

ProcessTakeout User Manual

Overview

ProcessTakeout is a program for processing photo and video files from the Google Photos folder of a Google Takeout on the basis of data contained in JSON files in the Google Takeout. Photos and videos can optionally be copied to another folder and de-duplicated or grouped by Google Photos album. After copying, images and videos can have their Modified dates set and People and Description data copied to Windows Tags and Comments fields respectively, making them searchable or ordered by any of these parameters. Files can be excluded from processing on the basis of a string appearing the file path or the photoTakenTime in the JSON file being before a particular time.

Creating and Downloading Google Photos Takeout Data

Once you have signed into your Google account, Takeouts can be created via the URL <https://takeout.google.com/>. Takeouts can be created for a selection of the 52 kinds of data which Google stores. If you only want to export photos, select only Google Photos from the 52 options which are presented. Google give you information about the format of the export as shown below:

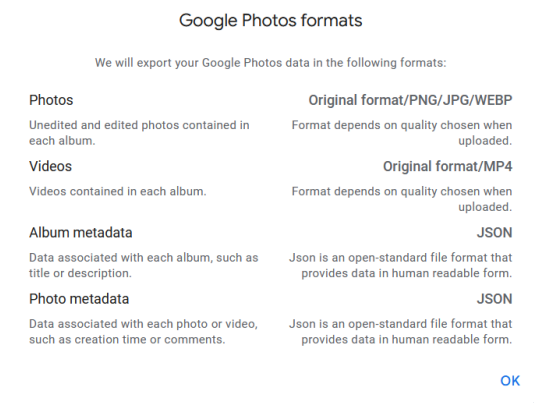


Figure 1 Google Takeout Photos Formats

You then have to specify a maximum size for each download file and whether you want the exports to happen periodically. If the maximum size is exceeded, multiple files are created as shown below

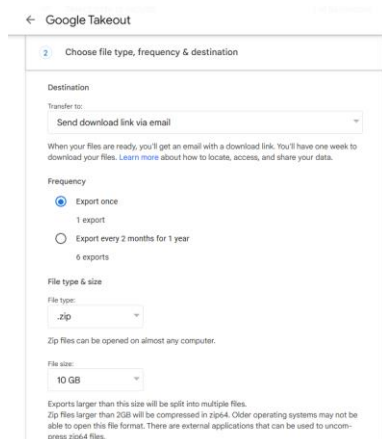


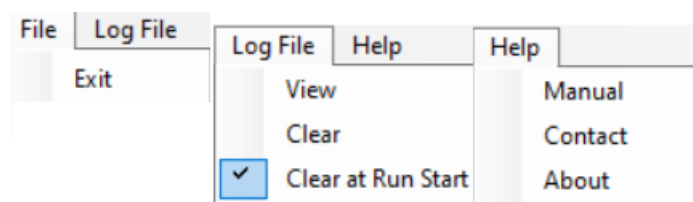
Figure 2 Google Photo Takeout Options

Choosing a large file size simplifies operations by creating a single file, but browsers do not reliably download large amount of data. Using a download manager extension for the browser (allows this function to be performed more reliably. (For example Firefox add-ons can be found at [Free Download Manager](#) or [Internet Download Manager](#)). These replace the browser download functionality with that of the add-on.

Once the Takeout Zip files have been created, data stored can be extracted and processed further. If there is only one Zip file, the extraction can be done within File Explorer by right clicking on the file and selecting Extract All. If there are multiple Zip files in the Takeout, extraction is more complex. Files may be duplicated in different Zip folders

Creating a Google Photos Takeout Folder Tree

ProcessTakeout is used to create a folder tree from Takeout zip files. Menu options are shown below:



File->Exit

This command closes ProcessTakeout. The program can also be closed by clicking the red x in the top RH corner of the screen.

Log File->View

This command displays written to the program's log file, which is stored in <UserName>\AppData\Local\Temp\ProcessTakeout Log.txt. It records action start and finish times and errors encountered during processing, with time stamps.

Log File->Clear

This command deletes the log file.

Log File->Clear at Run Start

If checked, the log file is deleted automatically at the start of processing. If not checked, messages accumulate in the log file from multiple runs.

Help

The Manual item displays this manual. The Contact item shows a web page with a contact form and email address for Aleka Consulting. The About item shows the version number of ProcessTakeout and gives information about the program.

Program Inputs and Processing

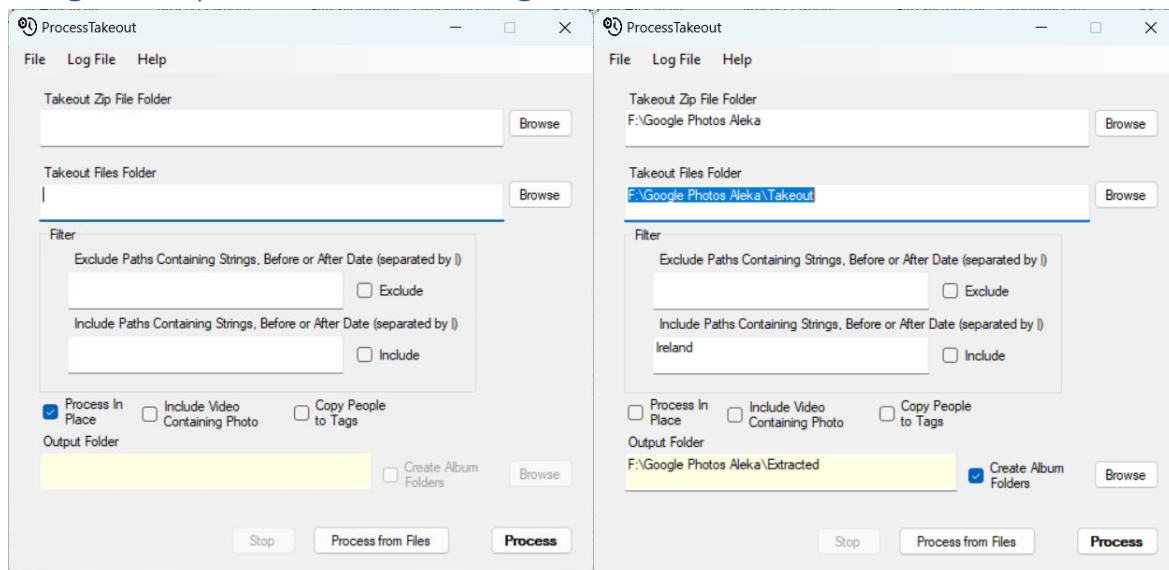


Figure 3 Main Screen using default settings (left) and after selecting a folder containing Takeout zip files, an output folder with album folders and an Include filter term (right)

The folder containing one or more Takeout zip files is selected via the **Takeout Zip Folder browse button** and is displayed on the **Takeout Zip File Folder text box**. All Zip file within this folder and subfolders are accessed. By default, the Takeout Files Folder text box is set to a Takeout sub- folder within the selected folder. This folder can be changed if desired.

The **Takeout Files Folder** text box displays the folder within and below which files with extension .json are examined via the Browse button.

The **Exclude and Include Paths** text boxes define conditions for files to be excluded from processing or included. The condition may be that a particular string is present in the path of the JSON file, or that the photoTakenDate element of the JSON file is before a date specified. Conditions separated by the pipe symbol (|). The date time condition is specified by the < or > symbol followed by the date, which can be in any format, the least ambiguous of which is dd-MMM-YYYY HH:mm:ss (eg 1-Apr-2017 13:45:00). The Exclude and Include check boxes determine whether the filter conditions are applied. If < appears, the condition applies to all files with adjusted Modified dates before the date specified are excluded. If > appears, the condition applies to all files with adjusted Modified dates.

If the **Process in Place** checkbox is checked, the Modified date of the file referred to in the “title’ element of the JSON file is set to the date specified in the “photoTakenTime” element. The date is adjusted to the date in the timezone specified by the latitude and longitude in the GPS data, if this is present. If **Process In Place** is not checked, the file with added metadata is copied to the folder specified in the Output text box if none of the Exclude or Include conditions are met and either the Exclude or Include checkbox is checked. Files with the same name in the output folder are overwritten. Processing is much faster if **Process In Place** is checked as files do not have to be copied.

If **Include Video Containing Photo** is checked, the short video files from Live or Motion Photos are also processed and the mp4 file extension added to them so that they can be viewed easily in Windows.

If **Copy People to Tags** is checked, any People data from the JSON file is copied to the Tags field of the output file. This option may slow processing if People data is present in a large number of the JSON files.

Description data from the JSON file is copied to the Comment field of the output file.

The **Output Folder** text box shows the folder to which files not meeting exclusion criteria or meeting inclusion criteria are copied if **Process In Place** is unchecked, as selected by the Browse button. If **Create Album Folders** is checked, album folders are created in the output folder. Note that photos taken in a particular year are treated as albums and contain duplicates of files appearing in albums created as such. The text box and Browse button are disabled if **Process In Place** is checked. Files from particular albums can be copied to the output folder by specifying the album name in the Include text box.

Processing from the Takeout zip files is initiated by the **Process** button and can be stopped by clicking the Stop button. Processing from files extracted from the Takeout zip files can be processed by clicking the **Process from Folder** button. If an output folder is specified, ProcessTakeout runs much more slowly. For Takeouts including tens of thousands of files, processing can take several hours. On completion the screen below is shown.



If any errors have occurred the option to view the error log is displayed.

Takeout Folder Tree Structure

The structure of a Google Photos Takeout folder tree is complex. The top level folder contains subfolders for each album created each year in which the image or video was taken and a number of folder named Untitled, Untitled(1), Untitled(2) etc. The resolution of the downloaded image files is the same as for the uploaded file unless it is larger than 16 MPixels, in which case it will be reduced by Google Photos. Each folder contains at least one JSON file, and may contain image or video files. The JSON file may not contain any element referring to a file.

The name of a file referred to in the JSON file is related to the name of the file uploaded to Google photos, either automatically from an Android phone, or manually from other sources, such as computer. This data is used for the presentation of photos within the Google Photos app. An example of the JSON file created by automatic upload from an Android phone is shown below:

```
{
  "title": "IMG_20220729_124241_MP.jpg",
  "description": "",
  "imageViews": "0",
  "creationTime": {
    "timestamp": "1721106327",
    "formatted": "Jul 16, 2024, 5:05:27AM UTC"
  },
  "photoTakenTime": {
    "timestamp": "1659062561",
    "formatted": "Jul 29, 2022, 2:42:41AM UTC"
  },
  "geoData": {
    "latitude": -35.2562861,
    "longitude": 149.1265111,
    "altitude": 0.0,
    "latitudeSpan": 0.0,
    "longitudeSpan": 0.0
  },
  "geoDataExif": {
    "latitude": -35.2562861,
    "longitude": 149.1265111,
    "altitude": 0.0,
    "latitudeSpan": 0.0,
    "longitudeSpan": 0.0
  },
  "url": "https://photos.google.com/photo/AF1QipOn8j7_q56p_86R1TGh6zFr8L6cqNpBVqfxUQoe",
  "googlePhotosOrigin": {
    "mobileUpload": {
      "deviceFolder": {
        "localFolderName": ""
      },
      "deviceType": "ANDROID_PHONE"
    }
  }
}
```

The “title” element of the JSON file contains the file name, but the name (without the file extension) is truncated to 48 characters in the Takeout. The “photoTakenTime” element contains the date on which the image or video was recorded, in UTC (Universal Time Co-ordinate).

Where the image is taken from the start of a short video sequence (Live Photo), the video sequence from Android phones is stored as a file with the same name as the image and no extensions, although it is actually in mp4 format. The indication that this file exists is the inclusion of _MP in the file name before the extension.

Where albums have been created in Google Photos, images in the album folder are copies of those shown in the year folders.