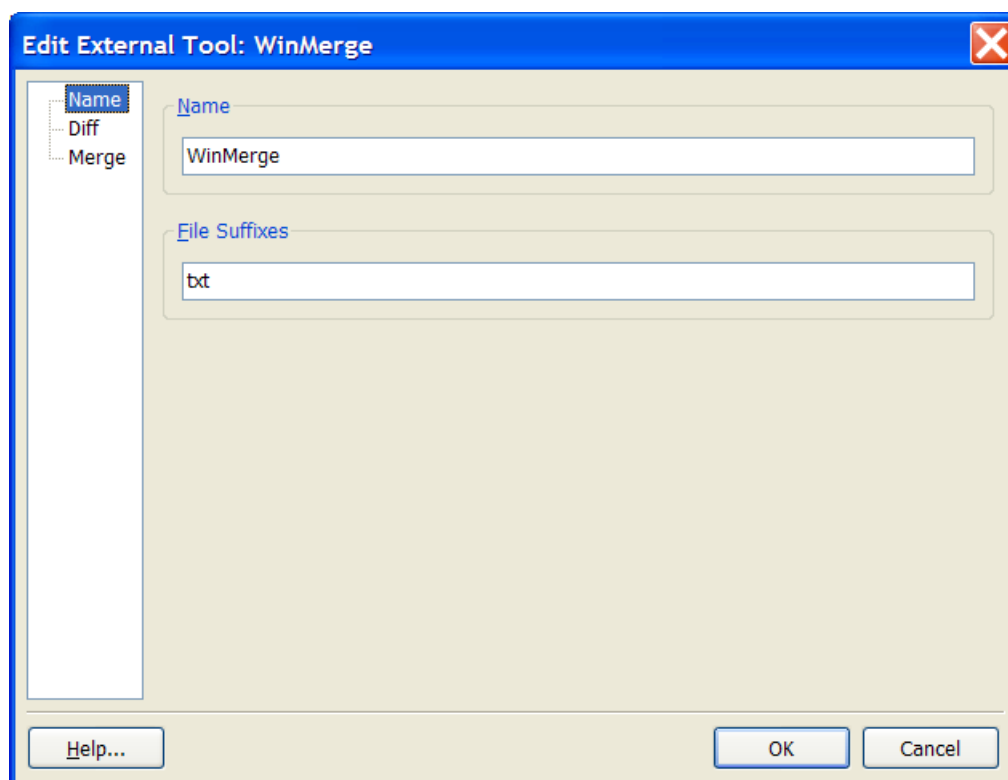
For each **External Tool** configured, you can decide if the tool is enabled for 2-way diffs, 3-way merges, or both. You can select different executables and command line argument templates for each mode.

## Add/Edit External Tool

The **Add/Edit External Tool** dialog enables you to modify the settings for a tool.

### Name

The **Name** page of the **External Tool Dialog**.

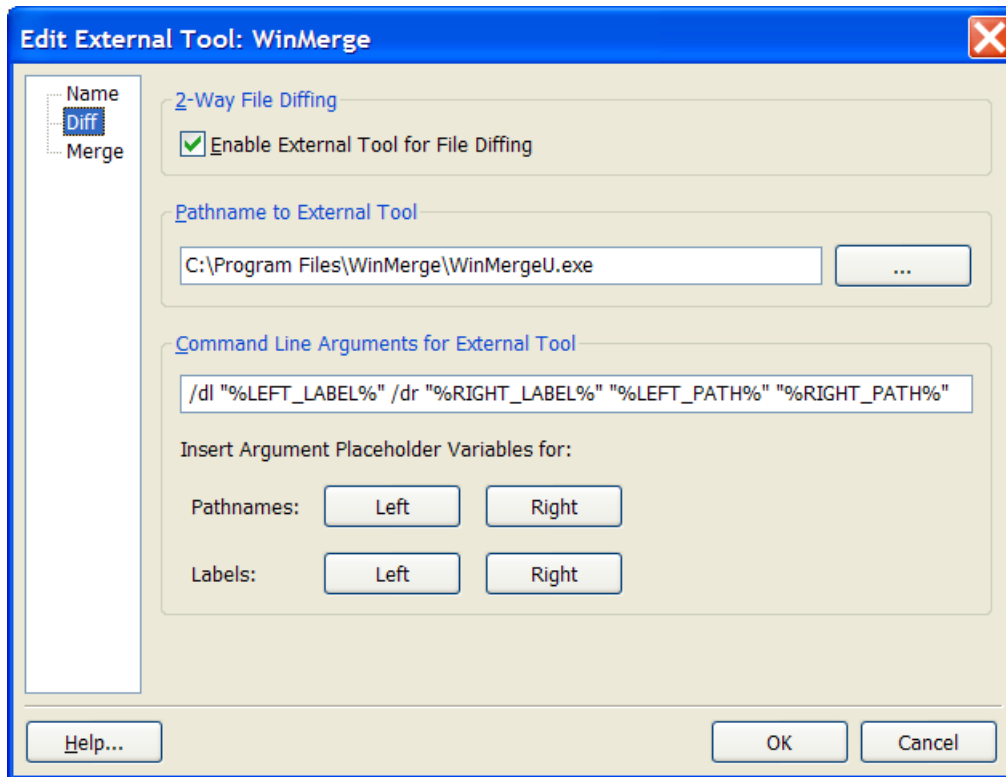


**Name:** The name field lets you enter a “human-readable” name for the tool. This name is for information only; it is displayed in various places to help you identify the tool.

**File Suffixes:** The **File Suffixes** text box is a space-separated list of suffixes. When DiffMerge loads files it tests the suffixes on files against the ones in this list. If a tool has a matching suffix for a particular file, then that tool might be used.

## Diff

The **Diff** page controls settings for performing 2-way file diffs.



**Enable External Tool for File Diffing:** Determines if this tool will be used for 2-way file diffs.

**Pathname to External Tool:** This text field contains the pathname to the third-party executable. You can use the ... button to browse for it.

***Tip:** On the Mac, you can give the path to either the application bundle (the `foo.app` folder) or the name of the actual executable inside the application bundle (`foo.app/Contents/MacOS/foo`).*

**Command Line Arguments for External Tools:** This text field contains the template for the command line to be used with the executable. DiffMerge will perform token substitution on the field before invoking the command.

The **buttons** below the text field are for your convenience and can be used to insert the corresponding token at the current insertion point into the text field.

***Tip:** It is highly recommended that you enclose these tokens in quotes so that whitespace in the titles and/or pathnames are properly received by the external application.*

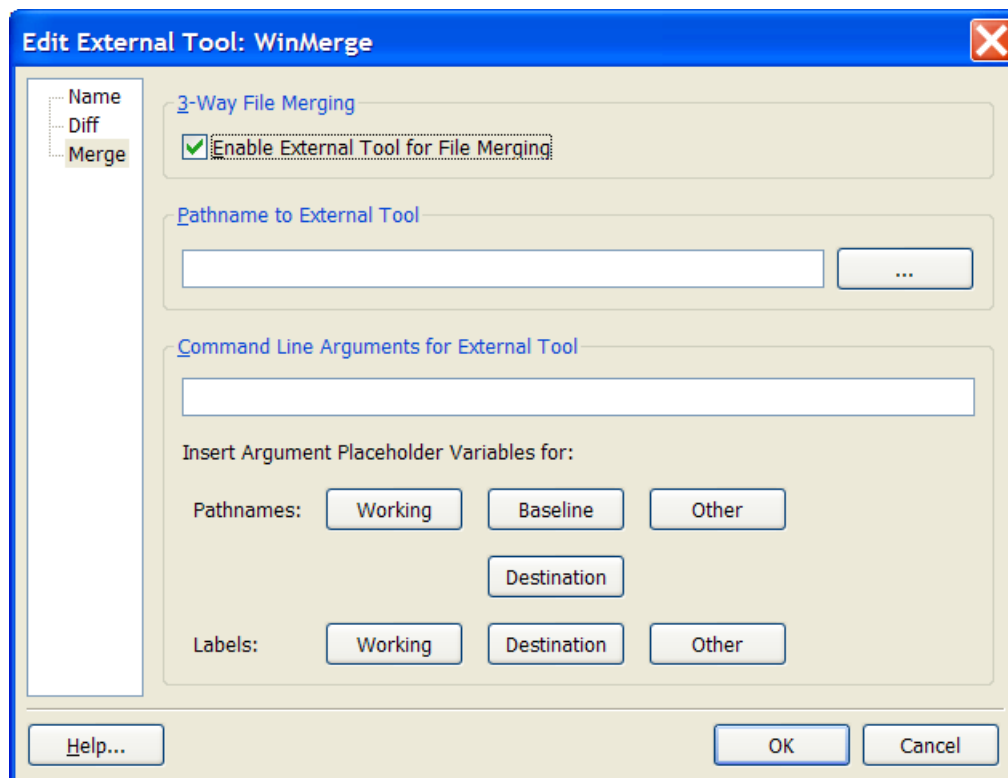
DiffMerge defines the following substitution tokens for external 2-way file diff tools.

<b>%LEFT_LABEL%</b> <b>%RIGHT_LABEL%</b>	<p>The labels/titles for the left and right files.</p> <ul style="list-style-type: none"><li>• When DiffMerge is handing off the initial set of files received on the command line, the values for these tokens come from the <code>/title1</code> and <code>/title2</code> arguments, if given.</li><li>• If not given on the command line or if you interactively cause DiffMerge to invoke an external tool, the values for these tokens are the corresponding pathnames.</li></ul>
---	--

<b>%LEFT_PATH%</b>	The pathnames for the left and right files.
<b>%RIGHT_PATH%</b>	

## Merge

The Merge page controls settings for performing 3-way file merges.



The descriptions for most of these fields are identical to the descriptions on the previous page for 2-way file diffs.

DiffMerge defines the following substitution tokens for external 3-way file merge tools.

<b>%WORKING_LABEL%</b> <b>%OTHER_LABEL%</b>	The labels/titles for the working (left) file and the other (right) files. <ul style="list-style-type: none"> <li>When DiffMerge is handing off the initial set of files received on the command line, the values for these tokens come from the <code>/title1</code> and <code>/title3</code> arguments, if given.</li> <li>If not given on the command line or if you interactively cause DiffMerge to invoke an external tool, the values for these tokens are the corresponding pathnames.</li> </ul>
<b>%DEST_LABEL%</b>	The label/title for the common ancestor (center) file. This comes from the <code>/title2</code> argument when given. It falls back to the destination result pathname or the common ancestor baseline pathname.
<b>%WORKING_PATH%</b> <b>%OTHER_PATH%</b>	The pathnames for the working (left) and the other (right) files.
<b>%BASELINE_PATH%</b>	The pathname of the common ancestor/baseline (center) file.
<b>%DEST_PATH%</b>	The pathname where the merge result should be written. This comes from the <code>/result</code> argument when given. It falls back to the baseline pathname.

# Printing

Printing in DiffMerge is standard. Select **File|Print**. The standard Print dialog box then displays, asking you to select the printer, the number of copies, etcetera. (It is also possible to print from the [Print Preview](#) dialog.)

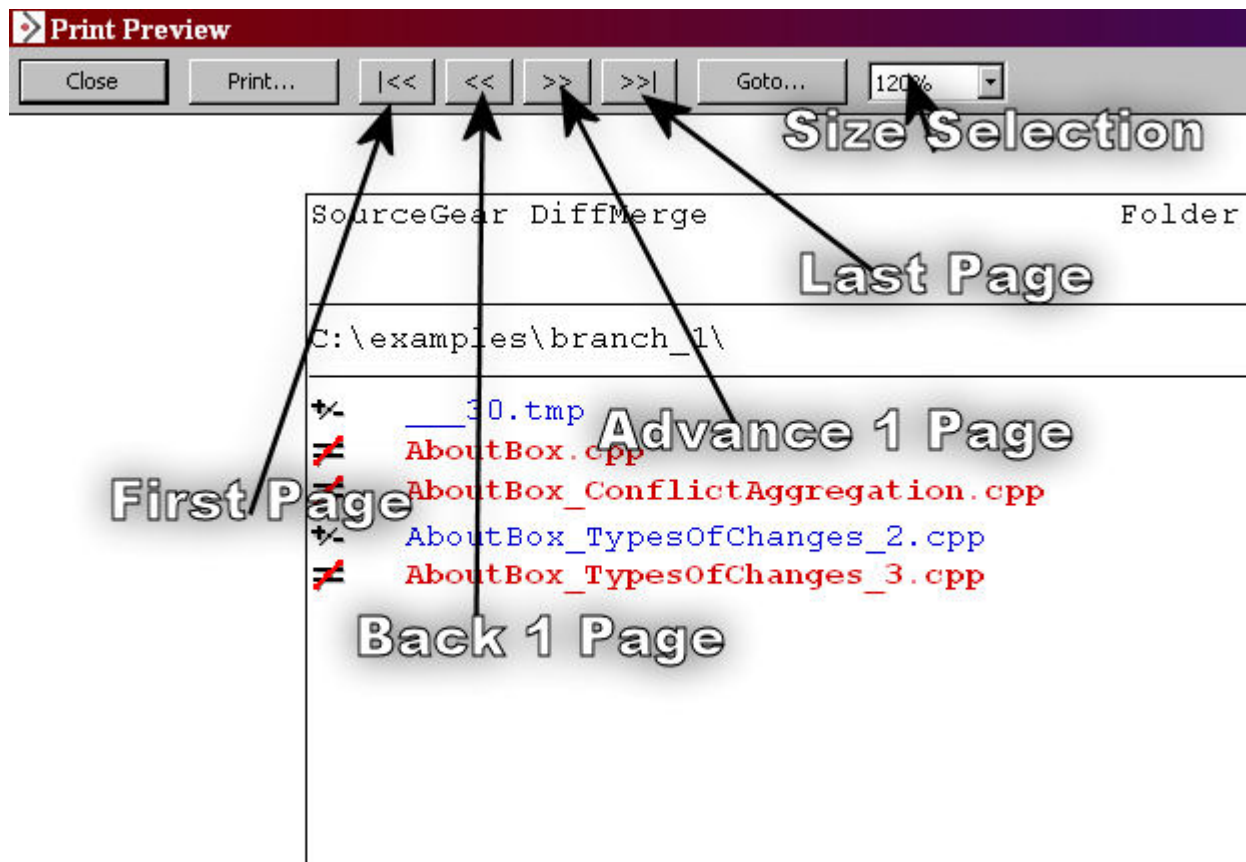
Each panel of a window is printed on a separate page; 2 pages across or 3 pages across as necessary. Page numbers are augmented with the letters a, b, and c to help track the printed papers. Vertically, the display of files is synchronized (with **Void**s used when necessary and printed as they are shown on screen) so that content is lined up on each page; that is, you can place pages 10a and 10b side-by-side and the changes line up.

Lines that don't fit across a page are currently truncated. If long lines are a problem, print using landscape mode.

---

## Print Preview Dialog

The **Print Preview** dialog is accessed by selecting **File|Print Preview**.



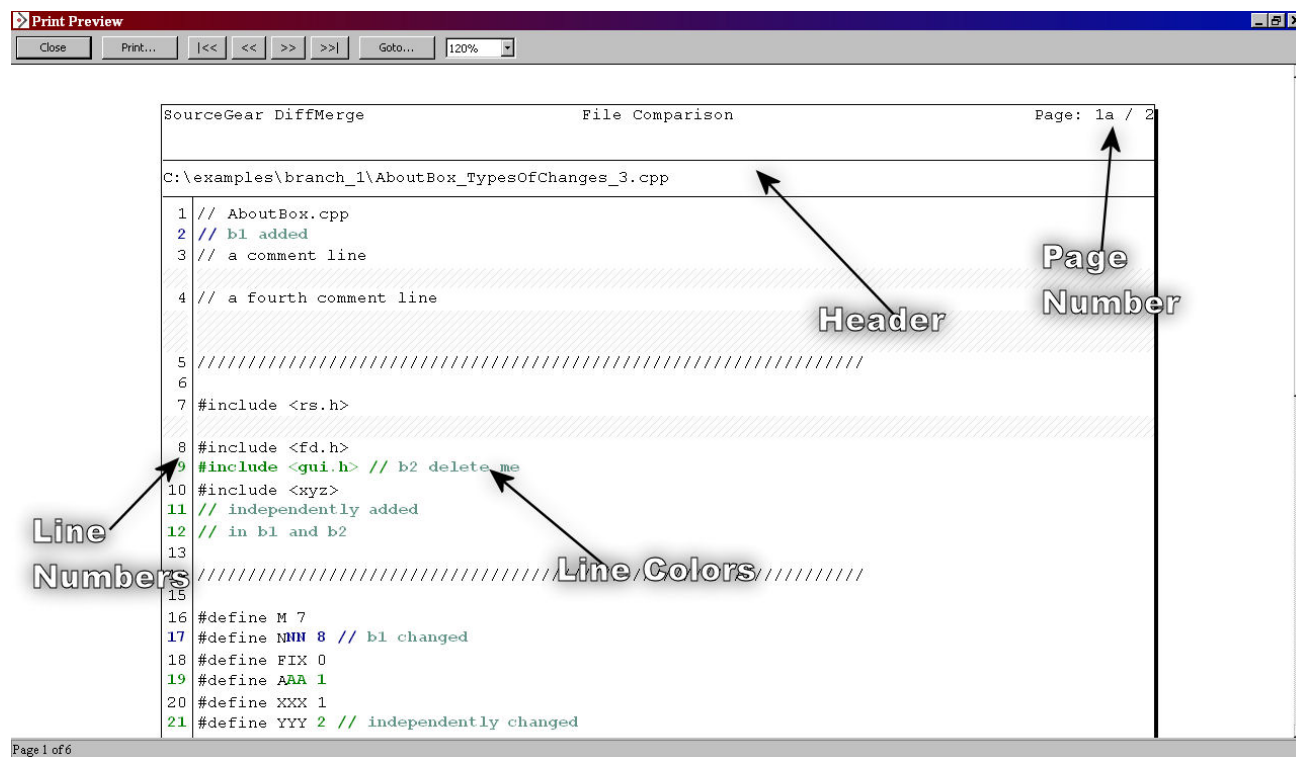
Four related buttons are listed below the **Print** button, each with a “fast forward” or “rewind” symbol. Assuming the document has multiple pages, these buttons enable you to advance one page or backup one page, advance all the way to the end of the document, or backup to the beginning.

Clicking the **Goto** button opens the [Goto Page](#) dialog.

Line Color and Line Numbers can be adjusted from **Options|Line Colors** and **Options|Other Colors**.

Likewise, the printing font can be changed from the [Options](#) dialog.

The **Size Selection** window selects the size at which you view the document. To change the document’s display size, click the window and select a size.



There are a number of features that can be adjusted when you are preparing a document for printing.

Headers	Headers are printed on each page, providing the (elided) pathname of the file being compared.
Page Numbers	Each panel is printed on a separate page. Page numbers are augmented with a, b, and c to aid in easier placement of the printed pages.
Footers	Footers provide a summary of the options and settings in effect at the time of the printing. This includes the current Ruleset in use, the Display Mode, and the Tab Stop setting.
Line Numbers	If the Line Numbers option is turned on in the window, the output also has line numbers. (To turn on the line numbers see Show Line Numbers.)
Line Colors	Lines with changes are printed in color and in bold. Line detail (whether whole lines are highlighted or intra-line changes are highlighted) depends upon the Detail Level you select in the Options dialog. It is possible to change File Colors from the <a href="#">Options Dialog</a> .

## The Goto Page Dialog

The **Goto Page** dialog is accessed from the [Print Preview](#) dialog: open the File|**Print Preview** and click **Goto**. It's primarily useful when you're dealing with a very long document. When the **Goto Page** dialog appears, it enables you to select the page you wish to view by typing in its number in the blank area of the dialog box.

# Command Line Arguments

```
diffmerge.exe [ options ] [ pathname1 [ pathname2 [ pathname3 ] ] ]
```

Option	Meaning
h, help	<b>Raises usage dialog and exits.</b>
c, caption <b>Example:</b> /caption="Hello World!"	<b>Descriptive caption for the application title bar of the first window opened.</b>
m, merge <b>Only applies to File Merge Windows.</b>	<b>Run "Merge to Center Panel" immediately after loading files in the first window opened.</b>
nosplash <b>Only applies when no pathnames are given.</b>	<b>Suppresses splash screen.</b>
r, result <b>Only applies when 3 source pathnames are given on the command line.</b> <b>Example:</b> /result="C:merge_result.txt"	<b>Specifies alternate pathname for saving the merge result from the first window. If not specified, the merge result (if saved) will overwrite the center file.</b>
ro1	<b>[DEPRECATED] Unused.</b>
ro2 <b>Only applies when 2 or 3 pathnames are given on the command line.</b>	<b>Treat the second pathname as read-only. Prevents editing in the first window opened. (See "Viewer Mode".)</b>
ro3	<b>[DEPRECATED] Unused.</b>
shex  <i>(Only available on Microsoft Windows.)</i>	<b>Shell/Extension flag; forces the Open Files or Folders dialog to appear (even when not necessary) before opening the first window. This allows you an opportunity to swap the pathnames if necessary.</b>
t1, title1 <b>Example:</b> /title1="Version 12 (foo.cpp)"	<b>Sets the display title for the first pathname given on the command line.</b>

t2, title2	Sets the display title for the second pathname given on the command
t3, title3	line. Sets the display title for the third pathname given on the command
Only applies to 3-way windows.	

Batch Option	Meaning
<b>d, diff</b> Example: <b>/diff="diff.output"</b>	Compare two files and write results to an output file rather than opening a window. The file is only created if there are differences to report. The Exit Status is: 0 - if the input files are identical; 1 - when they are different; 2 - when there are file errors; and -1 (255) - for command line errors.
<b>u, unified</b>	Write the /diff output file in UNIFIED format rather than TRADITIONAL format.

Arguments	Meaning
<i>pathname1, pathname2, pathname3</i>	A set of 2 or 3 files or 2 folders to open in the first window. For <b>File Diff Windows</b> , <i>pathname1</i> is placed in the left panel and <i>pathname2</i> is placed in the right panel. <b><i>pathname2</i> will be editable.</b> For <b>File Merge Windows</b> , <i>pathname1</i> is placed in the left panel, <i>pathname2</i> is placed in the middle panel, and <i>pathname3</i> is placed in the right panel. <b><i>pathname2</i> is considered to be the common ancestor.</b> For <b>Folder Diff Windows</b> , <i>pathname1</i> is placed in the left panel and <i>pathname2</i> is placed in the right panel.

Command options have a long and short form and may either be prefixed by a '/' or a '-' depending upon your platform. For example: **-h**, **-help**, **--help**, **/h**, or **/help**. For options that require values, they must have a COLON, EQUAL, or SPACE separator character between the keyword and the value. For example, **/caption="Hello World!"**.

For example:

```
diffmerge /t1="Baseline" /t2="My Working Version" c:/baseline/foo.cpp
c:/work/foo.cpp
```

```
diffmerge /t1="My Working Version" /t2="Merge Result" /t3="Repository
Version" /r="c:\merge_result.cpp" c:/work/foo.cpp c:/baseline/foo.cpp
c:/current/foo.cpp
```

# Integration with Third-Party Software

DiffMerge can be configured as an external compare / merge tool with various third-party version control systems. Usually this just involves formatting the correct command line template string in the package's options dialog. Here are instructions for the packages that we have information about.

---

## Microsoft TFS

Information on configuring an external diff/merge tool can be found at:

<http://msdn2.microsoft.com/en-us/library/ms181446.aspx>

This document describes how to configure tools based upon file suffix. A “\*” can be used for the suffix to change the default tool settings.

For a listing of the arguments used to build the command line string, see James Manning's blog:

<http://blogs.msdn.com/jmanning/articles/535573.aspx>

The arguments for comparing two files or two versions of a file should be:

`/t1=%6 /t2=%7 %1 %2`

With this command line, “*original version (%1)*” will be in the left panel and the “*modified version (%2)*” will be in the right panel. If you want to limit yourself to strictly viewing, rather than editing, the changes, add `/r02` to the beginning of the above command line.

The arguments for merging two versions of a file from a common ancestor should be:

`/m /r=%4 /t1=%7 /t2=%8 /t3=%6 /c=%9 %2 %3 %1`

With this command line, “*your changes (%2)*” will be in the left panel, the “*common ancestor (%3)*” will be in the center panel, and “*their changes (%1)*” will be in the right panel. When you save your merge changes, they will be written to the “*merge result (%4)*” file.

---

## TortoiseSVN

Information on configuring an external diff/merge tool can be found in

[http://tortoisesvn.net/docs/release/TortoiseSVN\\_en/tsvn-dug-settings.html#tsvn-dug-settings-progs](http://tortoisesvn.net/docs/release/TortoiseSVN_en/tsvn-dug-settings.html#tsvn-dug-settings-progs)

The arguments for comparing two files or two versions of a file should be:

```
/t1=%bname /t2=%yname %base %mine
```

With this command line, “*original version (%bname)*” will be in the left panel and the “*modified version (%mine)*” will be in the right panel. . If you want to limit yourself to strictly viewing, rather than editing, the changes, add `/ro2` to the beginning of the above command line.

The arguments for merging two versions of a file from a common ancestor should be:

```
/m /r=%merged /t1=%yname /t2=%bname /t3=%tname /c=%mname %mine %base  
%theirs
```

With this command line, “*your changes (%mine)*” will be in the left panel, the “*common ancestor (%base)*” will be in the center panel, and “*their changes (%theirs)*” will be in the right panel. When you save your merge changes, they will be written to the “*merge result (%merged)*” file.

# Regular Expressions

DiffMerge performs various searches and pattern matches using the RegEx regular expression library from Henry Spencer. DiffMerge uses the **Advanced Regular Expressions** that it defines. The library implements POSIX regular expressions and also supports Unicode and some Perl5 extensions.

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wxWindows adopted the code out of Tcl 8.4.5. Portions of regc\_locale.c and re\_syntax.n were developed by Tcl developers other than Henry Spencer; these files bear the Tcl copyright and license notice:

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