PictureReporter User Guide

v1.4

Gary C. Kessler

12 January 2013

PictureReporter is a program that will produce a simple HTML report from a set of directories containing images. It is intended for use by the digital forensics community as a way to produce nicely formatted reports by those using document cameras to take screen shots that do not have their own integrated reporting capabilities. By judiciously storing screen shots in well-chosen named subdirectories, the report can display the screen shots by category.

1. System and User Requirements

PictureReporter is a Perl program run from the command line. A Perl interpreter is part of any Unix or Linux environment, including MacOS X.

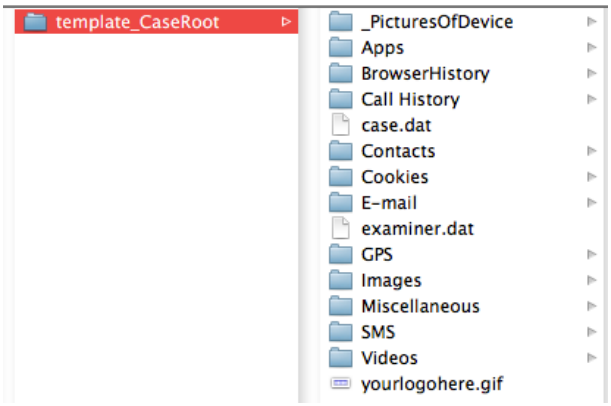
Windows users can emulate a Linux environment using Cygwin (http://www.cygwin.com); be sure to install the Perl package. There are also several open source, free, and commercial Perl interpreters available for Windows, including Strawberry Perl (http://strawberryperl.com/) and ActivePerl (http://www.activestate.com/activeperl). Be sure that the *perl* command is placed in your command line path.[1]

The user should be comfortable using the command line and with the directory structure of the forensic workstation.

2. Camera and Source Images

This program has no interaction with the camera system, so is camera-agnostic. Users are advised to use a camera that makes it easy to place pictures into the user's choice of directory.

[1] As an example, to add the Strawberry Perl interpreter to your existing path, type `PATH=%PATH%;c:\strawberry\perl\bin` at the command line.

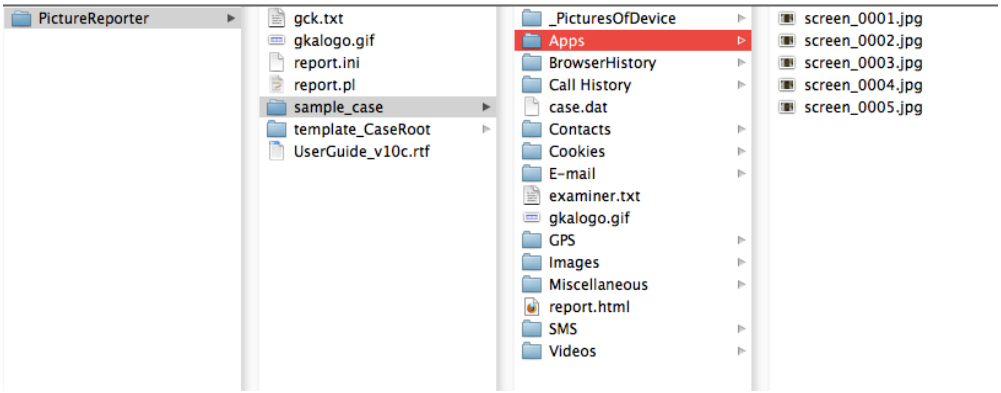


By way of example, the CaseRoot template includes a number of default subdirectories, as shown above. It is recommended that pictures be placed into an appropriate directory by category. The program merely reads the case root directory and looks in all of the non-empty directories to find files to display. Users are encouraged to create additional subdirectories and categories that they find useful.

3. Program Use

All screen shot pictures should be placed into appropriate subdirectories within a *CaseRoot* directory. These subdirectories should only contain image files that can be displayed by a Web browser.

The general directory structure is shown below. The program and all ancillary files can be placed into a directory called, say, *PictureReporter*. Individual case files can be placed in subdirectories of *PictureReporter*, such as *sample_case*; this directory is the "CaseRoot directory." The photographs are placed into appropriately named subdirectories of the CaseRoot.



The program can be run by entering:

```
perl report.pl
```

The program prompts for three categories of information. First, the user is asked for the name of the CaseRoot directory. This is the directory where the subdirectories with the images -- and your agency logo -- will be found. For example, in the sample directory structure shown above, the CaseRoot directory would be *template_CaseRoot*.

The CaseRoot directory can also be supplied on the command line using the -r switch (the following example assumes that *report.pl* is in the parent directory to the CaseRoot):

```
perl report.pl -r template_CaseRoot
```

NOTE: *If the CaseRoot directory is not specified, it is assumed to be the current directory. If supplied, this should be the first parameter specified.*

NOTE: *If the CaseRoot directory path has multiple directories, it is necessary to use* forward *slashes (i.e., "/") as you would on a Unix system rather than* backward *slashes (i.e., "\") as you would on a Windows system. As an example, the string* `c:/gck/pr/case001` *is a valid CaseRoot directory path whereas the string* `c:\gck\pr\case001` *will cause the program to fail.*

The second item of requested information is identifying information about the examiner. The program will ask for the examiner's name, agency, phone number, and e-mail address, as well as the name of the file containing the agency's logo. All of this information is optional and the program assumes that the logo is in the CaseRoot directory. Once this information is gathered, it is written to a file in CaseRoot named *examiner.txt*.

Alternatively, the user can create a file containing this information and place it is in the CaseRoot directory. The file should have five lines with the following information:

Examiner's name
Examiner's agency
Examiner's phone number
Examiner's e-mail address
Agency logo

The name of this file can be supplied to the program using the -e switch:

```
perl report.pl -r template_CaseRoot -e gck.txt
```

NOTE: *The agency logo file should be located in the CaseRoot directory.*

Finally, the program will request information about the case itself. The program will ask for the case number, evidence number, investigator's name and agency, and any additional comments or notes (e.g., the type of device). All of this information is optional. Once this information is gathered, it is written to a file in CaseRoot named *case.txt*.

Alternatively, the user can create a file containing this information and place it is in the CaseRoot directory. The file should have five lines with the following information:

Case number
Evidence identifier
Investigator's name
Investigator's agency
Comments/notes

The name of this file can also be supplied to the program, using the -c switch:

```
perl report.pl -r template_CaseRoot -e gck.txt -c 12GCK0502.txt
```

NOTE: *If the CaseRoot directory is specified using the -r switch, it should be the first switch used. In this way, the examiner (-e) and/or case (-c) files can be properly found.*

There is one additional switch that can be used with the program. The -v (verbose) switch turns on additional reporting while the program runs, listing all of the directories and image files as they are processed. This switch is merely added to the command line as follows:

```
perl report.pl -r template_CaseRoot -e gck.txt -c 12GCK0502.txt -v
```

The program's output is a file named *report.html* that can be found in the CaseRoot directory. This file can be opened with any browser.

One additional switch is -h, which will display the help file:

```
perl report.pl -h
```

One last note about the program's operation is in order. The program defaults to displaying four thumbnail images per row, where each thumbnail has a width of 200 pixels and a height of 200 pixels. These values can be changed in one of two ways.

The first way is to create a *report.ini* file in the same directory as the *report.pl* file, with the following information:

images_per_row,height,width

The second way is to edit the program itself by modifying the following lines:

```
$picsPerRow = 4;
$height = 200;
$width = 200;
```

4. Sample Data Files

This is a sample examiner information file:

```
Gary C. Kessler
Gary Kessler Associates
802-238-8913
gck@garykessler.net
gkalogo.gif
```

This is a sample case information file:

```
2012GKA0507
001-MD
Hanley A. Strappman
Univ. of Arizona P.D.
Motorola Droid Global (2010)
```

This is a sample *report.ini* file:

```
4,210,210
```

5. Step-By-Step Guide

In this detailed example, cell phone pictures are placed into a directory named *C:\KESSLER\PictureReporter\20121025*. This example presumes that *report.pl* is in the parent directory, which in this case is *C:\KESSLER\PictureReporter*. *(Screen shots below of the v1.3 dialogue are the same in v1.4.)*

1. Open the DOS prompt dialogue box

The DOS prompt may be opened in one of several ways:

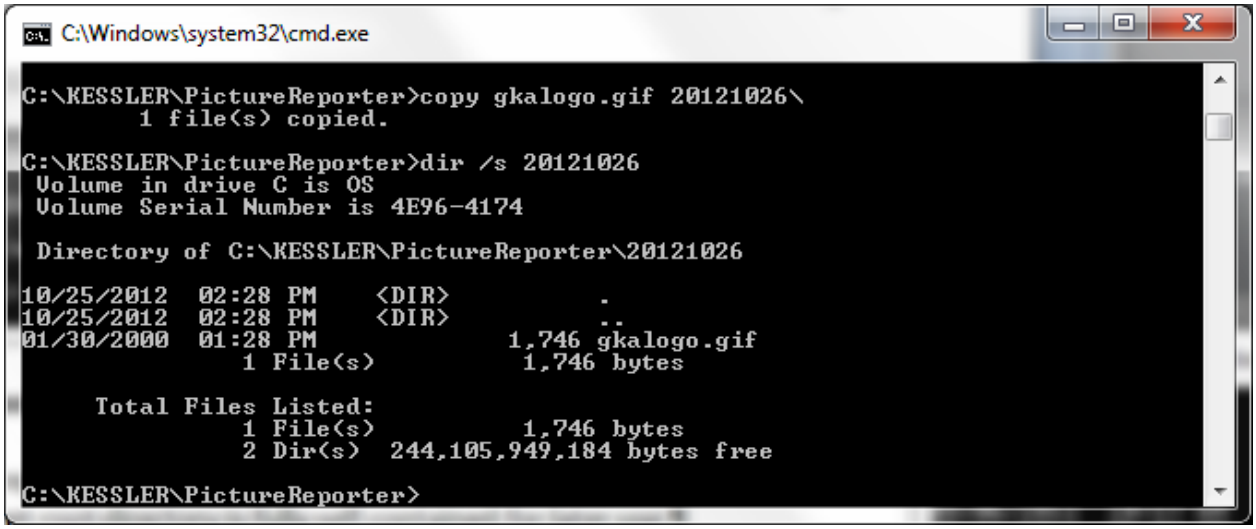
1.  , Run; type *cmd* in the dialogue box and hit <Enter>.
2.  + R, type *cmd* in the dialogue box and hit <Enter>.
3.  , All Programs, Accessories, Command Prompt

2. Create the target directory

Create the target root directory where the photos will be stored. Photos can be organized in this directory as a series of descriptively-named subdirectories. In this case, the parent directory is *C:\KESSLER\PictureReporter* and the target root directory is *20121026*.

3. Copy logo file into target root directory

If you have a logo file for your report, copy it into the new target root directory. The purpose for doing this is so that the target root directory is fully self-contained for later use.

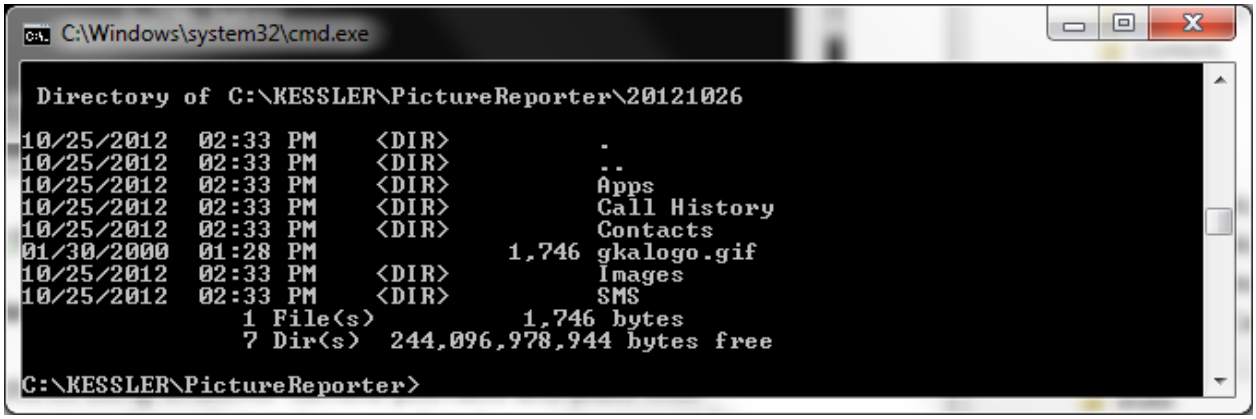


At this point, the only contents of the new target directory are the logo file.

> **NOTE:** If you have a standard *examiner.txt* file that you wish to use, it should also be moved into the new target directory.

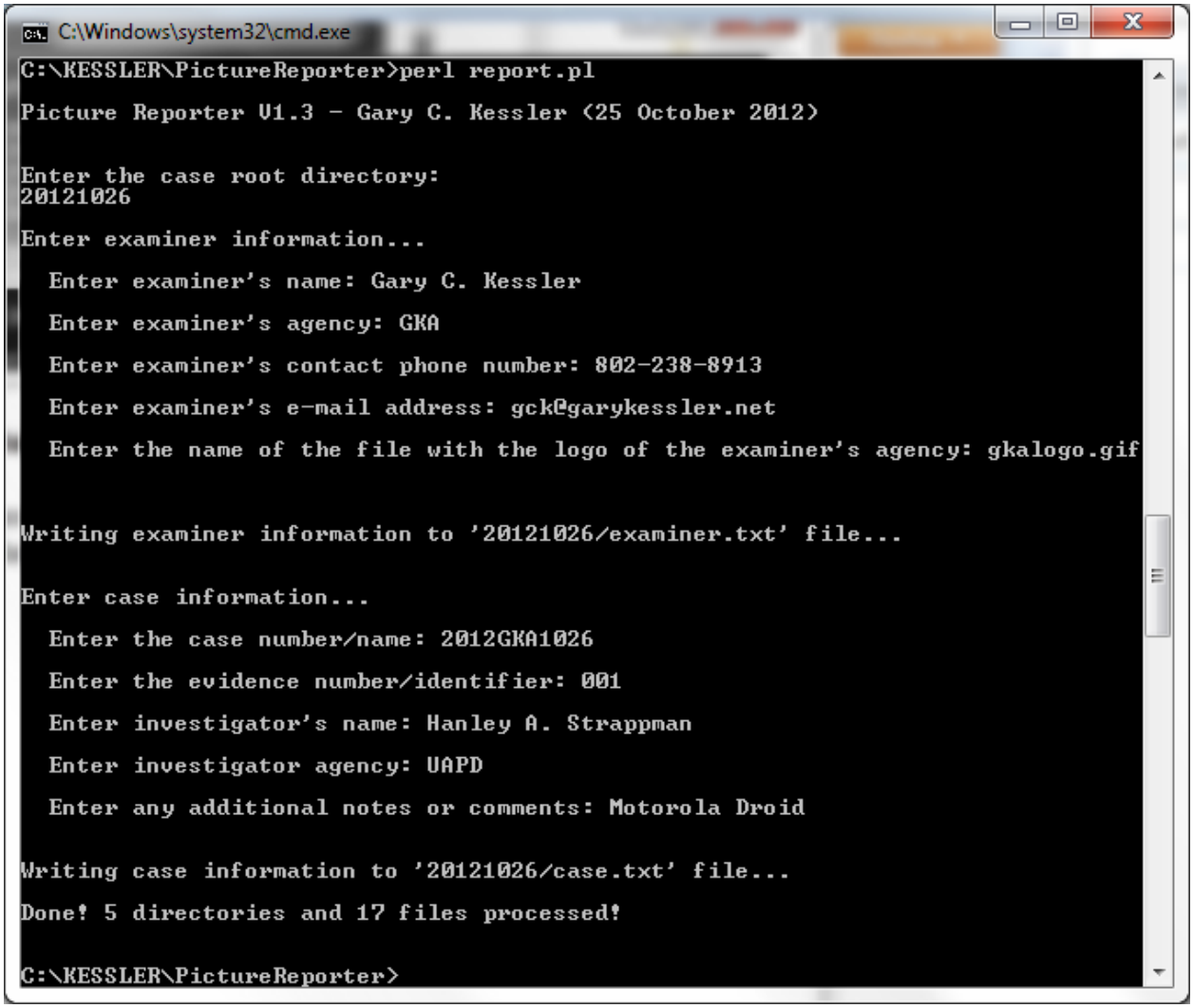
4. Take pictures and move into target root directory

Take screen shots and other pictures using whatever camera you have and place into directories that have descriptive names. Once that task is completed, copy (or move) the directories with the pictures into the target root directory. This can be done via the DOS command prompt or with Windows Explorer. When this task is completed, the target root directory should contain the logo file and your picture directories.



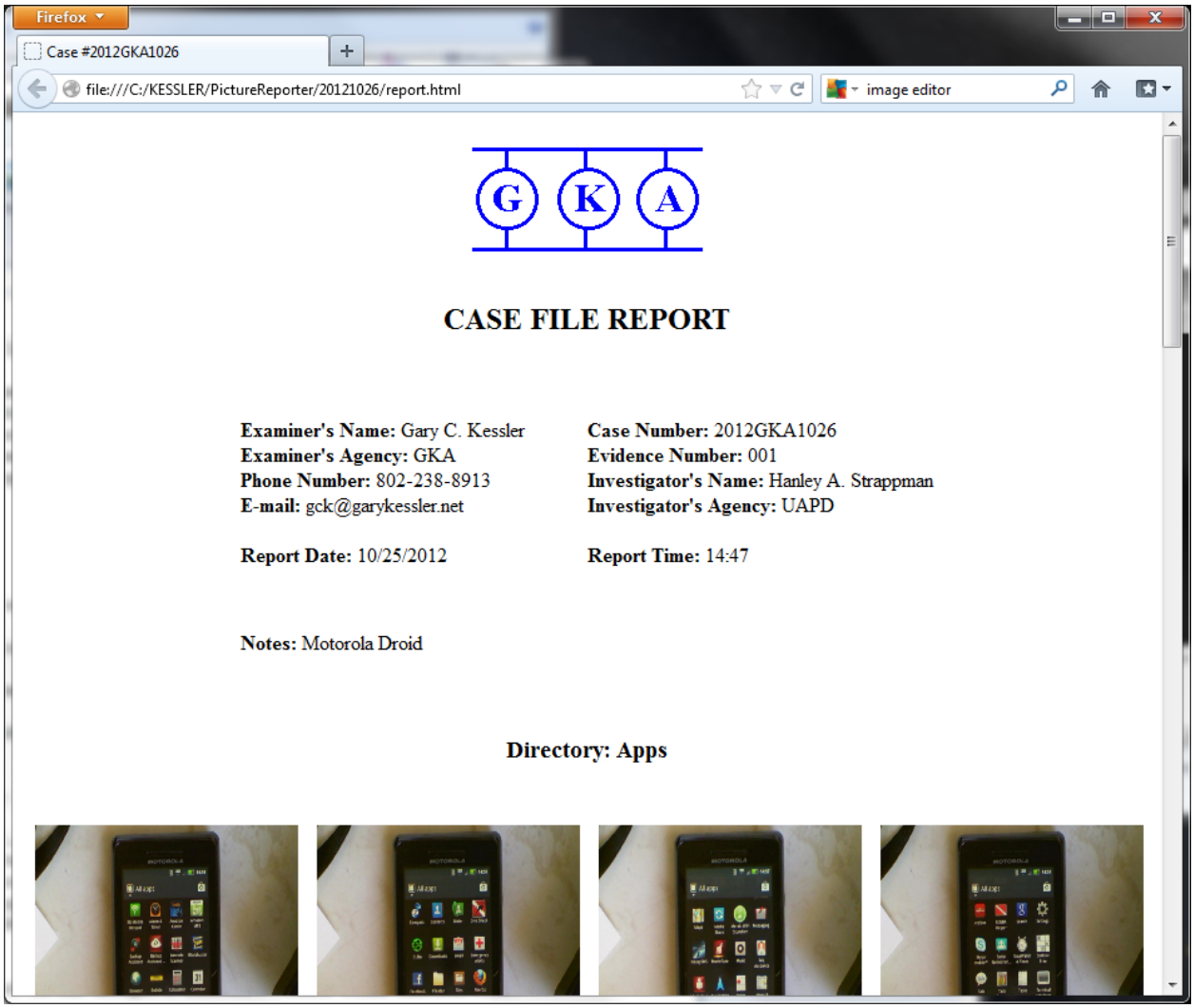
5. Running the program (initial report)

Run *report.pl* for the initial report without any parameters, unless you have already created a *case.txt* and/or *examiner.txt* data file.



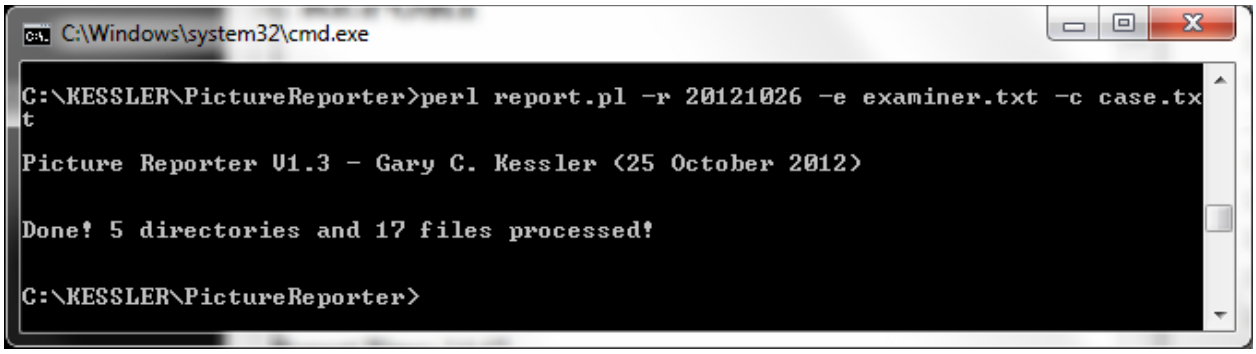
6. Open the HTML file

The report can be found in an HTML file named *report.html* in the target root directory.



7. Rerunning the program

If any changes are made to files or you need to rerun the program for any reason, you can reuse the *case.txt* and/or *examiner.txt* files merely by naming them in the command line:



Acknowledgements

Beta testers of software always suffer the most! Thanks are extended to Larry Flessert and Timothy W. Lokrantz from the Wisconsin Department of Justice-DCI for testing the initial versions of the software.