Rename JPEG pictures

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Juan M. Aguirregabiria

e-mail: juanmari.aguirregabiria@ehu.es

WWW: http://tp.lc.ehu.es/jma.html

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RenJPEG uses the files `exif.cpp` and `exif.h` from cexif by **Davide Pizzolato**, which only have the following notice:

```
* Purpose:    cpp EXIF reader
* 16/Mar/2003 <ing.davide.pizzolato@libero.it>
* based on jhead-1.8 by Matthias Wandel <mwandel(at)rim(dot)net>
```

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Hardware and software requirements

RenJPEG runs at least under Windows XP and Vista.

Other free programs by the same author

To get the last version of **RenJPEG** and of all my free programs contact the Author.

Introduction

RenJPEG is a small utility to rename JPEG pictures. It can extract from inside the picture some information, including when it was taken, which can be used in the new names.

For instance, my Nikon camera uses names like `DSCN1486.JPG` and other cameras have formats like `IMG_1486.jpg`. They are not particularly useful.

My Olympus camera does a bit better: `PA031486.JPG` is the 1,486[th] picture taken on October (the second letter is the month from 1 to 9 and A to C) 3rd of some unspecified year. Still this can be improved... by using **RenJPEG**.

I would prefer something like `O-09-10-03-1486.jpg`, with a O for Olympus and the full date (in short notation). This kind of name is not only more informative, but can be easily sorted from **Explorer** and other programs.

There is a lot of utilities to rename files, but **RenJPEG** have some interesting features:

- It is free.
- You can rename all the pictures in one or several directories, optionally including the pictures in subdirectories.
- You can rename only pictures matching some name patterns.
- The new names can be derived form the original ones in a rather powerful way.
- In the new names you can use the file date and time stamps, as well as some information stored in most JPEG pictures, such as the date and time the picture was taken, the camera make and model, the picture dimensions and so on.
- After renaming a bunch of files you are given the opportunities to reverse the changes.
- When selected, a picture and the information it contains are displayed in the program.
- The program gives you direct access to the same system menu **Explorer** would display for each picture, so that you can see and change its properties, edit it, send to zip files, and so on.
- The program comes with full documentation and help file. For further help, when the mouse is over any menu item, button, option or window the status line will display a hint to reminf its eaning.

Installing RenJPEG

To install the program run the setup program: `renjpeg???.exe`.

Uninstalling RenJPEG

To uninstall **RenJPEG**, use the **Control Panel**.
The program saves its options in one of the following files, which can be deleted after uninstalling **RenJPEG**, if the uninstall program fails to remove it.
- Windows XP:
`C:\Documents and Settings\`*`user`*`\Program data\Juan M. Aguirregabiria\RenJPEG.ini`
- Windows Vista:
`C:\Users\`*`user`*`\AppData\Roaming\Juan M. Aguirregabiria\RenJPEG.ini`
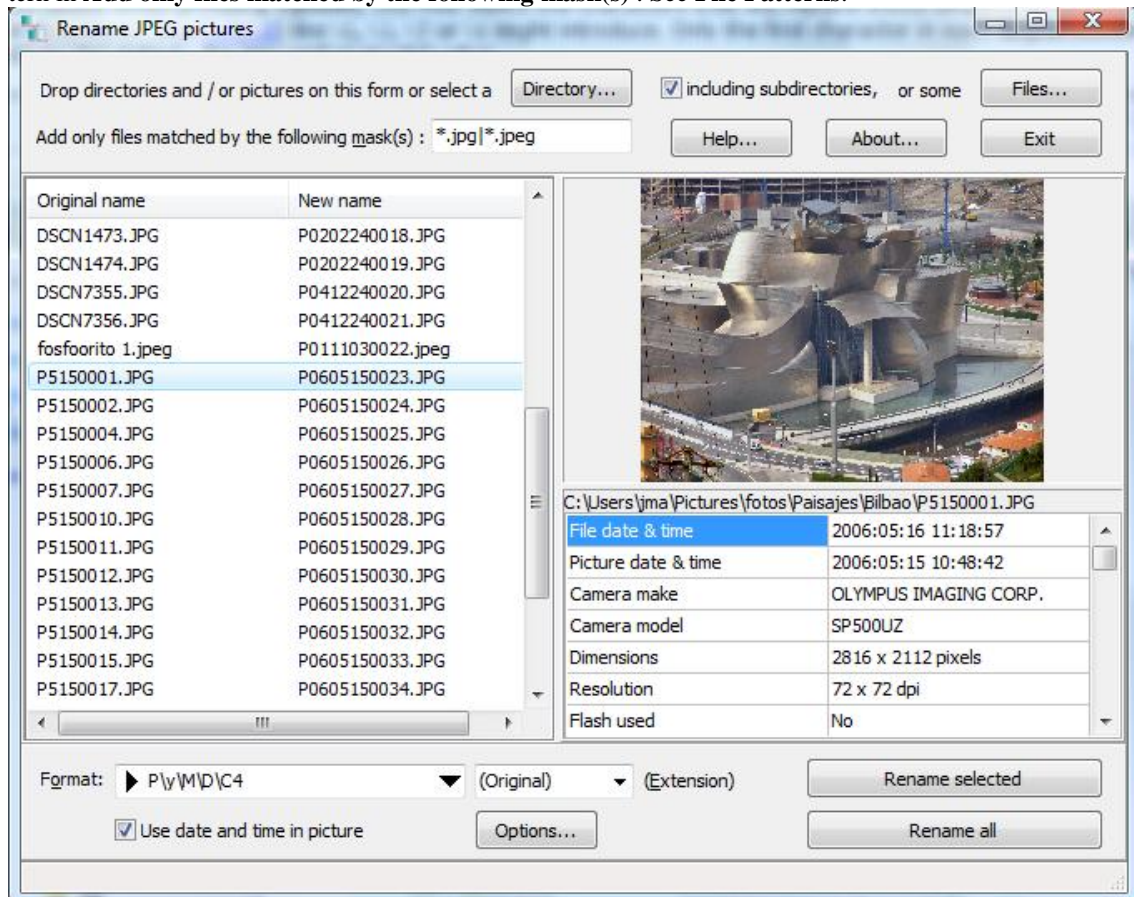Of course, you have to use the right *`user`* name`.`

Running RenJPEG

1. Start **RenJPEG** by choosing it from the **Start** menu (or any other way).

2. Select the pictures to be renamed by any of the following ways:
- Drag them from **Explorer** and drop them over the program window.
- Press **Directory** and then select a directory and all the pictures inside it will be selected, as well and those in subdirectories if **including subdirectories** is checked.
- Press **Files** and select the pictures.

The program adds the pictures to the main list after getting some information from them. This takes some time, but you may cancel a long operation by pressing **Exit**, which will appear as **Cancel** while pictures are being added.

3. You may repeat the previous procedure and before adding new files you will be asked if the pictures already in the list should be removed.

4. By default all JPEG files will be added to the main list, but you can change this by entering a file pattern in **Add only files matched by the following mask(s)** . See **File Patterns**.

4. The files selected will be added to the main list, where you can see, sort and manipulate them. See main list.
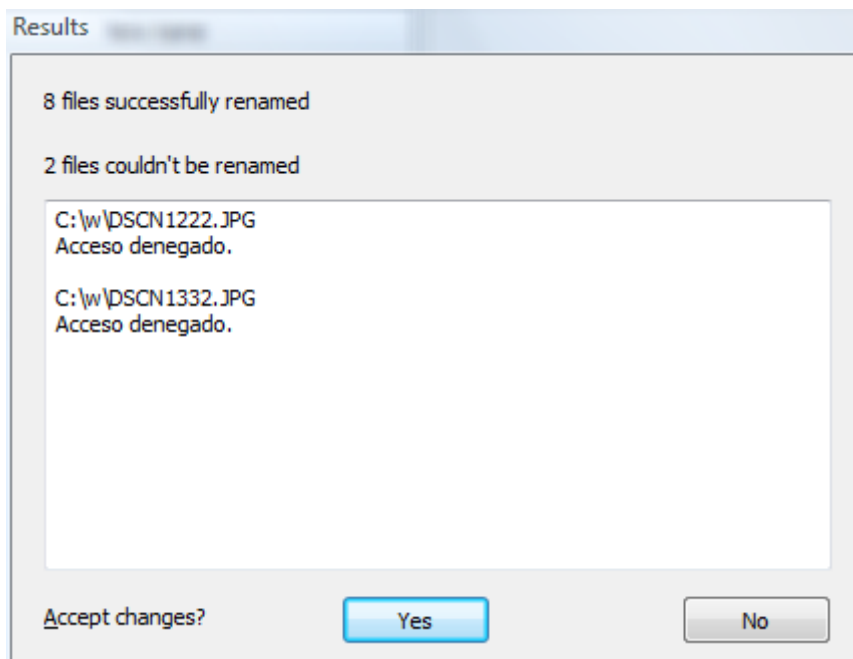
5. Select the format to be used with the new file names. See **Format**.

6. If you want to change the file extension, select in **(Extension)** the desired value:
- **(Original)** to use the file's current extension.
- **.jpg**
- **.jpeg**
- **.JPG**
- **.JPEG**
- **(None)** to remove the extension.

7. Make sure the new names on the main list right column are right. If they are not, change **Format**.

8. Press **Rename selected** to rename the currently selected pictures or **Rename all** to rename all files in the main list. A long file operation may be stopped by pressing **Exit**, which will appear as **Cancel** while pictures are being renamed.

```
Results

    8 files successfully renamed

    2 files couldn't be renamed

    ┌──────────────────────────────────────────┐
    │  C:\w\DSCN1222.JPG                         │
    │  Acceso denegado.                          │
    │                                            │
    │  C:\w\DSCN1332.JPG                         │
    │  Acceso denegado.                          │
    │                                            │
    │                                            │
    │                                            │
    └──────────────────────────────────────────┘

    Accept changes?         [  Yes  ]        [  No  ]
```

9. A dialog will open with the number of files that have been renamed and a list of files that couldn't be renamed followed by the reason reported by the system (in your system language; in Spanish in the figure above). The main list will now display the new names.

10. Press **Yes** to accept the new names and **No** to undo all renaming.

You may resize the three windows (main list, image and information) by dragging the lines separating them. This option, and all the remaining settings in the program will be reminded from session to session.

Buttons and options

The buttons and options in the program's main window are as follows:

Entry	Meaning (if clicked or checked)
Directory…	Click here to select a directory. All the files in the directory (and in its subdirectories, if the **including subdirectories** entry is checked) matching the mask(s) selected will be added to the main list.
Including subdirectories	When using **Directory...** add also files in subdirectories
Files…	Click here to select one or several files from your system and add them to the main list
Add only files matched by the following &mask(s) :	A mask or sequences of masks separated by | that the files must match to be added to the main list: see **File Patterns**
Help…	Open the help system
About…	Display information about the program
Exit	Quit the program. When it becomes **Cancel** it may be used to stop a lengthy operation
Format	The pattern defining how to rename files: see **Format**
Extension	The extension in the new name. You may choose to keep the original one, to remo it altogether or use in all new names one of the following: `.jpg`, `.jpeg`, `.JPG`, `.JPEG`
Use date and time in picture	Use the date and time stored inside the picture, if available
Options	Open the **Options** dialog box to select how to replace invalid characters in file names

Rename selected	Rename all the files selected in the main list
Rename all	Rename all the files in the main list

File Patterns

When you drop files over the program or select them with the **Directory** or **Files** buttons, only files matching the file mask(s) specified in the entry **Add only files matched by the following mask(s)** will be added.

A *pattern* is one or more file *masks* separated by | or /.

A *mask* is a file name optionally followed by an extension (paths are not allowed, so you cannot include \) which may contain any number of copies (including none) of the following wildcards:

- ? will match any character, but there must be exactly one character.
- * will match any sequence of characters, including the void one.

So, choice?.* will match choices.jpg and choice1.jpeg, but not choice.jpg. On the other hand, choice*.* will match the previously mentioned three files, as well as, choices are good.bmp. Of course, *.* will match any file.

If no extension is provided, .* will be assumed: so * also will match any file. But, a single dot indicates a void extension, so *. Will match any file without extension.

Spaces at the beginning and the end of a mask will be removed, but you can avoid it be putting the mask inside a pair of double quotes, which will be removed. So, to match *help.jpg , with a trailing space, you have to enter "*help.jpg ".

A pattern is a single mask or a sequence of masks separated by vertical bar. For instance, to match all JPEG pictures you could use something like *.jpg|*.jpeg.

If the pattern includes a slash, any file matched by the masks after it will be excluded. So, to match all JPEG pictures except the ones containing the letter w, you can use *.jpg|*.jpeg/*w*.

If the pattern starts with a slash, a default *.* is added in front of it, i.e., all files will be included except the ones matched by the mask(s) after the slash. For example, to match all files except the backup files produced by some programs, you might want to use /*.bak. To exclude temporary files you may try /*.tmp;*.*~*.
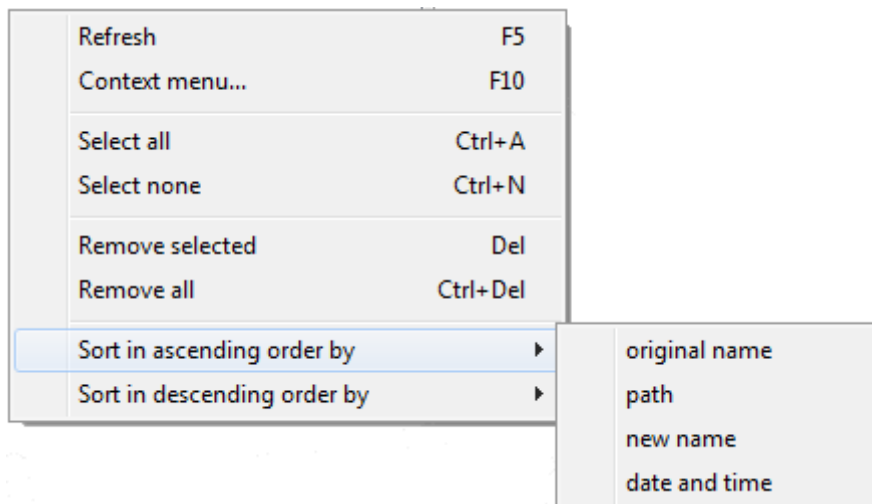
Main list

The main list will display the files you have selected for renaming.
- The left column displays the original file name, without path.
- The full original file specification is displayed in a popup hint when the cursor remains for a while over an item.
- The right column displays the new names that will be generated by the current **Format**.
In the main list you may
- Click on items to select them (as usual, use Ctrl and/or to Shift select more than one file).
- The (first) selected picture will be displayed on the right, and below it you will see
    o the file full specification
    o its date and time **and**
    o the information the program as extracted from the picture, if any.
- Click on a column header to order the items by ascending order of the corresponding field. Clicking a second time will order them in descending order.
- Press the right mouse button to display the context menu and select any of the following entries:

Menu entry	Shortcut	Meaning
Refresh	F5	Read again last open (or dropped) directory
Context menu	F10	Opens the system **context menu** for the selected item(s)
Select all	Ctrl+A	Select all items in the list
Select none	Ctrl+N	Remove all selections
Remove selected	Del	Remove selected items from the list (not from the disk)
Remove all	Ctrl+Del	Clear the list
Sort in ascending order		Sort the list is ascending order by the property selected in the sub-menu: • original name • path • new name • date and time
Sort in descending order		Sort the list is descending order by the property selected in the sub-menu: • original name • path • new name • date and time

The status line at the bottom of the will display a hint on the currently selected menu.

Format

In the **Format** field you select the way pictures will be called after renaming. You may any a series of letters but sequences starting with a backslash have a special meaning as described below.

The format may contain any number (including zero) of the following items:

Item	Meaning/Comment	Example	Result for DSCN1234
Characters	Any sequence of characters. For instances the city the picture was taken	Paris\C4	Paris0001
Characters from the file name	Using $\backslash n$ to select the nth character of the file name	Paris\3\C4	ParisC0001
	Using $\backslash n-m$ to select from the nth to the mth character of the file name	Paris\5-8	Paris1234
	See also \X and \x below		

Date and time information	It will be the date and time stored inside the picture if available and **Use date and time in picture** is checked. See below the available sequences	`Paris\l\C4`	Paris30/05/20050001
Other information	Other information stored in the picture if available. See below the available items	`Paris-\wx\e-\C4`	Paris-1600x1200-0001
Counter	A global counter (see below): `\C`*n* will be a counter with at least *n* digits, padded with zeros on the left if necessary	`Paris\C4`	Paris0001
	A global counter (see below): `\C`	`Paris\C`	Paris1
Separator	`\\` to end a sequence number followed by an unrelated digit	`Paris-\C4\\0`	Paris-00010

Global counters

Since the counters start from 1 every time you rename a bunch of files, they will be useful when dealing with pictures taken the same day or in the same location. Otherwise, I prefer to extract from the original file name the number all cameras insert there, as in the example `Paris\5-8` above.

Special sequences

A backslash start a special sequence. Some sequences end with a number and `\\` may be used to mark its end, if they are being followed by a unrelated digit.

Sequence	Meaning	Result (example)
-----	**Date**	March 5, 2009
`\Y`	Year (4 digits)	2009
`\y`	year (2 digits)	09
`\M`	Month (2 digits)	03
`\m`	month (1 or 2 digits)	3
`\D`	Day (2 digits)	05
`\d`	day (1 or 2 digits)	5
`\L`	Long date according to user preferences	Monday, March 5, 2009
`\l`	Short date according to user preferences	3/05/2009
-----	**Time**	1:02:05 pm
`\H`	Hour (2 digits) (24 hour format: use \T or \t for 12 hour format)	01
`\h`	hour (1 or 2 digits) (24 hour format: use \T or \t for 12 hour format)	1
\I	Minutes (2 digits)	02
\i	Minutes (1 or 2 digits)	2
`\S`	Seconds (2 digits)	05
`\s`	seconds (1 or 2 digits)	5
`\T`	Time according to user preferences	01:02:05
`\t`	Time according to user preferences without seconds	01:02
-----	**Counter**	
`\C`*n* or `\C`*n*`\\`	Global counter starting from 1 with at least *n* digits. *n* can be one or more decimal digits.. You may use `\\` to end the sequence if after it an unrelated digit is desired.	023 (with `\C3`)

\C	Global counter starting from 1	23
-----	**Characters from file name**	PA031234
\n-m or \n-m\\	Characters from the *n*th position to the *m*th position. *n* and *m* can be one or more decimal digits. You may use \\ to end the sequence if after it an unrelated digit is desired.	A03 (with \2-4)
\n or \n\\	Character at position *n*. *n* can be one or more decimal digits. You may use \\ to end the sequence if after it an unrelated digit is desired.	1 (with \5)
\X*n* or \X*n*\\	0 followed by the number at position *n* or 10 for A, 11 for B and 12 for C. *n* can be one or more decimal digits. You may use \\ to end the sequence if after it an unrelated digit is desired.	01 (with \X5) 10 (with \X2)
\x*n* or \x*n*\\	The number at position *n* or 10 for A, 11 for B and 12 for C. *n* can be one or more decimal digits. You may use \\ to end the sequence if after it an unrelated digit is desired.	1 (with \X5) 10 (with \X2)
-----	**Other information from picture**	
\a	Camera make	OLYMPUS IMAGING CORP.
\o	Camera model	SP550UZ
\w	Picture width (in pixels)	1600
\e	Picture height (in pixels)	1200
-----	**Other**	
\\	Nothing. Useful to end a sequence	

- Notice that the operating system would not allow in a file name the following characters (some of them appear in many date and time formats):

  / \ : * ? " < > |

  RenJPEG will substitute a legal character for any of them, according to your preferences selected in Options.

- You may press the ▶ button on the left to open a menu which
  - will remind you the syntax of the available escape sequences and
  - insert them at the cursor position or replacing the text currently selected in **Format**. (You still have to add the number(s) the special sequence requires.)

- You may also press the ▼ button on the right to display a list of the most recently used formats. You can choose any of the to replace the currently defined format.

Explorer Context Menu

If any picture is selected in the main list and right click on it and select the **Context menu...** (or press the `F10` key), there will appear the same menu that opens when right clicking on items in `My PC` or `Explorer` views, so that you can use the shell to display items properties, delete or rename them, send them to utility programs and so on. Keep in mind, however that there are some limitations:
1. Only items in the same directory that the first one will be used, since the shell expects only files from a single directory (all file sin an `Explorer` view are in the same directory).
2. Some functionality is provided by `Explorer` (rather than by the shell) and will not be available in **RenJPEG**. So you might get less menu entries.

For instance, you could use this menu to rename a particular picture in a special way:
- Press the `F10` key
- Select the **Properties** entry on the popup menu
- Change the name in the first entry of the dialog that opens then

Picture information

Most digital cameras store in JPEG pictures useful information in EXIF (*Exchangeable Image File Format*) format. **RenJPEG** can read and display this information and you will be able to use it in the Format to generate new file names.
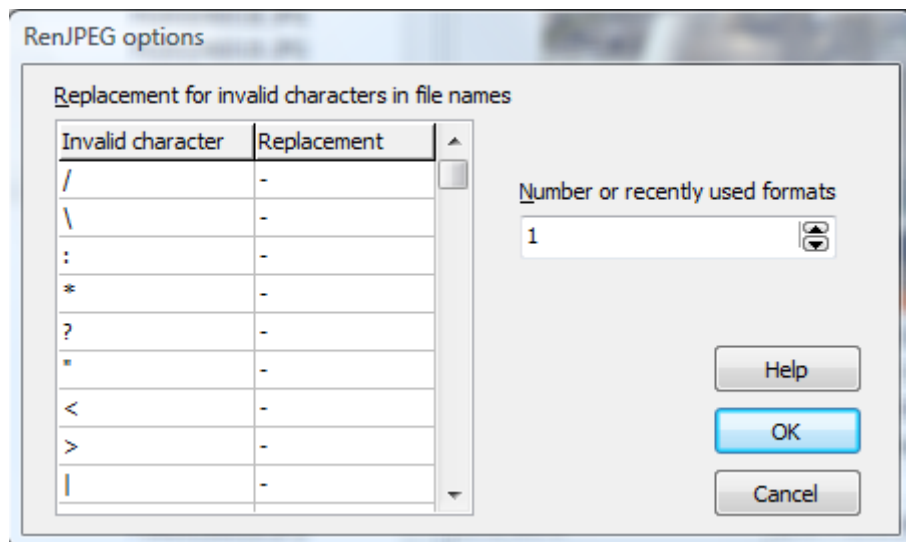
The program will always show under the picture

- the full file specification below and
- the file date and time (in the format described below for the **Picture date & time**) of the image of the (first) selected picture in the main list and
- it will add below any of the following EXIF items found inside the picture:

EXIF entry	Comment	Example
Picture date & time	year:month:day hour:minute:second	2004:01:30 14:02:05
Camera make		OLYMPUS IMAGING CORP.
Camera model		SP500UZ
Dimensions	width x height in pixels	1600 x 1200 pixels
Resolution	width x height in dots per inch	72 x 72 dpi
Color/BW		Black and white
Flash used		No
Focal length	in milimiters	9.1 mm
Exposure time	in seconds	1/100 s
Brightness		
Aperture		f/9
Focus distance	in meters	1.10 m
ISO equivalent		ISO-100
Exposure bias		
White balance		Sunny
Metering Mode		Center weight
Exposure		Automatic

JPEG quality	compression	Basic
Encoding		Baseline
Comments		

Options for RenJPEG

In this dialog, which opens when pressing **Options**, you may select the characters that will replace those illegal in Windows names (/ \ : * ? " < > |) that you or escape sequences (see **Format**) like \L, \l, \T or \t might introduce. Only the first character in each **Replacement** entry will be used and the program will substitute the default – for any void or invalid value.

You may also select here the number of Format you actually used that will be reminded and available from the ▼button on the right of **Format**.

- Press **Help** to open the corresponding help topic.
- **OK** to accept the current values.
- **Cancel** to discard all change.

Suggestions, bugs and help

The Author would highly appreciate receiving information about any bug or problem found in the program. Suggestions to improve **RenJPEG** in future versions are also welcome.