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GUI2 FEATURES OVERVIEW

<http://gui2-for-exiftool.weebly.com/>



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1 OBJECTIVE

The objective of the GUI2 interface is to help users to improve their photographic capability through more comprehensive review and analysis of the Metadata contained in your stored Digital Images

2 GUI2 DESCRIPTION

GUI2 Graphic User Interface gives easier accessibility to Digital Image Metadata using Exiftool © Phil Harvey at Queens University, Canada.
<http://www.sno.phy.queensu.ca/~phil/exiftool/>

GUI2 enables the user to extract and store Digital Image Metadata in a more structured, organized and user friendly way.

GUI2 is a windows Menu driven program which gives you a wide range of Metadata Search and Extraction options with a view to reviewing, evaluating, classifying, profiling etc. Digital Image shooting information.

GUI2 gives you a range of CUSTOMIZATION search options e.g.

- Camera types/models, lens focal lengths, camera serial number, image dates,
- Image Metadata profiling and analysis
- Get shooting Information from Photography Competition entries.
- You can Create your own “Short Cuts” to extract your selective Metadata.

GUI2 Metadata Output methodology.- Metadata is always output and saved to Sub-Folder within the selected Image Folder.
 Sub-Folders and Output Files are logically named.
 Both Sub-Folder and Output File names are created logically and automatically.

GUI2 Helps Photographers get an understanding of MetaData (shooting information) if they are not familiar with it.
 Specific Menu options dedicated to help understand MetaData.

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3 GUI2 PROGRAM OVERVIEW & EXIFTOOL

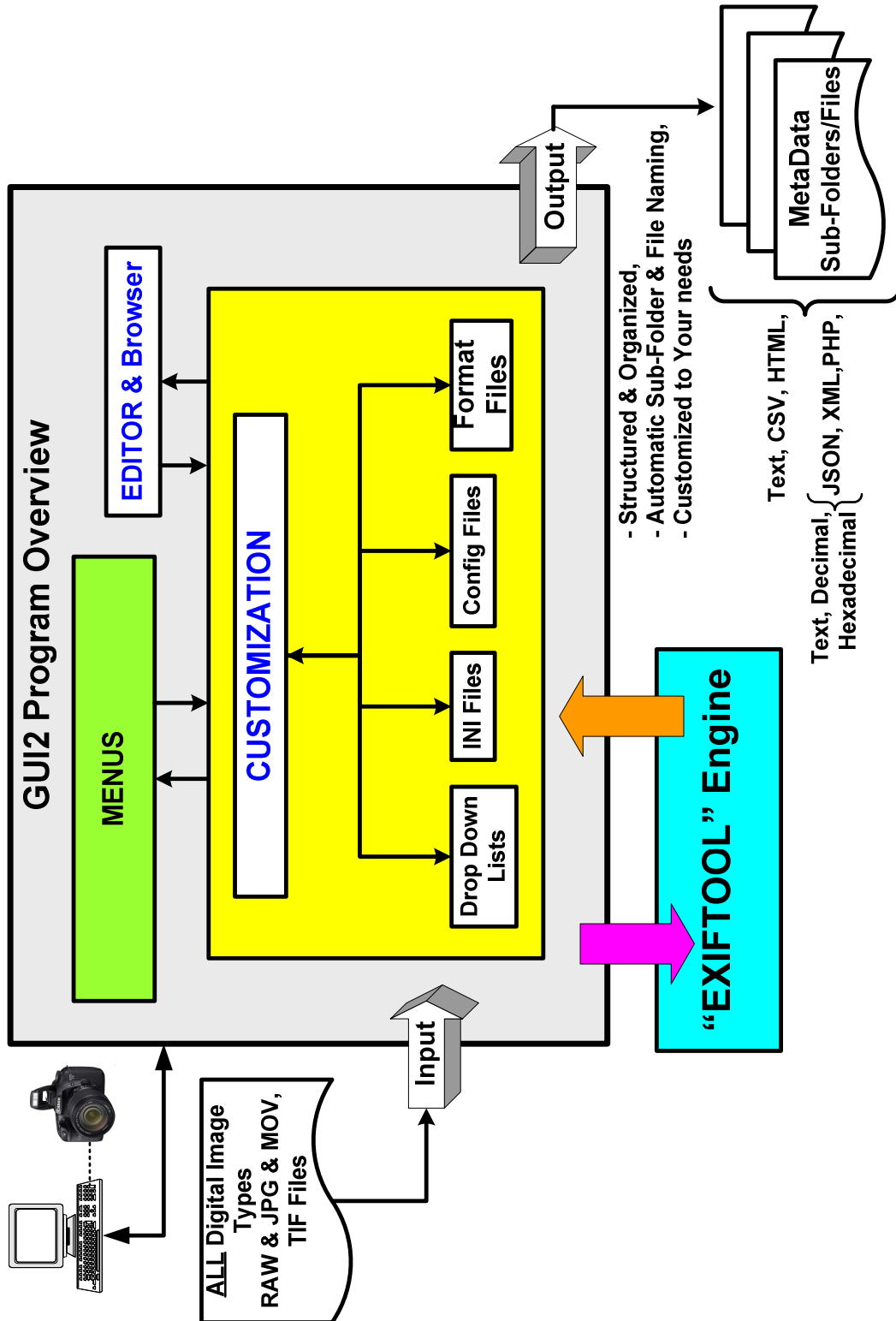


Figure 1. GUI2 and Exiftool.

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4 GUI2 FEATURES

4.1 BUILT IN EDITOR AND BROWSER

Used to Customize Format files, INI files and Config files to your preferred options.

4.2 GUI2 LIMITLESS CUSTOMIZATION

The Power and Value of Customization (using Exiftool) is to be found in “*B-Menu Option 4*” combined with “Format File selection”.

“Format Files” allow you to do complex operations in a simple way.

You can create Format files to suit almost all your needs, NO limit

Example is given in more detail in “GUI2 Features Overview Appendix 1 page 19

4.3 GUI2 HELP TO UNDERSTANDING & LEARNING METADATA

See Metadata Reference Tables <http://www.exiv2.org/metadata.html>

a) “A-Menu options a)...e) Outputs” both Sorted and Unsorted will Help to give a good understanding of Metadata to photographers not familiar with it.

Sorted Alphabetically with *line numbers*, file naming “xxxxxxx_SA.txt”
Un sorted with *line numbers* , file naming “xxxxxxx_UA.txt”
(For Un sorted output – each Tag Group is Sorted within group, but overall not sorted and is line numbered)

The Outputs from “A-Menu options a)..e) give you Tag Slogan plus data value.

Note: This MetaData will vary depending on Camera Model/Make, MakerNotes etc.

b) B-Menu Options 7-9 Explain Tag Names that may have to be used in “Format Files”, note the difference to A-Menu options a)..d). *(No spaces in Tag Name, some Names are different)*

B-Menu option 7 gives you “*Instance Number*” for Duplicate/Triplicate tags
The Outputs from “B-Menu options 8. 9. give you Tag Names as you would use in Format Files plus data value.

Here you get Metadata Tag Names specific to your Camera Digital Images.

c) ShortCut - Menu Options 1, 3, 5,19

The Outputs here both Sorted and Unsorted will Help to give a good understanding of Metadata Tag Groups .

Here you can Learn about the some of the different Tag Groups e.g. :

- “All Tags”
- “All Dates” Tags
- “Common” Tags
- “Maker Notes” Tags

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- "Canon" Tags
- "Nikon" Tags
- "Unsafe" Tags
- "Color Space" Tags
- "Large" Tags

d) C-Menu , here you can get a list of all "Tag Groups" in each Family Group
It has a Drop Down list that you can customize to your requirements
(see GUI2 Features Overview Appendix 1 pages 2-3

e.g. Example of Tag Group Names

EXIF (Exchangeable Image File Format – is organized into IFD's)
 IFD0 (Image File Directory 0)
 IFD1 (Image File Directory 1)
 EXIFIFD
 XMP
 GPS (Global Positioning System)
 CANON
 CANONCUSTOM
 COMPOSITE (are derived from the value of other Tags)
 MAKERNOTES (Camera manufacturer specific) etc.

The average Digital Image contains 300 – 440+ lines of Metadata(Shooting info)

4.4 MENU WINDOWS & DROP DOWN LISTS

Menu Windows used for Selecting your Format files. e.g B-Menu option 4. , and Used for INI File selection e.g D-Menu Camera Make selection.

Drop Down Lists for selecting your Options. . e.g A-Menu option h)

Most Drop Down List will drop down automatically at menu option selection.

If you Type the first letter of item you require – the list will jump to that location.

4.5 FOLDER - IMAGE COUNT

At file selection any Menu, once you click on an Image – you will get "Total Count" for that type of image in that Folder (Image types e.g. JPG, CR2, TIF, NEF, etc.)

If you are selecting an Image or multiple images – you can "only click on one image", the program knows if it is single or multiple selection.

4.6 PHOTOGRAPHY COMPETITION IMAGES

- i) Competition Entry. You can get following Image Metadata
 - Author, copyright etc.
 - Exposure information (+ Camera Model, Lens used, GPS etc.)
 - Full frame or APS-C camera used etc

ii) Checking Competition Entries. Same as i)

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4.7 CUSTOMIZATION EXAMPLES

No limit to the number of “**Format Files**” you can create, just follow the ***naming conventions*** specified for that Menu.

To create a “**New Format File**” – Edit an existing Format File and use “**Save As**” to create a new one, then Customize.

The Built in Editor *always* creates a backup file when editing with extension “.BAK”

Many Customization Options in the form of “Windows Drop down lists” using

- INI files (used in Menu Drop down lists)
- Format files (enables you to do complex operations in a simple way)
- Config files (create your own Short cuts)

The Built in Editor/Browser **locates** any INI / Format / Config file to edit/view by clicking on relevant Button after you have i) Clicked Edit, and ii) Clicked Open

*(See document “GUI2 Features Overview Appendix 1 Item 7A)
(See document “How To Customize & Use Format Files – with Examples)*

Camera Types / Serial numbers / Models / Shutter count

You can specify up to 50 different camera Types / Models

Every Canon DSLR has two Serial Numbers [E-Menu Options l) and m)]

External on Camera and Internal to Camera (*Both numbers are different and are stored in Image Metadata*)

e.g.

[IFD0]	Camera Model Name	: Canon EOS 7D
[EXIF]	Serial Number	: 1961001940
[MakerNotes]	Internal Serial Number	: S0882487A
[Canon]	Lens Serial Number	: 00001bfde9

Duplicate/Triplicate Tags, (B-Menu option 7)

[EXIF]	Focal Length	: 24.0 mm
[MakerNotes]	Focal Length	: 24 mm
[MakerNotes]	Focal Length	: 24 mm

Instance Number (How to use in Format Files)

[]	Focal Length	: 24.0 mm
[Copy1]	Focal Length	: 24 mm
[Copy2]	Focal Length	: 24 mm

Shutter Count

File Name	: _MG_4291.JPG
File Number	: 101-4291
Camera Model	: Canon EOS 7D

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Canon Image Numbering

Tag Names	Current Image Number MetaData (FileNumber)	Range xxxx	Total Count	Total Shutter Count
	100 - x	0001-9999	9,999	10,000
	101 - x	0001-9999	19,998	20,000
	102 - x	0001-9999	29,997	30,000
	103 - x	0001-9999	39,996	40,000
e.g.				
FileNumber	101 - 4291			14,290
DirectoryIndex	101			
FileIndex	4291			

Assuming camera internal coin battery was not removed ??

4.8 SEARCH OPTIONS: IMAGE METADATA SEARCH OPTIONS

- You can search 1000,s of Images, Folders, Sub-folders
 - e.g. Get camera Serial number if make is Canon EOS 7D will locate all
 - Get All Images taken with “Camera Serial Number” xxxxxxxxxxxxxx
 - Get “Lens Serial Number” [E-Menu options l) m)]
 - images taken by specified camera
 - You can specify Lens make to locate all Images taken with same lens
 - D & E & GPS1& ShortCut Menus give you endless **Image Search** options
- You can search for Images “Date Time Original “ or “Modify Date”
- equal to,
 - greater than,
 - less than (See E-Menu)

4.9 METADATA OUTPUT - FILE TYPES

Permanent **Structured** and **Organized** Metadata output to files.

[See A-Menu options a)...d) & B-Menu options 8. 9.]

- Automatic sub-Folder naming & File naming (File has same name as Image but with Extension TXT or CSV or PHP etc)
- Output as TXT file (Text files)
- Output as CSV files (Comma separated Values)
- Output as JSON files JavaScript Object Notation –Open Standard)
- Output as PHP files (Server Side Scripting Language)
- Output as XML files (Extensible Markup Language)
- Output as HTML files(web page files - Hyper Text Markup Language)

Sort and Field Select Output [See A-Menu options a)...d) & B-Menu options 8. 9.]

There are “Four Categories” of File Outputs

- One Image input, one Metadata file out.
- One Folder of Images input, one Folder of Metadata files out.
- Many Images(Folder) input, one Metadata file out.(Search Options)
- One Image input, One File per Tag Output. (F-Menu)

In addition the following **File Format Output Options** also apply JSON, PHP, and XML

- Normal Text output
- Decimal output

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- HexaDecimal output (See A-Menu, ShortCut–Menu)

4.10 HYPERFOCAL DISTANCE METADATA

Selecting Format files and Options

You can find your Cameras “Circle of Confusion” on Screen using the “Vu Menu”

See: http://gui2-for-exiftool.weebly.com/uploads/8/2/4/7/8247457/hfd-version_34_rev_c_.pdf

Pages 7, 35 of above HyperFocal Distance document: for Circle of Confusion Pages 35-38 for examples for Canon & Nikon Cameras – Format Files

4.11 ON SCREEN METADATA VIEWING (DYNAMIC OUTPUT)

Dynamic Output using Vu Menu (view on Screen)

Fixed “Dropdown List” of 20 options (more can be added on request)

Can only View one Image Metadata at a time.

4.12 EXTRACTS THUMBNAILS, PREVIEW IMAGES FROM RAW FILES

Extracts thumbnail images, preview images, and large JPEG images from RAW files.

4.13 SHORTCUT MENU OPTIONS

- Find “All“Metadata Tags.
- Find All “Date” Tags
- Find All “Canon” Tags
- Find “Common” Tags
- Find “Maker Notes” Tags
- Find “Nikon” Tags
- Find “Color Space” Tags
- Find “Unsafe” Tags

Above applies to Single Digital Image or Complete Digital Image Folders

You can create you own Specific Shortcuts, *as many as you need* – by Customizing My_Config.CFG file to your needs.

See Examples in My_Config.CFG file.

To use: Select your customized options from a “Drop Down List”

4.14 READS STRUCTURED XMP INFORMATION

Reads and stores Metadata in XMP format. (Extensible Markup Language)

4.15 USE EXIFTOOL COMMAND LINE OPTIONS FROM GUI2

C Menu option a) allows you to use Exiftool Command line options.

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Download Command line documentation from link:

http://owl.phy.queensu.ca/~phil/exiftool/exiftool_pod.pdf

Pages 2-4 of 36 page document give “Command line options” for Exiftool

Listed as :

- Option Summary
- Processing Control
- Special Features
- Utilities
- Other options
- Advanced options.

GUI2 represents approximately 40% of Exiftool’s ability.

The C-Menu will give an insight into Exiftool.

4.16 PROCESSES ENTIRE DIRECTORY / FOLDER TREES

Recursive Searches in Folders & Sub-Folders and or Outputs.

4.17 AUTOMATICALLY BACKS UP DIGITAL IMAGE WHEN WRITING

Currently only GPS2 & Misc Menu write to Image.

4.18 PROFILING YOUR CHOICE OF METADATA OPTIONS

- using two line “Format files” *Customized* to your needs
- You can create as many format files as you need and select from window
- You can import the output Metadata file into Microsoft XL to profile.

- **e.g. What Lens** do I need. To do this you can use GUI2 to extract “Camera Model” and “Focal Length” from lots of Images through various Folders and analyze results in Microsoft XL or Open office XL

See document “Profiling Shooting Metadata Example”

4.19 RENAMING, COPY, MOVE, RENAME & MOVE IMAGE/FOLDER OPTIONS

- Renames Image files and organizes in Folders (by Date or by **any** other Metadata information)
 - Two **Renaming** Menus (one requires valid –CreateDate, or DateTimeOriginal, or FileModifyDate) 2 or 4 digit year.
 - The second allows you add information **Before** or **After** file Name plus a list of options (*Customize*)
 - **Copy** File Menu – you can type in new Folder Name (*Customize*)
 - **Move** File Menu (requires valid –CreateDate, or DateTimeOriginal, or FileModifyDate). { see GPS1 Menu options c) & d) to Test for same }
 - **Rename & Move** Option to add Own Information(*Customize*)
- (See document “GUI2 Features Overview Appendix 2” for complete details)*

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4.20 MISC MENU

Enables you to view Search options in relation to the internals of how Metadata is attached to an Image (Programmers help), gives Advanced verbose and HTML based Hex dump outputs.

5 GUI2 AND CANON'S DPP & ZOOMBROWSER / ADOBE LIGHTROOM

GUI2 provides an enhancement to “on screen viewing, currently provided by **Canon’s DPP, ZoomBrowser** and **Adobe Lightroom 5.7 (LR)**

e.g. You can store Metadata for review analysis, profiling etc.

Test Results for Canon (RAW CR2 + JPG) on “Same Image Shot” show loss of MetaData

A Tag is a unique Data field

CR2 + JPG	Direct Test	After DPP > JPG	After DPP > TIF	After LR Export > JPG	After LR Export > TIF
xxxx.CR2	434 Tags	347 Tags	351 Tags	78 Tags	68 Tags
xxxx.JPG	420 Tags				
CR2 Reduction		- 87	-83	-356	-366

6 IMPORTANT FIRST TIME INSTALLATION INFORMATION

Always download the Setup program to your Desktop / Run.

Setup naming convention used: **SetupGUI2(Install_UnInstall_1007).exe**
(Where 1007 signifies Exiftool version 10.07)

Read document : **GUI2_First_Installation.pdf**

After installation using Setup you will be given the option to Launch GUI2. If you do so and Click on B-Menu you will notice an **empty** “Format File” window.

This is Ok, Close the B-Menu and “**Close/ Exit the GUI2**” program to complete the installation of the Exiftool part .

Re-launch the GUI2 program again from “**Desktop Icon**” and the program will work as designed.

7 GUI2 & EXIFTOOL UPDATE HANDLING

Exiftool is regularly updated and at each update I create a new Setup file.
SetupGUI2(Install_UnInstall_xxyy).exe

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Where xxyy is Exiftool Version e.g. 10.07

The same applies to GUI2 updates.

Documents:

ReadMeFirstxxyy.TXT

ReadMexxyy.TXT where xx.yy is Exiftool version

Read document: **GUI2_Update to New_Version_of_ExifTool-or-GUI2.pdf**



The easiest way to Update an existing GUI2 or Exiftool is :

Download the New Setup program to your Desktop.

Use New Setup program to update Exiftool / GUI2 .

8 GUI2 FEATURES OVERVIEW UPDATE HISTORY

Sincere thanks to Robert Scott Publisher of **EOS** magazine for making me realize the need for this document.

8.1 VERSION AND UPDATE REASON

“Version 1.0 Revision A”, 16-December 2015 Initial document release.

“Version 1.0 Revision B”, 18-December 2015

Change section 9 Document list: Rev_B

GUI2_Features_Overview_Appendix_1_Ver_1.0_Rev_B.pdf

GUI2_Features_Overview(Ver_1.0_Rev_C.pdf 21-12-2015

GUI2_Features_Overview(Ver_1.0_Rev_D.pdf 23-12-2015

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9 GUI2 DOCUMENT LIST

Available_Tag_Names(13132).pdf *-Varies with new Exiftool Version*
 END-USER GUI2 TERMS and Conditions.PDF

Output Examples A-Menu (..\Learn_MetaData_Help_TXT\)

Example1_Sorted_MG_4376(C)-G_SA.pdf
 Example2_Sorted_MG_4376(C)_g_SA.pdf
 Example1_Unsorted_MG_4376(C)-G_UA.pdf
 Example2_Unsorted_MG_4376(C)_g_UA.pdf

FORMAT_FILES_and_Duplicate-Triplicate_Tags_Ver 1.0 Rev A_.pdf

GUI2 Appendix 1 (Version 6.0 Rev A).pdf -currently being Updated
GUI2 Appendix 2_About MetaData (Version 4.0 Rev A).pdf
GUI2 Description (Ver 4.0 Rev A).pdf -currently being Updated

GUI2_First_Installation.pdf

GUI2 Rename Decoding Aid (Version 1.1 Rev C).pdf
 GUI2_Calendar_Translation_Record_Ver_C.pdf

GUI2_Features_Overview_Ver 1.0 Rev D.pdf - This document

GUI2_Features_Overview_Appendix_1_Ver_1.0_Rev_D.pdf
 GUI2_Features_Overview_Appendix_2_Ver_1.0_Rev_C.pdf

GUI2_Update_History_Rev B.PDF
 GUI2_Update to New_Version_of_ExifTool-or-GUI2.pdf

My_Example_Format_File_(fR)Out.PDF
 My_HyperFocal_Canon(7D).pdf
 Output_From(Format_File_Example).pdf
 Profile_Shooting_Metadata_Example_Ver 1.0 Rev A_.pdf

ReadMe1007.txt
 ReadMe_First1007.txt
 Two_Line_Format_File(Example).PDF
 Two_Line_Format_File_Output(Example R2C).pdf
 Two_Line_Format_File_Output(Example).PDF

All GUI2 Documents.ZIP