

tl;dr

I have a script that shows you the size, dimensions and length of movies and photos.

Drop the script into a folder (like "C:\Users\Susan\Pictures\Camera Roll") and run to get that info for all the captures and still created during testing.

Handy when you have a hundred or more files to peruse.

Where

All you need is the script "Get-FileMetaData.ps1" which is here.

How

Copy the "Get-FileMetaData.ps1" file to the directory you want to examine ("Pictures\Camera Roll" for example).

Either open a command or PowerShell window (does not need to be ADMIN) and run from the location OR right-click, "Run with PowerShell" from Explorer.

This is a PowerShell script, so you may need to set script running ON (a one-time operation).

Open an ADMIN PowerShell window and issue this command – "Set-ExecutionPolicy - ExecutionPolicy remotesigned -Force".

The script will take a little while to run (it's calling File IO for every file hundreds of times).

It will produce four files.

- MetaData.txt is a list of all the metadata types for the given directory (this can vary according to directory/file system type)
- sample-metadata.txt has each file and the full list of metadata for each.
- sample-metadata.csv has each file with the media data of most interest to us in a spreadsheet format
- sample-metadata.html is the same, but in a html format

If you run the script from a command prompt, you'll get an interactive viewer to examine the files and sort by data type.

Name	Size	Date created	Type	Length	Frame height	Frame width	Frame rate	Bit rate	Data rate	Dimensions
04 Coffee Break.mp3	6.03 MB	9/20/2018 8:43 AM	MP3 File	00:02:38				320kbps		
19 School for Monsters-The Money Song (...)	1.84 MB	9/20/2018 8:42 AM	WMA File	00:01:59				128kbps		
Archive		6/28/2018 9:19 AM	File folder							
Black Sheep Trailer.mov	10.1 MB	9/20/2018 8:43 AM	MOV File	00:01:52	260	480	25.00 frames/second	382kbps	342kbps	
Brightness.PNG	233 KB	9/18/2018 6:05 PM	PNG File							1524 x 9
Gillian and Horses, 2.MPG	20.9 MB	9/20/2018 8:44 AM	MPG File	00:01:00	480	640	25.00 frames/second	64kbps	2850kbps	
MetaData.txt	12.6 KB	9/20/2018 8:50 AM	Text Source File							
MS Quake.WMV	1.67 MB	9/18/2018 6:05 PM	WMV File	00:01:01	240	320	30.00 frames/second	34kbps	195kbps	
MS Tape.ts	88.1 MB	9/19/2018 1:01 PM	TS File	00:00:56	480	720	29.97 frames/second	256kbps	12000kbps	
NV12_30fps_FFC_Record_640x360.AVI	39.2 MB	9/18/2018 6:06 PM	AVI File	00:00:03	360	640	30.00 frames/second		8443kbps	
OrlandoPete.jpg	467 KB	9/19/2018 11:54 AM	JPG File							1830 x 2
Paul McCartney Carpool Karaoke.mp4	229 MB	9/19/2018 1:01 PM	MP4 File	00:23:42	720	1280	29.97 frames/second	125kbps	1223kbps	
salmon.asf	380 KB	9/20/2018 8:44 AM	Windows Media Au...	00:00:30	240	320	15.00 frames/second	18kbps	85kbps	
sample-metadata.csv	2.58 KB	9/20/2018 8:51 AM	Microsoft Excel Co...							
sample-metadata.html	10.7 KB	9/20/2018 8:51 AM	HTML File							
sample-metadata.txt	45.8 KB	9/20/2018 8:51 AM	Text Source File							
Sita_Sings_the_Blues_large.mp4	831 MB	9/18/2018 6:05 PM	MP4 File	01:21:31	368	640	23.98 frames/second	122kbps	1300kbps	
TestPatterns.docx	1.31 MB	9/18/2018 6:06 PM	Microsoft Word Do...							
WIN_20180628_09_19_13_Pro.mp4	6.62 MB	6/28/2018 9:19 AM	MP4 File	00:00:06	720	1280	29.93 frames/second	95kbps	7841kbps	
WIN_20180817_12_29_17_Pro.jpg	58.6 KB	8/17/2018 12:29 PM	JPG File							1280 x 7

What

The file system keeps information like name, size and date, which is displayed in explorer or a command prompt.

There is additional information for files not typically shown.

This additional information is called “metadata”.

Media files, like audio, photo and video, have information that is context sensitive – it varies by type of file.

Show me

Here are three sample media files with their complete metadata.

```
Name           : WIN_20180628_09_19_13_Pro.mp4
Size           : 6.62 MB
Item type      : MP4 File
Date modified  : 6/28/2018 9:19 AM
Date created   : 6/28/2018 9:19 AM
Date accessed  : 6/28/2018 9:19 AM
Attributes     : A
Perceived type : Video
Owner          : LondonRatcatcherson
Kind           : Video
Rating         : Unrated
Length         : 00:00:06
Bit rate      : 95kbps
Protected      : No
Total size     : 475 GB
Computer       : MININT-GB4309N (this PC)
File extension : .mp4
Filename       : WIN_20180628_09_19_13_Pro.mp4
Space free     : 271 GB
Shared         : No
Folder name    : Camera Roll
Folder path    : C:\Users\ LondonRatcatcherson\Pictures\Camera Roll
Folder         : Camera Roll (C:\Users\LondonRatcatcherson\Pictures)
Path           : C:\Users\LondonRatcatcherson\Pictures\Camera
Roll\WIN_20180628_09_19_13_Pro.mp4
Type           : MP4 File
Link status    : Unresolved
Media created  : 6/28/2018 9:19 AM
Space used     : 42%
Video compression : {34363248-0000-0010-8000-00AA00389B71}
Data rate      : 7841kbps
Frame height   : 720
Frame rate     : 29.93 frames/second
Frame width    : 1280
Spherical      : No
Stereo         : No
Video orientation : 0
Total bitrate   : 7936kbps
```

```
Name           : WIN_20180817_12_29_17_Pro.jpg
Size           : 58.6 KB
Item type      : JPG File
Date modified  : 8/17/2018 12:29 PM
Date created   : 8/17/2018 12:29 PM
Date accessed  : 8/17/2018 12:29 PM
Attributes     : A
Perceived type : Image
Owner          : LondonRatcatcherson
Kind           : Picture
Date taken     : 8/17/2018 12:29 PM
```

```

Rating                : Unrated
Dimensions            : 1280 x 720
Program name         : Windows 10
Total size           : 475 GB
Computer             : MININT-GB4309N (this PC)
File extension       : .jpg
Filename            : WIN_20180817_12_29_17_Pro.jpg
Space free           : 271 GB
Bit depth            : 24
Horizontal resolution : 96 dpi
Width                : 1280 pixels
Vertical resolution  : 96 dpi
Height              : 720 pixels
Shared               : No
Folder name          : Camera Roll
Folder path          : C:\Users\ LondonRatcatcherson \Pictures\Camera Roll
Folder              : Camera Roll (C:\Users\ LondonRatcatcherson \Pictures)
Path                : C:\Users\ LondonRatcatcherson \Pictures\Camera
Roll\WIN_20180817_12_29_17_Pro.jpg
Type                 : JPG File
Link status          : Unresolved
Space used           : 42%

Name                 : 04 Coffee Break.mp3
Size                 : 6.03 MB
Item type            : MP3 File
Date modified        : 9/20/2018 8:43 AM
Date created         : 9/20/2018 8:43 AM
Date accessed        : 9/20/2018 8:43 AM
Attributes           : A
Perceived type       : Audio
Owner                : LondonRatcatcherson
Kind                 : Music
Contributing artists : Charles Nelson Reilly; Claudette Sutherland
Album                : How to Succeed in Business Without Really Trying (Original
Broadway Cast Recording)
Year                 : 1961
Genre                : Soundtrack
Rating               : Unrated
Authors              : Charles Nelson Reilly; Claudette Sutherland
Title                : Coffee Break
#                    : 4
Length               : 00:02:38
Bit rate             : 320kbps
Protected           : No
Total size           : 475 GB
Computer             : MININT-GB4309N (this PC)
File extension       : .mp3
Filename            : 04 Coffee Break.mp3
Space free           : 269 GB
Shared               : No
Folder name          : Camera Roll
Folder path          : C:\Users\ LondonRatcatcherson \Pictures\Camera Roll
Folder              : Camera Roll (C:\Users\ LondonRatcatcherson \Pictures)
Path                : C:\Users\ LondonRatcatcherson \Pictures\Camera Roll\04 Coffee
Break.mp3
Type                 : MP3 File
Link status          : Unresolved
Publisher            : RCA Victor
Album artist         : Soundtrack
Composers            : Frank Loesser
Space used           : 43%

```

How it works

You can lookup the "Video compression" GUIDs here.

<http://gix.github.io/media-types/>

The script creates a Shell object and uses that to iterate over one file for possible metadata. Not every position is populated; a few are problematic and need to be filtered out.

The file metadata can also be used in a script to validate media properties, just like in the original Smoke scripts.

```
<#
    This gets the metadata for a single file.
    Call with the filename and the metadata is returned as an object.
#>
Function Get-FileMetaDataOne
{
    Param([string[]] $MediaFile)

    $FileMetaData = New-Object PSObject;
    $objShell = (New-Object -ComObject Shell.Application).namespace($pwd.path);
    foreach ($row in $objShell.items())
    {
        if ($row.Name -match "$MediaFile")
        {
            for ($a = 0; $a -le 400; $a++)
            {
                # Skip problematic metadata
                if ($a -eq 291) { continue; }
                if ($a -eq 296) { continue; }
                if ($a -eq 297) { continue; }

                if($objShell.getDetailsOf($row, $a))
                {
                    <# The -replace filters out '?' characters that sometimes
come with the data #>
                    $hash += @{
                        $($objShell.getDetailsOf($objShell.items, $a)) =
                            $($objShell.getDetailsOf($row, $a)) -
replace([char]8206,"") -replace([char]8207,"") };

                    $FileMetaData | Add-Member $hash|Out-Null;
                    $hash.clear();
                }
            }
        }
    }
}
```

```
        # This is the return from function!  
        $FileMetaData;  
    }  
}  
{
```