ReNamer User Manual

www.den4b.com

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Contents

Articles

Basics

ReNamer

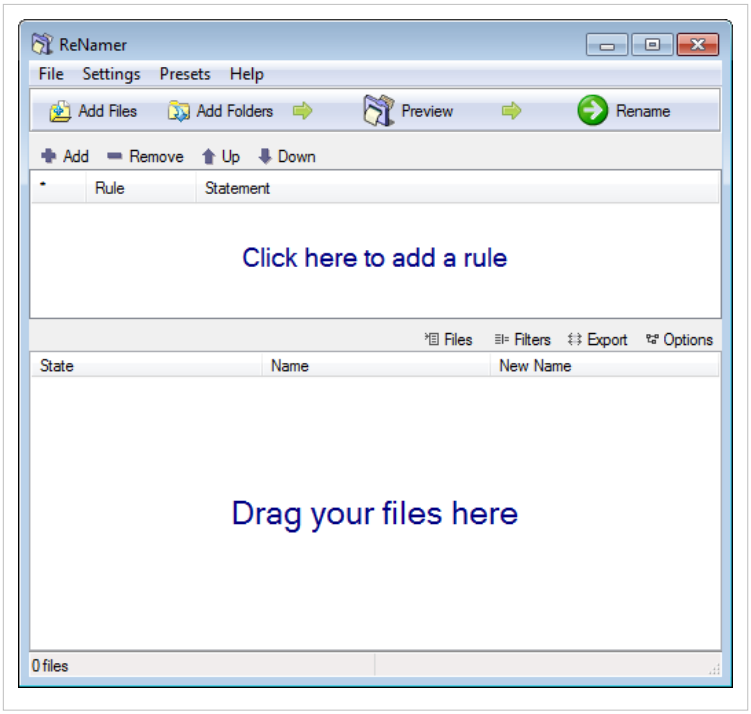
ReNamer is a very powerful and flexible file renaming tool.

ReNamer offers all the standard renaming procedures, including prefixes, suffixes, replacements, case changes, removing the content inside brackets, adding number sequences, changing file extensions, etc.

Advanced users can program their own algorithm using PascalScript rule.

ReNamer allows you to combine multiple renaming actions as a rule set, which can be saved, re-loaded, and edited. In addition, it can rename folders and process regular expressions. It can handle Unicode (non-English scripts).

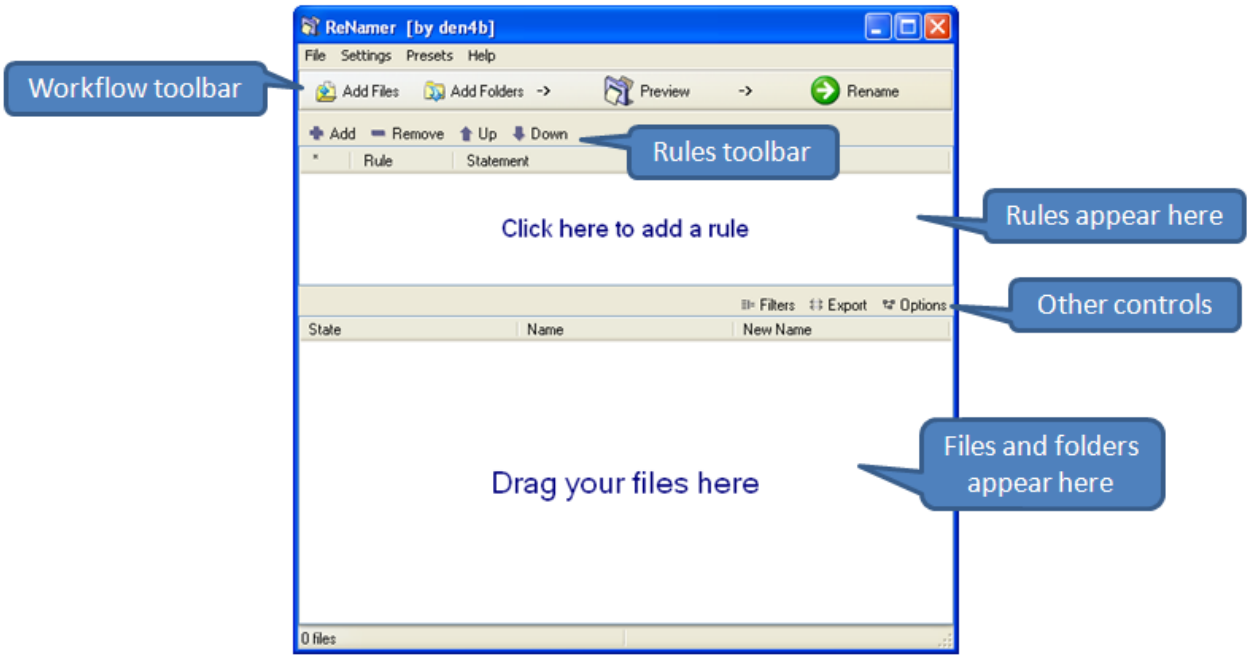
ReNamer supports a variety of meta tags, such as: ID3v1 [1], ID3v2 [1], EXIF [2], OLE [3], AVI [4], MD5 [5], CRC32 [6], SHA1 [7] and many more.



References

[1] http://en.wikipedia.org/wiki/ID3
[2] http://en.wikipedia.org/wiki/EXIF
[3] http://en.wikipedia.org/wiki/Object_Linking_and_Embedding
[4] http://msdn.microsoft.com/en-us/library/ms779636.aspx
[5] http://en.wikipedia.org/wiki/MD5
[6] http://en.wikipedia.org/wiki/CRC32
[7] http://en.wikipedia.org/wiki/SHA1

Introduction



ReNamer is a very powerful and flexible file renaming tool with the following features:

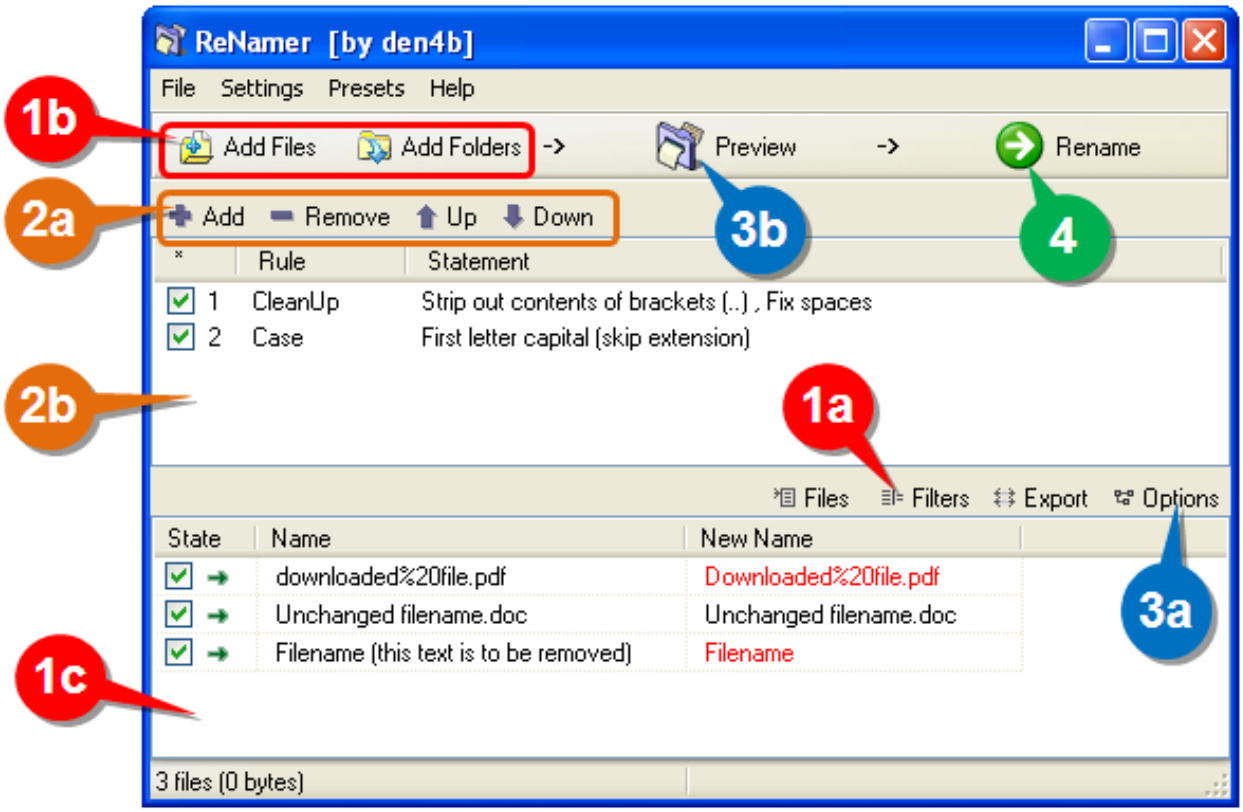
- The *workflow* toolbar makes renaming easy.
- ReNamer can rename files belonging to different folders (or even different computers) at a time.
  You can also filter the contents of the folders before renaming.
- ReNamer offers extensive set of rules for renaming. Each rule has controllable parameters.
- ReNamer can stack multiple rules in any sequence and apply in that order.
- ReNamer provides full preview (the affected file names can be highlighted).
- ReNamer allows you to try out the stack of rules on user-defined text
  (this allows safe experimentation, without risking real files).
- ReNamer can automatically handle name-conflicts arising from the renaming.
- You can save the stack of rules as a "preset" and re-use it later *with a keyboard shortcut*.
- ReNamer can rename folders.
- ReNamer can move files to other folders.
- ReNamer can rename Windows network (neighbourhood) files also.
- ReNamer can use RegEx (Regular Expressions) for the renaming.
- ReNamer supports Unicode filenames (e.g. Asian scripts, Cyrillic, French, Spanish, Arabic, Hebrew, etc).
- ReNamer allows scripting (Pascal Script) to create complex renaming logic.
  (many scripts are available on the Forum [1]).
- ReNamer can extract a large variety of meta tags from files and use them for the renaming.
  (e.g. ID3v1 [2], ID3v2 [3], EXIF [4], OLE [3], AVI [4], MD5 [5], SHA1 [5], CRC32 [6], etc)
- ReNamer can export/import the renaming-related information.
- ReNamer can take automatic actions based on outcome of renaming operation
  (e.g. clear off all successfully renamed files from the pane, but retain the problematic files)
- ReNamer can be run in command line mode, with lots of parameters.
  This allows you to select your files in explorer (or any other application) and do *one-touch renaming*.

References

[1] http://www.den4b.com/forum/
[2] http://www.id3.org/ID3v1
[3] http://www.id3.org/
[4] http://exif.org
[5] http://en.wikipedia.org/wiki/Sha1
[6] http://en.wikipedia.org/wiki/Crc32

Quick Guide

The ReNamer interface is shown below. Click on any part of the screenshot to see full description.



Using ReNamer is very simple. Just follow the four steps shown below.

Step	What to do
1	Select the files from various folders and add them to the working area. a. Change the default behavior for the "Add Folders" button (optional step). b. Add individually selected files (Add Files) and/or all files in selected folders (Add Folders), and/or... c. Drag-n-drop files from Windows Explorer (or any other application) into this area (called "Files pane").
2	Add rules to create a sequence of operations. Delete or edit an existing rule. Change the order of the rules. a. Allows addition and deletion of rules. Also change the order of any rule in the stack. b. Click in this area to add a rule (or to edit an existing rule, or just move it to a new position in the list).
3	Preview the results (check before proceeding with the actual renaming). a. Set options (e.g. highlight changed names, experiment with your own text, resolve conflicts, etc.). b. Click to see preview of the new file names in the bottom pane (not required in *auto-preview* mode).
4	Press this button to rename files and folders.

ReNamer is so intuitive that you would be able to use it without reading the manual any further.

The rest of the chapters provide more details on all aspects of ReNamer. Use them as reference.

There is an older version of this guide available here: Quick Start.

Step-by-step

As discussed before in the Quick Guide, ReNamer is used in just four steps, which are explained in this section (follow the links):

1. Load the files and/or folders to be renamed.
2. Load the renaming rules in a stack.
3. Preview the renamed files/folders to check if the result is as expected.
4. Rename the files/folders.

Adding files and folders

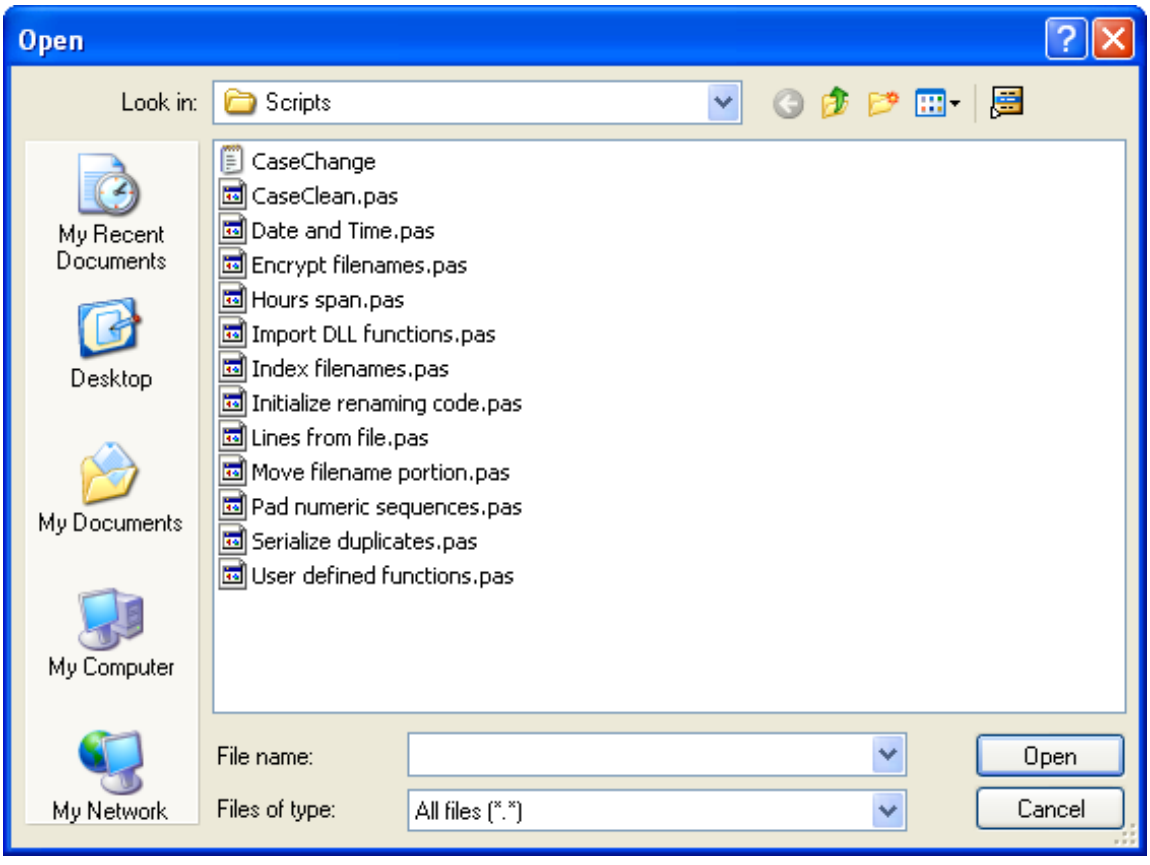
In this section, we will see how to place files and folders in ReNamer's working area (also called the **Files pane**). This consists of:

1. Adding files and folders,
2. Removing some files from the pane, and
3. Changing the order of files in the pane.

ReNamer has multiple methods for these actions, as described below

Adding files using the 'Add Files' button

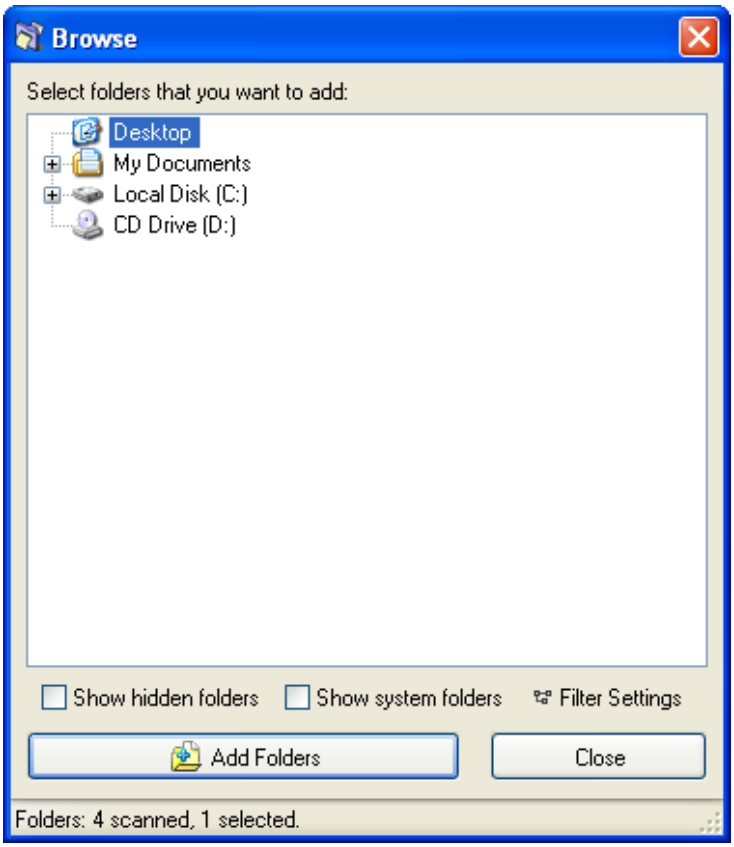
1. Press the Add Files button. The following window pops up:



2. Navigate to the required folder and select files.
3. Press **OK.** The selected files are added to ReNamer's **Files pane**.
4. Repeat steps 1-3 to load files from other folders (as required).

Adding items using the 'Add Folders' button

1. To add all the files belonging to a folder, press the Add Folders button.
   The following window pops up:



   - When you select a node in the tree, all its sub-nodes are automatically selected.
     In other words, when you select a folder, its subfolders are automatically selected.
   - By default, ReNamer adds all files from a folder, but *not* the folder itself.
     So if you want to rename the folder itself (and not its contents), then select this option using the **Filters**.
   - You can select any node from the tree. That means you can even select any/all drives on your computer!
   - You can select multiple nodes at a time, by pressing **CTRL** first and then cliking on different nodes of the tree. All those nodes will be added at one stroke.
2. If you want to add only certain items from the selected folder, set ReNamer's **Filters** by clicking on the Filter Settings button and then selecting different options. Depending on your selected options in this window, the **Add folders** window will add different items to ReNamer's **Files pane**.
   - You can also set the filters by clicking the Filters button (located above the **Files pane**)
3. Navigate to the desired folder and press the Add Folders button.

Adding files using the Drag-and-drop method

Select the files in any application and drag-and-drop them into ReNamer's **Files pane**.

- To drag-and-drop, click on your file selection with LMB. Without releasing the LMB, start moving the mouse. Now bring the mouse pointer over the ReNamer's **Files pane**, and then release the LMB.
  - If the ReNamer's window is not visible, first drag your selection onto ReNamer's task button 

 in Windows **Task** toolbar (located at the bottom of your screen). Wait for a couple of seconds without releasing the LMB. The ReNamer window pops up, and *stays above the other applications' windows* on your screen. Now you can move your mouse over the ReNamer window and drop your selection in its **Files pane**.
  - You can also use the ReNamer's **General settings** to keep its window above the other windows, so even when you are working in the other applications, the ReNamer window stays on top of the other applications' windows.

Adding files using the copy-and-paste method

Select the files in any application and press **CTRL+C** to copy them into the clipboard. Now switch to ReNamer and press **SHIFT+CTRL+V**.

Note that:

- Renamer does not use the usual keyboard shortcut **CTRL+V**.
- It is not necessary to click inside the **Files** pane for the *paste* operation.

Removing files or folders from pane

If you have added more files by mistake, you can remove them easily in just two steps:

1. Select the items
2. Press the **DEL** key. (This only removes the files/folders from the ReNamer. It does not delete them from the disk!)

Changing the order of the files in the pane

Certain rules (e.g. the Serialize Rule) act on the list of the files in "from-top-to-bottom" order (as opposed to acting on each file independently). In such cases, each file gets its name based on its position in the list. (For example, the *n*th file in the list is named Track-n.mp3.)

Normally, the files are listed in the order you added them to the pane (the most recently added file goes to the bottom of the list). But you can change the position of the files in the list.

Just click on the file and drag it to the new position.

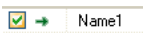
- You can select multiple files and drag all of them *as a group* to the new position.

Sorting files in the files pane

You can also sort files in the **Files pane** by any column with just a click on the column title. The little triangle will show up to indicate the order of sorting. For more information have a look at the full article on sorting files.

Selecting files

When a file is selected, its entire row is highlighted with blue background.

Selected file	
Unselected file	

ReNamer allows you to carry out specific operations on selected files.

You can select one or more files by the following methods:

1. Click anywhere in the row except on the check box.
   - To select non-adjacent files, press **CTRL** and then click on individual rows.
   - To select files listed in adjacent rows, first click on the row at one end, then keep the **SHFT** pressed down, and click on the row at the other end.
2. Draw a lasso (rectangle) with the mouse in the **Files pane**. All the rows touched by the rectangle are selected.
   - If you repeat these actions on an item, they toggle the selection status (selected-unselected).

When only one row is selected, use Up/Down arrow keys to change the selection to another row.

Marking and Unmarking the files

A file is marked by putting a tick in its check box ☑ . Conversely, it is unmarked by removing the tick ☐ .

ReNamer acts only on the *marked* files. An *unmarked* file is neither previewed nor renamed.

So unmarking a file is useful to exempt a file from renaming, *without* having to remove it from the **Files pane**.

To mark/unmark the files:

1. Click on the check box.
2. Select the files and press the **Spacebar** (on keyboard)

(Repeat of these actions on any item toggles its *marked/unmarked* status.)

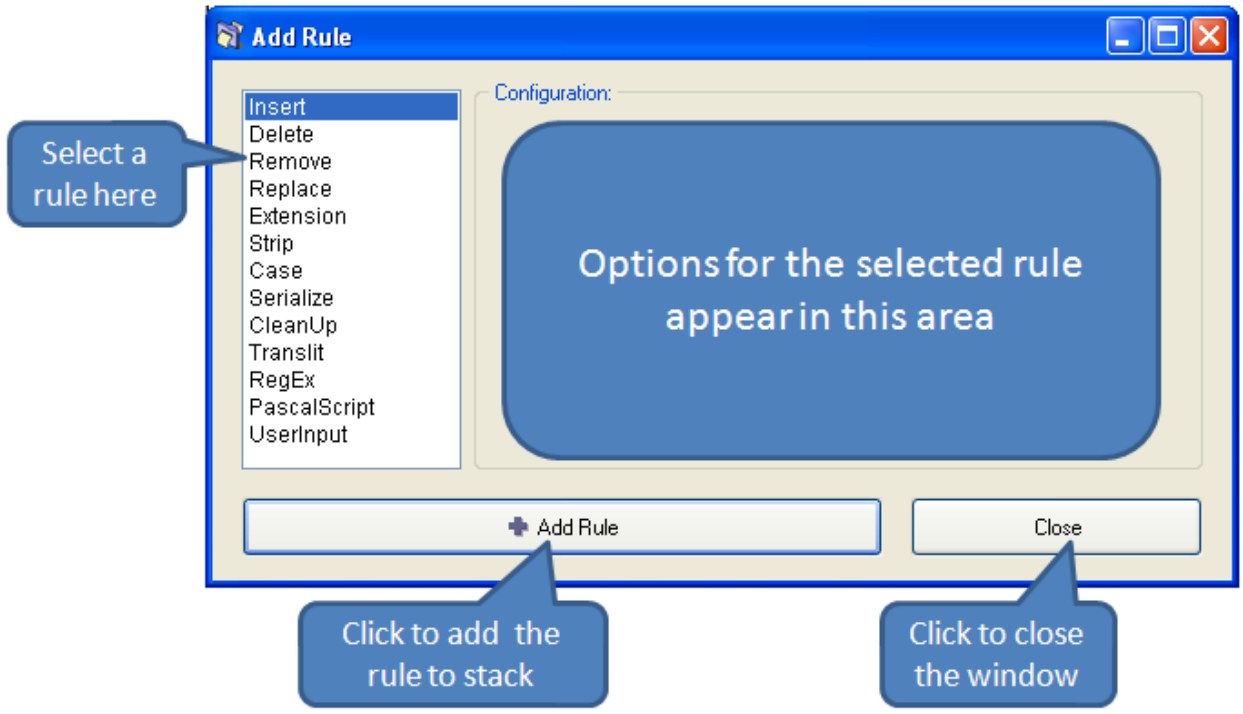
Note that the *marked/unmarked* status of a file has no relation with its *selected/unselected* status.

Managing Rules

This section explains how to add rules, remove rules, edit a rule and change the order in which they are applied to files and folders.

Adding rules

1. Rules can be added by using any of the following methods:
   - Click the Add Rule button,
   - Click inside the **Rules** area,
   - Press the **Ins** key when the ReNamer window is active.
2. The **Add Rule** window pops up:



   Select the desired rule.
3. The options for the selected rule appear immediately in the **Configuration** area (at right).

   Set the desired parameters, as explained in each rule.
4. Press the Add Rule button at the bottom of the window. The rule is added to the stack and the window is closed.
5. Repeat steps 1-5 to add more rules. Each new rule is added at the end of the stack.
6. To close the window without adding a rule press the Close button at bottom (or the button at the top right corner).

Removing (deleting) rules

To remove an existing rule, select it and press **DEL** or click on the Remove button.

Changing the order of the rules

All rules are applied to each file in the order they appear. Even with the same set of rules, the end-result can be very different if the order of the rules is changed.

You can change the order of rules using any of the following methods:

1. Using the Up and Down buttons.
2. Pressing **CTRL + Up/Down** arrows.
3. Drag-and-drop any rule with mouse.

Editing rules

Editing a rule means changing its parameters and options, and then saving the rule.

You can edit a rule using any of the following methods:

1. Double-click on it,
2. Right-click on it and select the **Edit Rule** option
3. Select it and press **ENTER.**

A window similar to the **Add Rules** window appears. There are only *two* minor differences: the button at the bottom is titled **Save Rule**, and the rules list in the left pane is grayed out (because you are not supposed to select rules in this window).

Change the parameters and options, and press the **Save Rule** button or **ENTER**.

Selecting a rule

When a rule is selected, its entire row is highlighted with blue background.

Selected rule	1 Insert
Unselected rule	1 Insert

Only one rule can be selected at a time.

To select a rule, use any of the following methods:

1. Click anywhere in the row except on the check box.
2. Use the Up/Down arrow keys on your keyboard to move the selection to another rule.

Marking and Unmarking a rule

A rule is marked by putting a tick in its check box ☑ . Conversely, it is unmarked by removing the tick ☐ .

ReNamer uses only the *marked* rules for the *preview* and *renaming* operations.

So unmarking a rule is useful to temporarily disable the rule *without* having to remove it from the **Rules** pane.

To mark/unmark the rules:

1. Click on the check box.
2. Select a rule and press the **Spacebar** (on your keyboard)

(Repeat of any of these actions toggles the marked/unmarked status.)

The reasons for unmarking a rule are:

1. You want to remove the effect of a rule and see what happens to the files.

2. You have a favorite set of rules that you use often. However, you need to remove a few rules in some cases. A trick is to save the superset of rules and reload them automatically each time you start ReNamer. Then in each session, unmark some rules.

Previewing Files

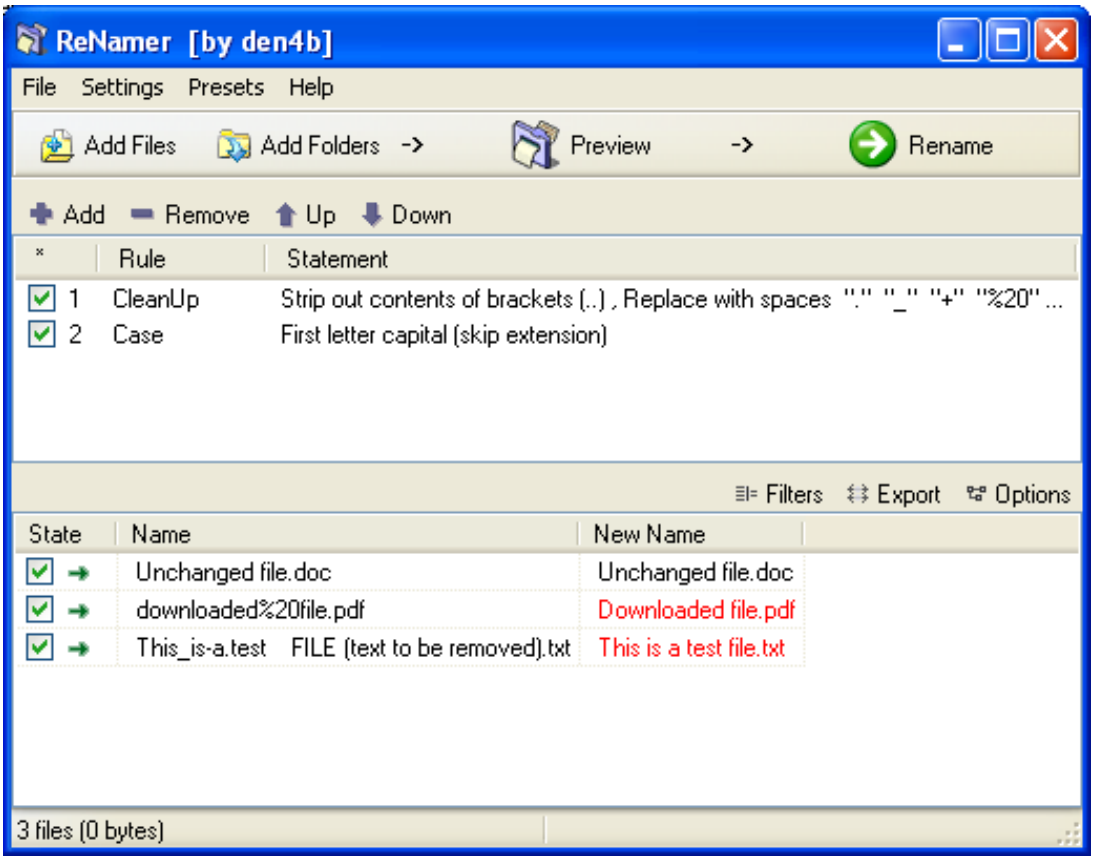
ReNamer shows a preview of the files, so that you can decide whether your rules are working as expected. If some files show unexpected results, edit some of the rules and check the preview again.

Let us see how preview works.

In the example below, there are two rules in the stack.

1. The first rule strips brackets and its contents. It also replaces , _ and %20 with a space, and fixes multiple spaces in the name.
2. The second rule capitalizes the first letter of the name and makes all other letters lowercased.

The ReNamer preview is shown below.



We can see that:

- In the **Files** pane, the **State** column shows whether the renaming will face any problems. In this case, the green arrows → show that the files are **ready to go!**, but in case anything is wrong, those files are marked with ⚠ (warning icon).
- The **New Name** column shows a preview of the new names. If you have the **Higlight changed names** option from the **Options** menu turned on, you will be noted with colours if the file name were changed during preview. This is showed on the picture above. The first name is unchanged, so it is shown in black. The remaining two names are affected by the rules, so they are shown in red.
- The check boxes in the **Rules** pane allow you to disable any rule temporarily. (Disable one of the rules and see the effect on the renaming.)

- The check boxes in the **Files** pane allow you to exempt any file/folder from the current renaming. New names are not shown for such unmarked files.

Note that ReNamer has many program options for previewing. Its behavior will vary greatly based on those settings. For example, you can set it to refresh the preview automatically when new files and/or rules are added. Another example is to show the **New Name** in red if it is affected by the rules (this makes it easy to spot the file names that are going to change)...

You may also want to customize the columns displayed in the "Files" pane. For example, many users prefer to see the **Path** and **New path** columns.

- To customize columns, right-click on the strip that contains all column-headers. A menu pops up all available columns. Select the columns you want. From now on, ReNamer remembers the new settings.

Manual Preview mode

If you do not select *auto preview* mode, you must press the 

button to see the preview.
This **Manual Preview** mode is actually useful if you do not want to miss out the subtle changes that can happen to the file names when you are adding new rules or if you adjust the file names manually after preview.

While using the **Manual Preview** mode, keep the following in mind:

- ReNamer has a WYSIWYG policy: The files will be renamed exactly as what you see in the preview.

  In manual preview mode, be sure to press the 

button after changing your rules, otherwise these changes will not be applied in the actual renaming! (In other words, the Rules pane shows some rules that are not actually applied!)

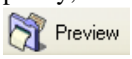
- If you change the items manually, these changes are lost if you press the 

button.

Renaming Files

When the 

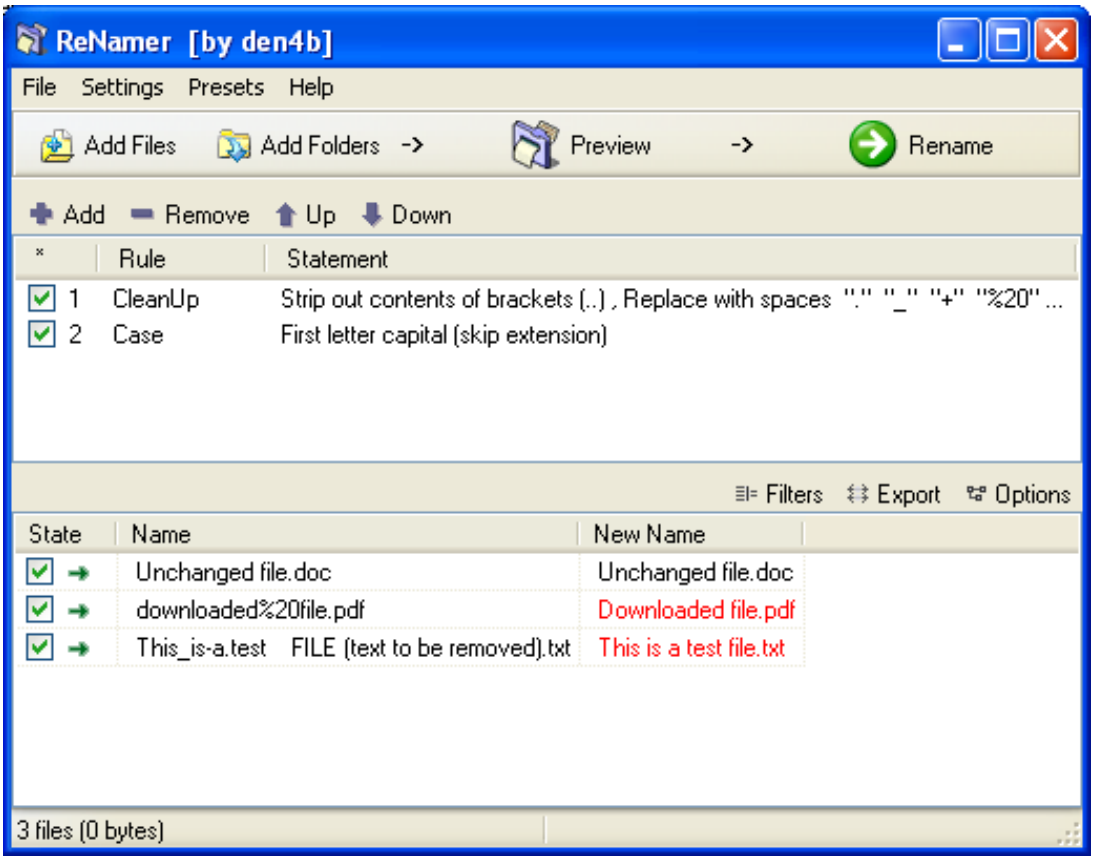
button is pressed, the following things happen:

1. The marked files are renamed according to the **Path** and **New Path** columns in the **Files** pane.
   - If some of the rules do not *seem* to have applied, the reason could be that the ReNamer is in **Manual Preview** mode, and you did not refresh the preview after adding/editing some of the rules. (ReNamer has a WYSIWYG policy, the items are renamed exactly as shown in the **New Path** column.) To update the preview, press the 

button again.
   - If your set of rules is not meant to move files from one folder to another, you can as well assume that files are renamed according to the **Name** and **New Name** columns of the **Files** pane.
1. The **Name** column now contains the new name of the item, and
2. The **New Name** column becomes empty (because it is supposed to show a preview of the *proposed* new name. So once the file is renamed, there is no *new name* any more.)

After the renaming is over, ReNamer can do a lot of other things depending on the Program settings for renaming. For example, it can automatically clear off the **Rules** and/or the **Files** pane or close the ReNamer window automatically.

When is a file considered "renamed successfully"?



Look at the first file (Unchanged file.doc) in the above screenshot. That file is not affected by the current set of rules. Yet, so far as ReNamer is concerned, all the marked rules *were* applied to it, and the renaming operation (consisting of renaming *Unchanged file.doc* into *Unchanged file.doc*) didn't give any errors, so ReNamer considers that this file was successfully renamed.

Each renaming operation can have four different outcomes:

Outcome	Is it considered as successfully renamed?
A file that was unmarked (that is, was NOT marked for the current round of renaming)	No
A file name that was changed during the renaming operation.	Yes
A file name that did not change because none of the renaming rules were applicable.	Yes
A file name that caused error during renaming (e.g. invalid file name, name conflict, etc.)	No

You can set ReNamer's Program settings to take some conditional actions on the files based on their outcome. For example, you can clear off the files that were NOT renamed in the current round of renaming.

Rules

Using the Rules

You can load a stack of rules in ReNamer. These rules act on the loaded files in the "top-to-bottom" order. This allows you to achieve very complex renaming algorithms.

- A rule modifies the name and then passes it to the next rule, which acts on the modified name (not the original name).
- Any rule can be used multiple times, each time with different settings.

All you have to do is to visualize how each rule in the stack affects the file name when the file name "passes through" the stack.

The first subtopic provides an overview of Rules. The subsequent subtopics show the specifics of each rule:

- How each option works, and how to set it.
- Examples (typical uses).

Tip: If you are going to use the same set of rules frequently, it is best to save it as a Preset. This allows you to re-load the entire set with a keyboard shortcut (such as **CTRL+1**). A huge timesaver!

Overview of Rules

Overview of Rules

ReNamer has an extensive set of rules. These rules can be combined together, in a logical sequence, to perform nearly any thinkable operation with the filename. You can also manually edit the name of any file.

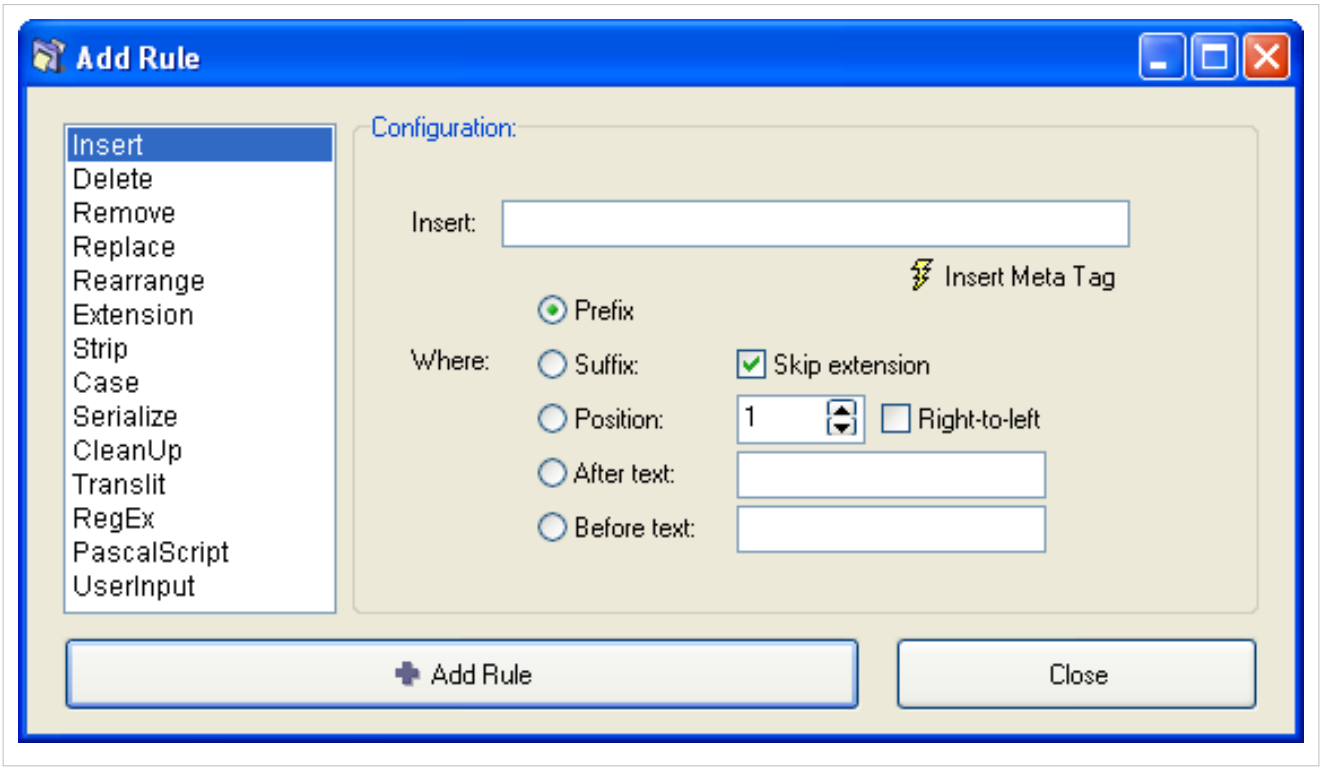
The table below lists all rules, with a brief description of each rule.
The subsequent chapters provide more details for each rule (follow the links).

Rules	Description
Insert	Insert the specified text into the filename: as prefix, as suffix, at the specified position, before- or after the specified text. There is also an option to insert meta tags into the filename.
Delete	Delete a portion of the filename, usually defined by character positions: from the specified position, from the occurrence of the specified delimiter, until the specified number of characters, until occurrence of the specified delimiter or till the end. This rule can be set to process the filename in a right-to-left manner.
Remove	Remove the specified text from the filename: first, last or all occurrences. Optionally, wildcards can be used within this rule, to remove masked text fragments.
Replace	This rule is very much like the **Remove** rule (above). It has similar options, except that instead of removing the text fragments, it will replace them with the specified text.
Rearrange	Chop up the existing file name using any delimiter or position and reuse any/all of the parts in any order to compose a new name.Add your strings, or use the meta tags extracted from the file to compose the new name.
Extension	Change extension of files to the specified extension, or to the extension automatically detected through the internal database of binary signatures.
Strip	Strip all occurrences of the specified characters from the filename. This rule has predefined character sets, like digits, symbols, brackets, but you can also define your own character set.

Case	Change the case of the filename: capitalize each word, to lower case, to upper case, invert case, or capitalize only the first letter and force the rest to lowercase (as in a sentence). There is also an option to force case for the manually entered fragments, for example: CD, DVD, India, ReNamer, etc.
Serialize	Use numeric incremental or random sequences of digits to put filenames into an order.
CleanUp	Cleanup filenames from (or for) commonly used naming conventions for Internet, peer-to-peer networks, and other resources.
Translit	Transliterate Non-English characters from different languages into their English/Latin representation. Useful for preparing files for network storage and transfer. Several transliteration maps are built in, and you can define your own maps.
RegEx	RegEx (=Regular Expressions) is used for complex pattern/expression matching and replacing operations. Although it may look complex at first, you can learn it quite easily, using the guide provided in this manual!
PascalScript	Scripting allows programming-aware users to code their own renaming rule using predefined set of functions. This rule uses Pascal/Delphi programming syntax and conventions. Extremely powerful feature in the right hands.
UserInput	Rule that simply sets the new names of the files to the names entered in a list (one name per line).

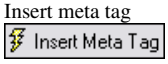
Insert Rule

Insert Rule



This rule inserts the specified string at the beginning of the name, or end of the name, or at any other specified position. It can also insert the string *conditionally (*only when the existing name contains a second specified string).

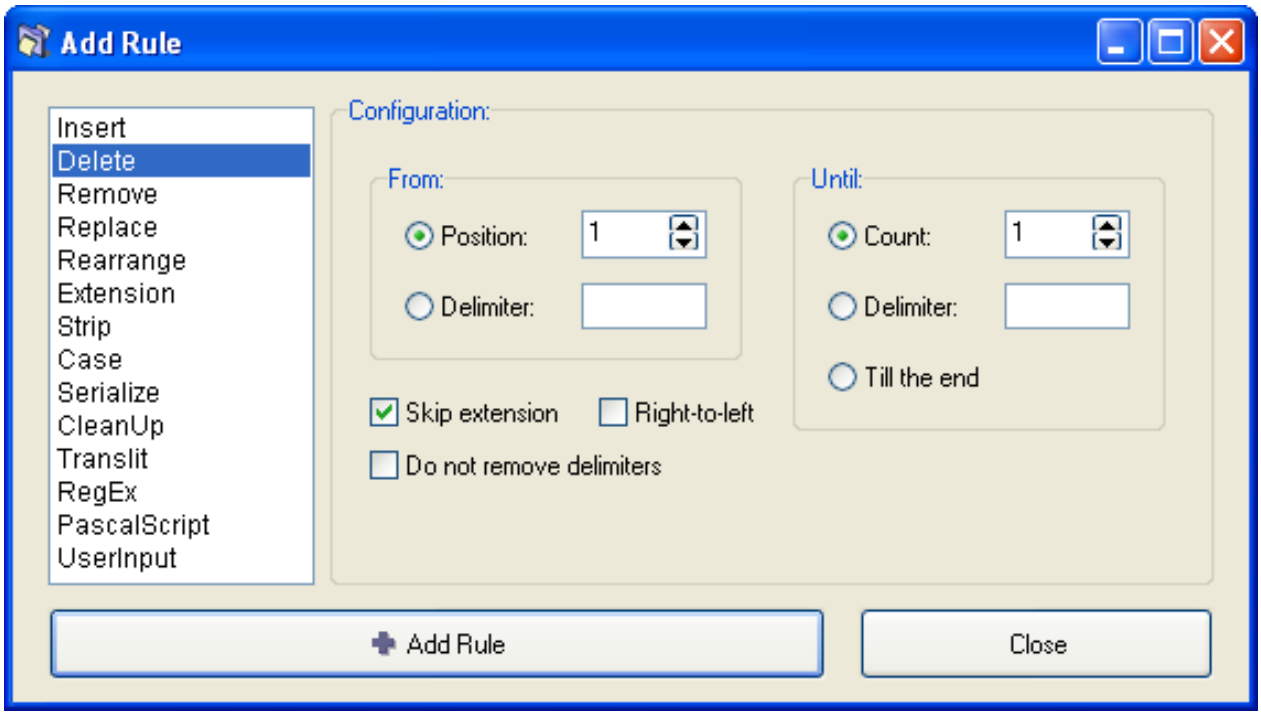
The parameters are as follows:

<table>
<tr><th>Parameter</th><th>Details</th></tr>
<tr><td>What</td><td>Enter the string that will be inserted.</td></tr>
<tr><td>Insert meta tag
  </td><td>Click the button to see a list of meta-tags.</td></tr>
<tr><td>Where</td><td>Select any one of the following options:

<table>
<tr><td>Prefix</td><td>Adds the string before the existing name.</td></tr>
<tr><td>Suffix</td><td>Adds the string after the existing name.
• If the skip extension option is not selected, the specified text will be inserted after the extension.</td></tr>
<tr><td>Position</td><td>Insert at the set position (the count starts from 1).
• Count spaces and special characters also.
• You can count in the right-to-left direction
• You may use Analyze window to check the position by pointing to the character with mouse or keyboard instead of counting it by yourself. Just select the file (or files) in the Files pane and choose the Analyze name option from the context menu.</td></tr>
<tr><td>After text</td><td>Inserts the text entered in the "what" box after the text entered in the "after text" box.
• If the "after text" string is not found in the name, the "what" text will not be inserted.</td></tr>
<tr><td>Before text</td><td>Inserts the text entered in the "what" box before the text entered in the "before text" box.
• If the "before text" string is not found in the name, the "what" text will not be inserted.</td></tr>
</table>
</td></tr>
</table>

Delete Rule

Delete Rule



This rule will delete all characters located between the **From** and the **Until** positions. Optionally, it can delete from the specified position till the end of the name.

The parameters are as follows:

Parameter	Details

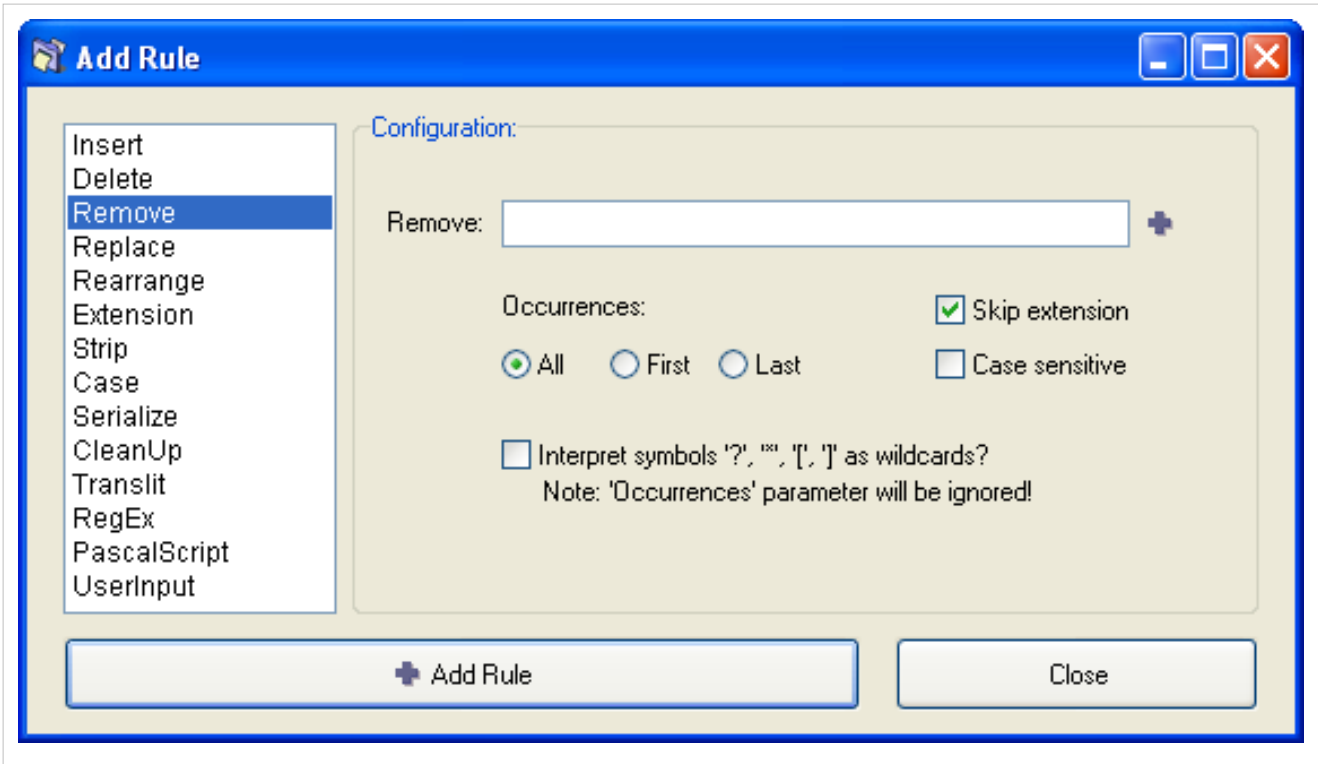
From	From which character-position you want to start the deletion. Select from the following options:
	• The starting position (count starts from 1)
	• The delimiter from where the deletion starts.
	  • The delimiter can be a single character or even a string.
	  • Typically **, . / ( ) -** and space are used as delimiters.

Until	Till which point you want to delete: Select from the following options:
	• Count: Specify how many characters to be deleted, starting from the FROM position.
	• Delete till a specified delimiter is reached.
	  • You can use two different delimiters in **From** and **Until** sections.
	  • The delimiter can be a single character or even a string.
	  • Typically **, . / ( ) -** and space are used as delimiters.
	• Delete all characters till the end.

Skip extension	If this check box is unselected, the extension will be included in the rule.
Right-to-left	If you select this option, ReNamer counts the position from the extreme right. (The **From** and **Until** positions switch places.) • When this option is selected, the "till the end" option in **Until** deletes all characters on the left (what we regard as the *beginning* of the name) For example, to keep only the four characters on the right side of the name (and delete all the rest of the characters on the left), use: **From** **Until** Position 5 Till the end
Do not remove delimiters	If you select this option, the delimiters themselves will be retained. • If you have used two different delimiters in **From** and **Until** sections, *both* of them will be retained.

Remove Rule

Remove Rule



This rule removes the specified string from the file name. It has options to remove the first occurrence, the last occurrence, or all the occurrences of the specified string. You can enter multiple strings at a time (just separate them with ***|***). If ReNamer finds any of them in the name, they will be removed. You can create a pattern with wildcards, so that any string that matches the pattern will be removed.

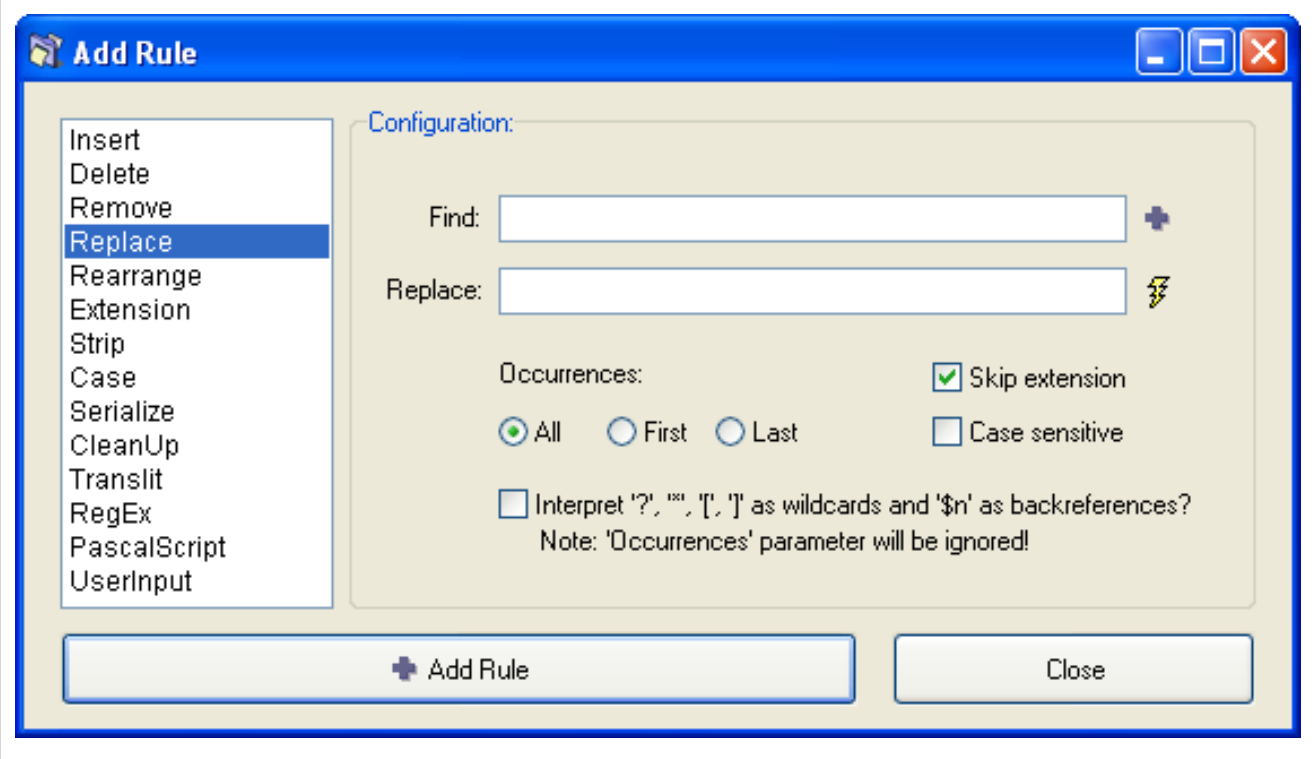
The parameters are as follows:

Parameter	Details
Remove	Enter the string to be removed. • You can enter multiple strings at a time. Press the + button to separate two strings • If the name does not contain the specified string, the rule will not act on it. • If the name contains more than one of these strings, it will remove all of them. **TIP:** Sometimes, the file names have a common string that needs to be removed. In such cases, rather than entering the whole string by hand, it is easier to borrow it from one of the file names. To do this, just click on a file name in the **Files** pane of ReNamer *BEFORE* launching the **Remove** rule. ReNamer will automatically copy the entire name of the selected file into the Remove field. Now edit this entry to get the desired common string.
button	Inserts a separator (***|***) sequence between two delimiter entries. (You can directly type *|* instead of clicking on this button.)
Occurrences	In case the strings occur multiple times in the name, specify which occurrences should be removed. (Options are: *first only*, *last only*, or *all*)
Skip extension	If this check box is selected, the rule won't touch the extension.
Case sensitive	Will only remove a specified string from the name if the case matches exactly.
Interpret symbols as wildcards	The following wildcards are allowed (compare with RegEx).

	Represents	Example
*	any number of characters (including numbers, space, underscores, etc.).	**abc*** equals **abc** followed by 0 or more characters.
?	Any single character (including numbers, space, underscores, etc.)	**ab?d** equals **abcd**, **ab1d**, **ab d**, **ab_d**, etc.
[]	Brackets enclose a set of characters, any one of which may match a single character at that position.	**foo[ab]ar** equals **fooaar** and **foobar**
-	(only within a pair of brackets) denotes a range of characters.	**foo[a-z]ar** equals **fooaar**, **foobar, foocar, foodar,** etc.

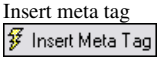
Replace Rule

Replace Rule



This rule removes the specified string from the name and replaces it with another string. It has options to replace the first occurrence, the last occurrence, or all the occurrences. You can replace multiple strings at a time. You can create a pattern with wildcards, so that any string that matches the pattern will be removed.

The parameters are as follows:

<table>
<tr><th>Parameter</th><th>Details</th></tr>
<tr><td>Find</td><td>Enter the string to be replaced. You can enter multiple strings at a time. They will be searched & replaced in the order as they appear. Press the + button to insert a separator between two strings. Instead of pressing this button, you can also enter *|* from the keyboard. If the name does not contain the specified string, the rule will not act on it. If the name contains more than one of these strings, it will replace them according to the Occurrences parameter.</td></tr>
<tr><td>  button</td><td>Inserts a separator (*|*) sequence between two delimiter entries. (You can directly type*|* You can use this button in the Replace box also. In that case, the nthe entry in the Find box is replaced by the nths entry in the Replace box. (e.g. A -->A', B -->B' etc.) }</td></tr>
<tr><td>Replace</td><td>Enter strings that will replace the "Find" strings. Note that the number of strings (separated with *|*) in "Find" and "Replace" boxes should be the same. If there is more strings in the "Find" box than in the "Replace" box the spare strings will be removed (replaced with an empty string). If there is more strings in the "Replace" box, the spare strings will be ignored.</td></tr>
<tr><td>Insert meta tag
  </td><td>Click the button to see a list of meta-tags.</td></tr>
<tr><td>Occurrences</td><td>In case that strings occur more than once in the filename, specify which occurrences should be replaced. (Options are: first only, last only, or all)</td></tr>
<tr><td>Skip extension</td><td>If this check box is selected, the extension will be ignored by the rule.</td></tr>
<tr><td>Case sensitive</td><td>Will only remove a specified string from the name if the case matches exactly.</td></tr>
<tr><td>Interpret symbols as wild cards</td><td>The following wild cards are allowed (compare with RegEx).
<table>
<tr><th></th><th>Represents</th><th>Example</th></tr>
<tr><td>*</td><td>any number of characters (including numbers, space, underscores, etc.).</td><td>abc* equals abc followed by 0 or more characters.</td></tr>
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<tr><td>[]</td><td>Brackets enclose a set of characters, any one of which may match a single character at that position.</td><td>foo[ab]ar equals fooaar and foobar</td></tr>
<tr><td>-</td><td>(only within a pair of brackets) denotes a range of characters.</td><td>foo[a-z]ar equals fooaar, foobar, foocar, foodar, etc.</td></tr>
</table></td></tr>
</table>

Beware

If you enter multiple find and replace strings they will be executed as multiple Replace rules, so first string will go first and only after replacing all (or first, or last) occurrences of that string the second string in the Find box will be searched & replaced.

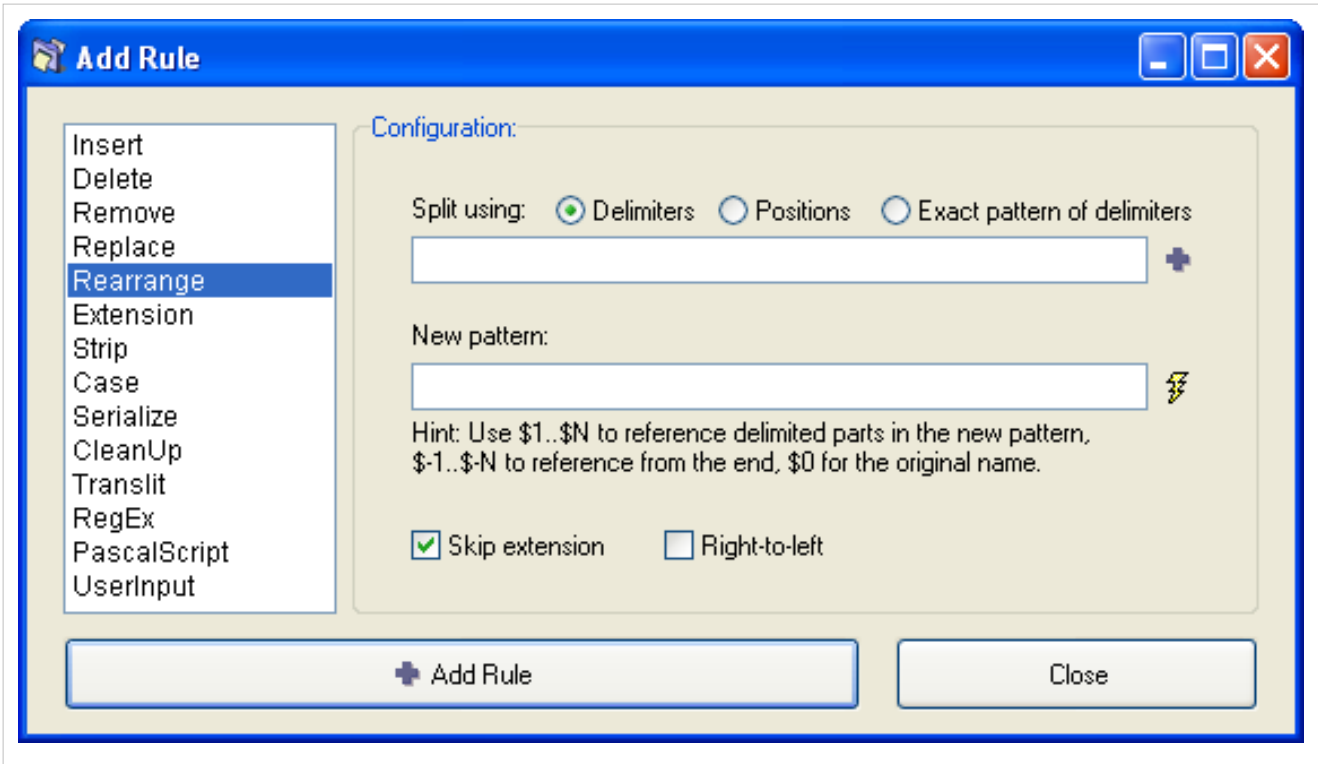
Find	Replace	Name	New Name
A|B	B|A	ABBA.mp3	AAAA.mp3

You may expect the new name to be BAAB.mp3, but it's not. This happens because first all A's are replaced with B's (so we've got BBBB.mp3) and only then all B's are replaced with A's (and the final result is AAAA.mp3).

If you need to apply character-to-character mappings you should use Translit rule.

Rearrange Rule

Rearrange rule



This rule allows you to chop up the existing file name and reuse any/all of the parts in any order to compose a new name.

- You can also add your own text, or use meta tags while composing the new name.
- You can also use the whole original name, and insert literal text (or meta tags) around it.

The parameters are as follows:

Parameter:	How to use:
Split using	Specifies how to split the existing name into parts. • You can use only one of the three options at a time (you cannot combine the chopping methods) For detailed explanation of split methods please look below at the split options explained section.
Right-to-left	If selected, the numbering starts from right. • The characters of the original names are counted from right (the count begins with 1) • The chopped parts will also be numbered from right ($1, $2, etc.)
	Adds a *|* sequence between two delimiter entries, to separates them. (You can directly type the ***|*** sequence instead of clicking on this button.).
New pattern	How to compose the new name from the parts created from the original name (see above). • You can add meta tags and literal text wherever you want. • $0 refers to the whole original name. This allows you to quickly compose a new name by inserting a string at the beginning and/or end.
	Click the button to see a list of meta-tags. Select any meta tag to insert it in the new name template.

Split options explained

Option:	What it does:
Delimiters	Chop the name where the delimiter occurs. • The delimiter can be a single character or a string. • The chopped parts do *not* contain the delimiters (they are omitted totally) • Spaces, numbers and symbols are treated like normal characters. • Several delimiters can be used at a time. Use the | character to separate them. • The chopped parts are numbered from left, as $1, $2, $3, etc. The same parts can be referred from the end as $-1, $-2, $-3, etc. • If the delimiter occurs at the very beginning of the name, the resultant $1 contains nothing (because there is nothing on the left side of the delimiter). **Warning:** The number of parts into which the filename is broken down depends solely on the number of delimiters in the filename. If you reference fewer parts in the output pattern that the number of available parts - not referenced parts will be lost! For example, take filename "Artist - Title" and to swap them around one would use " - " as a delimiter and "$2 - $1" as a new pattern which will result in "Title - Artist", but if some filename appears with more dashes like "Artist - Title - Album" the result will also be "Title - Artist" and last part will be lost. To make sure that no parts are lost use **Exact pattern of delimiters** option instead.
Positions	Chop the name at the indicated position (the position count begins with 1). • If you enter position **n**, ReNamer will chop the **n**-th character and all characters beyond that in a separate piece. • Spaces, numbers and symbols are treated like normal characters. • No part of the original name is omitted during chopping. • You can enter multiple positions. Separate them with the ***|*** sequence. • The chopped parts are numbered from left, as $1, $2, $3, etc. The same parts can be referred from the end as $-1, $-2, $-3, etc.
Exact pattern of delimiters	Chop the name using the exact pattern (sequence) of the delimiters. With this option you basically define how many parts you want the filename to be split into and the order in which the delimiters must occur. If you specify 1 delimiter then you end up with exactly 2 parts, if you specify 2 delimiters you'll get 3 parts, and so on.

Examples

This rule is so versatile that it can be used in a huge number of ways. Therefore its examples have been moved to a separate article Rearrange Examples.

Rearrange Rule Examples

Rearrange rule can be used in many ways. Few examples are given below.

For simplicity's sake, we have split examples into two sections: Basic usage (typical needs of beginners) and Advanced usage (for the power users).

Basic usage

Example 1

Task: Swap parts of name.

From:	To:
Artist - Title.mp3	Title - Artist.mp3

Settings:

Split using: (o)Delimiter
" - " (without the quotes)

New pattern: $2 - $1
[X] Skip Extensions

Explanation: We split the string at the hyphen (dash or minus sign -) or whatever you use to separate Artist from Title
Now, all signs before the dash are stored in variable $1, all after are put in var $2.
Because we want to swap this parts, we simple swap the vars in the output, the "New Pattern": $2 $1
And since this rule removes the used delimiter, we add it on our own: "$2 - $1", or use an new delimiter as e.g.: "$2_-_$1"

Example 2

Task: Insert text before the original name.

From:	To:
Ring Ring	ABBA - Ring Ring
The winner takes it all	ABBA -The winner takes it all

Settings:

Delimiter: none (leave blank)

New order/pattern: ABBA - $0

Remarks: is same as the **Insert** rule.

Example 3

Task: Insert text before and after the original name.

From:	To:
Ring Ring	ABBA- Ring Ring (Live)
The winner takes it all	ABBA-The winner takes it all (Live)

Settings:

Delimiter: none (leave blank)

New order/pattern: ABBA- $0 (Live)

Remarks: is same as using the **Insert** rule twice (one for adding the prefix, and another for adding the suffix).

Example 4

Task: Switch the words, and remove the comma between them.

From:	To:
King, Stephen	Stephen King
Cook, Robin	Robin Cook
Pride and Prejudice, The	The Pride and Prejudice

Settings:

Delimiter: ", " (without the quotes)

New Order: $2 $1

Example 5

Task: Move a word to a new position.

From:	To:
Words sample 1234 07-07-07	1234 Words sample 07-07-07

Settings:

Delimiter: " " (only a space, without the quotes)

New Order: $3 $1 $2 $4

Example 6

Task: Get rid of the numbers, hyphen and space at the beginning.

From:	To:
01 - Afilename.zip	Afilename.zip
002 - Bfilename.zip	Bfilename.zip
0003 - Cfilename.zip	Cfilename.zip

Settings:

Delimiter: "- " (without the quotes)

New Order: $2

Remarks:

1. Note that the delimiter contains a space. If only a hyphen is used as delimiter, then a space would be left out in the beginning of the name, which you would have to trim separately.
2. The **Delete** rule also would work (in *right-to-left* mode). But the **Rearrange** rule also allows you to add any string to the truncated names.

Example 7

Task: Move the first part to the end.

From:	To:
TEST.aaa.bbb.100.ext	aaa.bbb.100.TEST.ext

Setting:

Delimiter: "." (without the quotes)

New Order: $2.$3.$4.$1

Example 8

Task: Move the artist's name from end to the beginning, and change the name format.

From:	To:
Ring ring_ABBA.mp3	ABBA - Ring Ring.mp3
Material girl_Madonna.mp3	Madonna - Material girl mp3

Settings:

Delimiter: "_" (without the quotes)

New Order: $2 - $1

Example 9

Task: Move the numbers to the beginning.

From:	To:
DSC_0001-1.jpg	1-DSC_0001.jpg
DSC_0001-2.jpg	2-DSC_0001.jpg
DSC_0001-10.jpg	10-DSC_0001.jpg

Settings:

Delimiter: "-" (without the quotes)

New Order: $2-$1

Example 10

Task: Insert "sent_" before the last 3 digits.

From:	To:
family_001.jpg	family_sent_001.jpg
work_023.jpg	work_sent_023.jpg
friend_098.jpg	friend_sent_098.jpg

Settings:

Delimiter: "_" (without the quotes)

New Order: $1_sent_$2

Remarks:

The **Insert** rule also would work (in *right-to-left* mode). But the **Rearrange** rule also allows you to add any string to the names.

Example 11

Task: Remove the name of the artist (delete text until hyphen).

From:	To:
Sting - All This Time.mp3	All This Time.mp3

Settings:

Delimiter: "- " (without the quotes)

New Order: $2

Remarks:

1. Note the space after the hyphen. If we use just a "-" as delimiter, the second token would be left with a space in front, which we will have to trim separately.
2. Even the **Delete** rule would have worked (in *right-to-left* mode). But the **Rearrange** rule also allows you to add any string to the new name.

Example 12

Task: Remove the track numbers (and any separator symbol after that) from the beginning of the filenames:

From:	To:
08. Madonna - Like A Prayer.wma	Madonna - Like A Prayer.wma
08.-Madonna - Like A Prayer.wma	
08 Madonna - Like A Prayer.wma	

Settings:

Delimiter: "Madonna" (without the quotes)

New Order: Madonna$2

Remarks:

We chose the string "Madonna" as delimiter because it does not occur anywhere else in the names. The unwanted characters on the left are assigned to token $1, which we will not omit in the new name. However, there is an undesired side-effect: ReNamer removes "Madonna" string from the token $2 because it is the delimiter. Therefore, we have to manually add that missing string "Madonna" to $2, to restore the names.

Example 13

Task: Move the number to front, and remove the square brackets.

From:	To:
Name XXX [0001].jpg	0001 - Name XXX.jpg

Settings:

Delimiter: "[|]" (without the quotes)

New Order: $2 - $1

Remarks:

1. The | character is used to separate the two delimiters.
2. The second delimiter "|" will not produce a token. It is included only to remove it from the new name.

Example 14

Task: Add composer name and duration to an mp3 file, as prefix and suffix, respectively.

From:	To:
Eine kleine Nachtmusik.mp3	Mozart - Eine kleine Nachtmusik (6.37).mp3
Don Giovanni.mp3	Mozart - Don Giovanni (4.5).mp3

Settings:

Positions: 1

New Order: Mozart - $2 (:AudioDuration:)

Remarks:

1. This can also be done by using the **Insert** rule. However, you have to use that rule twice (once for prefix and the second time for the suffix). On the other hand, the **Rearrange** rule allows you to add both in a single stroke. Besides, you can see the structure of the new name.

2. When the original name is sliced at position 1, there is no characters on the left side; so the $1 token is a blank. The *entire* name is copied into the $2 token. This is a great trick to compose new name using the *whole* original name.

Example 15

Task: Swap parts of name at fixed position.

From:	To:
BusinessRawReport1.doc	RawReport1, Business.doc
BusinessRawReport2.doc	RawReport2, Business.doc
BusinessRawReport3.doc	RawReport3, Business.doc

Settings:

Split using: (o)Positions
"9" (without the quotes)

New pattern: $2, $1
[X] Skip Extensions

Remarks: Since we didn't have an real delimiter here, we simply split at an position within the string, here e.g. at char number 9:
BusinessRawReport1.doc
123456789

So all before 9th char is put in variable $1, and all from char number 9 till end of string is put in var $2.
That means: $1 holds 'Business' and $2 holds 'RawReport1'. (Note that we skip the extension, so we don't have to deal with it)
Now we compose our new string, the output pattern, just as we like it to be: '$2, $1'

-

You can also use more then one delimiter or position:

From:	To:
BusinessRawReport1.doc	Raw Business Report1.doc

Settings:

Split using: (o)Positions
"9|12" (without the quotes)

New pattern: $2 $1 $3
[X] Skip Extensions

Remarks:

BusinessRawReport1.doc
123456789
123456789012

$1 holds 'Business'
$2 holds 'Raw'
$3 holds 'Report1'

Advanced usage

Example 1

Task: Remove the string from the file name.

From:	To:
Artist - Title [Time 4 02 Cold] [2004].mpg	Artist - Title [2004].mpg

Settings:

Delimiter: " [T|d] " (without the quotes)

New Order: $1 $3

Remarks:

1. The | character separates the two delimiters.
2. Notice that we have included spaces in the delimiters, so that they do not end up as part of the tokens.
3. We have selected two *different* delimiters to represent the beginning and the end of the string we want to remove. Thus ***whatever*** lies between the two delimiters is converted into a token. This token is then omitted in the new name. This works just like using wildcards for the string (or a RegEx pattern).

Example 2

Task: The file names contain artist name, album name and track name. Sort them into separate folders as follows:

1. Create a separate folder for each artist.
2. For each artist, create a subfolder for each album.
3. Move each file in the corresponding folder.

From:	To:
Title - Artist (Album).mp3	D:\Artist\Album\Title.mp3

Settings:

Delimiter: " - | (|)" (without the quotes)

New pattern: D:\$2\$3\$1

Remarks:

1. Note that the delimiters contain spaces and symbols, so that only text remains in the tokens.
2. The last delimiter) does not produce a token. It is added just to strip the closing bracket from the last token.
3. Instead of **D:** a relative path (such as **..\..**) can be added to the front.

Example 3

Task: Sort digital photos in different folders based on the **Date taken** for each photo.

Note: Many people call this operation "binning", because we segregate the items into separate bins based on some criteria. (most people associate the word "Sorting" with "rearranging the files in ascending/descending order, without moving them to other folders")

From:	To:
DSC_0001.jpg	D:\photos\trip\2009_10_21\DSC_0001.jpg
DSC_0002.jpg	D:\photos\trip\2009_10_21\DSC_0002.jpg
DSC_0003.jpg	D:\photos\trip\2009_10_25\DSC_0003.jpg

Settings:

Delimiter: - (none)

New pattern: D:\photos\trip\:EXIF_Date:\$0

Remarks:

1. Note that this EXIF data is contained in the meta tag of each photo, not in the file name.
2. The meta tag **:EXIF_Date:** is replaced by the actual **date taken** for each photo. Thus all photos taken on the same date will be moved to the same folder.
3. The actual name of the folder would depend on the Date and Time format settings.

Example 4

Task: Delete the last part of the base name (but the extension should remain). Note that the file names have different lengths, so you cannot slice the name at a particular position. The names have a different depths also (number of segments separated by dots).

From:	To:
title.text1.text2.extension	title.text1.extension
title.text1.text2.text3.extension	title.text1.text2.extension

Setting: The solution requires a stack of two different rules, as shown below:

1. **Replace** Rule

Find: "." (without the quotes)

Replace: "#" (without the quotes)

Check "[X] Last" to find and replace last occurrence of an dot only.
Check "[X] Skip Extension" to not replace the file/extension separator as last dot.

(this is a temporary change; which will be eliminated in the second step)

2. **Rearrange** rule

Delimiter: "#" (without the quotes)

New Order: $1

Remarks:

We had to do this indirectly because the **Rearrange** rule cannot pick only the last dot as delimiter; and ignore the other dots. So we used a trick: we first changed the last dot into another character (using the **Replace** rule), and then use that new character as delimiter in the **Rearrange** rule.

Example 5

Task: Swap parts with more then one of the same delimiter

From:	To:
I. Author - Book title - True story.pdf	Book title - True story (I. Author).pdf
I. Author - Book title.pdf	Book title (I. Author).pdf

First exchange the first occurrence of the delimiter by an completely other sign, e.g. #

- Add an "Replace" Rule
- Replace First " - " with "#", [X] Skip Extension

So we got

From:	To:
I. Author # Book title - True story.pdf	Book title - True story (I. Author).pdf
I. Author # Book title.pdf	Book title (I. Author).pdf

Now use **Settings:**

Split using: (o)Delimiter
" # " (without the quotes)

New pattern: $2 ($1)
[X] Skip Extensions

Remarks: Since this rule removes the used delimiter, we don't have to take care about them in the output.

Example 6

Task: Keep only the last part of a file name:

From:	To:
title text1 text2.txt	text2.txt
title text1 text2 text3.txt	text3.txt

Settings:

Split using: (o)Delimiter
" " (space, without the quotes)

New pattern: $-1
[X] Skip Extensions

Task: Keep only the second last part of a file name:

From:	To:
title text1 text2.txt	text1.txt
title text1 text2 text3.txt	text2.txt

Settings:

Split using: (o)Delimiter
" " (space, without the quotes)

New pattern: $-2
[X] Skip Extensions

Remarks: Since $-1 and $-2 count the tokens from the right (from the end), we will get the same result even if the name is longer.

Example 7

Task: Sort files with same names (but different extensions) into separate subfolder.

Typically, training websites provide such sets of files for each episode/lecture/lesson, etc. (video, handout, homework, etc.)

When you download these files, they are in a single folder. ReNamer helps you in sorting them into separate folders.

We will see two different variations here:

Variation-1: The subfolder name is same as the base name of the files.

From:	To:
Episode 001.pdf	Episode 001\Episode 001.pdf
Episode 001.mp4	Episode 001\Episode 001.mp4
Episode 002.pdf	Episode 002\Episode 002.pdf
Episode 002.mp4	Episode 002\Episode 002.mp4

Settings:

Split using: - (Leave blank)
New pattern: $0\$0
[X] Skip Extensions

Remarks:

1. All files having the same base name will be sorted into a common subfolder.
2. ReNamer will create these subfolders in the current folder.

Variation-2: The subfolder name is different as compared to the base name of the files.

From:	To:
Handout 001.pdf	Part 001\Handout.pdf
Lesson 001.mp4	Part 001\Lesson.mp4
Handout 002.pdf	Part 002\Handout.pdf
Lesson 002.mp4	Part 002\Lesson.mp4

Settings:

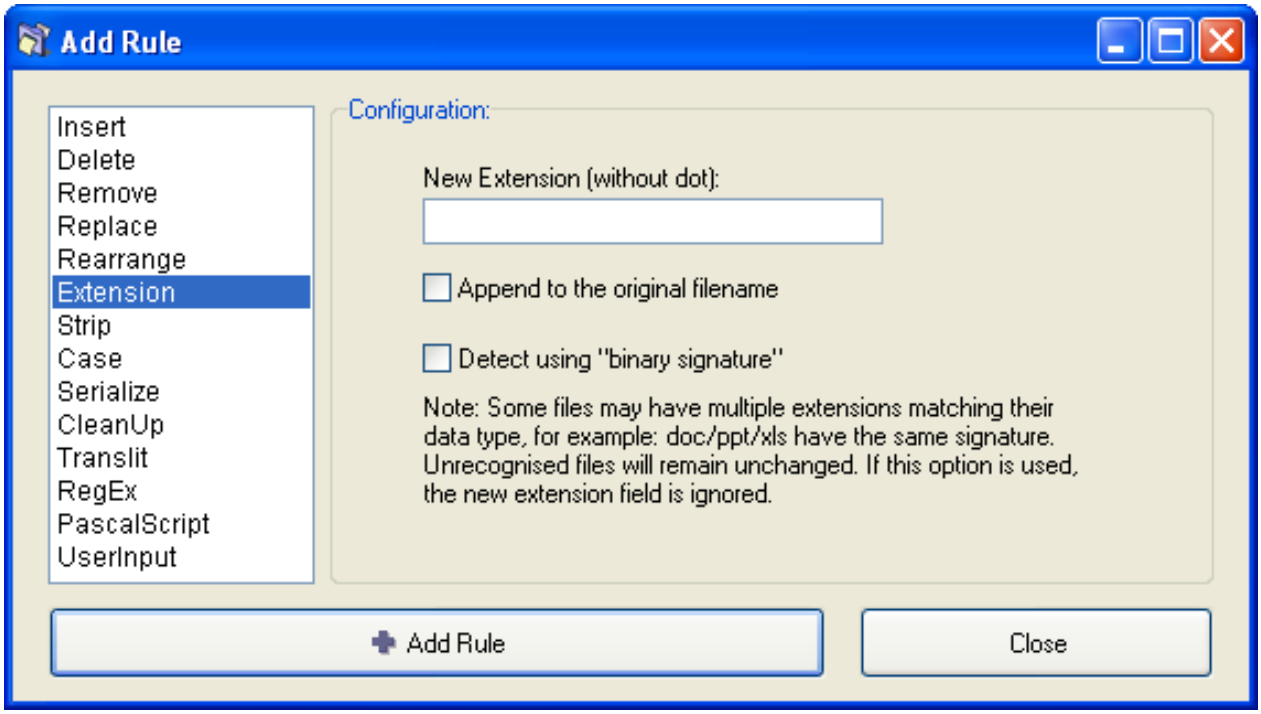
Split using:" " (space, without the quotes)
New pattern: Part $2\$1
[X] Skip Extensions

Remarks:

1. All files having the same *number* will be sorted into a common subfolder.
2. ReNamer will create these subfolders in the current folder
3. The "Part " is a literal string. (note the space at the end)

Extension Rule

Extension Rule



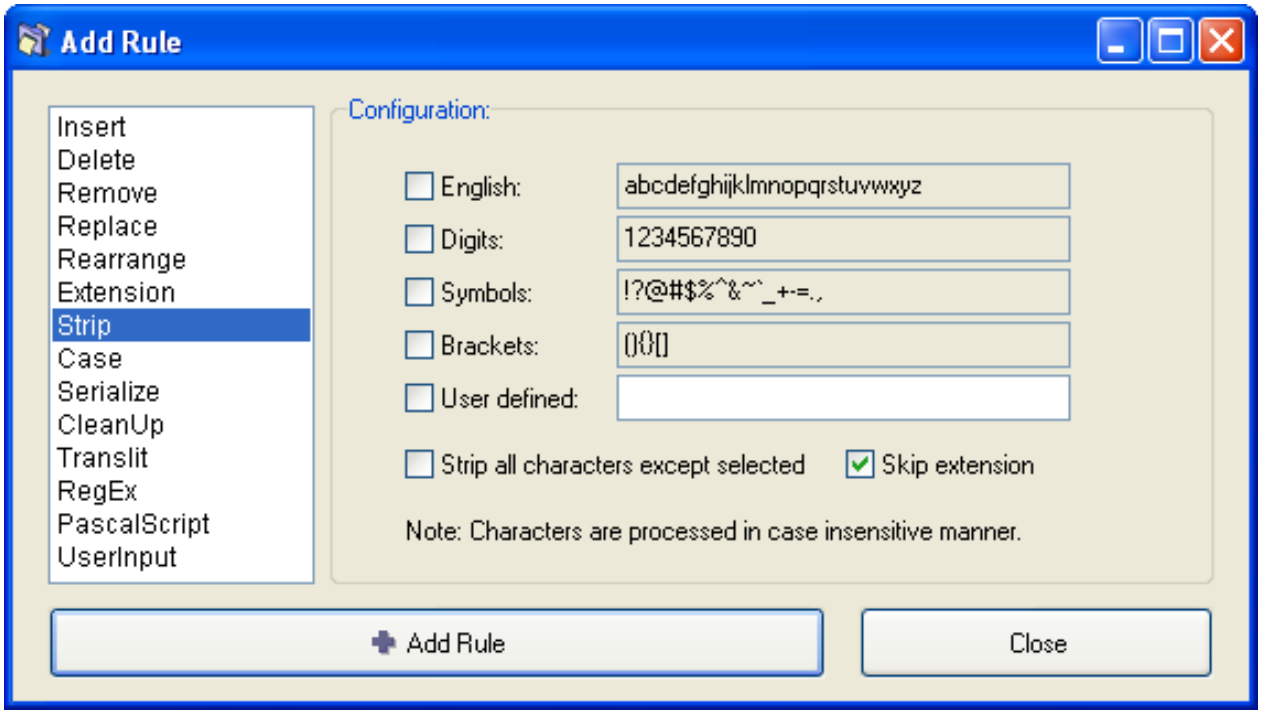
This rule allows you to attach a new extension. It is useful when the extension of a file is missing (or if the file has a wrong extension). There is an option to find the correct extension based on the file's structure.

The parameters are as follows:

Parameter	Details
New extension	New extension that has to be added to the filename.
Append to the original filename	If this option is selected, the new extension will be placed after the old extension. If it is deselected (default option) the new extension will replace the old one.
Detect using binary signature	wmvlasf". ReNamer also pops up an error window (because the combined extension is invalid). Just read the suggested extensions and then try them out one by one. This method is still better compared to making wild guesses, because ReNamer suggests only 2-3 extensions. For more accurate results, use ReNamer with TrID script, a specialized utility for identifying the file's real extension. Be aware that even TrID often suggests multiple extensions, and you still have to try them out.

Strip Rule

Strip Rule



Strip characters from the filename. The rule has predefined character sets, like digits, symbols and brackets, but you can also define your own character set. Every occurrence of each of the specified characters will be removed from the filename.

The parameters are as follows:

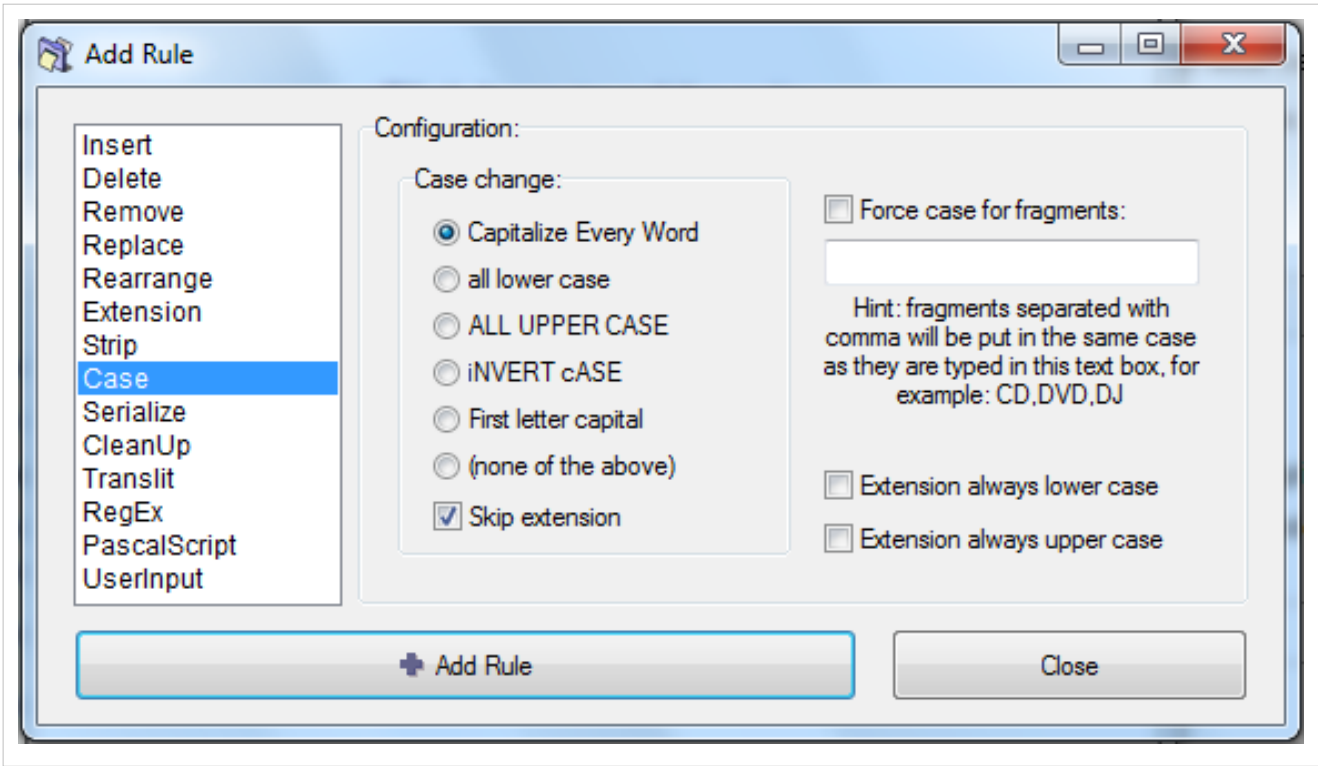
Parameter	Details
English	Strip all English characters (both capital and small). • Numbers (0-9) will not be stripped. • Non-English characters will not be stripped. (e.g. characters with diacritical mark [1], which are used in many languages in Europe and Asia)
Digits	Strip digits
Symbols	Strip symbols (all characters that are considered to be symbols are showed in the box on the right)
Brackets	Strip brackets (but not the contents of the brackets) • If you want to delete the content as well, use the CleanUp rule instead.
User-defined	Define any character that needs to be stripped off. • Note that this is not a string. All characters in the entry are searched for individually and removed.
Strip all characters except selected	Retains the selected characters only, and strips the rest. • This option is very useful to strip all non-English characters: Select this option along with the **English** option above.
Skip extension	If this check box is selected, the extension will be ignored by the rule.

References

[1] http://en.wikipedia.org/wiki/Diacritic

Case Rule

Case Rule



This rule changes the case of the filename. Options are: capitalize, to lower case, to upper case, invert case, and put only first letter capital (as in a sentence).

There is also an option to force case for specific text-fragments, such as CD, DVD, RF, etc. These fragments would not look natural in any other case (e.g. cd, dvd, rf), so the rule allows you to prevent changing the case of such terms in one stroke.

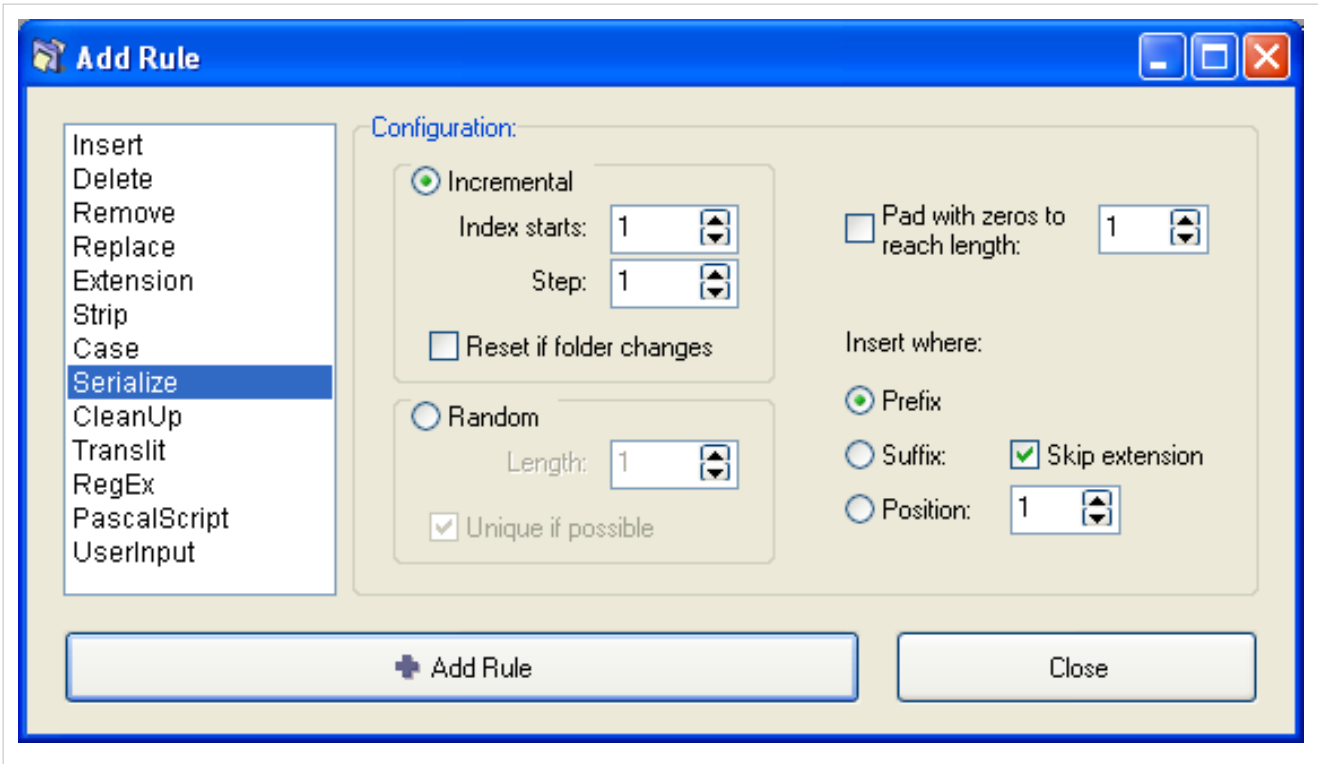
The parameters are as follows:

Parameter	Details
Case change	Several options are offered. • The case of each option itself illustrates how that option works. For example, **Capitalise Every Word**. • **Invert case** will change all capital letters in the filename to lowercased ones, and all lowercased letters to capitalized ones. • The **(none of the above)** option is provided to disable the case conversions listed on the left, so you could independently operate the two options listed on the right side.
Skip extension	If this check box is selected, the extension will be ignored by the rule.

<table>
<tr><td>Force case for fragments</td><td>This option forces the case of specified text-fragments (strings) in the file name.
Note: This check box is coupled with the box below it. (Enter the fragments in the box and then activate the option by selecting the check box.)
• You can set any case for the strings (ALLCAPS, Only first letter capitalized, lowercase, MixedCase, etc.)
• You can specify multiple strings at a time, each with its own case format. To separate the strings from each other, put a comma between them.
(Note: In versions prior to v5.50, a space was used instead of a comma.)
• The case for these strings will be set exactly as entered in the box, regardless of the options selected in Case change list.
Here are some typical examples of such strings:
<table><tr><th>Case</th><th>Examples</th></tr><tr><td>ALLCAPS</td><td>CD, DVD, TV, HTML, XML, C++, USA, GIMP</td></tr><tr><td>Only the First letter capitalized</td><td>Java, India, English, Sunday, Easter, February</td></tr><tr><td>Mixed case</td><td>OpenSUSE, OpenOffice, ReNamer</td></tr></table></td></tr>
<tr><td>Extension always upper case</td><td>Forces the extension to uppercase. Note: This setting overrides any other setting that can alter the extension. For example, consider a case where the all lowercase option is selected and the skip extension option is deselected. Logically, the extension should be converted into lowercase too. But if the Extension always upper case option is selected, the case of the extension will be converted to uppercase. This setting will override even the fragments case-conversion.</td></tr>
<tr><td>Extension always lower case</td><td>Forces the extension to lowercase. Note: This setting overrides any other setting that can alter the extension. For example, consider a case where the ALL UPPER CASE option is selected and the skip extension option is deselected. Logically, the extension should be converted into ALLCAPS. But if the Extension always lower case option is selected, the case of the extension will be converted to lowercase. This setting will override even the fragments case-conversion.</td></tr>
</table>

Serialize Rule

Serialize Rule



This rule works on a set of files, and inserts incremental numeric series or random sequences of digits in the names of those filenames.

When the *incremental* option is chosen, the files listed in the pane are numbered in ascending order. Thus, the position of the file in the **Files** pane becomes important. Check the order of the files in the list before applying this rule.

Examples:

1. You have a bunch of log files, and you want to make them look like "log0001", "log0002", "log0003", etc.
2. You want to force specific sorting for files: "01 - Song XYZ", "02 - Song ABC", "03 - Song YYY", etc.

The parameters are as follows:

Parameter Incremental Random Pad with zeros to reach length Insert where

Details

Inserts serialized numbers in the names of the files placed in the Files pane of ReNamer.

Index start	Starting number. If the folder already has some files with serialized numbers, start with the next number.
Step	Usually 1, but you may like to enter a higher number here if files with intermediate numbers are expected later. Also, negative numbers can be used to make decremental indexes, e.g. -1, -2, -3, etc.
Reset if folder changes	Since ReNamer can work on files collected from multiple folders, this control allows you to reset the counter for each of those folders. The effect is as if you are repeating the same commend for each of the folders separately.

Inserts a random number in the file name.

Length	Specify how many digits your random number should have. • ReNamer will create random numbers with specified length (number of digits). So a length of 4 means the random digits will be from 0000 to 9999 (inclusive). • Note that random numbers are padded with leading zeroes by default
Unique if possible	Normally, random numbers can repeat themselves. If this option is selected, ReNamer will try to use unique numbers.

ReNamer will pad the remaining places with leading zeros. For example 457 becomes 000457 if it is padded to reach 6 digits, and 0457 if padded to 4 digits.

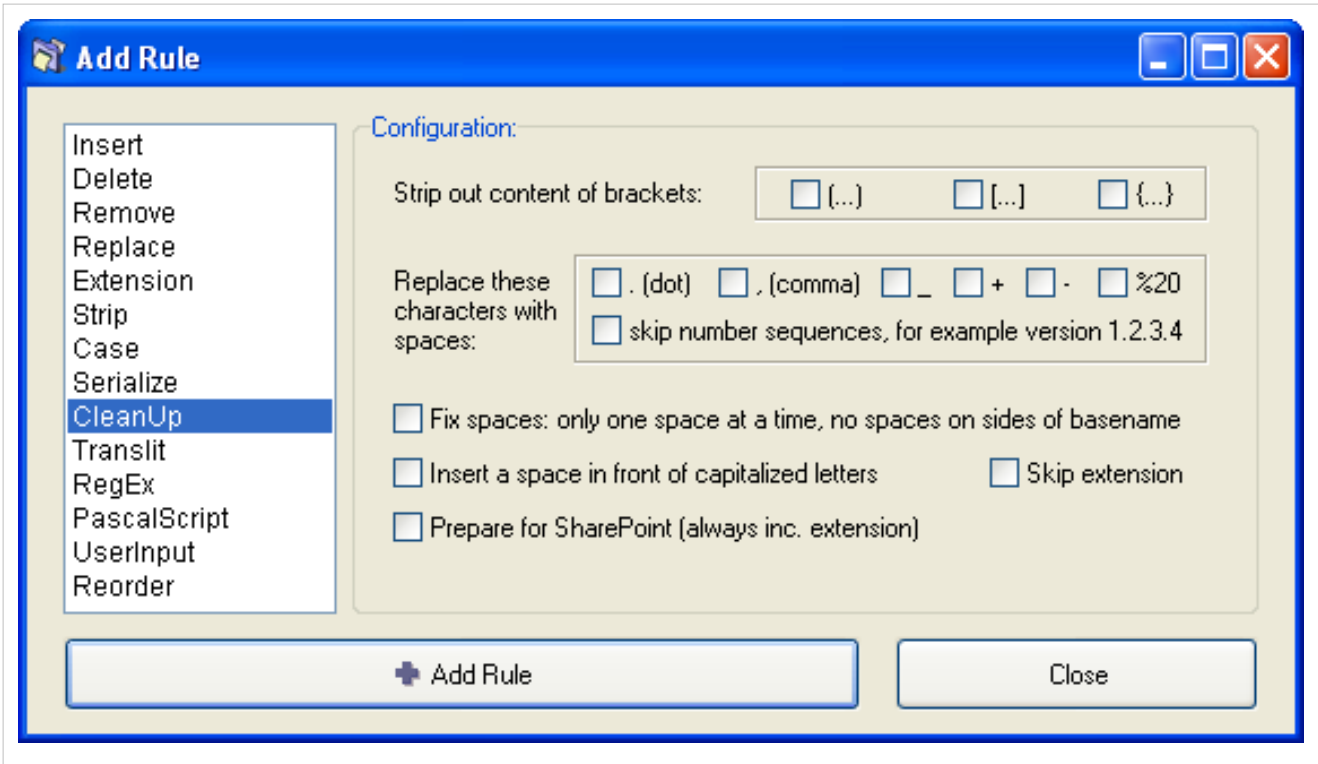
Specify where to insert the number.

Prefix	Before the original filename
Suffix	After the original filename • If the **skip extension** option is selected, the specified text will be inserted *before* the extension.
Position	Insert the number at the specified position.

Note that if the "*pad with zeros*" option (above) is selected, the *padded* number is inserted.

CleanUp Rule

CleanUp Rule



This rule cleans up the filenames from (or for) commonly used naming conventions for Internet, peer-to-peer networks and other resources. Multiple problems can be removed at once.

The parameters are as follows:

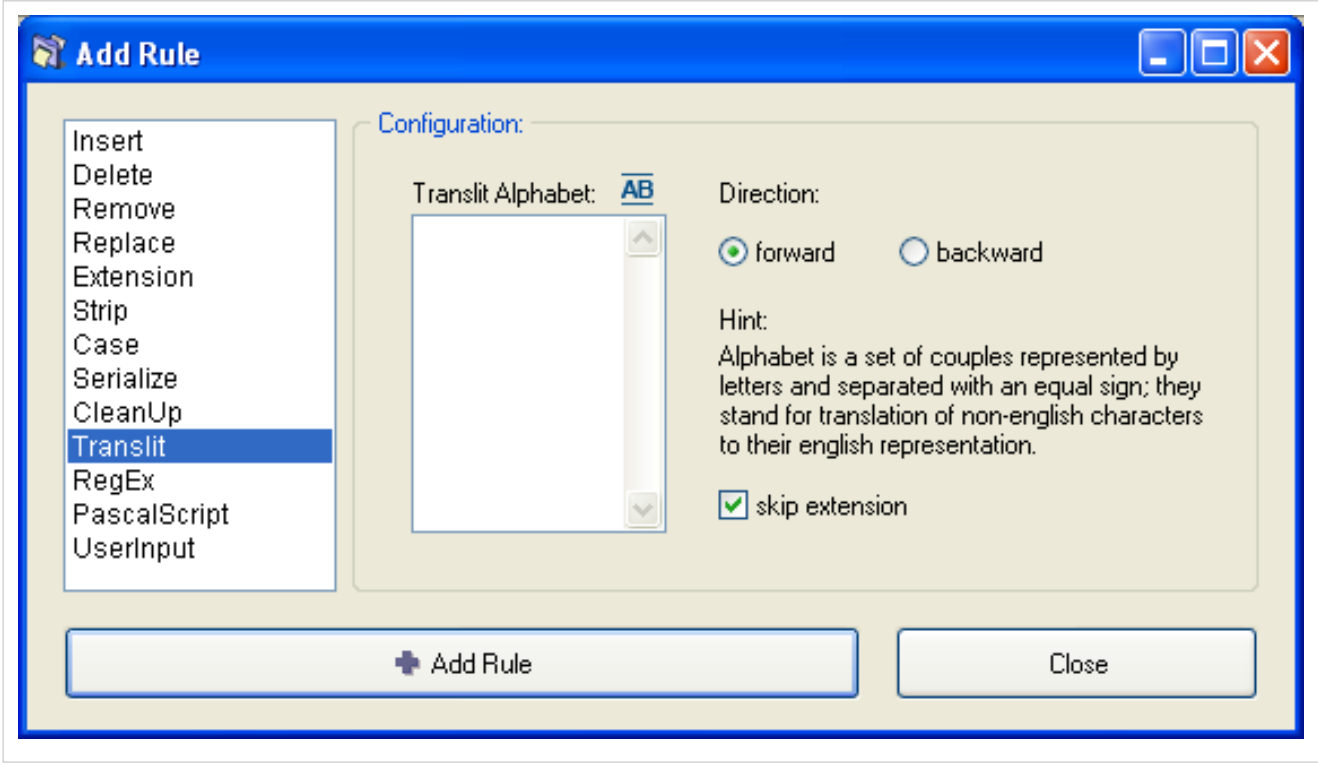
Parameter	Details
Strip out content of brackets	A typical use of this option is to strip the needless comments attached to filenames, such as **(best!!)**. • This option removes the brackets also. • You can select any/all of the various types of brackets. If you do NOT want to delete the content within the brackets, use the Strip rule instead.
Replace these characters with spaces	These characters occurring in the file names are removed and a space is inserted in their place.
Fix spaces	Replace multiple consecutive spaces with a single space. It also removes spaces from the beginning and the end of the filename: • If **skip extension** is selected it removes spaces from the beginning and end of the *base name* (*before* the extension). • If **skip extension** is deselected it removes spaces from the beginning and from the end of the *filename* (*after* the extension).
Insert a space in front of capitalized letters	Often words in the file name are just joined together, without spaces or underscores to separate them. Each word begins with a capital letter, so that you can read it easily. This option separates such words in the file name. For example, **SeparateTheseWords.pdf** becomes **Separate These Words.pdf**. (Note that if there is a capitalized letter at the very beginning of the name, ReNamer does NOT add a space before it.)

Prepare for SharePoint	Prepares the file for hosting it on Microsoft Sharepoint [1]. 1. strips standard forbidden filename characters 2. strips consecutive dots 3. strips **#**, **%**, **~**, **&** 4. replaces **{** and **}** with **(** and **)**
Skip extension	If this check box is selected, the extension will be ignored by the rule.

References

[1] http://www.microsoft.com/sharepoint/prodinfo/what.mspx

Translit Rule



This rule transliterates one alphabet into another. Its main goal is to transliterate Non-English characters from different languages into their English/Latin representation. For example, the German character **ü** can be transliterated to **ue** (the name **Müller** can be also written as **Mueller**).

This rule uses *transliteration maps* (explained below).

Transliteration maps

To transliterate, we create a pair of equivalent characters, like this: **ü=ue**

(Note that the right side of this equation has *two* characters. Any number of characters may be placed on both sides of the equation.)

We need several such *equivalent character pairs* to convert one language into another. The entire set is called a *transliteration map*. (This is really some kind of a find-and-replace rule.)

ReNamer has several such built-in maps. Each map is named after a language (the second language in all maps is English).

Each map can be used in *both* directions (e.g. French-to-English or English-to-French.)

When you start up the **Translit** Rule, its window does not show any maps. You are free to do any of the following:

1. Use any of the built-in maps (and use it in *forward* or *reverse* direction)
2. Create your own map and use it.
3. Edit a built-in map first, and then use it.

Let us see how to do this.

Automatic case conversion

Translit rule does automatic case conversion with an algorithm adopted specifically for transliteration. Translit rule discard the case on the input, i.e. "A=B" is same as "a=b". Case is decided upon case of the input fragment. Multiple character fragments are treated as part of words, with their case decided based on the case of letters around them.

The logic for the case conversion is as follows (ReNamer Beta from 23 Aug 2009):

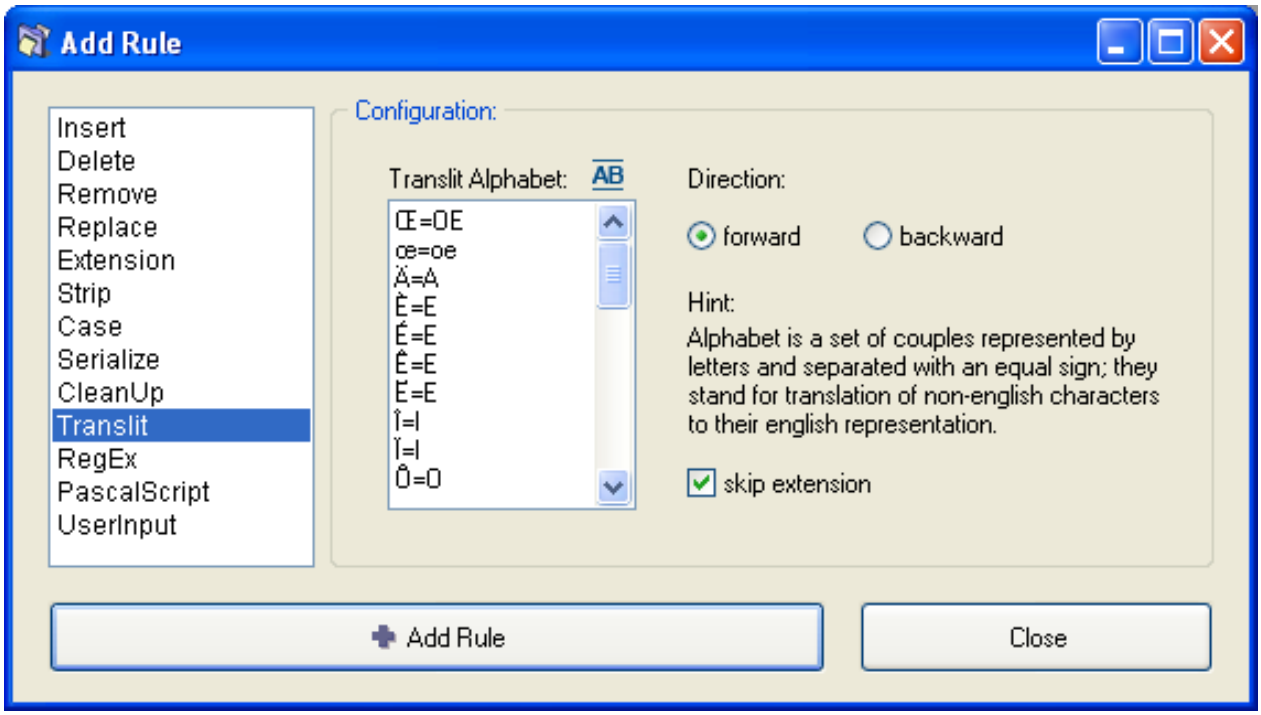
```
set OUTPUT-PART to lower case
if first letter in INPUT-PART is upper case then
  if length of OUTPUT-PART bigger than 1 then
    if next letter in original name is upper case then
      convert whole OUTPUT-PART to upper case
    else
      convert only first letter in OUTPUT-PART to upper case
  else
    convert whole OUTPUT-PART to upper case
```

Using a built-in transliteration map

To select any of the built-in maps, press the AB button. A list of available transliteration maps pops up:

Click on the desired transliteration map. As an example, let us click on the French (to English) transliteration map.

The **Rules** window changes immediately to show the French characters and their English equivalents.



You can edit any of the entry in this list, add new entries, or delete any of the entries.

Note that such editing does not alter the saved version of the map. (The map is edited just for a one-time use. So, if you select the same Translit map again, ReNamer will load the *original* version, not the *edited* version.) We will see how to edit and save a map later.

Next, select the rule's parameters as shown below:

Parameter	Details
forward	This is transliteration from-left-to-right direction, as defined in the map.
backward	This is transliteration from-right-to-left direction, as defined in the map.
skip extension	If this check box is selected, the extension will be ignored by the rule.

Finally, press the Add Rule button to add the rule to the stack.

Making your own transliteration map

Click in the **Translit Alphabet** window, and start entering your custom alphabet.

Transliteration alphabet consists of two equivalence parts (or a couple), which are entered one per line and two parts separated with "=" (equal sign). Alphabet should not contain spaces and should have case discarded (case is adjusted automatically). Also, make sure to put couples which contain greater number of characters at the top, so they will get processed first and will not get processed partially by shorter representations. Below is a simple example:

```
щ=sh
ю=yu
я=ya
ь='
э=e
```

After entering all such transliterations, press the Add Rule button to add the rule to the rule-stack.

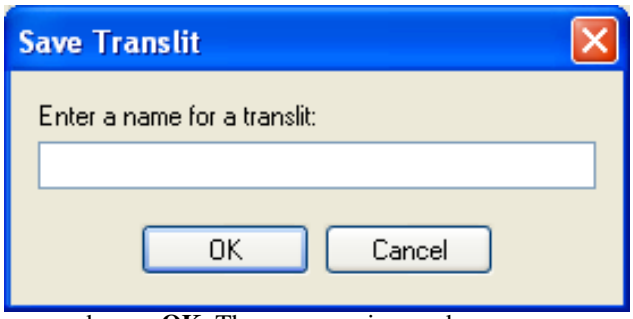
Note that this rule is not saved yet (it was just composed for a one-time use). The following topic shows how to save a map.

Saving a transliteration map

To save a newly composed Transliteration rule,

1. Press the AB button.
   A menu pops up.

2. Select the last option (**Save Translit...**).
   A window pops up, as shown below:



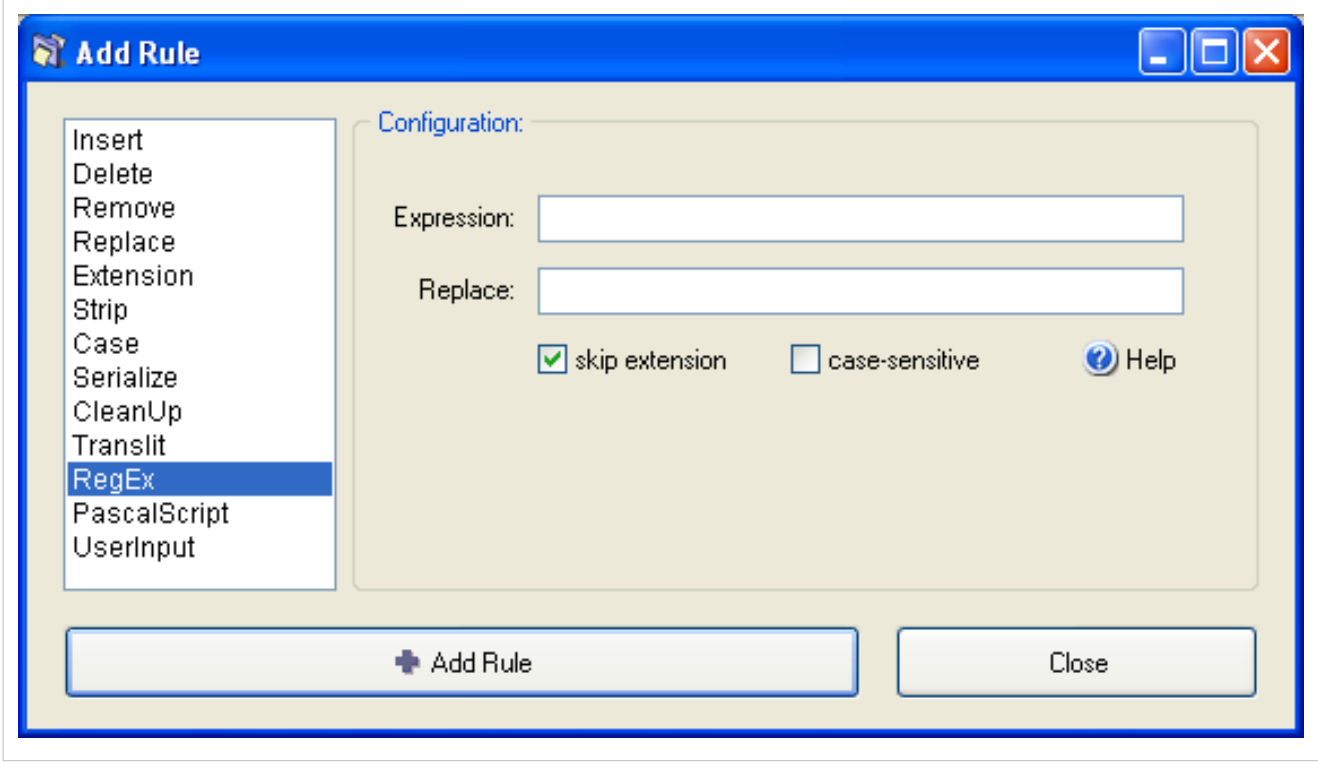
3. Enter a new name for the map and press **OK**. The new map is saved.

The process of saving an edited Transliteration map is similar. The only difference is that the **Save Translit** window (see above) shows the current map's name. You can press **OK** to save the changes you've just made, or enter a new name to create a new translit map for the edited version of the current map.

The new map's name is added to the map list.

From now on, the new map will also be available as "standard".

RegEx Rule



This rule finds text that matches the specified RegEx pattern, and replaces it with another string. RegEx is short for **Regular Expressions**, which stands for special syntax for describing search and replace patterns. Regular Expressions are very powerful and they are *really* worth learning. The RegEx syntax is explained in the appendix.

(The TRegExpr [1] RegEx engine used by ReNamer is a little different from the standard PERL RegEx [2] or Windows RegEx [3]. You may check the correct syntax in here)

The parameters are as follows:

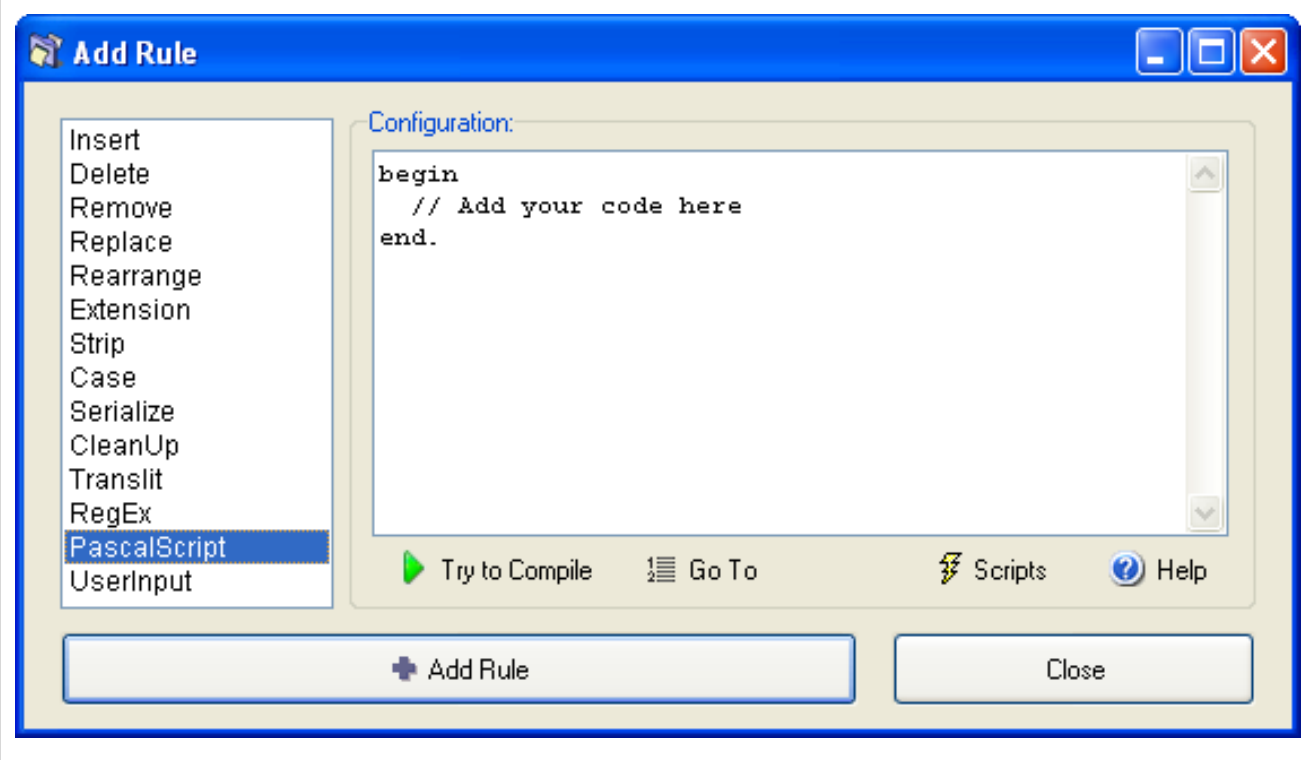
Parameter	Details
Expression	RegEx pattern to match or find.
Replace	RegEx pattern that replaces the found pattern.
Skip extension	If this check box is selected, the extension will be ignored by the rule.
Case-sensitive	If this option is selected, ReNamer will search for the text in *case-sensitive* manner.

Tip: ReNamer users have posted many RegEx patterns at the User Forum [4]. You can copy and use them.

References

[1] http://www.regexpstudio.com/
[2] http://perldoc.perl.org/perlre.html
[3] http://msdn.microsoft.com/en-us/library/6wzad2b2(VS.85).aspx
[4] http://www.den4b.com/forum/index.php

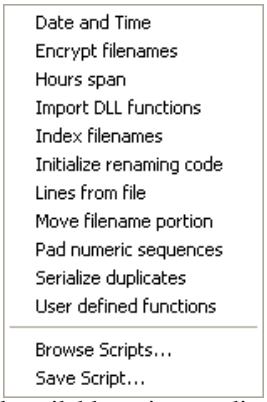
PascalScript Rule



This rule uses Pascal/Delphi programming syntax and conventions. ReNamer comes with some preloaded scripts. We will see how to use them, and how to add a new script.

Using a ready script

1. Click on the Scripts button (located just below the **Configuration** pane).
   A list of scripts appears.



2. All available scripts are listed *above* the line. Click on any script to load it into the **Configuration** pane.
3. Edit the script if required
4. Press Add Rule button to add the script to the rule stack.
5. Repeat steps 1-4 to add more script-based rules.

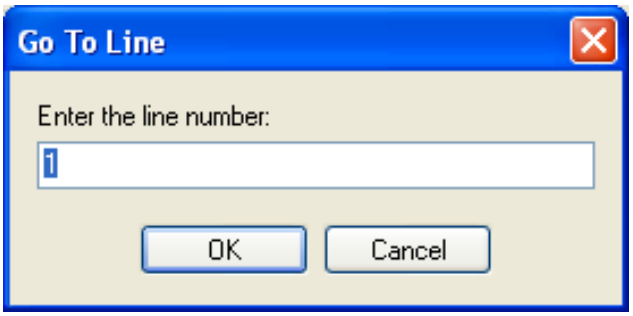
Borrowing scripts from forum

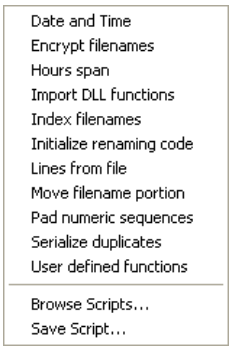
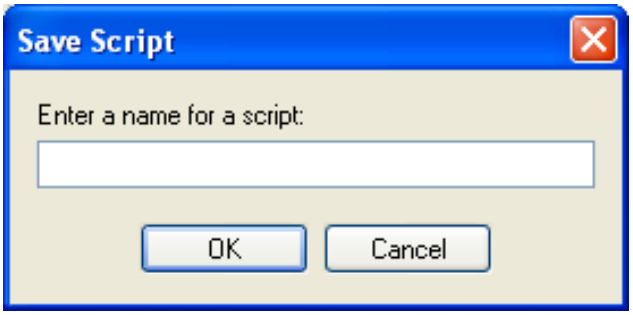
Even if you do not know how to write a script, you can easily use scripts written by others.

First, visit the **User Forum** [1] and search for a suitable script. The Forum already has a large number of such scripts. Some of these scripts have embedded comments about how to customize the script. If you cannot find a suitable script, you can ask other users to write the script for you.

TIP: If you are looking for scripts only, try to use **begin** or **end** words in your search phrase as these are the words that are present in every single script.

Once you find such a script, follow these simple steps:

Step	Details
1	**Copy the script** Copy the script from the forum (ensure that nothing is left out).
2	**Clear the ReNamer's Configuration pane** Open the **Pascal Script** Rule in ReNamer. Select the three lines you see in the **Configuration** pane, and press DEL or paste the script while these lines are selected. • The three lines already provided in the window are meant to begin a script from scratch; but since you are pasting a ready-made script, they must be removed first, otherwise they will interfere with your script.
3	**Paste the script into ReNamer pane** Use the **CTRL+V** shortcut or right-click and select **Paste**.
4	**Compile the script** Press the Try to Compile button. • In case some error comes up, the error message will identify the line number of the faulty statement. You can try and troubleshoot the problematic statement in the script using the Go To button. ReNamer opens a window like this:  Now enter the line number in the window and press **OK**. It takes you to the faulty statement. Try to edit the statement and compile the script again. (Note that if the script compiles successfully, the Go To button is not required at all.)

5	**Saving the script and giving it a name:** The **save** button is hidden under the **scripts** menu. So first click on the Scripts button. It pops up a window like this:  Note that all the existing scripts are listed here. (When you save the new script, it will also be added to this list.) Select the **Save script...** option (at the very bottom of the menu). Another window pops up.  Enter a name that suggests the function of your script. Press **OK**. The new name is added to the list of scripts. Now use it as described above.

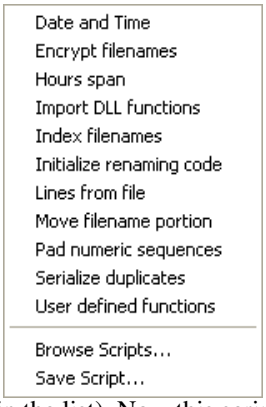
Writing your own scripts

To write your own scripts, you must have knowledge of Pascal script. Learning Pascal script is easy. Refer to the Pascal Script section.

Here, we will assume that you already know how to write pascal scripts.

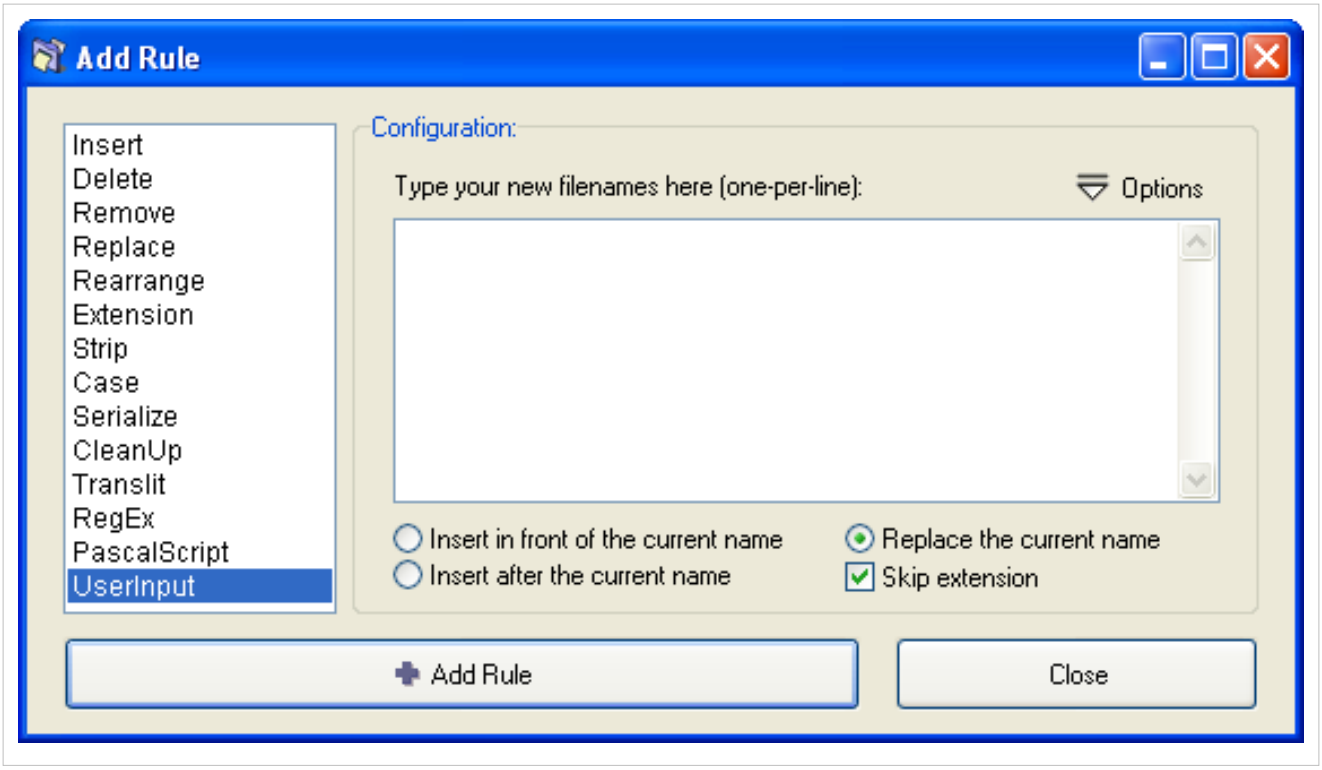
The step-by-step procedure is as follows:

1. Click in the Configuration pane and enter the script directly. (You can also copy it from anywhere and paste it into the pane by pressing **CTRL+V**. Or right-click in the pane and select the **Paste** option from the context menu.)
2. Compile the script by pressing the Try to Compile button located below the Configuration pane.
   - If an error message comes up, troubleshoot the script. The fault message usually includes the line number of the problematic statement in the script. Press the Go To button and enter that line number to locate the faulty statement quickly. Then correct the errors and press the Try to Compile button again. Repeat this till a ***Compiled successfully!*** message pops up.
3. Now you can add the script as a rule by pressing Add Rule button or save it for later use.
4. To save the script press the Scripts button. A list pops up:



5. Click on the **Save Script...**(the last option in the list). Now this script is added to the list (it appears above the line in the list).
   - Now you can use that script as described above.

UserInput Rule



This rule replaces the original filenames with the names taken from the list. (The *n*th line in the list serves as the new name for the *n*th file in the **Files** pane.)

Naturally, the list should contain names for all the files loaded in the **Files** pane.

- If the list is shorter, then some of the files will not be renamed.
- If the list is longer, some of the names will remain unused (but all files in the **Files** pane will be renamed).

There are three ways to create the list:

1. Click in the pane, and manually type the list (one name per line).
2. Copy the list from any application to your clipboard. Switch to ReNamer. Click in the **UserInput** pane and press **CTRL+V**, right-click and select **Paste** or choose the **Load from clipboard** from Options menu).
3. Load a list from the text file (available from Options menu).

The optional parameters are as follows:

Parameter	Description
Insert in front of the current name	Inserts the name before the file name.
Insert after the current name	Inserts the name *after* the current name. The actual position depends on the **Skip extension** option.
Replace the current name	Replaces the existing filename with the new name. The effect on extension depends on the ***Skip extension*** option:
Skip extension	• If the option is selected, the extension is ignored and user input strings will affect only the base name of files. • If the option is deselected, user input strings will replace entire filename, *including* the extension, or will be added *after* the old extension (if the **Insert after the current name** option is selected).

Example and warning

Warning

The list of new names must exactly match the list of current files, one-by-one.

Current Name column	your NewName-list
Old name 1	new name for old name 1
Old name 2	new name for old name 2
Old name 3	new name for old name 3

Or in other words: the amount of items in your NewName list should match the current amount of items in the Name column. (see example below for clarifying)

Hint: Your NewName list must only contain the new names!
Not the old names too, as maybe seen with other renamers like "old|new" or "old=new" or like that.

For example, if you have this three files:
Old name 1
Old name 2
Old name 3

then your NewName list should contain exactly three lines like:
new name for old name 1
new name for old name 2
new name for old name 3

Examples for clarifying:

Example 1
File list (Current Name) is longer then new name list:

Name column	NewName-list
One.txt	First.txt
Two.txt	Second.txt
Three.txt	Third.txt
Four.txt	<will not be renamed>

Example 2

New name list is longer then file list:

Name column	NewName-list
One.txt	First.txt
Two.txt	Second.txt
Three.txt	Third.txt
<unused>	Fourth.txt

Example 3

TAKE CARE!

Missed item in new name list; **your file names will get messed-up:**

Name column	NewName-list
One.txt	First.txt
Two.txt	Third.txt
Three.txt	Fourth.txt
Four.txt	Fifth.txt

Pascal Script

Pascal Script

The PascalScript Rule in ReNamer uses Pascal Script component to allow users to program their own renaming rule.

To master Pascal Script, follow these steps:

1. Learn the basic syntax and concepts of Pascal Script
2. Understand the specific variables, procedures and functions that are defined within ReNamer
3. Learn how to use these variables/functions/procedures in scripts

Let us see these steps in more details.

Learn the basics

To learn the basics of Pascal Script, please refer to the Pascal Script Quick Guide.

Types and functions

In this section, we will see all types, procedures and functions which can be used *within* ReNamer.

- Types
- Procedures and functions

Note: Most of these are not part of the "standard" Pascal Script, so you will not find them in other applications.

Script cookbook

In this section, we will see how to write scripts for some common renaming tasks.

They also demonstrate how to use ReNamer's types, procedures and functions.

1. How to rename a file (using the FileName variable)
2. How to skip extention (basic FileName utilities)
3. How to convert the filename to ALLCAPS (the WideUpperCase function)
4. How to operate on words (Unicode string-handling routines)
5. How to serialize files (basic conversion routines)
6. How to initialize variables
7. How to create interactive dialogs
8. How to work with folders and paths (FilePath constant)
9. How to break the script execution
10. How to read file content
11. How to import functions
12. How to split file path into parts (folders, base, extension)
13. How to store/load variables for later reuse

Scripts repository

- Official Scripts Repository.
- The Forum [1] contains several ready scripts.

Study them and adopt them for your purpose.

Tips

A few quick tips:

- In Pascal Script, ReNamer has defined the **FileName** variable to represent the New Name of the File. Therefore, in your script, you will have to manipulate this variable to change the filename.
- The **FilePath** constant holds the original path of the file. It allows you to access the file directly.
- ReNamer supports UDFs (User-Defined Functions) and also importing of external functions from DLLs.
- Try to use **WideString** type instead of an ordinary **String** type. This will allow ReNamer to handle Unicode filenames.
  (In other words, it will be able to handle non-English scripts, such as Cyrillic, Asian, German, French, etc.)

Warning: Do not override ReNamer's built-in variables, types and functions.

Warning: Some of the functions are able to alter your file system (create new folders, move files, etc.). So use them with caution! Remember that scripts are executed during Preview (NOT Rename) operation. So you let the script alter your system by pressing Preview or having Auto Preview on.

Important: The only product of PascalScript that doesn't affect your files until Rename operation is the content of the FileName variable. "New Name" (and "New Path") fields of filetable are replaced with this variable content. After Preview you may check if you like them and if you do - press Rename. Only then the actual renaming of the files will take place.

External links

- RemObjects Pascal Script [1]

  Developers of the Pascal Script component.

- Delphi Basics [2]

  Help and reference for the fundamentals of the Delphi/Pascal language.

References

[1] http://www.remobjects.com/ps
[2] http://www.delphibasics.co.uk/

Quick Guide

If you are not familiar with Pascal Scripting, first go through the excellent tutorial [1] written by **Tao Yue**.

The following is a short overview of Pascal Script.

Basic pascal script

The structure of a basic script is as follows (keywords are shown in ALLCAPS bold):

CONST

<*Constant declarations*>

TYPE

<*Type declarations*>

VAR

<*Variable declarations*>

BEGIN

<*Executable statements*>

END.

Note that:

- The main code must be within the **begin** and **end.** keywords.
- All statements in the script use the semicolon "**;**" as terminator. Only the last statement (**END.**) uses a dot as terminator.

Control structures

All the typical control structures (building blocks) occurring in Pascal Script are described in the following table. The table shows a flow chart and Pascal Script code required to implement that logic. To compose your own PascalScript rule, you can simply copy and paste the code and then edit it to finish your script.

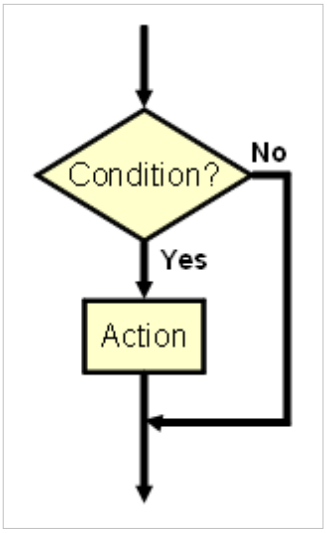
In actual implementation, just substitute the following:

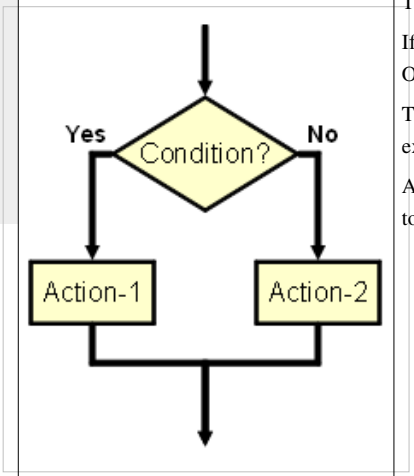
- Replace ***<Condition>*** with an actual Pascal statement that tests for a condition.
- Replace ***<Action>*** with code block that takes action relevant to the condition. There may be several statements.

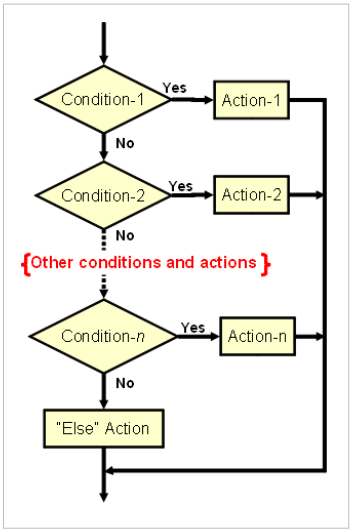
Branching

These structures are used to execute different blocks of code depending upon a condition.

Branching structure	Pascal script	Flowchart (Logic)	Remarks

if-then	`if <Condition> then`
	`begin`
	`  <Action>`
	`end;`
			Execute the **<Action>** statement only if the **<Condition>** is met. Otherwise pass on the control to the next statement that follows the **<Action>**.

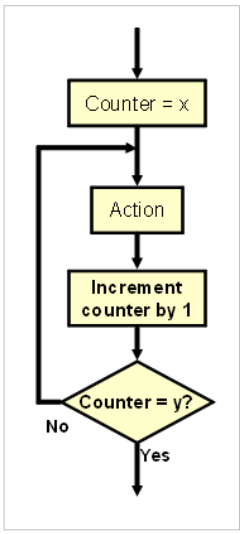
if-then-else	`if <Condition> then`
	`begin`
	`  <Action-1>`
	`end else`
	`begin`
	`  <Action-2>`
	`end;`
			Two alternative actions are provided.
			If **<Condition>** is met, execute **<Action-1>**. Otherwise execute **<Action-2>**.
			Thus one of these two **<Actions>** are definitely executed.
			After execution of the action, pass on the control to the next statement.

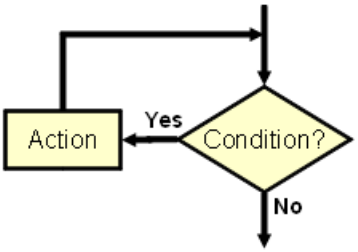
case/switch	`case X of`
	`  1:`
	`  begin`
	`  <Action-1>`
	`  end;`
	`  2:`
	`  begin`
	`  <Action-2>`
	`  end;`
	`  else`
	`  begin`
	`  <Default Action>`
	`  end;`
	`end;`
			This code structure has several **<Action>** blocks, each with its own condition.
			• Any given **<Action>** block is executed only if its condition is met.
			• One and only one **<Action>** is executed. After that, the control passes on to the next statement. (It does not check for the next condition.)
			• The conditions are checked in the "top down" order. So even if the other conditions are also met, their **<Actions>** will never be executed.
			• The code structure can optionally have a **<Default Action>**. It is executed if (and only if-) none of the conditions are met.
			This is a generalized version of the **if-then-else** block (above).

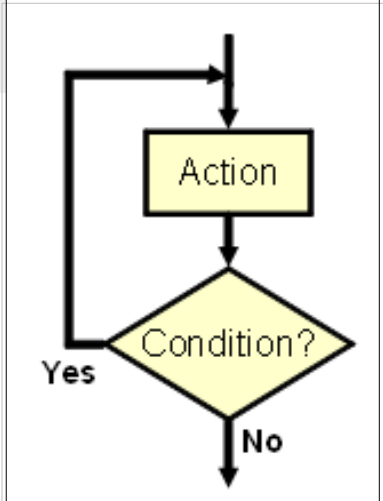
Loops

Loops are used to execute a block of code iteratively till a certain condition is met.

Loops	Pascal script	Flowchart (Logic)	Remarks

For To Do	`for I := X to Y do`
	`begin`
	`  <Action>`
	`end;`
			Execute the <Action> a certain number of times. This example shows that the counter is incremented by 1, but it can be any statement that changes the value of the counter vaiable towards the target value.
			Similarly, the decision block can have any logical expression with the counter.
			Make sure that the exit condition is reached at some point of time; otherwise the loop will execute endlessly, and ReNamer will appear to be hung.

While Do	`while <Condition> do`
	`begin`
	`  <Action>`
	`end;`
			Check for a condition and if it is met, execute the **<Action>**. The loop is repeated till the condition is met. When the condition is not met, the loop is terminated and control passes to the next statement. Note that if the condition fails in the first-ever check, the **<Action>** may not be executed at all.
			Make sure that the condition will fail at some point of time; otherwise the loop will execute endlessly, and ReNamer will appear to be hung.
			Sometimes the condition is set to be always TRUE, and then a statement inside the **<Action>** block breaks the loop based on a different condition.(See the **break** command below)

Repeat Until	`repeat`
	`  <Action>`
	`until <Condition>;`
			This structure is similar to the **While** loop (see above). However, the only difference is that the **<Action>** is taken first and *then* the condition is checked. As a result, the **<Action>** is executed at least once.

Break	`Break;`
	OR
	`if <Condition> then Break;`
		This statement is placed in any of the above loops to terminate the loop when a condition is met. Typically, it is used as the **<Action>** statement in a **if-then** block. This block is then embedded (nested) inside the other code block that is to be contionally terminated.
		See the **Case** block above, which uses the **break** statement as integral part of its structure.

Continue	`Continue;`
	OR
	`if <Condition> then Continue;`
		This statement is placed in any of the above loops to jump to the end of the current iteration, bypassing all the subsequent statements within the loop. However, the execution of the loop continues (the next iteration starts).
		Typically, it is used as the **<Action>** statement in a **if-then** block. This block is then embedded (nested) inside the other code block, just before the statements that are to be skipped in the current iteration.

Control

Exit	`Exit;`
	OR
	`if <Condition> then Exit;`
		The **Exit** procedure abruptly terminates the current function or procedure. If exiting a function, then *Result* contains the last set value.
		Warning: use with caution - jumping is a concept at odds with structured coding - it makes code maintenance difficult.

References

[1] http://www.taoyue.com/tutorials/pascal/contents.html

Types

This page lists and explains all supported types in Pascal Script used within ReNamer.

Integer types

Type	Size	Range
Byte	1 byte	0 .. 255
ShortInt	1 byte	-128 .. 127
Word	2 bytes	0 .. 65535
SmallInt	2 bytes	-32768 .. 32767
Cardinal	4 bytes	0 .. 4294967295
Integer	4 bytes	-2147483648 .. 2147483647

Floating point types

Type	Size	Range
Single	4 bytes	1.5×10^{-45} .. 3.4×10^{38}
Double	8 bytes	5.0×10^{-324} .. 1.7×10^{308}
Extended	10 bytes	3.6×10^{-4951} .. 1.1×10^{4932}

String types

Type	Description
Char	Stores a single Ansi character
String	Holds a sequence of Ansi characters of any length
WideChar	Stores a single Unicode character
WideString	Holds a sequence of Unicode characters of any length

Note: Unicode article highlights the difference between Unicode and Ansi.

Pointer types

Type	Description
PChar	Pointer to a Char value, and can also be used to point to characters within a string

Other types

Type	Description
Boolean	Provides an enumeration of the logical **True** and **False** values
Array	Single and multi dimensional indexable sequences of data
Record	Provides means of collecting together a set of different data types into one named structure
Variant	Provides a flexible general purpose data type

Enumerations and Sets

For example, the Boolean data type is itself an enumeration, with two possible values: True and False. If you try to assign a different value to a Boolean variable, the code will not compile.

Example	Description

`type`
`  TDay = (Mon, Tue, Wed, Thu, Fri, Sat, Sun);`
`var`
`  Day: TDay;`
`begin`
`  Day := Mon;`
`  if Day <> Tue then`
`    Day := Wed;`
`end.`
	An enumeration is simply a fixed range of named values

`type`
`  TDay = (Mon, Tue, Wed, Thu, Fri, Sat, Sun);`
`  TDays = set of TDay;`
`var`
`  Days: TDays;`
`begin`
`  Days := [Mon, Tue, Wed];`
`  if Sun in Days then`
`    Days := Days - [Sun];`
`end.`
	Whereas enumerations allow a variable to have one, and only one, value from a fixed number of values, sets allow you to have any combination of the given values

Custom types

Several types are custom defined to simplify the usage of some functions.

Type	Declared as	Description
TDateTime	Double	Holds date and time
TStringsArray	Array of WideString	Holds an indexable sequence of WideString

Functions

ReNamer has many functions to manipulate the entities related to file names and do some more complex tasks for individual files. These entities may be derived from the existing filename, path, system date, meta tags from the file, strings entered by the user, etc. This functionality is available for use via the PascalScript rule.

The difference between a "function" and a "procedure" is that while a function executes an algorithm and returns a value, a procedure just executes an algorithm without returning anything.

A common prefix **Wide** in the function name indicates that the function deals with Unicode strings (WideString). ReNamer has similar functions without **Wide** prefix, for processing **ANSI** strings. For example, **ShowMessage** and **WideShowMessage** procedures.

Basic String Handling

Routine	Remarks
procedure **Insert**(Source: String; var S: String; Index: Integer);	Inserts the string **S** into string **Source** at position **Index**.
procedure **Delete**(var S: String; Index, Count: Integer);	Deletes **Count** characters from the string **S**, starting from position **Index**.
function **Copy**(S: String; Index, Count: Integer): String;	Copies **Count** characters from string **S**, starting at position **Index**, and returns them as a new string.
function **Pos**(Substr: String; S: String): Integer;	Returns the position of a string **Substr** in another string **S**.

Note: Indexes of characters in strings are 1 based, so first character in string S would be S[1].

Length Management

Routine	Remarks
procedure **SetLength**(var S: Array; NewLength: Integer);	Sets the length of array variable **S** to **NewLength**.
procedure **SetLength**(var S: String; NewLength: Integer);	Sets the length of string variable **S** to **NewLength**.
procedure **SetLength**(var S: WideString; NewLength: Integer);	Sets the length of widestring **S** to **NewLength**.
function **Length**(const S: Array): Integer;	Returns the length of array **S** (number of elements).
function **Length**(const S: String): Integer;	Returns the length of string **S** (number of characters).
function **Length**(const S: WideString): Integer;	Returns the length of WideString **S** (number of characters).

Unicode String Handling

Routine	Remarks
procedure **WideInsert**(const Substr: WideString; var Dest: WideString; Index: Integer);	Inserts **Substr** in **Dest** at position **Index**.
procedure **WideDelete**(var S: WideString; Index, Count: Integer);	Deletes **Count** characters from **S**, starting from the **Index** position.
procedure **WideSetLength**(var S: WideString; NewLength: Integer);	Change the length of string **S** to a new length specified by **NewLength**. If new length is smaller than original, the string is truncated. If new length is greater than original, the string will be expanded but additional characters will not be initialized and can be anything.
function **WideLength**(const S: WideString): Integer;	Returns the length of WideString **S**.
function **WideCopy**(const S: WideString; Index, Count: Integer): WideString;	Returns **Count** characters from WideString **S**, starting at position **Index**.
function **WidePos**(const SubStr, S: WideString): Integer;	Find and occurrence of **SubStr** in **S**. Returns the position of first occurrence, or **0** if nothing was found.
function **WidePosEx**(const SubStr, S: WideString; Offset: Cardinal): Integer;	Find and occurrence of **SubStr** in **S** but start searching from position specified by **Offset**. Returns the position of first occurrence, or **0** if nothing was found.
function **WideUpperCase**(const S: WideString): WideString;	Returns the ALLCAPS version of the WideString **S**
function **WideLowerCase**(const S: WideString): WideString;	Returns the lowercase version of the WideString **S**
function **WideCompareStr**(const S1, S2: WideString): Integer;	Compares two WideStrings **S1** and **S2**, case-sensitive, and returns an integer based on the result. The return value is less than 0 if S1 is less than S2, 0 if S1 equals S2, or greater than 0 if S1 is greater than S2.
function **WideCompareText**(const S1, S2: WideString): Integer;	Compares two WideStrings **S1** and **S2**, case-insensitive, and returns an integer based on the result. The return value is less than 0 if S1 is less than S2, 0 if S1 equals S2, or greater than 0 if S1 is greater than S2.
function **WideSameText**(const S1, S2: WideString): Boolean;	Compares two WideStrings **S1** and **S2**, case-insensitive. Returns TRUE if both are identical, otherwise returns FALSE.
function **WideTextPos**(const SubStr, S: WideString): Integer;	Behaves like **WidePos** function, except text if processed in case-insensitive manner.
function **WideTrim**(const S: WideString): WideString;	Removes leading and trailing spaces and control characters from the given string **S**.
function **WideReplaceStr**(const S, OldPattern, NewPattern: WideString): WideString;	Returns the result of replacing on a string S, a string OldPattern (Case Sensitive), with a NewPattern.
function **WideReplaceText**(const S, OldPattern, NewPattern: WideString): WideString;	Returns the result of replacing on a string S, a text OldPattern (Case Non-Sensitive), with a NewPattern.
function **WideSplitString**(const Input, Delimiter: WideString): TStringsArray;	Splits the **Input** wherever **Delimiter** occurs and returns an array that contains the split parts. • The **Delimiter** itself can be a multi-character WideString. (Unlike the usual comma, hyphen or space that are used for this purpose) • The split parts (returned as elements of the array) do not contain the **Delimiter**.
function **WideJoinStrings**(const Strings: TStringsArray; const Delimiter: WideString): WideString;	Joins all individual items from **Strings** into a single WideString, with **Delimiter** inserted between the joined items.
function **WideCaseCapitalize**(const S: WideString): WideString;	Returns the *Sentence case* version of the WideString **S**. Only the first alphabetic character is capitalized. All other alphabetic characters are converted to lowercase. • If **S** begins with numeric characters, the first alphabetic character that follows will be capitalized.

function **WideCaseInvert**(const S: WideString): WideString;	Inverts the case of all characters in the WideString **S** and returns the WideString.

Meta Tags Extraction

Function	Remarks
function **CalculateMetaTag**(const FilePath: WideString; const MetaTagName String): String;	Extracts and returns the value of a metatag specified by **MetaTagName** from the file specified by the complete absolute path **FilePath**.

For example, to extract **EXIF_Date** tag from an image and set it to the filename, one can use something like this:

```
begin
  FileName := CalculateMetaTag(FilePath, 'EXIF_Date');
end.
```

The full list of meta tags can be found in Meta Tags article.

Regular Expressions

<table>
<tr><th>Function</th><th>Remarks</th></tr>
<tr><td>function ReplaceRegEx(const Input, Find, Replace: WideString;const CaseSensitive, UseSubstitution: Boolean): WideString;</td><td>Find-and-replace function using RegEx. Works like RegEx rule.
The parameters for this and next RegEx functions are:
Input - The WideString that is input to the function.
Find - RegEx pattern to be found (same as Expression field in the RegEx rule).
Replace - Replacement string (same as the Replace field in the RegEx rule).
CaseSensitive - Specifies whether to process in a case-sensitive mode.
UseSubstitution - Determines whether use backreferences in the result.</td></tr>
<tr><td>function MatchesRegEx(const Input, Find: WideString;const CaseSensitive: Boolean): TStringsArray;</td><td>Returns a list of RegEx matches as an array. Function returns an array of full matches, which matched the entire expression, not the sub-patterns. For example:<table><tr><th>Input</th><th>Find</th><th>Results</th></tr><tr><td>Ax1_-_Bx2---Cx3</td><td>[A-Z]x\d</td><td>Ax1
Bx2
Cx3</td></tr><tr><td>Ax1_-_Bx2---Cx3</td><td>([A-Z])x(\d)</td><td>Ax1
Bx2
Cx3</td></tr></table></td></tr>
</table>

<table>
<tr>
<td>function SubMatchesRegEx(const Input, Find: WideString;const CaseSensitive: Boolean): TStringsArray;</td>
<td>This function is very similar to MatchesRegEx, but instead of returning full matches it will return an array of sub-expression matches for the first full match. For example:
<table>
<tr><th>Input</th><th>Find</th><th>Results</th></tr>
<tr><td>Ax1_-_Bx2---Cx3</td><td>[A-Z]x\d</td><td>(empty)</td></tr>
<tr><td>Ax1_-_Bx2---Cx3</td><td>([A-Z])x(\d)</td><td>• A
• 1</td></tr>
</table>
In this way, it can easily be combined with MatchesRegEx function, to allow users to find all global matches, and then parse those matches through SubMatchesRegEx function to find individual sub-expression matches of each global match.</td>
</tr>
</table>

Unicode Character Handling

Function	Remarks
function **IsWideCharUpper**(WC: WideChar): Boolean;	Checks a Unicode character **WC** and returns TRUE if it is in UPPERCASE.
function **IsWideCharLower**(WC: WideChar): Boolean;	Checks a Unicode character **WC** and returns TRUE if it is in lowercase.
function **IsWideCharDigit**(WC: WideChar): Boolean;	Checks a Unicode character **WC** and returns TRUE if it is a digit (numeric character 0-9).
function **IsWideCharSpace**(WC: WideChar): Boolean;	Checks a Unicode character **WC** and returns TRUE if it is a white-space character, such as: space, form-feed, newline, carriage-return, tab and vertical-tab (characters classified as C1_SPACE).
function **IsWideCharPunct**(WC: WideChar): Boolean;	Checks a Unicode character **WC** and returns TRUE if it is a punctuation mark (characters classified as C1_PUNCT).
function **IsWideCharCntrl**(WC: WideChar): Boolean;	Checks a Unicode character **WC** and returns TRUE if it is a control character (characters classified as C1_CNTRL).
function **IsWideCharBlank**(WC: WideChar): Boolean;	Checks a Unicode character **WC** and returns TRUE if it is a blank, such as: space and tab (characters classified as C1_BLANK).
function **IsWideCharXDigit**(WC: WideChar): Boolean;	Checks a Unicode character **WC** and returns TRUE if it is a hexadecimal digit (0-9 or A-F).
function **IsWideCharAlpha**(WC: WideChar): Boolean;	Checks a Unicode character **WC** and returns TRUE if it is a alphanumeric character (a-z or A-Z).
function **IsWideCharAlphaNumeric**(WC: WideChar): Boolean;	Checks a Unicode character **WC** and returns TRUE if it is a alphanumeric character or a numeric character (a-z, A-Z or 0-9).
function **WideCharUpper**(const WC: WideChar): WideChar;	Returns a UPPERCASE version of the input Unicode character. In case of non-alphabetic character, it returns the same character.
function **WideCharLower**(const WC: WideChar): WideChar;	Returns a lowercase version of the input Unicode character. In case of non-alphabetic character, it returns the same character.

Note: Character classifications, such as C1_UPPER, C1_LOWER, C1_DIGIT, C1_SPACE, C1_PUNCT, C1_CNTRL, C1_BLANK, C1_XDIGIT, C1_ALPHA - are part of Unicode definitions. More information regarding classification can be found on the internet. For example: http://www.fileformat.info/info/unicode/ [1].

Unicode Conversion

Function	Remarks
function **WideToAnsi**(const WS: WideString): String;	Converts a Unicode string to its ANSI version.
function **AnsiToWide**(const S: String): WideString;	Converts a ANSI string to its Unicode version.
function **UTF8Encode**(const WS: WideString): String;	Convert Unicode string to the UTF-8 [2] encoded string. Useful for storing Unicode strings in files, sometimes for compatibility reasons and sometimes to reduce the size of the file.
function **UTF8Decode**(const S: String): WideString;	Convert UTF-8 [2] encoded string to its full Unicode representation.

Basic Conversion

Function	Remarks
function **BoolToStr**(B: Boolean): String;	Convert boolean variable into a string. Returns **True** or **False** string.
function **IntToStr**(Value: Integer): String;	Converts an integer to a string. The following assumptions are correct: • IntToStr(123) = '123' • IntToStr(0123) = '123' • IntToStr(123) <> '0123'
function **StrToInt**(const S: String): Integer;	Converts a string to an integer. The following equalities are correct: • StrToInt('123') = 123 • StrToInt('123') = 0123 • StrToInt('0123') = 123 **Warning:** An error will occur if the parameter to this function cannot be converted to an integer!
function **StrToIntDef**(const S: String; const Default: Integer): Integer;	Behaves like **StrToInt** function, but instead of producing an error on incorrect input function allows the **Default** value to be specified, which will be returned if the input cannot be converted to an integer.
function **FloatToStr**(Value: Extended): string;	Converts supplied floating point value to its string representation, using default system format.
function **StrToFloat**(const S: string): Extended;	Converts supplied string to a floating point value. **Warning:** An error will occur if the parameter to this function cannot be converted to a floating point value!
function **StrToFloatDef**(const S: string; const Default: Extended): Extended;	Behaves like **StrToFloat** function, but instead of producing an error on incorrect input function allows the **Default** value to be specified, which will be returned if the input cannot be converted to a floating point value.
function **FormatFloat**(const Format: string; Value: Extended): string;	Converts supplied floating point value to its string representation, using user specific **Format**. Format string may contain following specifiers:

	<table><tr><th>Specifier</th><th>Represents</th></tr><tr><td>**0** (zero)</td><td>Digit placeholder. If the value being formatted has a digit in the position where the "0" appears in the format string, then that digit is copied to the output string. Otherwise, a "0" is stored in that position in the output string.</td></tr><tr><td>**#** (hash)</td><td>Digit placeholder. If the value being formatted has a digit in the position where the "#" appears in the format string, then that digit is copied to the output string. Otherwise, nothing is stored in that position in the output string.</td></tr><tr><td>**.** (dot)</td><td>Decimal point. The first "." character in the format string determines the location of the decimal separator in the formatted value, any additional "." characters are ignored.</td></tr><tr><td>**,** (comma)</td><td>Thousand separator. If the format string contains one or more "," characters, the output will have thousand separators inserted between each group of three digits to the left of the decimal point. The placement and number of "," characters in the format string does not affect the output.</td></tr></table>
function **DateToStr**(D: TDateTime): String;	Converts a date to a string, using system format for the short date, for example: **dd/mm/yyyy**.
function **StrToDate**(const S: String): TDateTime;	Converts a date string to a proper TDateTime value, using system format for the short date, for example: **dd/mm/yyyy**.
function **IntToHex**(Value: Integer; Digits: Integer): String;	Converts an integer to its hexadecimal representation. Here are samples: • IntToHex(1234, 1) = '4D2' • IntToHex(1234, 8) = '000004D2'
function **HexToInt**(const HexNum: String): Integer;	Converts a hexadecimal value to its decimal representation. **Warning:** An error will occur if the parameter to this function cannot be converted to an integer!
function **HexToIntDef**(const HexNum: String; Default: Integer): Integer;	Behaves like **HexToInt** function, but instead of producing an error on incorrect input function allows the **Default** value to be specified, which will be returned if the input cannot be converted to an integer.
function **Ord**(X: Char): Byte;	Return an ordinal value (byte representation) of a character.
function **Chr**(X: Byte): Char;	Return a character by its ordinal value (byte representation).

Date and Time

Function	Remarks
function **Date**: TDateTime;	Returns the current system date.
function **Time**: TDateTime;	Returns the current system time.
function **Now**: TDateTime;	Returns the current system date and time.
function **EncodeDate**(Year, Month, Day: Word): TDateTime;	Generates date value for the specified **Year**, **Month**, **Day**. Parameters must be within a valid date range: Year = 0..9999, Month = 1..12, Day = 1..31 (depending on month/year). An error will be raised if parameters are invalid.
function **EncodeTime**(Hour, Min, Sec, MSec: Word): TDateTime;	Generates time value for the specified **Hour**, **Min**, **Sec**, **MSec**. Parameters must be within a valid time range: Hour = 0..23, Min = 0..59, Sec = 0..59, MSec = 0..999. An error will be raised if parameters are invalid.
function **TryEncodeDate**(Year, Month, Day: Word; var Date: TDateTime): Boolean;	Behaves exactly like **EncodeDate** function, except this function returns the TRUE or FALSE depending on the success of the operation. If operation was successful, function will return TRUE and the generated date value will be written in the **Date** variable.
function **TryEncodeTime**(Hour, Min, Sec, MSec: Word; var Time: TDateTime): Boolean;	Behaves exactly like **EncodeTime** function, except this function returns the TRUE or FALSE depending on the success of the operation. If operation was successful, function will return TRUE and the generated time value will be written in the **Time** variable.

procedure **DecodeDate**(const DateTime: TDateTime; var Year, Month, Day: Word);	Extracts **Year**, **Month** and **Day** components from a given **DateTime** value.
procedure **DecodeTime**(const DateTime: TDateTime; var Hour, Min, Sec, MSec: Word);	Extracts **Hour**, **Min**, **Sec** and **MSec** components from a given **DateTime** value.
function **DayOfWeek**(const DateTime: TDateTime): Word;	Returns the day of the week (as an index) for the specified **DateTime** value. The indexes are: 1 = Sunday, 2 = Monday, 3 = Tuesday, 4 = Wednesday, 5 = Thursday, 6 = Friday, 7 = Saturday.
function **DateTimeToUnix**(D: TDateTime): Int64;	Converts **D** value of type **TDateTime** to a Unix timestamp.
function **UnixToDateTime**(U: Int64): TDateTime;	Converts a Unix timestamp to a value of **TDateTime** type.
function **FormatDateTime**(const Fmt: String; D: TDateTime): String;	This function provides rich formatting of a **DateTime** value into a string. Date and time format is defined by the **Fmt** string.
function **IncYear**(const AValue: TDateTime; const ANumberOfYears: Integer): TDateTime;	Increments a TDateTime variable by a number of years (plus or minus).
function **IncMonth**(const AValue: TDateTime; ANumberOfMonths: Integer): TDateTime;	Increments a TDateTime variable by a number of months (plus or minus).
function **IncWeek**(const AValue: TDateTime; const ANumberOfWeeks: Integer): TDateTime;	Increments a TDateTime variable by a number of weeks (plus or minus).
function **IncDay**(const AValue: TDateTime; const ANumberOfDays: Integer): TDateTime;	Increments a TDateTime variable by a number of days (plus or minus).
function **IncHour**(const AValue: TDateTime; const ANumberOfHours: Int64): TDateTime;	Increments a TDateTime variable by a number of hours (plus or minus).
function **IncMinute**(const AValue: TDateTime; const ANumberOfMinutes: Int64): TDateTime;	Increments a TDateTime variable by a number of minutes (plus or minus).
function **IncSecond**(const AValue: TDateTime; const ANumberOfSeconds: Int64): TDateTime;	Increments a TDateTime variable by a number of seconds (plus or minus).
function **IncMilliSecond**(const AValue: TDateTime; const ANumberOfMilliSeconds: Int64): TDateTime;	Increments a TDateTime variable by a number of milliseconds (plus or minus).

File Management

Function	Remarks
function **WideFileSize**(const FileName: WideString): Int64;	Returns the size of the file.
function **WideFileExists**(const FileName: WideString): Boolean;	Check whether specified file exists. Returns TRUE if file exists, otherwise FALSE.
function **WideDirectoryExists**(const Directory: WideString): Boolean;	Check whether specified directory exists. Returns TRUE if directory exists, otherwise FALSE.
function **WideForceDirectories**(Dir: WideString): Boolean;	Makes sure that that all directories in the path exist. If they don't, function will try to create them, recursively. Returns TRUE if all folders exist or have been successfully created.
function **WideCreateDir**(const Dir: WideString): Boolean;	Create specified directory (non-recursive). Returns TRUE on success, otherwise FALSE.
function **WideDeleteFile**(const FileName: WideString): Boolean;	Delete physical file from the disk. Returns TRUE on success, otherwise FALSE.
function **WideRenameFile**(const OldName, NewName: WideString): Boolean;	Rename file from **OldName** to **NewName**. Returns TRUE on success, otherwise FALSE.

function **WideCopyFile**(FromFile, ToFile: WideString; FailIfExists: Boolean): Boolean;	Rename file from **FromFile** to **ToFile**. If **FailIfExists** flag is TRUE, file will not be copied when destination file already exists, otherwise, destination file will be overwritten. Returns TRUE on success, otherwise FALSE.
function **WideFileSearch**(const Name, DirList: WideString): WideString;	Search through the directories passed in **DirList** for a file named **Name**. DirList is a list of path names delimited by semicolons. If file matching Name is located, function returns a string specifying a path name for that file. If no matching file exists, function returns an empty string.
procedure **WideScanDirForFiles**(Dir: WideString; var Files: TStringsArray; const Recursive, IncludeHidden, IncludeSystem: Boolean; const Mask: WideString);	You can get a list of the files inside a folder. • **Dir**: The folder you want to scan. • **Files**: Where the list of files is going to be saved. • **Recursive**: Do you want to scan the subfolders? • **IncludeHidden**: Do you want to list the hidden files? • **IncludeSystem**: Do you want to list the system files? • **Mask**: You can list everything ('*'), or only the files that contain some string (example: '*.txt').
procedure **WideScanDirForFolders**(Dir: WideString; var Folders: TStringsArray; const Recursive, IncludeHidden, IncludeSystem: Boolean);	You can get a list of the folders inside other folder. • **Dir**: The folder you want to scan. • **Folders**: Where the list of folders is going to be saved. • **Recursive**: Do you want to scan the subfolders? • **IncludeHidden**: Do you want to list the hidden folders? • **IncludeSystem**: Do you want to list the system folders?

File Name Utilities

Function	Remarks
function **WideExtractFilePath**(const FileName: WideString): WideString;	Returns the drive and directory portion from "FileName", including the trailing path delimiter, e.g. "C:\Folder\".
function **WideExtractFileDir**(const FileName: WideString): WideString;	Returns the drive and directory portion from "FileName", excluding the trailing path delimiter, e.g. "C:\Folder".
function **WideExtractFileDrive**(const FileName: WideString): WideString;	Returns the drive letter, e.g. "C:".
function **WideExtractFileName**(const FileName: WideString): WideString;	Returns the filename with extension, e.g. "FileName.txt".
function **WideExtractBaseName**(const FileName: WideString): WideString;	Returns the base name of the file, i.e. file name without extension and path components. **Input** → **Output** Document.txt → Document C:\Folder\Document.txt → Document
function **WideExtractFileExt**(const FileName: WideString): WideString;	Returns the file's extension with the dot, e.g. ".txt".
function **WideChangeFileExt**(const FileName, Extension: WideString): WideString;	Replaces the original extension, and returns the new filename with extension, e.g. "FineName.txt" -> "FineName.pdf".

function **WideStripExtension**(const FileName: WideString): WideString;	Strips off the extension from the filename, maintaining the path component unaffected. **Input** **Output** Document.txt Document C:\Folder\Document.txt C:\Folder\Document
function **WideExpandFileName**(const FileName: WideString): WideString;	Converts the relative file name into a fully qualified path. This function does not verify that the resulting path refers to an existing file.
function **WideExtractRelativePath**(const BaseName, DestName: WideString): WideString;	Creates a relative path to go from **BaseName** to **DestName**. For example: **BaseName:** C:\Folder\FileName.txt **DestName:** C:\Documents\Article.pdf **Result:** ..\Documents\Article.pdf
function **WideExtractShortPathName**(const FileName: WideString): WideString;	It converts a path into it's representation in DOS format.
function **WideIncludeTrailingPathDelimiter**(const S: WideString): WideString;	With this function you can ensure that a path for a folder **contains** the path delimiter ("\") at the end of the path.
function **WideExcludeTrailingPathDelimiter**(const S: WideString): WideString;	With this function you can ensure that a path for a file does **not contain** the path delimiter ("\") at the end of the path.
function **WideSameFileName**(const S1, S2: WideString): Boolean;	Compares the filenames **S1** and **S2**, and returns TRUE if they are identical.

File Read/Write

Function	Remarks
function **FileReadFragment**(const FileName: WideString; Start, Length: Integer): String;	Starting at position **Start**, read **Length** number of characters of the file **FileName** and return them as a string. **Start** is 0-based, so in order to start the fragment at the beginning of the file, set this parameter to 0 (zero).
function **FileReadLine**(const FileName: WideString; LineNum: Integer): String;	Read a line from a file **FileName** specified by a line index **LineNum**. **LineNum** is 1 based, so to get the first line set this parameter to 1 (one). **Note:** This function is extremely inefficient and provided only for convenience!
function **FileCountLines**(const FileName: WideString): Integer;	Count number of lines in the file. **Note:** This function is extremely inefficient and provided only for convenience!
function **FileReadContent**(const FileName: WideString): String;	Return the entire content of the file as a String.
procedure **FileWriteContent**(const FileName: WideString; const Content: String);	Write **Content** to the file. If target file already exists, it will be overwritten.
procedure **FileAppendContent**(const FileName: WideString; const Content: String);	Append **Content** to the end of the file. If target file does not exist, it will be created.

File Time

Function	Remarks
function **FileTimeModified**(const FileName: WideString): TDateTime;	Returns last modified time of the specified file.
function **FileTimeCreated**(const FileName: WideString): TDateTime;	Returns creation time of the specified file.
function **SetFileTimeCreated**(const FileName: WideString; const DateTime: TDateTime): Boolean;	Sets creation time for the specified file.
function **SetFileTimeModified**(const FileName: WideString; const DateTime: TDateTime): Boolean;	Sets last modified time for the specified file.

Process Execution

Function	Remarks
function **ShellOpenFile**(const FileName: WideString): Boolean;	Run (open) a file specified by **FileName**. Works like "Start > Run" command. Parameter does not have to be an executable file, it can by any file or protocol with assigned handler. For example, you can open a Word document or a web page, and associated application will be launched: • ShellOpenFile('http://www.den4b.com/'); • ShellOpenFile('C:\Document.doc');
function **ExecuteProgram**(const Command: String; WaitForProgram: Boolean): Cardinal;	Execute a command line specified by parameter **Command**. Works like "Command Prompt". Parameter **WaitForProgram** allows you to specify whether the code needs to wait until the command (launched program) has finished executing.
function **ExecConsoleApp**(const CommandLine: String; out Output: String): Cardinal;	Execute a command line specified by parameter **CommandLine** and record its standard output in the variable **Output**. Works like "Command Prompt". Should be used only for console style applications. Returns the exit code.

Dialogs

Function	Remarks
procedure **ShowMessage**(const Msg: String);	Show a simple dialog with the message specified by **Msg** parameter.
procedure **WideShowMessage**(const Msg: WideString);	Same as **ShowMessage** function but parameter is Unicode text.
function **DialogYesNo**(const Msg: String): Boolean;	Show a simple prompt with the message specified by **Msg** parameter and two button: Yes and No. Returns TRUE if user clicks Yes button, otherwise FALSE.
function **WideDialogYesNo**(const Msg: WideString): Boolean;	Same as **DialogYesNo** function but parameter is WideString text.
function **InputBox**(const ACaption, APrompt, ADefault: String): String;	Displays a simple dialog box with the given **ACaption** and **APrompt** message. It asks the user to enter data in a text box on the dialog. A **ADefault** value is displayed in the text box initially. If the user presses OK, the value from the text box is returned, otherwise **ADefault** value is returned.
function **InputQuery**(const ACaption, APrompt: String; var Value: String): Boolean;	Operates similar to **InputBox** function. The default value and the value of the text box after the dialog is closed are transferred via the **Value** parameter. Function returns TRUE is user clicked OK, otherwise returns FALSE.
function **WideInputBox**(const ACaption, APrompt, ADefault: WideString): WideString;	Same as **InputBox** function but operates on WideString text.

function **WideInputQuery**(const ACaption, APrompt: WideString; var Value: WideString): Boolean;	Same as **InputQuery** function but operates on WideString text.

Application

Function	Remarks
function **GetApplicationPath**: WideString;	Return full path to the application, for example: "C:\Program Files\ReNamer\ReNamer.exe".
function **GetApplicationParams**: TStringsArray;	Return an array of command line parameters which were supplied to the application at launch.
function **GetCurrentFileIndex**: Integer;	Get index of the current file. Index ranges from **1** to **GetTotalNumberOfFiles**.
function **GetTotalNumberOfFiles**: Integer;	Get total number of files in the application.
function **GetCurrentMarkedFileIndex**: Integer;	Get index of the current file, counting only *marked* files. Index ranges from **1** to **GetTotalNumberOfMarkedFiles**.
function **GetTotalNumberOfMarkedFiles**: Integer;	Get total number of *marked* files in the application.

System

Function	Remarks
function **WideGetCurrentDir**: WideString;	Returns the current working directory.
function **WideSetCurrentDir**(const Dir: WideString): Boolean;	Sets the current working directory to the directory specified by parameter **Dir**.
function **WideGetTempPath**: WideString;	Returns system defined temporary directory. If returned value is empty it means that temporary folder could not be determined.

function **WideGetEnvironmentVar**(const VarName: WideString): WideString;	Returns an environment variable by its name. For example:
	`var`
	`  UserName, ComputerName: WideString;`
	`begin`
	`  UserName := WideGetEnvironmentVar('USERNAME');`
	`  ComputerName := WideGetEnvironmentVar('COMPUTERNAME');`
	`end.`

Miscellaneous

Function	Remarks
procedure **Sleep**(Milliseconds: Cardinal);	Sleep (pause the execution) for specified number of **Milliseconds**.
procedure **DivMod**(Dividend: Integer; Divisor: Word; var Result, Remainder: Word);	Perform integer division and fetch the remainder as well, all in one operation. **Dividend** is the integer into which you are dividing. **Divisor** is the value by which to divide **Dividend**. **Result** returns the result of the integer division. **Remainder** returns the remainder (the difference between Result * Divisor and Dividend).
procedure **Randomize**;	Prepares the random number generator. **Note:** Should only be called once per application cycle, at the start of the process!
function **RandomRange**(const AFrom, ATo: Integer): Integer;	Return a random integer number within the specified range from **AFrom** (inclusive) to **ATo** (non-inclusive).
function **GetClipboardText**: WideString;	Get the content of the the clipboard (text only).
procedure **SetClipboardText**(const S: WideString);	Set the content of the the clipboard (text only).
function **Base64Encode**(const S: String): String;	Encode string **S** into Base64 [3]. Useful for encoding binary data in order to minimize the likelihood of data being modified in transit through different systems, like email or internet.
function **Base64Decode**(const S: String): String;	Decode Base64 [3] string;
function **GetTickCount**: Cardinal;	Retrieves the number of milliseconds that have elapsed since the system was started (up to 49.7 days, then timer resets). The precision of this timer is very limited.
function **SizeOf**(X): Integer;	Pass a variable reference to determine the number of bytes used to represent the variable. Pass a type identifier to determine the number of bytes used to represent instances of that type.

References

[1] http://www.fileformat.info/info/unicode/
[2] http://en.wikipedia.org/wiki/UTF-8
[3] http://en.wikipedia.org/wiki/Base64

User Scripts

This page contains a collection of scripts which can be used in ReNamer's PascalScript rule.

Educational scripts

Script	Description
Initialize	How to initialize the code.
Import DLL	Demonstrates how to call functions of 3rd party DLL.
Date and Time	How to use date and time of the file.
Move filename portion	How to move part of the filename to a new position.
Index filenames	How to insert an incrementing number into the filename.

3rd party libraries

Script	Description	Forum Link
TrID	Detecting file extension.	[1]
Xpdf	Extract PDF tags.	[2]
Exiv2	Extract EXIF/IPTC/XMP tags from any images.	[3] [4]

User scripts

Script	Description	Forum Link
Separate words	Insert a space in front of each capitalized letter.	[5]
AVI video codec	Extract name of video codec used encoding AVI file.	[6]
RegEx Case Convertion	Convert case of capturing groups of your regular expression.	[7] [8]
Using MasterFile	Renaming folder basing on the MetaTag of the first file in the folder. In this particular case: adding the ID3_Year metatag from the mp3 file to it's parent folder name.	[9]
Hours span	Add hours to a date embedded in the filename in format "yyyy-mm-dd hh-nn-ss.JPG".	[10]
Roman numerals serialization	Serialization with Roman numerals.	[11] [12]
EAN-13 checksum	Calculate the checksum digit for the EAN-13 barcode [13].	[14]
Serialize duplicates	Serialize duplicated filenames by append a counter to the filename.	
Partial case change	Change case of specific parts of the file name.	
URL decode	Decode a URL encoded filename.	
Index files per folder	This script adds a serialization index to the end of every file on per folder basis. The index is incremented only when the folder path changes.	
Random characters and length	Generate new names consisting of random selection of characters and of random length.	

References

[1] http://www.den4b.com/forum/viewtopic.php?id=550
[2] http://www.den4b.com/forum/viewtopic.php?id=349
[3] http://www.den4b.com/forum/viewtopic.php?id=407
[4] http://www.den4b.com/forum/viewtopic.php?id=109
[5] http://www.den4b.com/forum/viewtopic.php?pid=2529#p2529
[6] http://www.den4b.com/forum/viewtopic.php?pid=3484#p3484
[7] http://www.den4b.com/forum/viewtopic.php?pid=3454#p3454
[8] http://www.den4b.com/forum/viewtopic.php?pid=3459#p3459
[9] http://www.den4b.com/forum/viewtopic.php?pid=1626#p1626
[10] http://www.den4b.com/forum/viewtopic.php?id=696
[11] http://www.den4b.com/forum/viewtopic.php?id=828
[12] http://www.den4b.com/forum/viewtopic.php?pid=3327#p3327
[13] http://en.wikipedia.org/wiki/EAN-13
[14] http://www.den4b.com/forum/viewtopic.php?id=930

Appendices

Using Presets

A "preset" is a set of rules that is saved with a user-defined name. It can optionally save the Filter setting also.

You can save frequently used sets of rules as presets, and load them instantly. This saves you a lot of time. Without the presets, you would have to compose the same set of rules each time you start the program. You can create an unlimited number of presets, but in practice, you would normally need about 4-5 presets.

Shortcuts

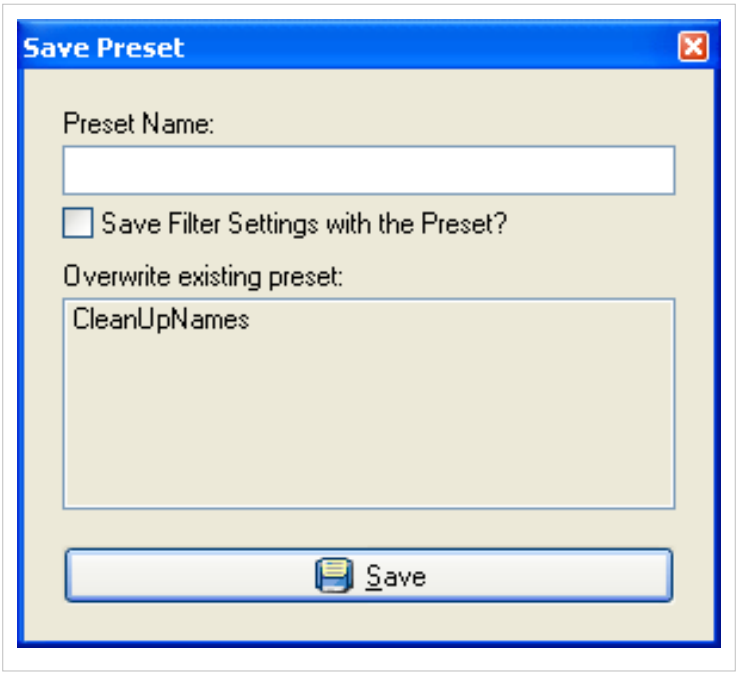
ReNamer automatically assigns keyboard shortcuts to presets, so that they can be loaded into the **Rules** pane with least effort. Shortcuts have the following form: **CTRL+1**, **CTRL+2**, etc. Unfortunately, there are only 9 shortcuts available, one for every digit from 1 to 9.

Presets are sorted in alphabetic order. You can manipulate the order of the presets by renaming them. If you want some specific preset to always appear at the top, you can insert an exclamation mark "**!**" (or some other symbol that is at the top of the sorting order) in front of the preset name. If you have several presets that you want to push to the top, you can prefix them with something like this: "**!1**", "**!2**", "**!3**", etc.

Managing Presets

Save a preset

1. Create a list of rules (Managing rules).
2. Set the required Filter settings (optional).
3. Press **CTRL+S**, or use the **Presets > Save As** menu option.
4. A window pops up:



5. Enter a new name in the **Name** box, or select one of the existing presets listed below to overwrite it.
6. Put a tick in the check box if you want to save the current filter settings.
7. Press the **Save** button. The preset is saved.

Note: At any point of time, you can abort the process by pressing **ESC** or closing the window.

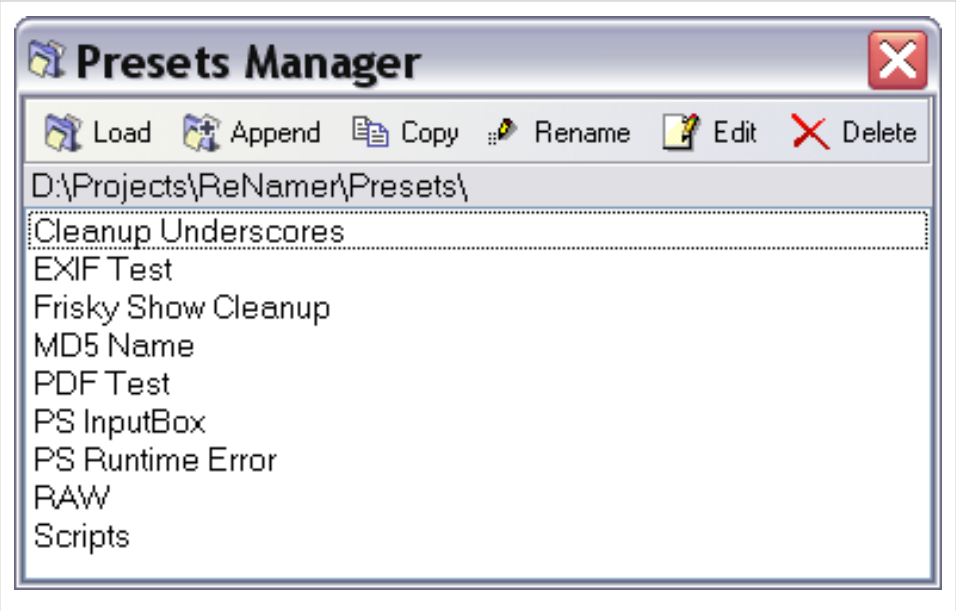
Load an existing preset

You can load any of the presets by pressing its shortcut (**CTRL+1**, etc. see above). If you do not remember the shortcuts, use the **Preset > Load** menu to see the master list of all existing presets and select a preset from that list.The selected preset is loaded.

Append an existing preset to current set of rules

You can append any of the presets to the end of the current rules stack. To do it, follow these steps:

1. Press **CTRL+M** or use the **Presets > Manage** menu option.
2. The **Presets manager** window pops up:



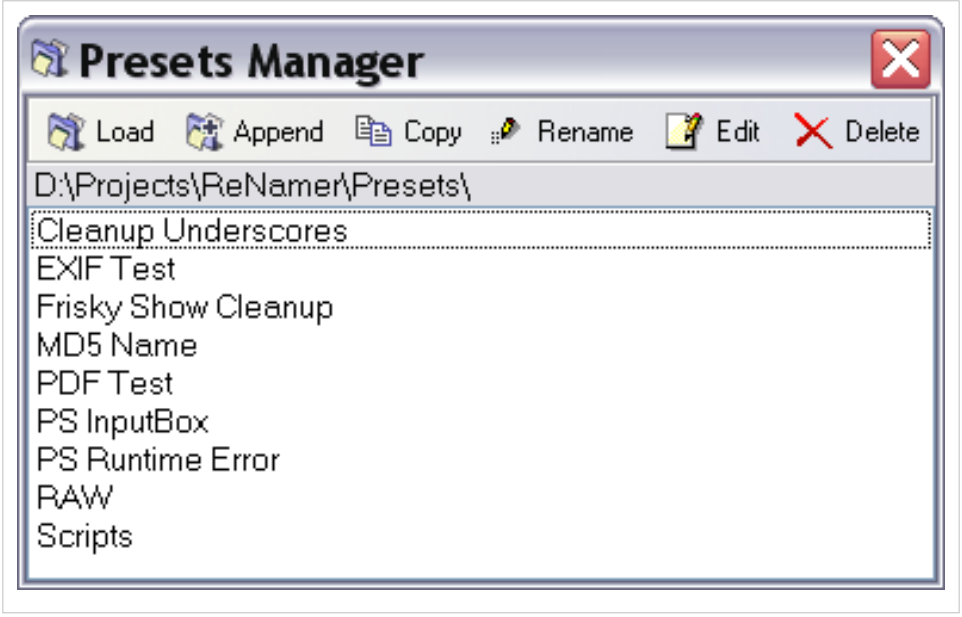
3. Select the preset you want to append and then press the 

button.
4. Close the **Preset Manager** window.

Delete an existing preset

Sometimes you may not need a preset any longer. To delete it, follow these steps:

1. Press **CTRL+M** or use the **Presets > Manage** menu option.
2. The **Presets manager** window pops up:

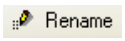


3. Select the preset you want to delete and then press **DEL** key or the 

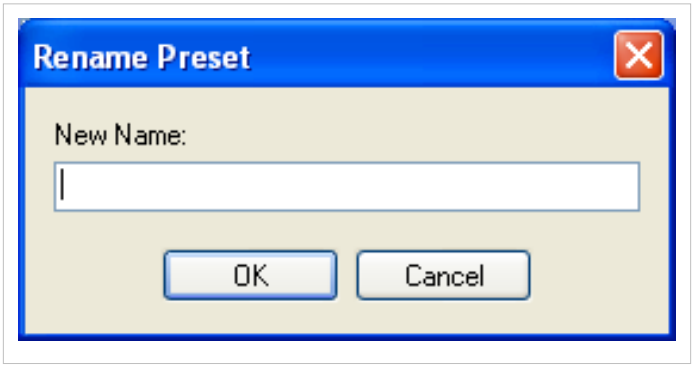
button.
4. Close the **Preset Manager** window.

Rename a preset

To rename a preset, follow these steps:

1. Press **CTRL+M** or use the **Presets > Manage** menu option.
2. The Preset manager window pops up.
3. Select the preset you want to rename and then press **F2** or the 

button.
4. The following dialog pops up:



5. Edit the name (or enter a new name), and press **OK** or **ENTER**.

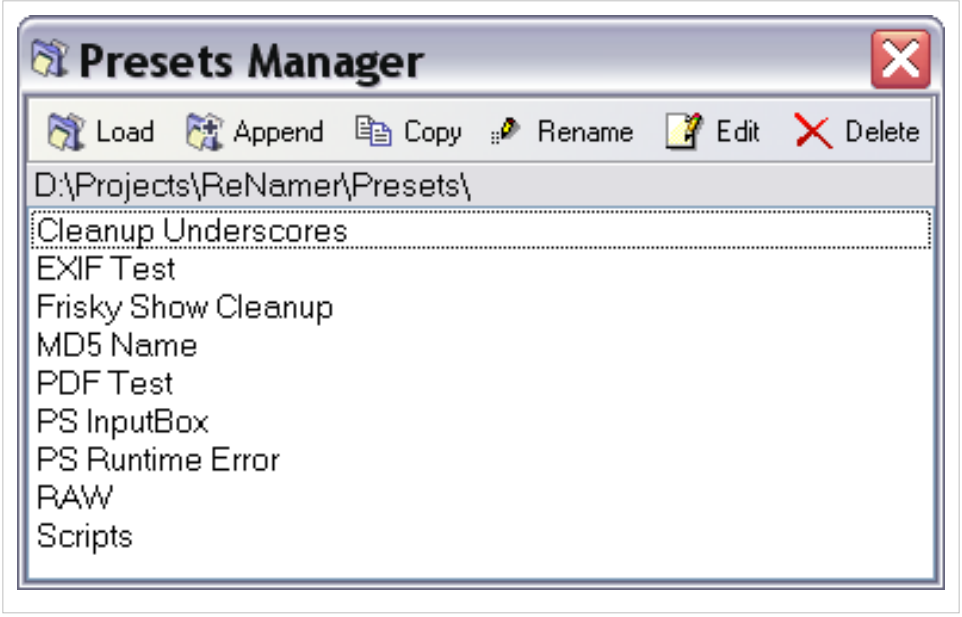
To abort the process at any time, press **ESC** or close the window.

Edit a preset

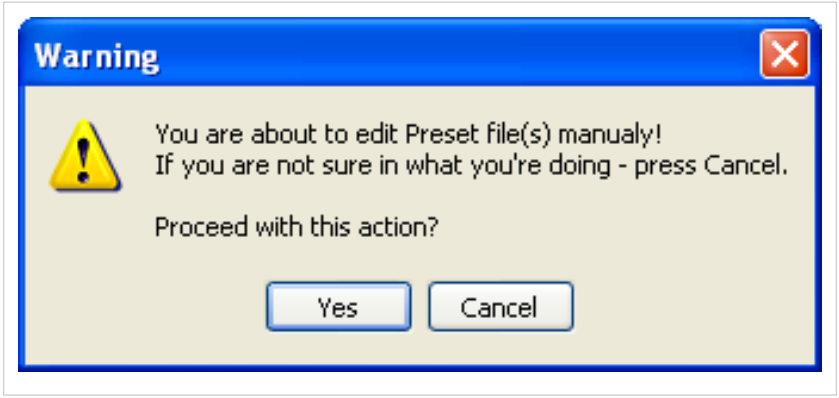
The preset manager can show the contents of a preset (i.e., settings of all rules and filters) as editable text. You can simply edit the rules and filters by changing the text.

To edit a preset, follow these steps:

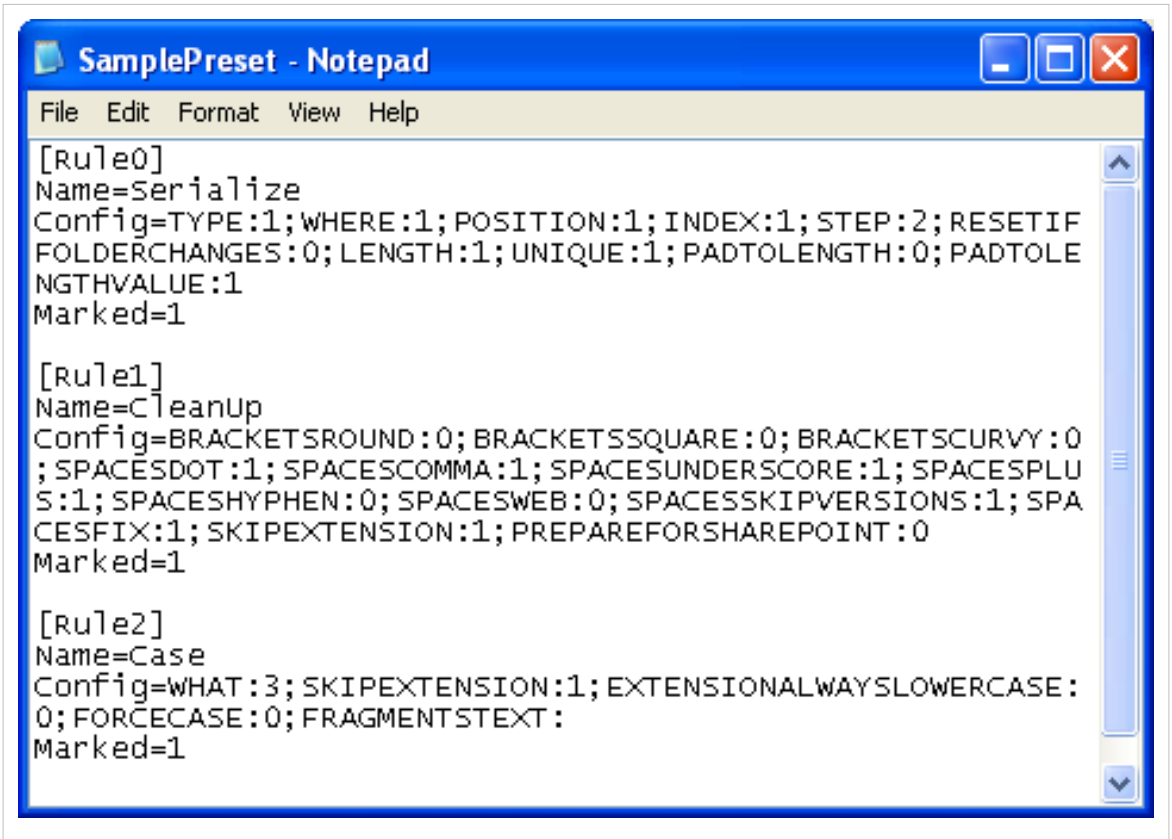
1. Press **CTRL+M** or use the **Presets > Manage** menu option.
2. The **Presets manager** window pops up:



3. Select the preset you want to edit and then press **F4** or the  button.
4. A warning pops up:



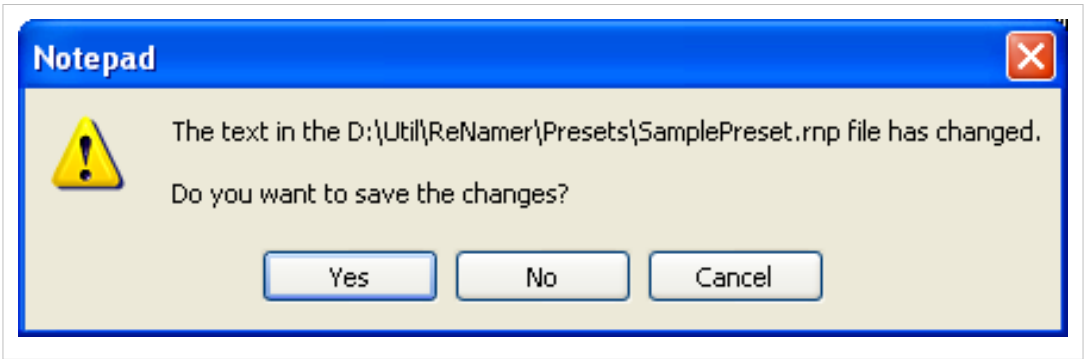
5. Click on **Yes**. A Notepad (text editor) window pops up with the selected preset:



Notice that:

- This window shows the preset name in the title bar, and all settings (rules and filters).
- In each rule, the parameters are shown in **ParameterName:ParameterValue** format.
- All such pairs are separated by a semicolon (**;**).

6. Edit the settings and then close the file. A confirmation dialog pops up.



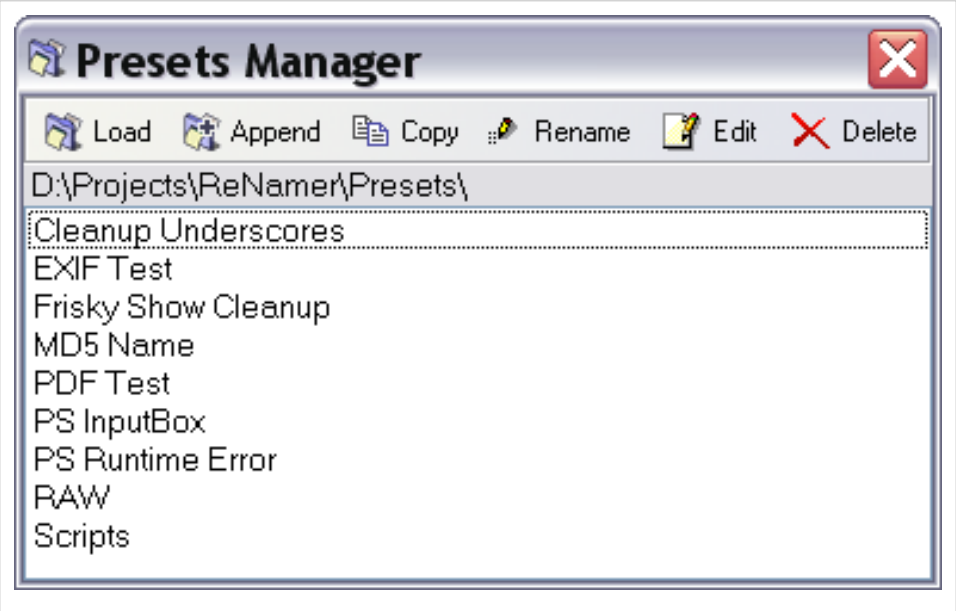
7. Click on **Yes**. Now the preset is edited.

Copy a preset

You may want to duplicate an existing preset and create a variation by editing it (or just take a backup of the preset before experimenting with it).

To duplicate a preset, follow these steps:

1. Press **CTRL+M** or use the **Presets > Manage** menu option.
2. The **Presets manager** window pops up:

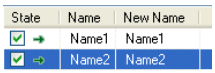
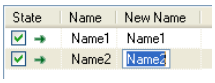
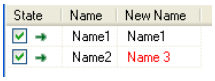
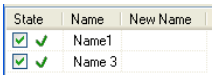


3. Select the preset you want to duplicate and then press the Copy button.
4. A duplicate copy of the preset is created.
5. Now go ahead and edit the original present (or its copy).
6. Finally close the **Presets Manager** window.

Manual Editing

In addition to combining multiple rules, you can rename any file manually.

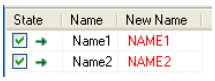
The following example explains the process:

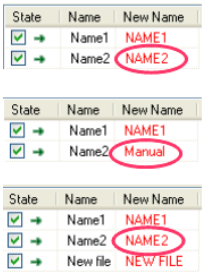
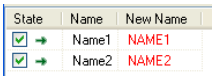
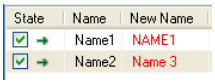
1	In the **Files** pane, select the file to be manually renamed (click anywhere on its row).	
2	To enter **Edit** mode, do any of the following: 1. Press **F2** 2. Right-click on the filename and select the **Edit New Name** option 3. Slow-click on the file-name. ReName enters **Edit** mode. The **New Name** column shows the file name in a box, and the file's name is highlighted. Now you can: • Type a new name to replace the old name entirely. • Use left/right arrow keys to place your cursor anywhere in the name and add/delete/change a few characters. In this example, we will replace *2* with *3* (the effect is shown below).	
3	To end the **Edit** mode, press **ENTER** (or click anywhere outside the edit box). The newly edited name is shown as preview (the file is not renamed yet). • You can abort the renaming by pressing **ESC.**	
4	To *actually* rename the file, click on the  button.	

Note that manual renaming has a major limitation: it must be the *last* operation before renaming. Any further Preview operation will discard your adjustments. If the **AutoPreview** is *on*, your changes will be discarded if you press  button, or do something in the ReNamer **GUI** (such as adding/removing a file, adding/removing/editing a rule).

This happens because manual renaming is not a rule; so its results cannot be passed on to the other rules for further processing. The rules stack *always* start with the file's original name.

We will check this out with multiple examples.

1	**Example-1:** Manual renaming is always lost if **Preview** button is pressed. If we press the **Preview** button, the manual renaming is lost, and the rules in the **Rule** pane take over again! In this example, we renamed the second file manually, and *then* pressed the **Preview** button. As a result, the ALLCAPS rule acted on the *original* name (**Name2**) again, and converted it into **NAME2.**	

2	**Example-2:** Manual renaming may be lost when files are added (if the **Auto preview when new files are added** mode is turned ON). In this example, the preview options are set to refresh the preview whenever new files are added to the **Files** pane of ReNamer. So, if we add a new file, ReNamer behaves as if we pressed the **Preview** button (and the manual renaming is lost). So the net effect is same as the **Example-1** (above). Compare the three screenshots: The first screenshot shows the effect of the Case Rule, which is set to convert the name to ALLCAPS. Both file names are turned ALLCAPS. The second screenshot shows that the file **Name2** is manually renamed to **Manual**. (The ALLCAPS rule still works on the first file.) The third screenshot shows what happens when the **New file** is added to the **Files** pane: The **auto preview** mode forces a refresh of the pane. As a result, the name of the second file is reset to its original name. Then the ALLCAPS rule acts *afresh* on all three names, and turns all the three file names to ALLCAPS. The net effect is as if the manual renaming was never done at all.	
3	**Example-3:** The effect of manual renaming may be lost when you add a new rule (if the **Auto preview on change of rules configurations** mode is turned ON). In this example, the preview options are set to refresh the preview on any change to the rules. The file was renamed manually, and then a single Case Rule was added to convert the names to ALLCAPS. Notice that this rule actually ignored the manually given name (**Name 3**) and acted on the *original* name of the file (**Name2**), and made it **NAME2.**	
4	**Example-4:** Manual renaming works ***if*** done ***after*** all the rules are added (no matter what the AutoPreview settings are). This is the reverse of the Example-3. The preview options are also set to refresh the preview on any change to the rules. But this time the ALLCAPS (Case) rule was added first. As soon as it was added, It acted on both files. The second file was manually renamed *after* that. So its name is changed from **NAME2** to **Name 3**. To conclude, the effect of the manual renaming survived because it was done *after* the last Preview (triggered by adding the rule in this case).	

Analyze

When you select the **Analyze tool** option (or press SHFT+A), ReNamer launches a window, where you can enter any arbitrary text and apply rules entered in the **Rules** pane.

This is very useful to see the effect of the rules using dummy text (for example before using the **Insert** rule). It also allows to check the positions of any character in the text just by pointing to it with keyboard or mouse. The appropriate data is displayed in the status bar of the window.

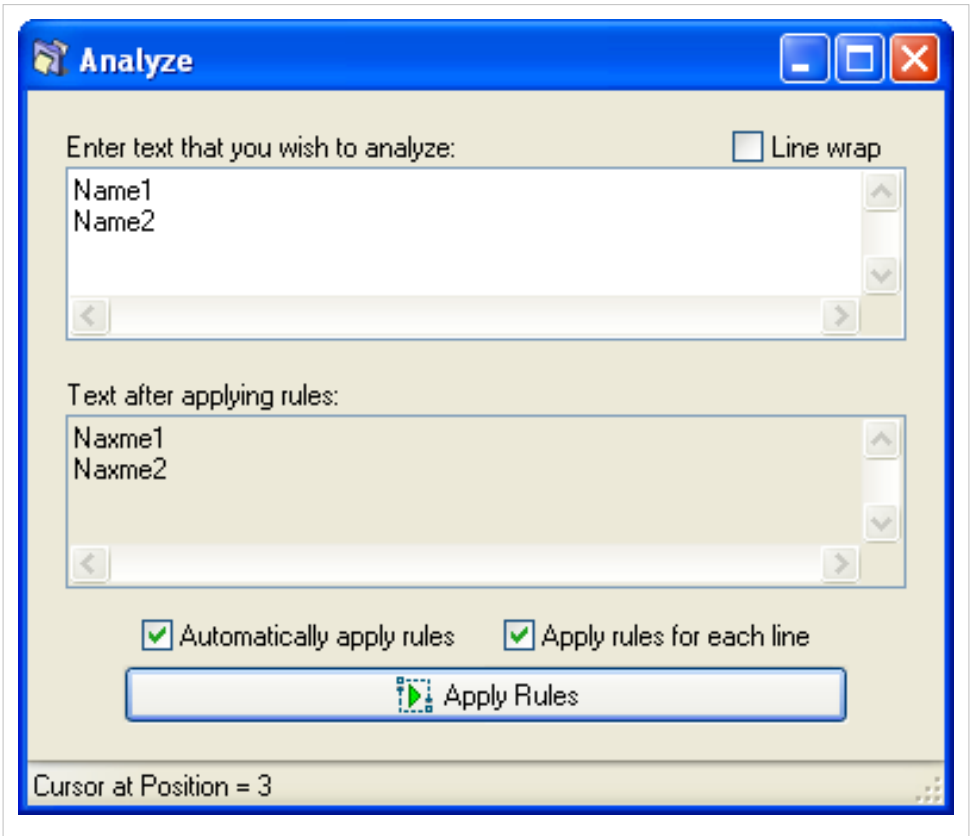
The text may be a filename (or multiple filenames) loaded from **Files** pane or any text manually created by user.

Let us see an example.

I had already added a single Insert Rule in the **Rules** pane of ReNamer. It was set to insert "*x*" (without the quotes) at the 3rd position.

Now I press SHFT+A.

A window pops up:



In this window, I have entered some arbitrary text to show the effect of the rule. Notice how **x** is added at the 3rd character in each line.

In our example, I have moved the cursor to the 3rd position, and the status line at the bottom of the screenshot shows this position. That reassures me that the rule *does* insert an **x** at position-3. (My renaming will happen as planned.)

Now I can close this window and go ahead and rename my files.

The options in the window are as follows:

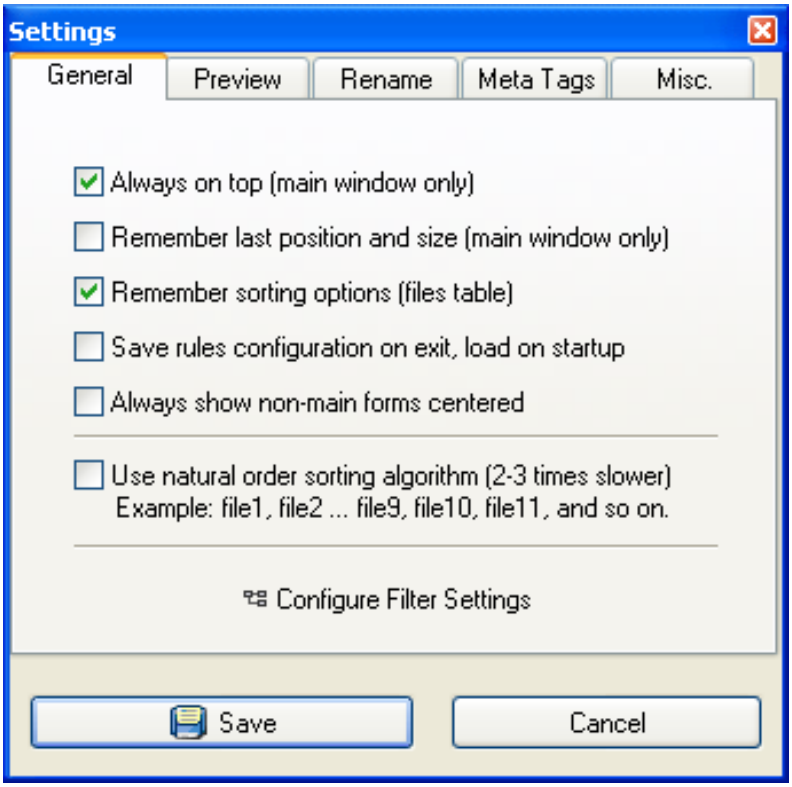
Line wrap	Wraps a line if it exceeds the window's width. (note that the window's width can be adjusted by dragging its right border.)
Automatically apply rules	You do not have to press the Apply Rules button.
Apply rules for each line	Applies the rule to each line separately.

Program settings

This appendix describes the settings that change ReNamer's behavior in various ways.

General settings

These settings are applicable to the ReNamer application.



Always on top (main window only)	Keeps the ReNamer window above the other windows. This feature is useful when you are using the drag-and-drop method to add files from Windows Explorer. When you are working in Windows Explorer, the ReNamer window does not vanish below the Windows Explorer window.
Remember last position and size	ReNamer will retain the same size and position in the next session. You will not need to resize/re-position the ReNamer window each time you start it.
Remember sorting options (files table)	ReNamer will retain the file sorting order in the next session.
Save rules configuration on exit, load on start up	In the next session, ReNamer retains all rules that are currently loaded in the **Rules** pane. Useful if you use the same rules every time.
Always show non-main forms centered	All windows and dialog boxes (except the main window) appear in the center of the ReNamer window. You still may shift the new window, but when you close it and open again it will be opened in the center of ReNamer window. If the option is deselected window would reopen in its old position.

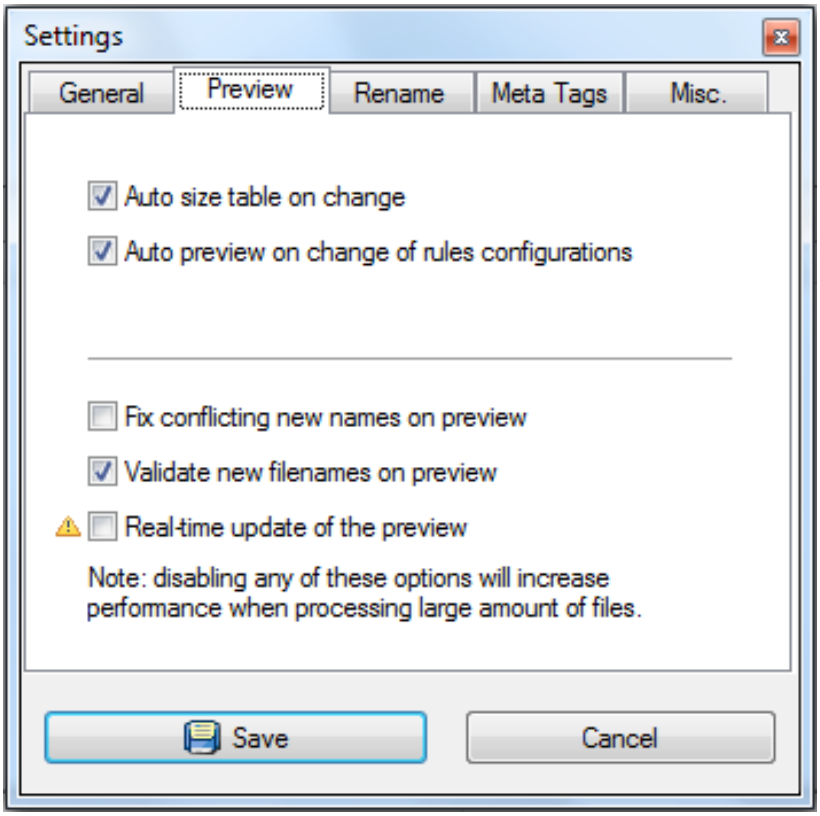
<table>
<tr>
<td>Use natural order sorting algorithm</td>
<td>ReNamer has two different types of sorting algorithms:

<table>
<tr><th>Order</th><th>Example</th><th>Remarks</th></tr>
<tr><td>Natural</td><td>Name1.ext
Name2.ext
Name10.ext
Name20.ext</td><td>Numbers are sorted in their natural order.</td></tr>
<tr><td>Lexicographical</td><td>Name1.ext
Name10.ext
Name2.ext
Name20.ext</td><td>Sorts like in a dictionary. All entries are sorted based on characters' positions, counted from left.</td></tr>
</table>

If this option is selected, filenames are sorted in Natural order; otherwise they are sorted in Lexicographical order.</td>
</tr>
</table>

Preview settings

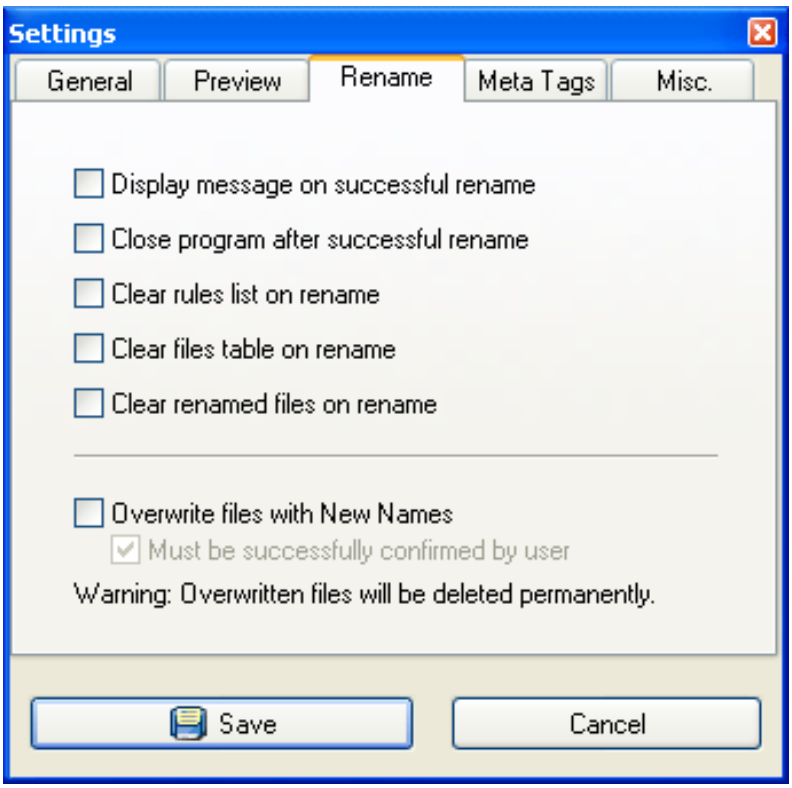
These settings are applicable only to the previewing.



Autosize table on change	Each column resizes automatically to accommodate the longest name in it.
Auto preview on change of rules configurations	Whenever a rule is added/deleted/edited, the preview refreshes automatically
Auto preview when new files are added	Whenever a file is added, the preview refreshes automatically
Fix conflicting new names on preview	If the new file names are going to conflict, then this option resolves the conflict by adding a suffix number in **(n)** format.
Validate new filenames on preview	Raises a warning if new filenames are not valid: • There are duplicates in the *New path* column • *New path* contains forbidden characters • *New path* is already taken by an existing file • *New path* exceeds maximum length (256 characters)
Real-time update of the preview	If this option is selected, when you click the **Preview** button, files will be updated one-by-one and displayed in the table. During the processing, ReNamer continues to accept any user inputs (mouse/keyboard). **WARNING: This option allows you to use mouse/keyboard even when the previous rules are being processed. This may lead to unpredictable behavior and consequences! Use this option with EXTREME CAUTION, only for cases when some heavy processing is done on each file, for example: using HASH functions or other types of content analysis.** If this option is deselected, when you click **Preview** button, ReNamer shows nothing till all files are processed; after which all files are displayed at once. During the processing, ReNamer will stop accepting any user inputs (mouse/keyboard). This mode is safe. **For normal use, deselect this option!**

Rename settings

These settings are applicable to the renaming process.

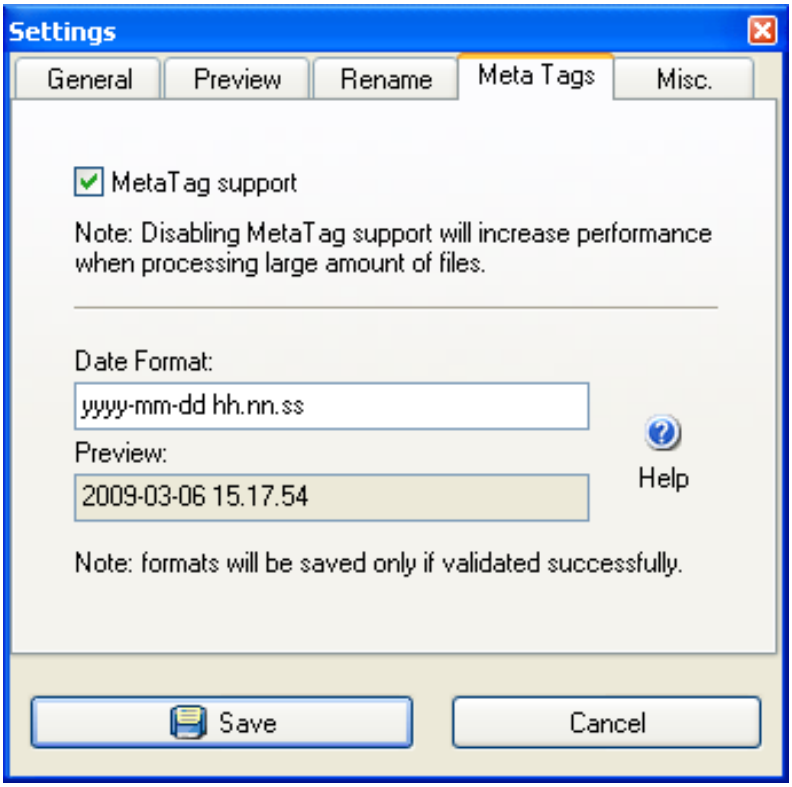


ReNamer can boost your productivity by doing certain operations on its own. On the other hand, you may want to have the flexibility of choosing your options each time. So this panel lets you decide how to strike a balance!

<table>
<tr><td>Display message on successful rename</td><td>Deselect if you do not want a message each time.
(This setting is not applicable to the pop-up windows that show the error messages. Those windows are always shown.)</td></tr>
<tr><td>Close program after successful rename</td><td>Useful if you use ReNamer sparingly (rename once and close ReNamer.)
In case of problem, ReNamer stays open.</td></tr>
<tr><td>Clear rules list after rename</td><td>Useful if you use a different set of rules each time. This option will clear off the Rules pane automatically.</td></tr>
<tr><td>Clear files table on rename</td><td>Useful if you want to load another set of files for each new renaming.
Note that even files that were not renamed in the last round will get cleared off. So, deselect this option if you tend to rename your loaded files in 2-3 separate renaming operations.
NOTE: This will make Undo option unusable.</td></tr>
<tr><td>Clear renamed files on rename</td><td>Clears off the files once you have finished renaming them.
Note that the files that were not renamed will remain behind, so that you can apply a new set of rules to them.
Note that the currently marked set of rules may not change some file names (for example, if you want to insert a string at 10th position, and we have some files with shorter file names.) Even in such cases, the files are considered to be renamed.
NOTE: This will make Undo option unusable.</td></tr>
<tr><td>Overwrite files with new names</td><td>If there is a naming conflict as a result of renaming, the newly renamed files can overwrite the existing files with the same names automatically.
Note that the name conflict can occur with a file that exists in the same folder, but which is NOT loaded in ReNamer.
Note also that multiple files from the same folder may be renamed in such a way that most of them get overwritten in sequence. In the worst case, only the last file to be renamed will survive!
CAUTION: Your important files can be overwritten without your knowledge!</td></tr>
<tr><td>Must be successfully confirmed by user</td><td>(Applicable only when Overwrite files with new names option is selected):
<table><tr><td>Selected</td><td>ReNamer will pop up confirmation dialog for every file that is to be overwritten. The old file will be overwritten only if you confirm. (If the renamed file has no conflicts in its folder, ReNamer will rename it without asking for permission.).</td></tr><tr><td>Deselected</td><td>If a renamed file has the same name as an existing file, ReNamer will overwrite the old file silently.
CAUTION: Your important files can be overwritten without your knowledge!</td></tr></table></td></tr>
</table>

Meta tags settings

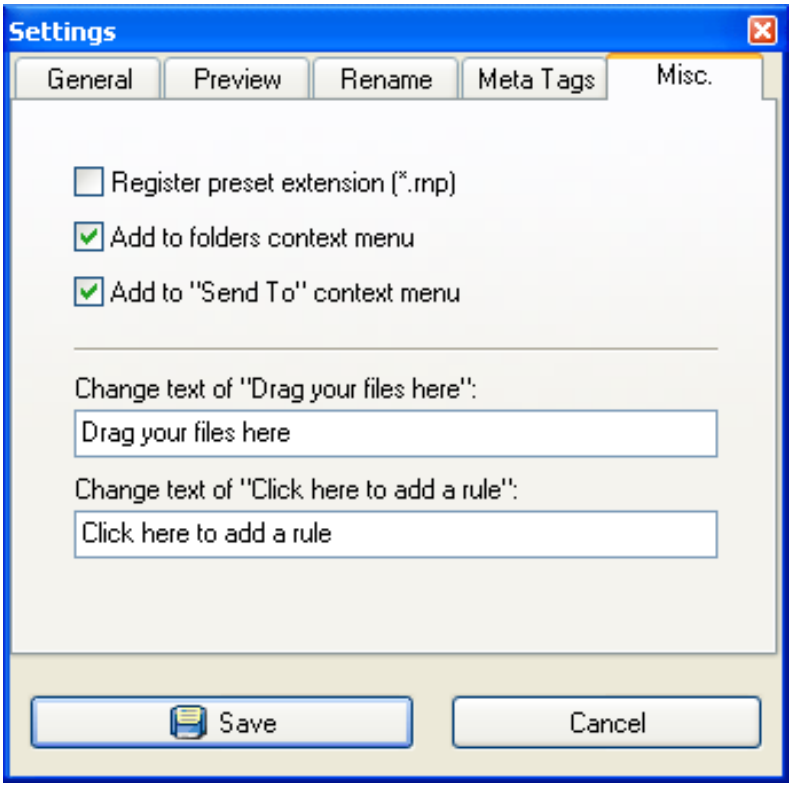
These settings are for meta-tags only.



Meta tag support	Extracting meta-tags from files puts heavy demand on system resources. So if you do not need meta-tags, deselect this option. The system will become more responsive (not only ReNamer, but other applications as well.).
Date format	Sets the date format for ReNamer's use. (The selected date format will be used for naming files.) See Date-time format used in Meta tags to see available formats.
Preview	Tests the current date-time format, using current time.

Miscellaneous settings

A general-purpose tab to provide all miscellaneous settings.



Register preset extension (*.rnp)	Associate the .rnp extension with ReNamer.
Add to folders context menu	in Windows Explorer, a ReNamer option is added to the context menu for folders.
Add to Send to context menu	in Windows Explorer, a ReNamer option is added to the Send to... context menu.
Change text of "Drag your files here"	The lower pane of ReNamer will show your custom text when empty
Change text of "Click here to add a rule"	The upper pane of ReNamer will show your custom text when empty

Main Menu and Keyboard Shortcuts

In this appendix, all the menus and context menu options are described.

File menu

Menu option	Keyboard Shortcut	What it does...
New Project	CTRL+N	Create a new project. Clear all rules and files.
Undo	SHFT+CTRL+Z	If possible, reverses the effect of the last renaming operation.
Paste	SHFT+CTRL+V	Pastes the selection of files from the clipboard into the **Files** pane. (We assume that you have already copied some files into the clipboard)
Add files	F3	Starts a window to select specific file(s) from any folder and add them to the **Files** pane.
Add folders	F4	Starts a window to add all files from a chosen folder (behavior depends on Filter settings)
Preview	F5	Manual preview (not required if *auto-preview* mode is on)
Rename	F6	Renames the file with a name shown in the **New Name** (**New Path**) column in the **Files** pane.
Exit	ALT+F4	Closes the application

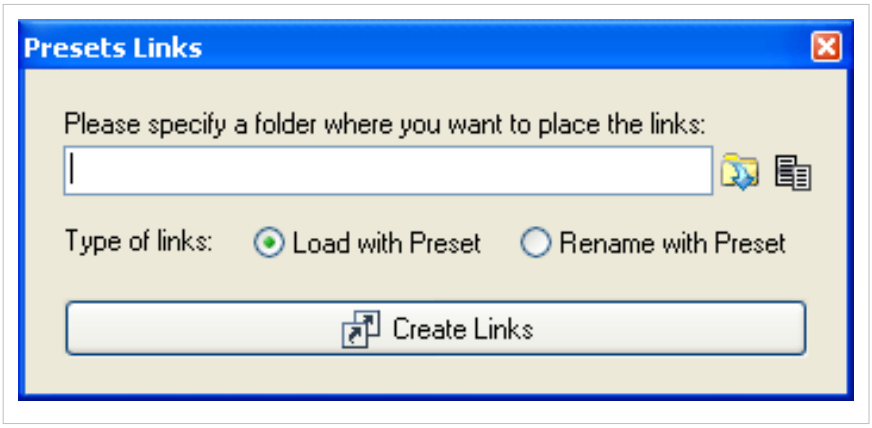
Settings menu

Menu option	Keyboard Shortcut	What it does...
All Settings	F8	See **Program settings** for details.
General		Shows the **General** tab of the **Settings** dialog.
Preview		Shows the **Preview** tab of the **Settings** dialog.
Rename		Shows the **Rename** tab of the **Settings** dialog.
Meta tags		Shows the **Meta Tags** tab of the **Settings** dialog.
Miscellaneous		Shows the **Miscellaneous** tab of the **Settings** dialog.
Filters	CTRL+F	Changes the default behavior when adding folders.

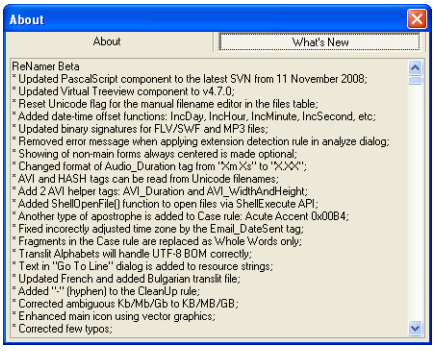
Presets menu

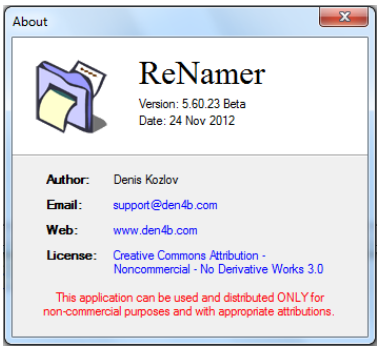
Note: Presets are explained here

Menu option	Keyboard Shortcut	What it does...
Load		Opens a submenu with a list of all available presets. Click on a preset to load its rules in the **Rules** pane. If the preset was saved with any filter settings, they will also be set. **Note:** Be aware that all current rules will be lost. If you want to add a preset in the end of the current rules stack use **Append preset** option from **Preset Manager**.
Save As...	CTRL+S	Saves the current preset.
Manage	CTRL+M	Opens the **Preset Manager** dialog.
Browse...		Browse to folder where presets are stored (via Windows Explorer).
Import...		Select presets from any folder in your file system, which you want to be copied to ReNamer's **Presets** folder.

Create links		The following window pops up:  Shortcuts will be created for every available *preset* and placed in the selected folder. • If the **Load with Preset** option is selected, links will only open new ReNamer window with the preset loaded into **Rules** pane and files that where sent to the link loaded into **Files** pane. Now you can edit rules, delete or add some more rules, and finally rename the files. If the preset contained any filter settings, they will be applied to the files that where sent to the link. • If the **Rename with Preset** option is selected, the linked preset will be loaded and all files which were sent to the link will be automatically renamed. For more information, please see Command Line usage. **WARNING: Be careful with the "Rename with Preset" option. It will rename files without asking for your confirmation!**
Rescan		Scans the preset folder for new presets. Useful if you have manually modified the content of the presets folder as you don't have to restart ReNamer to use them.

Help menu

Menu option	Keyboard Shortcut	What it does...
User Manual	ALT+F1	Opens User Manual file which is distributed with the application (PDF file).
Donate		Takes you to the donation web page. Although ReNamer is freeware, you could support the project with a small donation.
What's new		Pops up a window like this:  You can check the latest changes here.

About	F1	Pops up a window like this:  This screen provides you with general information about ReNamer, and contact details in case you are facing any difficulties that are not covered in this manual. A right click on the white header of the dialog will place ReNamer's version information to the clipboard. (Now you can paste it into your posts at the forum.)

Menus for the Files Pane

This article needs to be cleaned up!

- Breakdown into separate articles, one for each main section/menu
- Clear formatting artifacts from rich editor
- Update linking from other articles

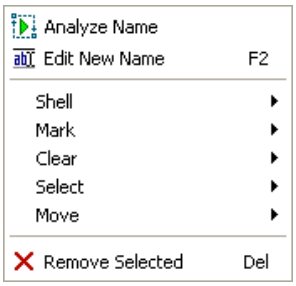
ReNamer has a menu bar between the **Rules** and **Files** panes 

.
This appendix describes options available from this menu.

Files button

When you click on the 

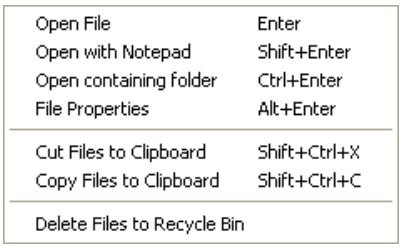
button, the following list pops up:



Analyze Name	Opens analysis window, and loads the names of the selected files into it.
Edit New Name **F2**	Starts manual editing of the selected filename.
Shell	Options for Windows shell operations.
Mark	Options for marking specific items.
Clear	Options for removing specific items from the **Files** pane.
Select	Options for selecting specific items.
Move	Options for moving specific items.
Remove selected items **Del**	Remove selected items from the ReNamer's **File** pane. (This command does not delete the items from the disk.)

This menu provides second-level options, as follows:

Shell submenu

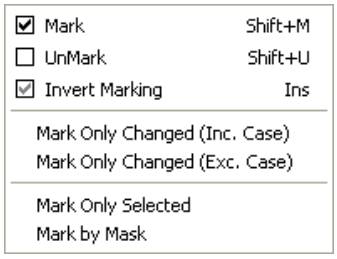


Open File	**Enter**	Open the selected file using its default associated application.
Open with Notepad	**Shift+Enter**	Open the file with notepad. Useful when you want to see the raw data in the file. (When viewed this way, the file will not be displayed in its original formatting. It may not be easily readable.)
Open operating folder	**Ctrl+Enter**	Launch Windows Explorer and open the folder where the selected file is located. Highlight (select) the file in it.
File properties	**Alt+Enter**	Display the properties of the selected file. Typically, file size, dates (created/modified/accessed), comments, author, attributes (hidden, system, etc.)
Cut Files to clipboard	**Shift+Ctrl+X**	Cuts the selected file(s) to clipboard. **Note:** If you paste these files in Windows Explorer, all files will be moved to one folder, no matter where they were initially located.
Copy Files to clipboard	**Shift+Ctrl+C**	Copies selected file(s) to clipboard. **Note:** If you paste these files in Windows Explorer, all files will be copied to one folder, no matter where they were initially located.
Delete files to Recycle Bin		Deletes the selected file(s) to Recycle Bin. (They can be recovered from the Recycle Bin.) Note that if the file is too large for the Recycle Bin, Windows will warn you that it will not be put in Recycle Bin, but deleted permanently. If you confirm, the file is deleted permanently.

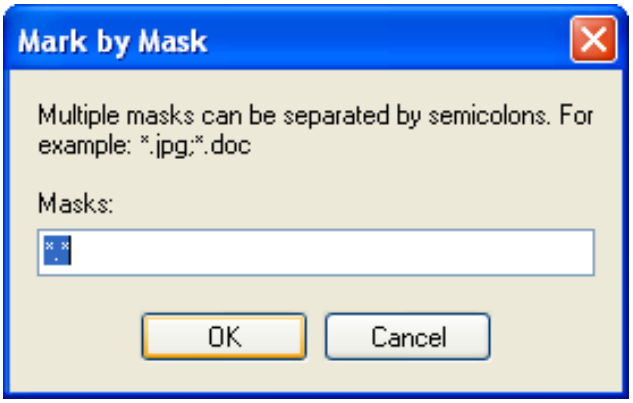
There are 2 possible uses for **Copy to clipboard** and **Cut to clipboard** options:

- 3rd party application can retrieve that list of files from the clipboard (using Paste operation or Win API).
- Paste all files into a singe destination folder via Windows Explorer, even when files are scattered across different directories.

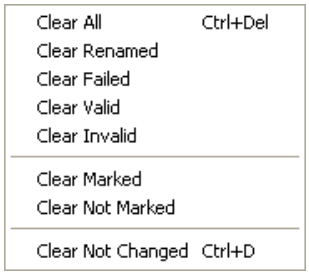
Mark submenu



Note: Marking of files is explained here.

Mark **Shift+M**	Mark all selected files. If some files are already marked, they remain marked.
UnMark **Shift+U**	Unmark all selected files. If some files are already unmarked, they remain unmarked.
Invert Marking **Ins**	Marked files become unmarked, and vice versa.
Mark only changed (Inc. Case)	Mark files that have been changed. Files that had just change of case (and nothing else) will also be marked. ("*Change of case*" means some letters are converted capital-to-small and/or small-to-capital)
Mark only changed (Exc. Case)	Mark files that have been changed, but do not consider changes of case. ("*Change of case*" means some letters are converted capital-to-small and/or small-to-capital)
Mark only selected	Mark files that are selected. If some unselected files are already marked, they will be unmarked.
Mark by Mask	Pops up a Mask window:  Specify a mask pattern. All files that match this mask will be marked. You can enter multiple masks (separating them with semicolon). If a file matches any of these masks, it will be marked.

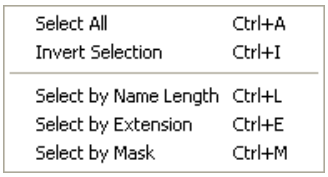
Clear submenu



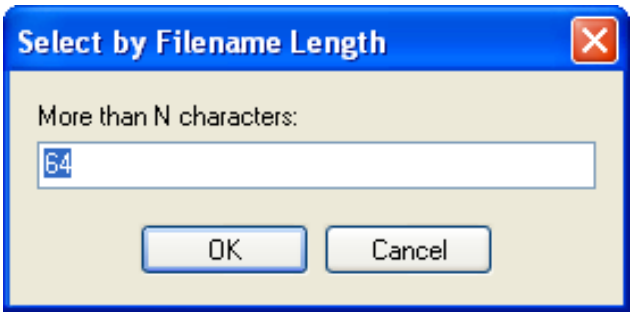
Note: The term "*Clear*" means remove from **Files** pane of ReNamer.

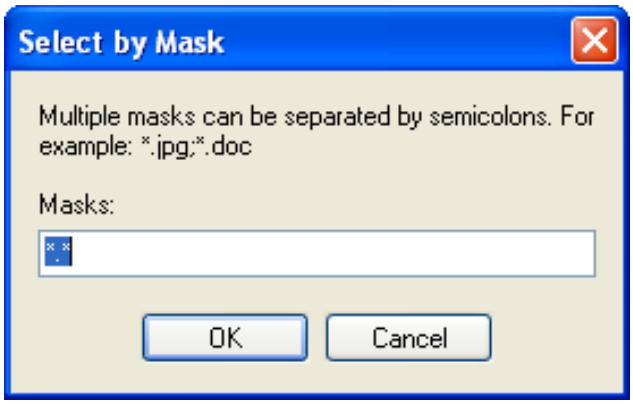
Clear All	Clear all files loaded in the pane.
Clear Renamed	Clear all files which have been renamed just before this command. Note that even if some files are not affected by the rules, they are still regarded as renamed successfully. Only files that failed to rename (those with an **x** mark) will remain in the pane.
Clear Failed	Only files that failed to rename (those with an **x** mark) will be cleared. All other files (including files whose names were not altered by the rules) will remain in the **Files** pane.
Clear Valid	Clear files that have valid names after Preview (but haven't been renamed yet).
Clear Invalid	Clear files that got invalid (causing conflicts, empty or with forbidden characters etc.) names after Preview (but before renaming).
Clear Marked	Clear all marked files.
Clear Not Marked	Clear all files that are not marked.
Clear Not Changed **Ctrl+D**	Clear all files that haven't been changed by the Preview. This also includes all files that have their New Name field empty (eg. because they have been successfully renamed or haven't been previewed since last renaming operation).

Select submenu

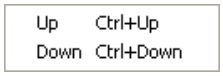


Note: Selection of files is explained here.

Select All **Ctrl+A**	All files in the pane will be selected.
Invert Selection **Ctrl+I**	Selected files become deselected, and vice versa.
Select by Name Length **Ctrl+L**	Pops up a window:  Specify the length of file name. Only files that exceed that length will be selected. The length refers to the whole filename including dot and the extension. **Note**: A typical application is to check if the file can be put on a CD/DVD. The maximum length allowed in ISO 9660-compliant file-system is 64 characters. Longer file names are truncated when you burn a CD/DVD. It is difficult to correlate such files with their originals. To avoid such problems, shorten the names *before* burning the CD/DVD.
Select by Extension **Ctrl+E**	Pops up a window:  Specify the extension (without the dot). All files having that extension will be selected. You can enter multiple extensions (they must be separated by semicolons - not comma).

Select by Mask **Ctrl+M**	Pops up this window:  Specify the mask. All files matching that pattern will be selected. You can enter multiple masks (they must be separated by semicolons - not comma).

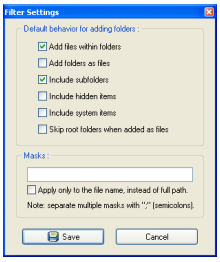
Move submenu



Up **Ctrl+Up**	Moves the selected file up. This is used to re-arrange files in the list. It is easier to use the keyboard shortcut **CTRL+UpArrow**.
Down **Ctrl+Down**	Moves the selected file down. This is used to re-arrange the files list. It is easier to use the keyboard shortcut **CTRL+DownArrow**.

Filters menu

When you click on the Filters button, the **Filters** window pops up. It controls what gets added to the **Files** pane when you use the Add Folders button or Drag & Drop or Copy & Paste methods.

 	The options work as follows:

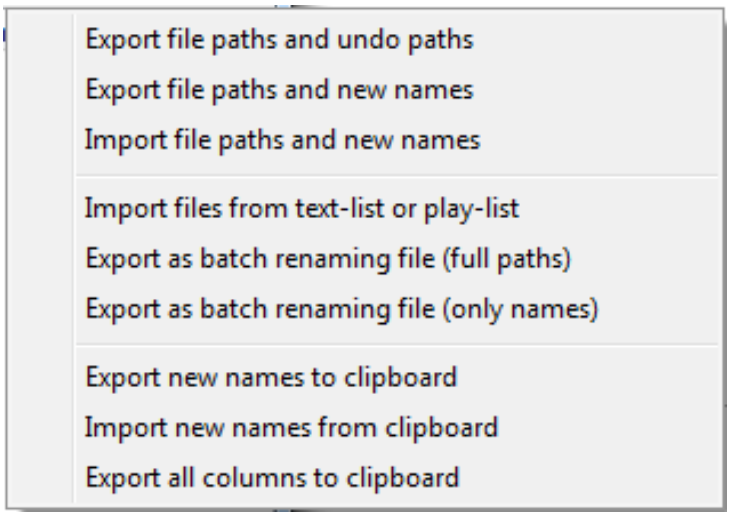
Option	Effect
Add files within folders	When this option is selected, ReNamer scans the selected folders iteratively (including its subfolders), and loads all the files for renaming. If you want to rename only the folders (and not their contents), UNTICK this option, and select the **Add folders as files** checkbox.
Add folders as files	If this option is selected, ReNamer treats a folder just like a file (not as a container that holds files and subfolders). So only the folder is loaded, and not the files in it. This is useful for renaming the folder itself.
Include subfolders	Loads contents from all subfolders recursively. If this option is unselected, when you add a folder, its subfolders will be ignored.
Include hidden items	To protect hidden items, deselect this option.
Include system items	To protect files reserved for system (OS), deselect this option.
Skip root folders when added as files	Works when the *Add folders as files* and *Include subfolders* options are selected. When it's on, ReNamer adds all the subfolders but not the root folder itself.
Masks	All added files (or folders as files) must match specified mask(s). For example, if you enter ***.jpg;*.gif;*.png** as masks, ReNamer will add only files with these extensions. Everything else will be filtered *out*(not added to ReNamer).
Apply only to the file name	Changes how the masks (see above) are applied. For example, suppose you have file ***C:\Folder\File.ext***. If *this* option is ON, only the filename part (***File.ext***) will be checked against the mask(s). But if *this* option is OFF, the entire path (***C:\Folder\File.ext***) will be checked against the mask(s).

Press **Save** to save changes.

Filters menu is also accessible from the **Add Folder** window. For details see Adding items using the 'Add Folders' button section.

Export menu

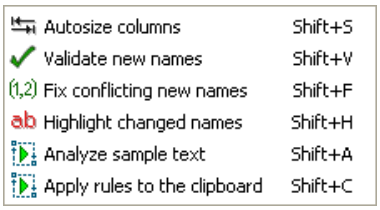
When you click on the Export button, the following list pops up:



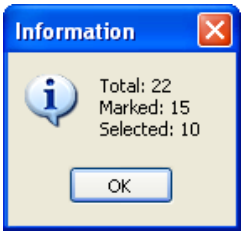
Export file paths and undo paths	Exports *file paths* and *undo paths* to the .csv (comma separated) or .txt (tab separated) file.
Export file paths and new names	Exports *file paths* and *new names* to the .csv (comma separated) or .txt (tab separated) file.
Import file paths and new names	Imports *file paths* and *new names* from the .csv (comma separated) or .txt (tab separated) file.
Import files from text-list or play-list	Imports *file paths* from the .txt/.log file (one file per line) or .m3u/.pls playlist. **Note:** It will load file paths into **Files** pane only if the file really exists on your file system.
Export as batch renaming file (Full paths)	
Export as batch renaming file (Only names)	
Export new names to clipboard	Export *new names* to clipboard. One name per line.
Import new names from clipboard	Imports *new names* from clipboard. Every name should be placed in a new line. If there is less lines in the clipboard text than files in **Files** pane last files won't be renamed. If there is more lines in the clipboard text than files in **Files** pane, then last lines won't be used.
Export all columns to clipboard	Exports *all columns* to clipboard as a tab separated text.

Options menu

When you click on the Options button, the following list pops up:



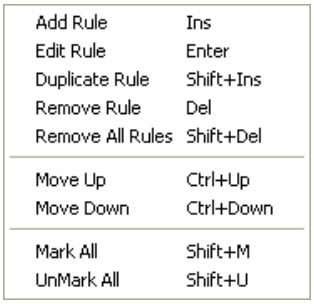
Autosize columns	Auto-size all columns, to accommodate the longest entry in each column.
Validate new names	Check if the new names are valid.
Fix conflicting new names	Add incremental numbers as suffixes to avoid conflicts in names. For example, if a new name for a file is Name1, and if such a file already exists in the target folder, then a suffix (2) is added to the newly renamed file. If more than one files have such name conflicts, ReNamer uses incremental numbers (i.e. (2), (3)...) as suffixes to make sure that each file gets a unique name.
Highlight changed names	Usually you load files only because you want to change their names. Yet, sometimes, some files escape all the rules you have loaded and remain unchanged. In such cases, you may want to know why that happened. ReNamer can highlight files that are going to be changed. Now you can investigate the remaining files. **Note:** *Highlight changed names* option works as a switch: it turns highlighting ON and OFF. **Tip:** You can unmark the rules selectively and see the effect on the files. That will tell you which rules are working on which files. Once your analysis is over, you can mark all rules.
Analyze sample text	It opens the Analyze window. Thanks to that option you don't have to load files to the **Files** pane just to check if your rules work as desired. It is extremally useful when you want to help others on the forum. • Enter any text that looks like your target files, and see whether the rules work as desired on that text. • Edit the rules if the desired result is not achieved • Once you are satisfied with the rules, apply them on the real files or post the set of rules on the forum. **Note:** Analyze sample text won't be any help if the rules base on the files properties (and not only on the filename). Analyze tool won't be able eg. to extract Meta tag from the text in its window.
Apply rules to the clipboard	When you choose this option your rules will be applied to the text in clipboard instead of files in the **Files** pane. This might be useful eg. when working with word processors that don't support RegEx'es.

Count marked and selected files **Alt + I**	It pops up a window like this  where **Total** stands for total number of files loaded into the **Files** pane, and **Marked** and **Selected** stand for number of marked and selected files respectively.

Context Menus

This appendix describes context-sensitive menu options available by right-clicking in different parts of the ReNamer window.

Context menus for the Rules pane



Action	Shortcut	Description
Add Rule	**Ins**	Add a new rule
Edit Rule	**Enter**	Edit the selected rule.
Duplicate Rule	**Shift+Ins**	Duplicate the selected rule. Duplicated rule will appear jus below the oryginal rule.
Remove Rule	**Del**	Remove the rule (see note below)
Remove All Rules	**Shift+Del**	Remove all rules (see note below)
Move Up	**Ctrl+Up**	Move the rule upward in the stack
Move Down	**Ctrl+Down**	Move the rule downward in the stack
Mark All	**Shift+M**	Mark all rules (all of them will be active on the marked files)
UnMark All	**Shift+U**	Unmark all rules (all rules become inactive). This is useful if you have added too many rules and getting strange results. First, unmark all rules, so that none of them is active. And then add (mark) one rule at a time and see its incremental effect on the files.

Note: If the rule is edited but not saved, then the changes are lost.

Context menus for the Files pane

Two different context menus appear in the Files pane, depending on where your mouse pointer is.

If you right-click on any of the column headers, you get a list of all available columns.

- Click on any entry to toggle that column on/off.
- Use **Cancel sorting** option to turn sorting off.

If you right-click anywhere inside the pane area, you get the same context menu as the menu you get by left-clicking on the **Files** button of the Menu strip.

Date and Time Format

Date-Time format is mostly used by the meta tags. You can define almost any thinkable format for all tags which extract a date-time field from the file. You can change it from within the **Settings** menu. Below is a list of variables which you can use.

Variable	Description
d	Displays the day as a number without a leading zero (1-31).
dd	Displays the day as a number with a leading zero (01-31).
ddd	Displays the day as an abbreviation (Sun-Sat).
dddd	Displays the day as a full name (Sunday-Saturday).
e	Displays the year in the current period/era as a number without a leading zero (Japanese, Korean and Taiwanese locales only).
ee	Displays the year in the current period/era as a number with a leading zero (Japanese, Korean and Taiwanese locales only).
g	Displays the period/era as an abbreviation (Japanese and Taiwanese locales only).
gg	Displays the period/era as a full name. (Japanese and Taiwanese locales only).
m	Displays the month as a number without a leading zero (1-12). If the m specifier immediately follows an h or hh specifier then minute is displayed.
mm	Displays the month as a number with a leading zero (01-12). If the mm specifier immediately follows an h or hh specifier then minute is displayed.
mmm	Displays the month as an abbreviation (Jan-Dec) using the strings given by the ShortMonthNames global variable.
mmmm	Displays the month as a full name (January-December) using the strings given by the LongMonthNames global variable.
yy	Displays the year as a two-digit number (00-99).
yyyy	Displays the year as a four-digit number (0000-9999).
h	Displays the hour without a leading zero (0-23).
hh	Displays the hour with a leading zero (00-23).
n	Displays the minute without a leading zero (0-59).
nn	Displays the minute with a leading zero (00-59).
s	Displays the second without a leading zero (0-59).
ss	Displays the second with a leading zero (00-59).
z	Displays the millisecond without a leading zero (0-999).
zzz	Displays the millisecond with a leading zero (000-999).
am/pm	Uses the 12-hour clock for the preceding h or hh specifier, and displays "am" for any hour before noon, and "pm" for any hour after noon. The am/pm specifier can use lower, upper, or mixed case, and the result is displayed accordingly.
a/p	Uses the 12-hour clock for the preceding h or hh specifier, and displays "a" for any hour before noon, and "p" for any hour after noon. The a/p specifier can use lower, upper, or mixed case, and the result is displayed accordingly.
"xx"	Characters enclosed in single or double quotes are displayed as-is, and the formatting is not applied to them. The only way to put **d**, **m**, **y** or any other meaningful letter into your format.

For example, if we assume that the date is 25-th of October 2007 and the time is 16:59:00, then sample formats and their outputs would be:

- **dd-mm-yyyy hh.nn.ss** format will produce **25-10-2007 16.59.00**, which is an easily readable format for the date and time.

- **"It's" dddd, hh:nn:ss AM/PM** format will produce **It's Thursday, 4:59:00 PM**, which is unsuitable for filenames because of **:** forbidden character.
- **yyyymmddhhnnss** format will produce **20071025165900**, which is ideal for serializing files because the filename is relatively short, most probably unique, contains only digits, and also makes files automatically sorted in chronological order.

Binary Signatures

ReNamer's Extension rule uses an internal binary signature base for detecting file extensions.

These signatures are in binary (hex) format and in files can be seen only using specialized applications, such as Hex Editor XVI32 [1]. This list if up to date for **ReNamer 5.50+ Beta 32**, from 19 July 2010.

```
482B424544562050726F6475637473204C6963656E7365204B6579204696C650000000000000000000000000000
 KEY, Avira Product Key
FFFE570069006E0064006F00770073002000520065006700690073007400720079002000450064006900740006
 REG, Registry Data File 5.00
41565020416E7469766972616C20446174616261736520E202863294B6173706572736B79204C6162203139393
 AVC, Kaspersky Anti-Virus Database
00000002FFFFFFFFFFFFFFFF0000000000000000000000000000000000000000000000000000000000000000000
 MAC, MacPaint Bitmap Graphic
1A45DFA3934282886D6174726F736B614287810142858101185380 67, MKV, Matroska
 Video Stream
24464C32402823292053505353204441544120464 94C45, SAV, SPSS Data
4C0000000114020000000000C000000000000046, LNK, Windows Shortcut
5B436C6F6E6543445D0D0A56657273696F6E3D, CCD, CloneCD Control File
000100005374616E6461726420414345204442, ACCDB, Access 2007 Database
File
000100005374616E64617264204A6574204442, MDB, Microsoft Access Database
4D4544941204445534352495054 4F52, MDS, Media Descriptor CD Image File
000615610000002000004D200001000, DB, Netscape Navigator (v4) database
file
52494646????????43444441666D7420, CDA, Compact Disc Digital Audio
(CD-DA)
52494646????????415649204C495354, AVI, Windows Audio Video Interleave
52494646????????524D494464617461, RMI, Windows Musical Instrument
Digital Interface
52494646????????57415645666D7420, WAV, Waveform Audio
89504E470D0A1A0A0000000D49484452, PNG, Portable Network Graphics
50532D582045584500000000000000000, EXE, Playstation Executable
3026B2758E66CF11A6D900AA0062CE6C, WMA|WMV|ASF, Windows Media File
4F676753000200000000000000000, OGG, Ogg Vorbis Audio
??BE000000AB0000000000000000, WRI, Microsoft Write Document
0000000020000000FFFF0000FFFF, RES, Resource File
000002000604060008000000000, WK1, 1-2-3 Spreadsheet
384250530001000000000000000, PSD, Photoshop Image
??????10123A001019040010, SIS, Symbian OS Installer File
414F4C204665656462616720, BAG, AOL Instant Messenger Buddy List
```

```
52494646????????41434F4E, ANI, Windows Animated Cursor
EFBBBF234558544D33550D0A, M3U8, MP3 Playlist (UTF-8)
110000005343410F000000, PF, Windows Prefetch
4D546864000000060001 00, MID, Musical Instrument Digital Interface
(MIDI)
5B6175746F72756E5D0D0A, INF, Autorun File
64383A616E6E6F756E6365, TORRENT, BitTorrent Metainfo File
504B0304140008000800, JAR, Java Archive
424547494E3A564D5347, VMG, Nokia Text Message
5B706C61796C6973745D, PLS, Winamp Playlist
2E524D460000001200, RM, RealMedia Streaming Media
67696D702078636620, GZ, GIMP Image
234558544D33550D0A, M3U, MP3 Playlist
D0CF11E0A1B11AE1, DOC|PPT|XLS, Microsoft Office Document
5245474544495434, REG, Windows Registry Data
300000004C664C65, EVT, Windows NT/2000 Event Viewer Log
4D53434600000000, CAB, Microsoft Cabinet File
????????6D6F6F76, MOV, QuickTime Movie
FF4B455942202020, SYS, Keyboard Driver
255044462D312E, PDF, Adobe Portable Document Format
526172211A0700, RAR, WinRAR Compressed Archive
000001BA210001, MPG, MPEG 1 System Stream
52454745444954, REG, Registry Data File
377ABCAF271C, 7Z, 7-Zip Compressed Archive
AC9EBD8F0000, QDF, Quicken Data
D7CDC69A0000, WMF, Windows Metafile
010009000003, WMF, Windows 3.x Metafile
4A4152435300, JAR, JARCS Compressed Archive
424547494E3A, VCF, vCard File
2E7261FD00, RA, RealMedia Streaming Media
7B5C727466, RTF, Rich Text Format File
000001BA44, MPG, ProgDVBR MPEG2 Video
464F524D00, AIFF, Audio Interchange File
49735A21, ISZ, UltraISO ISO Zipped Format
4B4C7377, KEY, Kaspersky Anti-Virus Key
4D502B07, MPC, Musepack Audio
93B20000, LNG, SourceEdit Language Definition
DF0000?F, DCU, Delphi Compiled Unit
00000100, ICO, Windows Icon
01000000, EMF, Extended (Enhanced) Windows Metafile Format
CFAD12FE, DBX, Outlook Express E-mail Folder
47494638, GIF, Graphic Interchange Format
49492A00, TIF, Tagged Image Format
4D4D002A, TIF, Tagged Image Format
00000200, CUR, Windows Cursor
C5D0D3C6, EPS, Encapsulated PostScript
3F5F0300, HLP, Windows Help File
```

```
49536328, CAB, Install Shield v5.x or 6.x Compressed File
504B0304, ZIP, ZIP Compressed Archive
E3828596, PWL, Windows Password List
EDABEEDB, RPM, RedHat Package Manager
50533244, SYS, PlayStation 2 Icon
FF575043, WPD, WordPerfect Document
464C5601, FLV, Flash Video
000001, MPG, MPEG Video File
465753, SWF, Macromedia Flash Format
435753, SWF, Shockwave Flash (v5+)
FFD8FF, JPG, JPEG/JIFF Image
1F8B08, GZ, GZip Compressed Archive
1F9D90, Z, UNIX Compressed Archive
494433, MP3, MP3 Audio
FFFB, MP3, MP3 Audio
FFFA, MP3, MP3 Audio
4D5A, EXE|COM|DLL|SYS, Windows Executable
424D, BMP, Windows OS/2 Bitmap Graphics
9501, SKR, PGP Private Keyring
9901, PKR, PGP Public Keyring
```

For more information regarding known file signatures look here:

- http://mark0.net/soft-trid-e.html (TrID)
- http://filext.com/
- http://file-extension.net/seeker/
- http://www.garykessler.net/library/file_sigs.html

References

[1] http://www.chmaas.handshake.de/delphi/freeware/xvi32/xvi32.htm

Meta Tags

Meta tags allow users to extract some meta information associated with files and use it for renaming.

There are two different ways for using meta tags:

- Using Insert, Replace or Rearrange rule to insert meta data directly into the filename,
- Using CalculateMetaTag function in a PascalScript to do more complex manipulations with meta data.

Tag	Description
Date_Now	Current Date
File_SizeBytes	Size of file in bytes
File_SizeKB	Size of file in Kb
File_SizeMB	Size of file in Mb
File_DateCreated	File created date
File_DateModified	File last modified date
File_FileName	Full name of the file without the path
File_FilePath	Full name of the file with the path
File_BaseName	Base name of the file
File_Extension	Extension of the file
File_FolderName	Name of the parent folder
File_DOSName	Short name in the 8.3 format
ID3_Artist	ID3 Artist
ID3_Title	ID3 Title
ID3_Album	ID3 Album
ID3_Year	ID3 Year
ID3_Genre	ID3 Genre
ID3_TrackNo	ID3 Track Number
ID3_PartOfSet	ID3 Part Of Set
WMA_Artist	WMA Artist
WMA_Title	WMA Title
WMA_Album	WMA Album
WMA_Year	WMA Year
WMA_Genre	WMA Genre
WMA_TrackNo	WMA Track Number
FLAC_Artist	FLAC Artist
FLAC_Title	FLAC Title
FLAC_Album	FLAC Album
FLAC_Year	FLAC Year
FLAC_Genre	FLAC Genre
FLAC_TrackNo	FLAC Track Number
Audio_Duration	Duration of an Audio file

Audio_DurationMins	Duration of an Audio file in minutes
Audio_DurationSecs	Duration of an Audio file in seconds
HTML_Title	Title tag extracted from an HTML file
EXIF_Date	EXIF Original Date
EXIF_Model	EXIF Camera Model
EXIF_Make	EXIF Camera Make
EXIF_Description	EXIF Image Description
IPTC_ObjectName	IPTC Object Name
IPTC_Caption	IPTC Image Caption
IPTC_Headline	IPTC Image Headline
IPTC_Location	IPTC Location Name
IPTC_City	IPTC City
TIFF_Date	TIFF Date
TIFF_Model	TIFF Model
TIFF_Make	TIFF Make
TIFF_Description	TIFF Description
Image_WidthAndHeight	Real Width and Height of an image in pixels
Image_Width	Real Width of an image in pixels
Image_Height	Real Height of an image in pixels
Image_Pixels	Amount of pixels in the image
Document_Title	Summary Information: Title
Document_Subject	Summary Information: Subject
Document_Author	Summary Information: Author
Document_PageCount	Summary Information: Number of Pages
Hash_MD5	MD5 Hash of a file
Hash_SHA1	SHA1 Hash of a file
Hash_CRC32	CRC32 Checksum of a file
Email_DateSent	Email date sent
Email_Subject	Email subject
Email_Sender	Email sender
Outlook_ID	Outlook Message ID
Outlook_DateSent	Outlook Message Date Sent
Outlook_Subject	Outlook Message Subject
Outlook_Sender	Outlook Message Sender
AVI_FramesPerSecond	AVI Frames per Second
AVI_TotalFrames	AVI Total amount of Frames
AVI_Duration	AVI Duration in H:M:S format
AVI_DurationMins	AVI Duration in Minutes
AVI_DurationSecs	AVI Duration in Seconds

AVI_WidthAndHeight	AVI Dimensions in WxH format
AVI_Width	AVI Width in Pixels
AVI_Height	AVI Height in Pixels
AVI_VideoCodec	AVI Video Codec
BinarySign_Extension	Binary File Signature: Extension
BinarySign_Description	Binary File Information: Description
VersionInfo_Version	Version Information: Version
VersionInfo_Product	Version Information: Product
VersionInfo_Company	Version Information: Company
VersionInfo_Copyright	Version Information: Copyright
VersionInfo_Description	Version Information: Description
VersionInfo_Comments	Version Information: Comments

Editing Meta Tags

ReNamer is a file renaming tool, not a meta tag editing tool.

Meta tags (e.g. ID3, EXIF) are not part of the names of the files - They are contained inside certain files. Therefore ReNamer does not edit meta tags. This feature will NEVER be supported.

To edit meta tags, please use a suitable meta tag editor such as **mp3BookHelper**, **mp3Tag** or **TagScanner** (for various tags in digital audio files) or **PhotoME** (for EXIF tags).

Checksum-based tags (MD5, SHA1, CRC32) are non-editable: They are calculated by the system from the contents of the file. You can use them to check the integrity of any file, using software like **Exactfile**.

Analyze

When you select the **Analyze tool** option (or press SHFT+A), ReNamer launches a window, where you can enter any arbitrary text and apply rules entered in the **Rules** pane.

This is very useful to see the effect of the rules using dummy text (for example before using the **Insert** rule). It also allows to check the positions of any character in the text just by pointing to it with keyboard or mouse. The appropriate data is displayed in the status bar of the window.

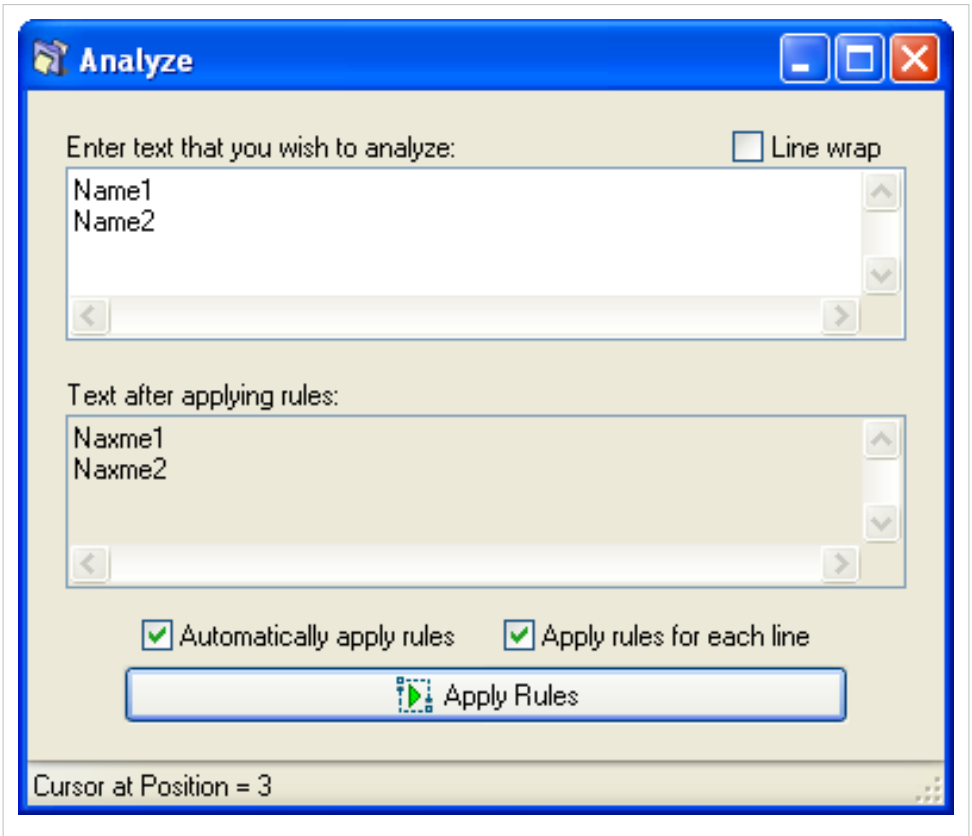
The text may be a filename (or multiple filenames) loaded from **Files** pane or any text manually created by user.

Let us see an example.

I had already added a single Insert Rule in the **Rules** pane of ReNamer. It was set to insert "*x*" (without the quotes) at the 3rd position.

Now I press SHFT+A.

A window pops up:

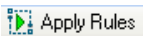


In this window, I have entered some arbitrary text to show the effect of the rule. Notice how **x** is added at the 3rd character in each line.

In our example, I have moved the cursor to the 3rd position, and the status line at the bottom of the screenshot shows this position. That reassures me that the rule *does* insert an **x** at position-3. (My renaming will happen as planned.)

Now I can close this window and go ahead and rename my files.

The options in the window are as follows:

Line wrap	Wraps a line if it exceeds the window's width. (note that the window's width can be adjusted by dragging its right border.)
Automatically apply rules	You do not have to press the  button.
Apply rules for each line	Applies the rule to each line separately.

Regular Expressions

Introduction

Regular Expressions (RegEx) allow you to use precise search conditions, such as:

- Your search string *must* be located at the beginning (or at the end) of a line,
- The specified text must occur *n* times, etc.

RegEx expressions use $. ^ { [(|) * + ? \ characters (called *metacharacters*) in various combinations to specify all these conditions.The search engine *interprets* these metacharacters, rather than finding a literal match for them.

The RegEx search expression is called a "***RegEx pattern***", because a single expression can match a large number of actual text that has the specified *pattern.* For example, the RegEx pattern b?t matches with **bat**, **bet**, **bit**, **bot** and **but**, etc.

Remember that RegEx strings are case-sensitive (The words cat, CAT, cAt, Cat, caT, cAT, CAt and CaT are not equivalent).

So our RegEx pattern b?t also matches with **bAt**, **bEt**, **bIt**, **bOt** and **bUt**, etc.

Also, note that even the digits (0-9) are "numeric characters" for RegEx.

So our RegEx pattern b?t also matches with **b5t**, **b7t**, etc.

In this section, the RegEx expressions (patterns) are shown in bold orange. The target strings (which are compared with the RegEx expression for a possible match) are shown in **bold black**. A part of the target text is color-coded to provide a clue as to why a certain part matches (green color), or does not match (red color)

Simple (literal) matches

When the search string does not contain any metacharacters, the RegEx engine works like "normal" search. (it tries to find an exact copy of the search string.) (This is also known as "literal match").

If you want to find a literal match for a metacharacter, put a backslash **** *before* it. (The \ character is called "*escape character*", because it lets the metacharacter escape from its special duty, and lets it act as a normal character. Its combination with a metacharacter is called "*escape sequence*").

For example, metacharacter ^ matches the beginning of string, but \^ matches the character ^.

Note that the RegEx pattern \\ matches the character \.

RegEx pattern	Matches	Remarks
foobar	foobar	This RegEx pattern does not contain any metacharacters; so all characters are matched literally.
\^FooBarPtr	^FooBarPtr	The \^ escape sequence searches for the character ^ *literally* .

Escape sequences

We already saw one use of escape sequence (above).

Specific escape sequences are interpreted as special conditions, as listed below.

RegEx pattern	matches
\xnn	Character represented by the hex code *nn*
\x{nnnn}	two bytes char with hex code nnnn (unicode)
\t	tab (HT/TAB), same as \x09 (Hex 09)
\n	new line (NL), same as \x0a (Hex 0a)
\r	carriage return (CR), same as \x0d (Hex 0d)
\f	form feed (FF), same as \x0c (Hex 0c)
foo\x20bar	matches foo bar (note the space in the middle), but does *not* match **foobar**
\tfoobar	matches foobar preceded by a tab (the tab is needed for the match)

Note that the tab, new line, carriage return, and form feed are known as "white spaces". But RegEx can distinguish between them. This allows you to make high-precision searches.

Character Classes

A character class is a list of characters in square brackets [], which will match any one (and *only one*-) character from the list.

Note that:

- The characters are not separated with a comma or a space.
- If you repeat any character in the list, it is considered only once (duplicates are ignored).
- A hyphen - is used to indicate range of characters.

RegEx Pattern	Remarks
[abdef]	Matches d, e, or f (only *one* character), but no other characters
[c-m]	Matches any one (and only one) of the small alphabetical characters, from c to m
[G-J]	Matches any one (and only one) of the capital alphabetical characters from G to J
[a-zA-Z]	Matches any one (and only one) of the alphabetical characters (capital or small)
[5-8]	Matches any one (and only one) of numerical characters from 5 to 8
[\n-\x0D]	Matches any one (and only one) of #10, #11, #12 or #13 (Note the use of escape sequence inside a class)

There are some special conditions:

- If you do not want any of the characters in the specified class, then place ^ at the very beginning of the list (RegEx interprets that as "none of the characters listed in this class").
- If you want [or] itself to be a member of a class, put it at the start or end of the list, or create a escape sequence (by putting \ before it).

RegEx Pattern	Remarks
[-az]	matches a, z, and - (since – is put at the beginning, the escape sequence is not needed)
[a\-z]	matches a, z, and - (since – is *not* at the beginning/end, the escape sequence *is* needed)
[^0-9]	matches any *non-digit* character
[]-a]	matches any character from] to a. (since] is at the beginning, the escape sequence *is not* needed)
foob[aeiou]r	Matches with **foobar**, **foober**, etc. but not **foobbr**, **foobcr**, etc.
foob[^aeiou]r	Matches with **foobbr**, **foobcr** etc. but not **foobar**, **foober**, etc.

Predefined Classes

Some of the character classes are used so often that RegEx has predefined escape sequences to represent them.

RegEx Pattern	Remarks
\w	an alphanumeric character, including an *underscore* (_)
\W	a non-alphanumeric character
\d	a numeric character
\D	a non-numeric character
\s	any space (same as the [\t\n\r\f] class)
\S	a non space
.	any character in line (the symbol is just a dot)

Notice that the capitalized letter is used to negate (for example, compare \w with \W)

Word/Text Boundaries

A word boundary (\b) is a spot between two characters that has a \w on one side of it and a \W on the other side of it (in either order), counting the imaginary characters off the beginning and end of the string as matching a \W.

RegEx Pattern	Remarks
\b	word boundary
\B	not word boundary
\A	start of text (^ is an alternative)
\Z	end of text ($ is an alternative)

These markers are combined with the search string to specify where exactly you want the search string to be. For example, \bhis\b will search for a whole word **his**, but will ignore **this**, **history** or **whistle**.

Iterators (Quantifiers)

Iterators (quantifiers) are meta-characters that specify how many times the *preceding* expression has to repeat, A typical example is to find a 3-to-5 digit number.

RegEx newbies often place the iterators *after* the character that needs to repeat. Just remember that RegEx syntax is exact opposite of the usual English syntax. So, instead of "*four dogs*", we would have to say "*dogs four*", RegEx-style.

Iterators can be 'Greedy' or 'Non-Greedy'. Greedy means the expression grabs as *much* matching text as possible. In contrast, the non-greedy expression tries to match as *little* as possible.

For example,

- when b+ (a greedy expression) is applied to string **abbbbc**, it returns **bbbb**,
- but when b+? (a non-greedy expression) is applied to **abbbbc**, it returns only **b**.

Note that a ? attached to a greedy expression makes it non-greedy.

RegEx pattern	Remarks	Greedy?	Remarks
*	zero or more	Yes	equivalent to {0,}
+	one or more	Yes	equivalent to {1,}
?	zero or one		equivalent to {0,1}
{n}	exactly *n* times	Yes	
{n,}	at least *n* times	Yes	
{n,m}	at least *n* but not more than *m* times	Yes	
*?	zero or more	No	equivalent to {0,}?
+?	one or more	No	equivalent to {1,}?
??	zero or one	No	equivalent to {0,1}?
{n}?	exactly *n* times	No	
{n,}?	at least *n* times	No	
{n,m}?	at least *n* but not more than *m* times	No	

Let us see some examples:

RegEx pattern	Remarks
foob.*r	matches **foobar**, **foobalkjdflkj9r** and **foobr**
foob.+r	matches **foobar**, **foobalkjdflkj9r** but not **foobr**
foob.?r	matches **foobar, foobbr** and **foobr** but not **foobalkj9r**
fooba{2}r	matches **foobaar**
fooba{2,}r	matches **foobaar, foobaaar**, **foobaaaar** etc. but not **foobar**
fooba{2,3}r	matches **foobaar**, or **foobaaar** but not **foobaaaar** or **foobar**

Alternatives

A RegEx expression can have multiple alternative characters or subexpressions. The metacharacter | is used to separate the alternatives.

For example, fee|fie|foe will match with **fee**, **fie**, or **foe** in the target string.

It is difficult to understand where each alternative starts and ends. This is why it is a common practice to include alternatives in parentheses, to make it easier to understand.

For example, fee|fie|foe can be written as f(e|i|o)e, to make it easier to understand.

Alternatives are tried from left to right, so the first alternative found for which the entire expression matches, is the one that is chosen. For example, when matching foo|foot against **barefoot**, only the **foo** part will match, because that is the first alternative tried, and it successfully matches the target string. (This is important when you are capturing matched text using parentheses.)

RegEx Pattern	Remarks
foo(bar|foo)	matches **foobar** or **foofoo**

Also remember that alternatives cannot be used inside a character class (square brackets), because | is interpreted as a literal within []. That means [fee|fie|foe] is same as [feio|]. (The other characters are treated as duplicates, and ignored).

Subexpressions

Parts of any RegEx pattern can be enclosed in brackets (), just like using brackets in a mathematics formula. Each part that is enclosed in brackets is called a "*subexpression*".

The brackets serve two main purposes:

- Better readability, as in the mathematical formula **a+(b+c)**.
- Make a functional group, as in the mathematical formula **a(b+c)**. This group is evaluated first.

Let us see some examples:

RegEx Pattern	Remarks
(fee)|(fie)|(foe)	Much better readability than the equivalent RegEx pattern fee|fie|foe.
(foobar){2,3}	Matches with the entire enclosed string **foobar** repeated 2 or 3 times. (i.e., matches with **foobarfoobar** or **foobarfoobarfoobar**) (The iterator acts on the entire subexpression. Compare with the example below!)
foobar{2,3}	Matches with **fooba** followed by the character **r** repeated 2 or 3 times. (i.e., matches with **foobarr** or **foobarrr**) (The iterator acts only on the last character.)
foob([0-9]|a+)r	matches only the character **foob0r**, **foob1r**, **foobar**, **foobaar**, **foobaaaar**, etc. (The subexpression is evaluated first.)

Backreferences

You must have told (or heard-) jokes like this one:

"Two guys walk in a bar. The ***first guy*** says.... Then the ***second guy*** replies....".

Then you are already familiar with *backreferences*!

A "*backreference*" is a *numbered reference* to a previously mentioned thing.

RegEx also has backreferences. Let us understand how backreferences are defined in RegEx.

The RegEx engine tries to find text that matches the *whole* RegEx pattern. If a matching text is found, the RegEx engine identifies the matching text for each of the subexpressions in the pattern.

At this stage, the RegEx engine gives numbers to these matching parts:

- The text that matches the *entire* RegEx expression takes the number '0'.
- The text matching any subexpression is given a number based on the position of that subexpression inside the pattern. In other words, text matching the *n*th subexpression will take the number 'n'.

Now we use those numbers to refer to the entire pattern and/or subexpressions. (That is why these numbers are called "**backreference**".)

The backreference to the n^{th} subexpression is written as **\n**.

The backreferences can be used to compose the RegEx pattern itself, as shown below:

(.)\1+	matches **aaaa** and **cc** (any single character that is repeated twice or more)
(.+)\1+	matches aaaa, cc, abababab, 123123 (a set of one or more characters, repeated twice or more) (The character-sets are alternately colored blue and pink for easy identification. Observe how a RegEx pattern can match quite different text!)

Substitution of text using backreference

The backreferences are also used in *find-and-replace* operations, to re-assemble new text from old.

- The expressions \1 through \9 serve as backreferences to the subexpressions found in the RegEx pattern. The expression \0 is used to represent the text that matches the whole RegEx pattern. These are used in the "find" part of the operation.
- The expressions $1 through $9 represent the actual text that matches the *respective* subexpressions. These are used in the "replace" part of the operation.
- The expressions $0 refers to the whole original name. Note: it is not necessary to enclosed them in round brackets () for this use, $0 is just there.

The replacement text is typically a combination of-

- The text that matched the subexpressions, and
- Some new text.

Note that the RegEx pattern *may* have some parts that are not enclosed in (). (In other words, it may have parts that are not subexpressions.) Such parts are not used in the replacement text.

Here are some "find-and-replace" examples:

Expression	Replace	Description
(.*) (.*)	$2, $1	Switch two words around and put a comma after the resulting first word. Example: if input string is "John Smith", then output will be "Smith, John". Notice that the replacement text also has additional literal text in the middle (comma and space).
\b(\d{2})-(\d{2})-(\d{4})\b	$3-$2-$1	Find date sequences in dd-mm-yyyy format and reverse them into yyyy-mm-dd format. (e.g. 25-10-2007 is converted to 2007-10-25). **Note**: This is not a very robust example, because \d can represent any digit in range of 0-9. That means sequences like 99-99-9999 also will match this pattern, resulting in a problem. This in fact shows that you need to be careful with RegEx patterns!
\[.*?\]		Remove the contents of the [...] (square brackets), and the brackets too. (Replace with *nothing* means *deleting*.)

Limitations for binary data

One of the known limitation of RegEx engine when working with binary data is that the input string is not searched beyond the first occurrence of NULL character (\x00). This would not affect file names because there are simply no NULL characters in them, but may affect parsing of binary content of files when working in Pascal Script for example.

External links

- www.regular-expressions.info [1]
  - Excellent site devoted to regular expressions. Nicely structured and with many easy-to-understand examples.
- www.regexpstudio.com [1]
  - Freeware regular expressions library for Delphi.

References

[1] http://www.regular-expressions.info/

Command Line Mode

This article needs to be cleaned up!

- Combine short and extended sections into one
- Remove formatting artifacts

ReNamer supports several command line parameters. Different parameter types cannot be combined together.

Parameter	Description
<files>	Paths to files and folders which will be automatically added to the program. Program's default settings will be used for adding folders. Masked paths can also be used, e.g. "C:\Pictures*.jpg"
/preset <preset> <files>	Load preset specified by a preset name or a full path. Optionally, paths to files/folders can be appended to the end on this command, and they will be automatically added to the program.
/rename <preset> <files>	Load preset specified by a preset name or a full path and proceed with Preview and Rename actions. Upon successful Preview and Rename operations, program will close automatically. Otherwise, graphical user interface will become visible and an appropriate error message will be displayed. Paths to files/folders can be appended to the end on this command, and they will be automatically added to the program.
/enqueue <files>	Add following files/folders to already running instance of the program. If no running instance is found - launch a new one.
/list <files>	Load a list of files/folders from the following list files.
/uninstall	Remove all manually turned on associations with the program, e.g. presets association. For advanced users only!

Examples:

- **"ReNamer.exe" /enqueue "C:\Folder" "C:\Pictures*.jpg"**
  This command will add to already running instance of the program contents of folder "C:\Folder" (depending on the default settings) and all *.JPG files from folder "C:\Pictures".
- **"ReNamer.exe" /preset "MyRules" "C:\Folder"**
  This command will launch a new instance of the program, will load the preset with the name "MyRules", and will add contents of folder "C:\Folder" (depending on the default settings).
- **"ReNamer.exe" /rename "MyRules" "C:\Folder"**
  This command will launch a new instance of the program, will load the preset with the name "MyRules", will add contents of folder "C:\Folder" (depending on the default settings), and will execute Preview and Rename operations (program will close upon successful completion of all operations).
- **"ReNamer.exe" /list "List1.txt" "List2.txt"**
  Where "List1.txt" and "List2.txt" are lists of files (one per line), with absolute or relative paths (relative to the list file). The contained paths will be loaded into ReNamer.

Extended Article

ReNamer can be launched using command line.

The general format for the command is as follows:

"ReNamer.exe" <Parameters>

The parameters are listed in the following table. Different parameter types cannot be combined together.

Parameters	Description
<files>	Launch ReNamer and add all files to the **Files** pane. You will have to finish the rest of the steps yourself: add rules, preview the items and rename them. While composing the command, replace **<files>** with the absolute paths to files and folders to be renamed. Use a space to separate the entries in the list. • Even if a Renamer window is already running, this command will always launch a new window. • When adding folders, ReNamer's **Filter** settings will be used. • Masked paths can also be used, e.g. "C:\Pictures*.jpg" **Example: "ReNamer.exe" "C:\Folder" "C:\Pictures*.jpg"** • This command will launch ReNamer, and add contents of folder "C:\Folder" (depending on the **Filter** settings) and all *.JPG files from folder "C:\Pictures" to its **Files** pane. Now add rules, preview the items and rename them. **Note:** This explanation applies to all the commands given below wherever **<files>** parameter is used.
/preset **<preset>** **<files>**	Launch ReNamer and load the preset specified by a preset name or a full path to the preset file. (The **/preset** part is a *literal* - enter it just as shown.) You will have to finish the rest of the steps yourself: preview the items and rename them. • The **<files>** parameter (explained above) is optional. **Example: "ReNamer.exe" /preset "MyRules" "C:\Folder"** • This command will launch a new ReNamer window, load the preset with the name "MyRules", and add contents of folder "C:\Folder" to the **Files** pane (depending on the **Filter** settings). You can add even more files and folders. Now preview the items and rename them.
/rename **<preset>** **<files>**	Launch ReNamer, load preset specified by a preset name or a full path to the preset file, add the files and folders listed at the end on this command line, and then proceed with Preview and Rename actions. (The **/rename** part is a *literal* - enter it just as shown.) ReNamer's behavior changes basing on whether there are any problems during renaming. • If the *Preview* and *Rename* operations are successful, ReNamer window will be closed automatically. • If there are any errors, ReNamer's main window will stay open and an appropriate error message will be displayed. **Example: "ReNamer.exe" /rename "MyRules" "C:\Folder"** • This command will launch a new ReNamer window, load the preset with the name "MyRules", add contents of folder "C:\Folder" to the **Files** pane (depending on the **Filter** settings), and execute preview and rename operations. • The ReNamer window will be closed if the renaming is successful. But if there are any errors in preview/renaming, the window will stay open and display the error message. You will have to take the appropriate action and then finish the renaming.
/enqueue **<files>**	Add the listed files/folders to an already running instance of ReNamer. If no running instance is found, launch a new one. (The **/enqueue** part is a *literal* - enter it just as shown.) **Example: "ReNamer.exe" /enqueue "C:\Folder" "C:\Pictures*.jpg"** • This command will check if a ReNamer window is already running. If it is found, it will add the contents of folder "C:\Folder" to the **Files** pane (depending on the **Filter** settings) and all *.JPG files from folder "C:\Pictures". You can add even more files and folders. Now you will have to add rules, preview the items and rename them. • If ReNamer is not already running, this command will launch new ReNamer instance and folllow the process described above.

/list <files>	Load a list of files/folders from the *list files* that follow the command. (The **/list** part is a *literal* - enter it just as shown.) • A *list file* is a text file that contains a list of filepaths (one file per line). • The paths can be absolute or relative (when relative path is used, the reference is the list file and **not** the ReNamer executable). **Example: "ReNamer.exe" /list "List1.txt" "List2.txt"** • The "List1.txt" and "List2.txt" are two text files. Each *list* file contains a list of files, which are listed in the form of absolute or relative paths. The command loads files listed in **List1.txt** and **List2.txt** into the **Files** pane of ReNamer.
/uninstall	Remove all manually turned on associations with the program, e.g. presets association. (The **/uninstall** part is a *literal* - enter it just as shown.) **Example: "ReNamer.exe" /uninstall**

Note: The examples shown above assume that the Windows PATH environment variable is set properly.

If not, you will have to do one of the following:

1. Add the path of the ReNamer executable to the Windows PATH environment variable. After that, you can use the commands as shown above.
2. Use the full path to the ReNamer executable in the command line, e.g. **"D:\Util\ReNamer\Renamer.exe" /list "List1.txt" "List2.txt"**.

Tricks with command line

You can exploit the command line in two different ways:

Application	How
Launch ReNamer with options	Normally, you launch ReNamer from the **Quick Launch bar**. At such times, it starts without any rules. But you can launch ReNamer with any of the parameters shown in the table above. Here is the trick: 1. Right-click on the ReNamer icon (typically located on **Desktop** or in the **Quick Launch Bar**). 2. A menu pops up. Select the last option ("**Properties**"). A window pops up. 3. Select the **Shortcut** tab. In the **Target** input box, enter the command line you want. 4. Press **OK**. From now on, whenever you click on the icon, ReNamer will be launched with all the options you've selected. **Tip:** You can create multiple copies of the icons in your **Quick Launch Bar**, **Desktop** or **Menu START**, and then assign a different command line to each icon.
Launch ReNamer from other applications	Many applications allow you to launch Windows commands. In such cases, you can select different files in that application and then invoke ReNamer from the command line mode. This will allow you to rename selected files *directly*, without having to add them to ReNamer's **Files** pane first.

Sorting Files

The order of items in the **Files** pane is important in two different cases:

1. If you want to rename folders and their contents at once.
2. If you want to give serial number to the file names by using the **Serialize Rule**

ReNamer has two different ways to sort the items:

- Manual sorting (one-time sorting);
- Automatic sorting (items are always kept sorted, newly added items get sorted automatically).

Manual sorting

To sort the items manually, select a group of items and use the files table context menu to move items up or down the list. Alternatively, you can drag the selection around the table using the mouse.

This is strictly one-time sorting. Newly added items will be placed at the end of the current list, in the order in which they are added.

Automatic sorting

To enable **automatic sorting** mode, left-click on the column headers of the **Files** pane. Items will be sorted by that column. Clicking on the same column again toggles the sorting direction. When **automatic sorting** mode is active, a ▲ (ascending order) or ▼ (descending order) appears in the column-header. Two examples are shown below.

Sorted by Name in ascending order

State	Name ▲	New Name	Created
☑ →	File 1	File 1	09/08/2009 12:39:26
☑ →	File 2	File 2	09/08/2009 12:39:27
☑ →	File 3	File 3	09/08/2009 12:38:47
☑ →	File 4	File 4	09/08/2009 12:39:23
☑ →	File 5	File 5	09/08/2009 12:39:21

Sorted by Created Date in descending order

State	Name	New Name	Created ▼
☑ →	File 2	File 2	09/08/2009 12:39:27
☑ →	File 1	File 1	09/08/2009 12:39:26
☑ →	File 4	File 4	09/08/2009 12:39:23
☑ →	File 5	File 5	09/08/2009 12:39:21
☑ →	File 3	File 3	09/08/2009 12:38:47

ReNamer allows you to sort files by any of the available columns. The default screen does not show all of these available columns. To see them, right-click on the column headers. A context menu shows the full list of available columns. Click on any row to toggle that column on/off.

Canceling automatic sorting

To cancel the automatic sorting, right-click on the column headers. A context menu appears (see the figure above). Select the **Cancel sorting** (last) option. Once you cancel the automatic sorting, newly added items will simply appear at the end of the current list, in the order in which they are added.

Preserving the original order

Sometimes you have already ordered items (e.g. in Windows Explorer), and you want ReNamer to preserve that order.

To do that, turn off the automatic sorting first, and only then add items to ReNamer.

Keep in mind the following quirk of Windows: When you are adding your selection, you must focus on the top (first) item in the selection, otherwise the same order will not be maintained when items are transfered to ReNamer. For example: In case of drag-and-drop, you need to select all your files and drag the selection by the very first file.

Note: The initial list of items (files and folders) is processed in the supplied order, but if you are adding folders the content of folders will be added in order determined by the file system, because folders are automatically scanned for the contained items.

Renaming Folders

ReNamer has several filter options which configure how added items (files and folders) are treated.

By default, folders are not added to the renaming list as items, instead, their contents are added to the renaming list. To rename the folders themselves, open filter settings and enable option "**Add folders as files**".

Extensions in folders

Note that Skip extension option also affects folders. (If there are any periods in the name of a folder, the portion on the right side of the last period is treated as extension.

A typical example is folders that contain tutorials: **01. Introduction**, **02. Basics**, etc.) Here, the words "01" and "02" are treated as names, and "introduction" and "Basics" are treated as extensions.

Conflicting order

Renaming a folder also affects all of its content. Therefore renaming of folders requires a little more care.

A problem can occur if you try to rename folders and their content in a single run. Items in the renaming list are processed from top to bottom. The order of items in this case is extremely important for successful renaming.

Important: Parent folders must always appear below their contained items. This can be easily achieved by sorting items in descending order by the **Folder** or **Path** column.

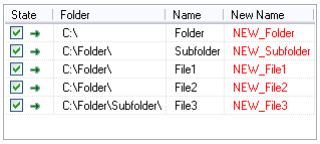
If a parent folder is renamed first, the actual path for its contents changes instantly, with its new name. However, the subfolders and files contained in that folder are still listed in ReNamer with their old path. As a result, ReNamer is unable to find those items at the specified location, and therefore it cannot rename them.

For example, assume you have a folder named "C:\Folder" and a file named "C:\Folder\File" in it. Assume also that you have listed **Folder** above **File** in ReNamer. As soon as first **Folder** is renamed to **New_Folder**, the path for **File** changes to **C:\New_Folder**. However, the File is still listed in ReNAmer at its original location (with the **C:\Folder** path). Thus ReNamer is unable to find **File**.

In other words, while the contained folder is renamed, the contents are not.

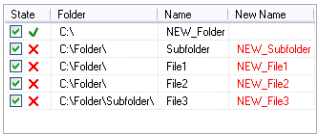
Problem occurred

Preview



State	Folder	Name	New Name
☑ →	C:\	Folder	NEW_Folder
☑ →	C:\Folder\	Subfolder	NEW_Subfolder
☑ →	C:\Folder\	File1	NEW_File1
☑ →	C:\Folder\	File2	NEW_File2
☑ →	C:\Folder\Subfolder\	File3	NEW_File3

Rename

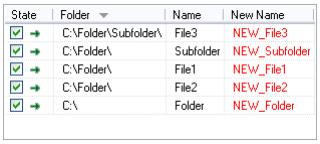


State	Folder	Name	New Name
☑ ✓	C:\	NEW_Folder	
☑ ✗	C:\Folder\	Subfolder	NEW_Subfolder
☑ ✗	C:\Folder\	File1	NEW_File1
☑ ✗	C:\Folder\	File2	NEW_File2
☑ ✗	C:\Folder\Subfolder\	File3	NEW_File3

Items as they appear after they were added, no sorting.

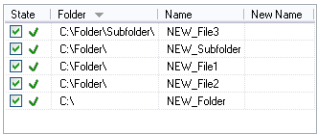
Problem solved

Preview



State	Folder	Name	New Name
☑ →	C:\Folder\Subfolder\	File3	NEW_File3
☑ →	C:\Folder\	Subfolder	NEW_Subfolder
☑ →	C:\Folder\	File1	NEW_File1
☑ →	C:\Folder\	File2	NEW_File2
☑ →	C:\	Folder	NEW_Folder

Rename



State	Folder	Name	New Name
☑ ✓	C:\Folder\Subfolder\	NEW_File3	
☑ ✓	C:\Folder\	NEW_Subfolder	
☑ ✓	C:\Folder\	NEW_File1	
☑ ✓	C:\Folder\	NEW_File2	
☑ ✓	C:\	NEW_Folder	

Items after they were sorted in descending order by Folder column.

Renaming to Another Folder

You can optionally **move** the renamed item to another folder. If you have loaded multiple files in ReNamer, you can also sort them into multiple folders.

Moving the item to another folder

Just specify a new folder path in the **New Name** field.

- Although you can use this trick in multiple rules, the easiest is the Insert rule.
- You can use either absolute path (e.g. **"D:\Utilities\"**) or relative path (e.g. **"..\"**).

For example, let us imagine that we have just added few files to ReNamer.

Name
Text.txt
Song.mp3
Document.doc

We want to move those files to a new folder "**C:\New Folder**". What we need to do is to add a single Insert rule, inserting "**C:\New Folder**" as prefix. This will result in the following:

Name	New Name
Text.txt	C:\New Folder\Text.txt
Song.mp3	C:\New Folder\Song.mp3
Document.doc	C:\New Folder\Document.doc

Now you can proceed with the renaming as usual.

- If the target folders do not exist already, ReNamer will create them and then move the file into these newly created folders.

Tip: Make the **New Path** column visible in the **Files** table, so that you can see the final destination for each item. This can be particularly useful when working with relative paths, because ReNamer displays the relative paths as if they are absolute paths (you do not have to guess the final destination).

Sorting files into multiple folders

When you have loaded multiple files in ReNamer, you can use the properties of these files to sort them into different folders (also called "binning").

To do this, instead of hard-coding the path, use a meta tag in the new path (see this example, which uses the **Replace** rule).

- If the folders do not exist already, ReNamer will create them.
- You can even create a hierarchy in a single renaming operation (just use multiple meta tags in the **New Path**).

  For example, **C:\MetaTag1\MetaTag2\NewName** will create two levels of folders and sort the files into them.

Instead of *moving* the file, can we *copy* it into another folder?

Well, as we saw above, ReNamer actually changes the path of the file, which effectively moves the file. But copying a file requires creating a new instance of the file, which ReNamer cannot do.

The best we can do is to copy the files in the same folder first (with an external application, such as Windows Explorer) and then rename them as shown above to move them.But even this can save a lot of work, as ReNamer can create new folders and distribute the files into them at once.

Failed Renaming

This article needs to be expanded!

- Give examples for all reasons
- Include possible workarounds

There can be several reasons for a failed renaming operation. Validation process will try to prevent some common problems prior to renaming by raising warnings during the preview process, but it cannot catch all possible problems. The most common reasons for failed renaming are as follows:

Reason	Solution
File path exceeds maximum number of characters	Shorten the name of the file or any of its parent folders so that the total characters in the entire path is within the limit. **Note:** Windows defines maximum number of characters using a constant MAX_PATH = 260.
Destination file already exists (name conflict)	There are multiple options: • Rename the name in the list (Refer to Fix conflicting new names). • Rename the 'other' file that is at the destination to avoid conflict. • Manually edit the new name of the file to avoid conflict.
Source file does not exist	This can happen because: • You moved or manually renamed the file outside of ReNamer. • You renamed its folder first. Just remove the items listed in **Files** pane, and then add them again (with the new path).
The file is being blocked by other program	Find the program that is currently using the file (using utilities like the **Windows Task Manager** or **Process Explorer**) and close it. (Sometimes the file is still being downloaded, in which case just wait!)
You don't have sufficient privileges to rename the file.	Get privileges by contacting the Admin (or the owner if the item is shared on a neighborhood PC). If you are the Admin, check the permissions of the folder.
Invalid destination path	You may have included invalid characters to the file name, such as: `\/:*?"<>|`

Validation of New Names

This article needs to be expanded!

- Article is generally not finished

Validation is a process which tries to prevent common renaming problems by analyzing the list of files and target destinations. A warning message is given when possible problems are discovered. Users should generally eliminate all warnings prior to renaming, otherwise items may fail to rename.

Here is a list of reasons for a warning during validation process:

1. There are duplicated destination paths
2. New path contains forbidden characters
3. New path is already taken by an existing file
4. New path exceeds maximum length

By default, automatic validation is enabled during the preview process. This behavior can be changed from within the settings.

Note: Validation may require significant amount of time when processing large amount of files.

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