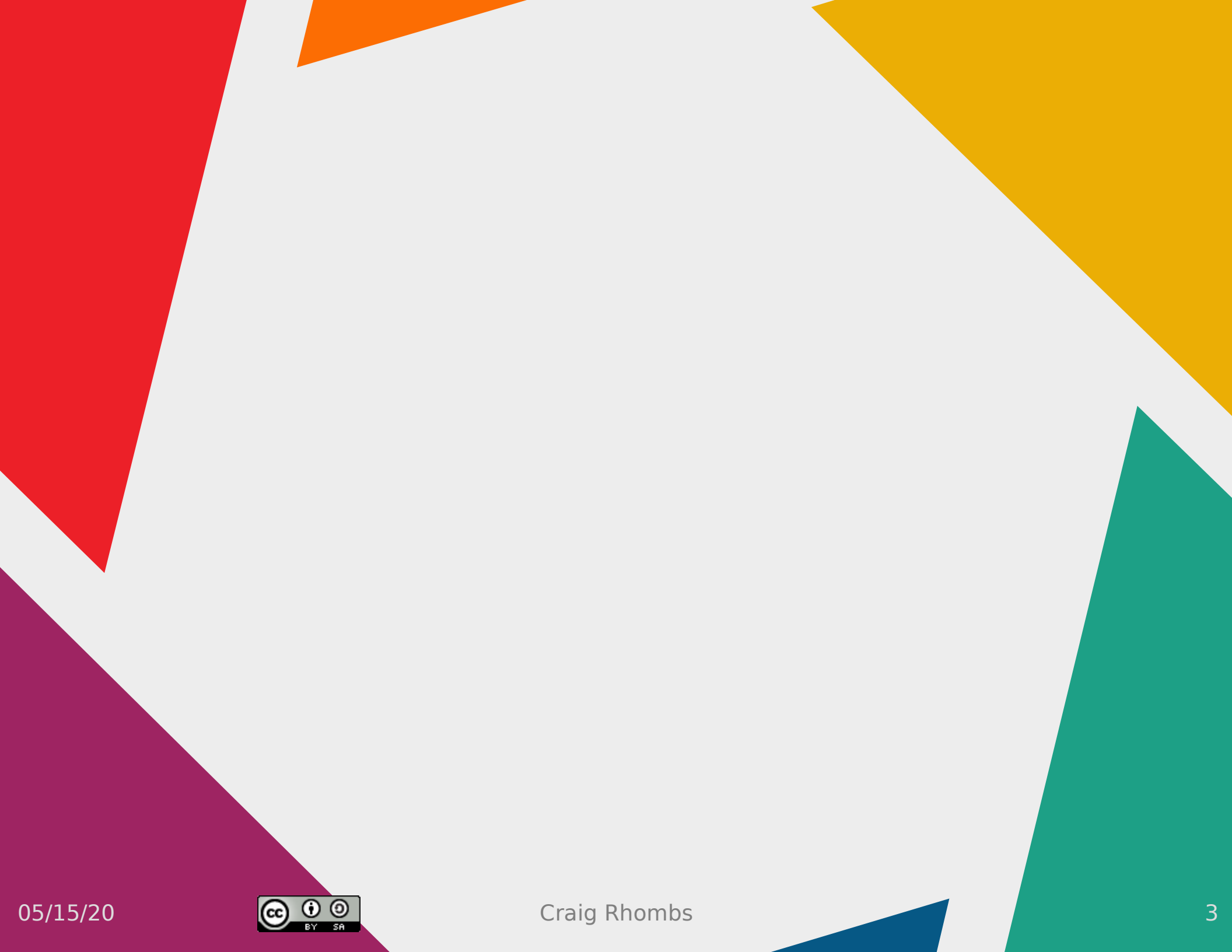




Digitizing
Old Slides





Purpose(s)

- Record & share my experiences digitizing & color-correcting hundreds of old slides
- By: Craig Rhombs
 - email: 281connections@gmail.com
 - Web: <https://281connections.us>

Assumption/Disclaimer

- Slides are standard 2x2 inch cardboard or plastic slides made from 35mm, 110, or 126 format film.
- Disclaimer: There are other ways to do this work! Here are some examples.
 - “outsource” the work:
<https://www.astoundvideo.com/index.php>
 - Equipment rental:
<https://services.ezphotoscan.com/rent-photo-scanner-photo-slide/>

Tools - Hardware

- An inexpensive Epson Perfection V370 scanner that can scan four slides at a time. Resolution up to 4800 dpi.
- <https://epson.com/For-Home/Scanners/Photo-Scanners/Epson-Perfection-V370-Photo-Scanner/p/B11B207221>



Tools - Software

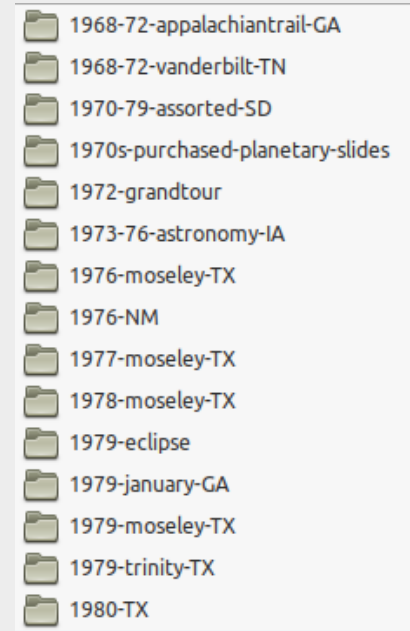
- VueScan (<https://www.hamrick.com/>): scanning; pro version costs less than \$100
- Image viewer s/w that can flip images left/right and up/down; comes with your operating system; e.g., eye-of-mate, ms photos, etc.
- DigiKam (<https://www.digikam.org/>): batch processing of slides for doing color correction, adding metadata, etc.; free
- My operating system was Ubuntu Mate (Linux), but tools work on Windows or MAC OS as well.

Major Steps (PSPSP)

- **Prepare** the slides
- **Scan** the slides
- **Process** the results to correct color, add metadata, etc.
- **Save/Preserve** selectively and carefully
- **Publish** on the web so that the results can be shared (using Google Photos)
- *Don't forget: enjoy the nostalgia; have fun sharing the results with others; learn more about your family and ancestors.*

Preparing the Slides

- Organize into groups, collections, etc. according to rules that make sense to you.
- by date, by date and location, by location, by subject, etc.
- e.g., 1981-SD, 1981-honeymoon, 1981-january-TX, . . .
- Develop your plan! This is the measure twice, cut once step.
- Get to know your slides again!
- Decide how/if you want to integrate them into your family tree.



Integrating Photos with a Tree

- Various optional things to consider . . .
- Put images in the image gallery that your family tree software uses. (issue: duplicates versus pointing the software to your pictures folder)
- Put links to special photos in the notes in your tree. e.g., note for Dennis Bates,
/home/craig/Pictures/family_Bates-Loy/Dennis/1939Grandmas.jpg
- Maybe your tree software has a slick way of integrating a photo and its metadata with your tree.
- Note the issue that one photo may pertain to multiple people. DigiKam handles this nicely - maybe be satisfied with it.

Scanning Process (1)

- Select 4 slides; load the scanner “frame”
- pay attention to order
- “this side toward screen” should be up

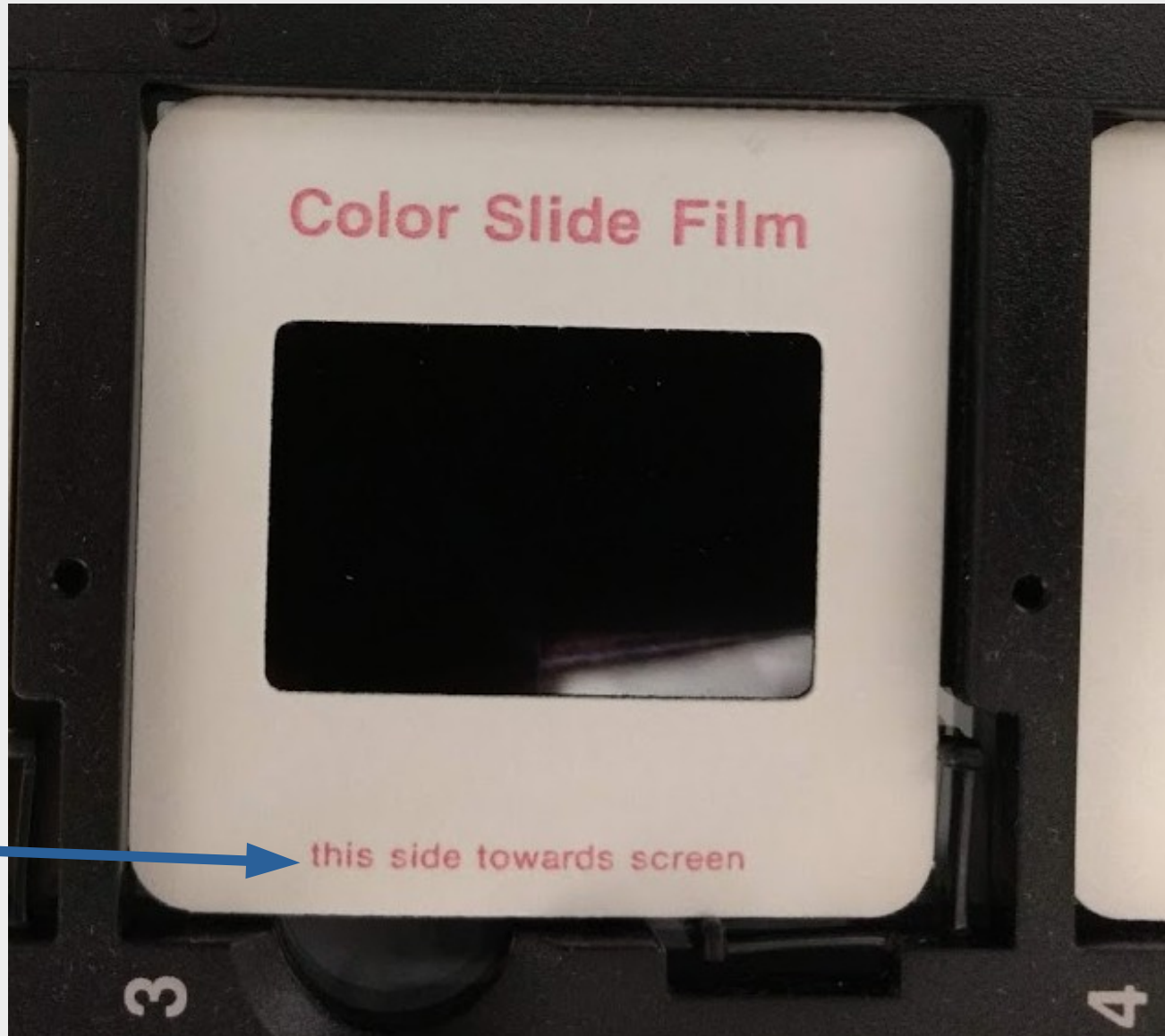
Load Slides (1)



Note scan sequence!



Load Slides (2)



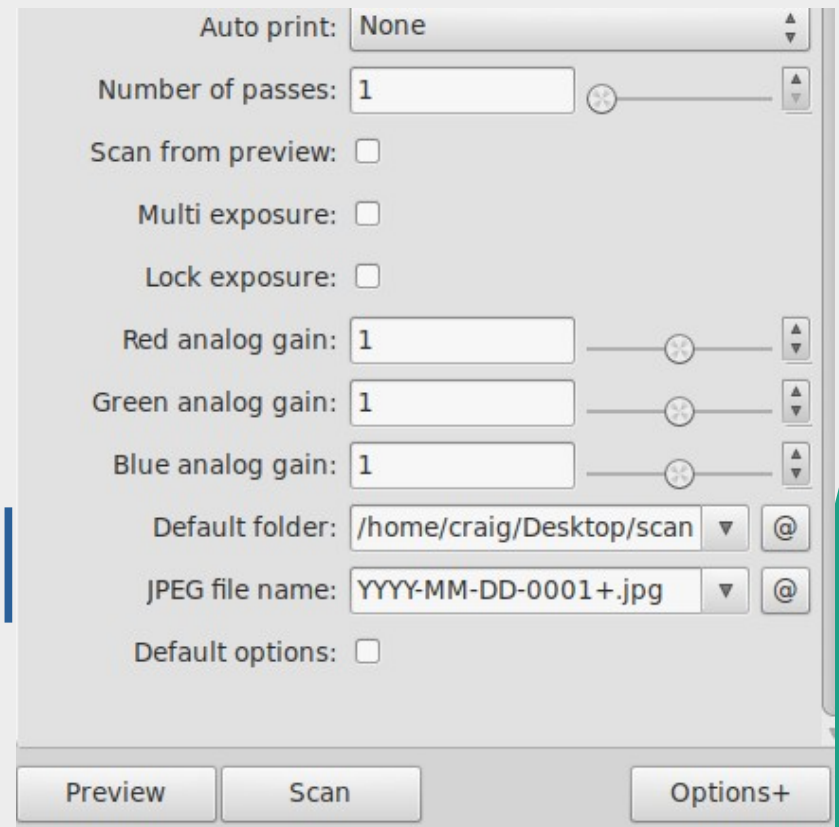
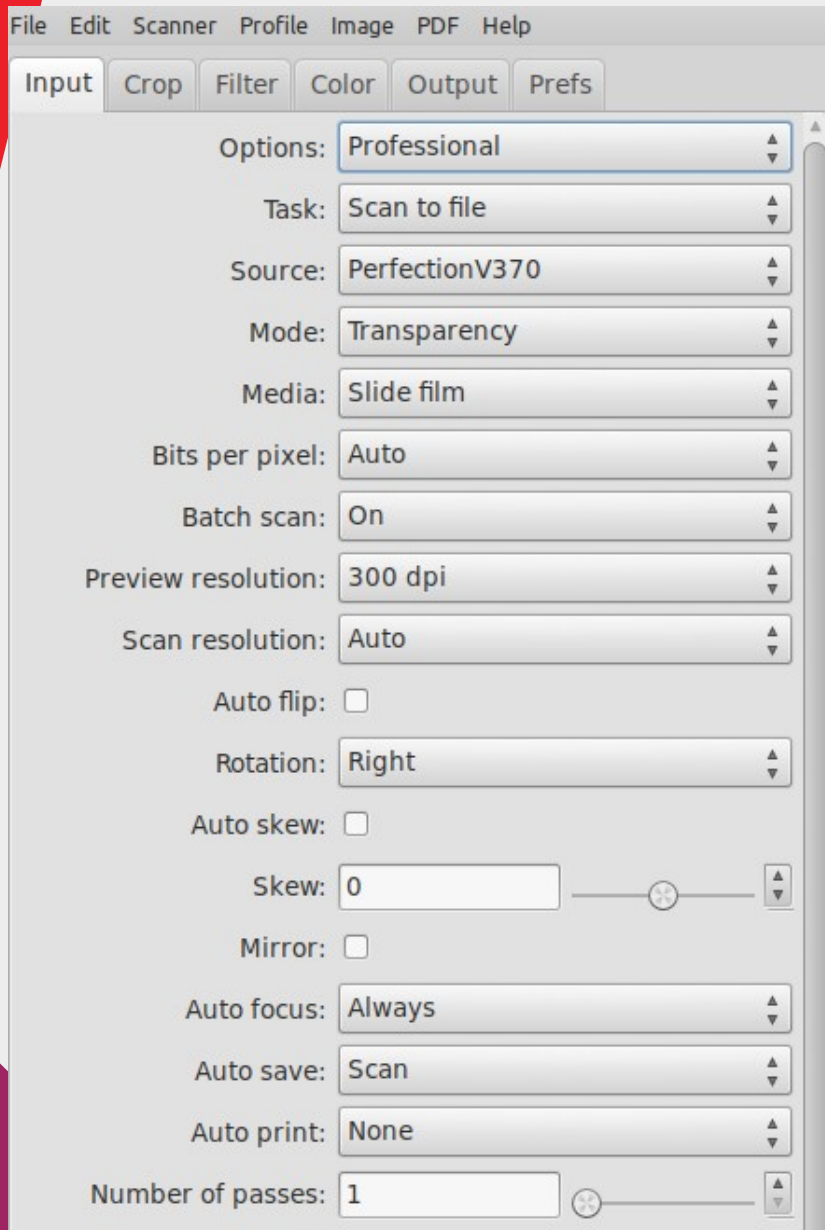
Scanning Process (2)

- Configure VueScan: batch processing, destination folder, auto file naming, cropping, output format (e.g., jpeg), resolution
- Note: automatic cropping for 35 mm slides only; manual otherwise
- Note: you can ask for automatic color correction, but it may be more efficient to do this using digiKam
- Do a preview scan (and adjust cropping and/or color adjustments as desired)
- Scan!

Scanning Process (3)

- Review the four resulting images using your image viewer and correct any left/right or up/down issues
- Copy these to a destination folder
- Repeat until your current set of slides is done.
- Back up the results on a separate medium (e.g., drive)

Configuration - input



Configuration – Crop

Input Crop Filter Color Output Prefs

Crop size: Manual

X size: 31.724

Y size: 38.375

Auto offset:

Multi crop: 35mm Slide

Show multi outline:

Auto rotate:

Lock aspect ratio: Off

Border (%): 0

Buffer (%): 8

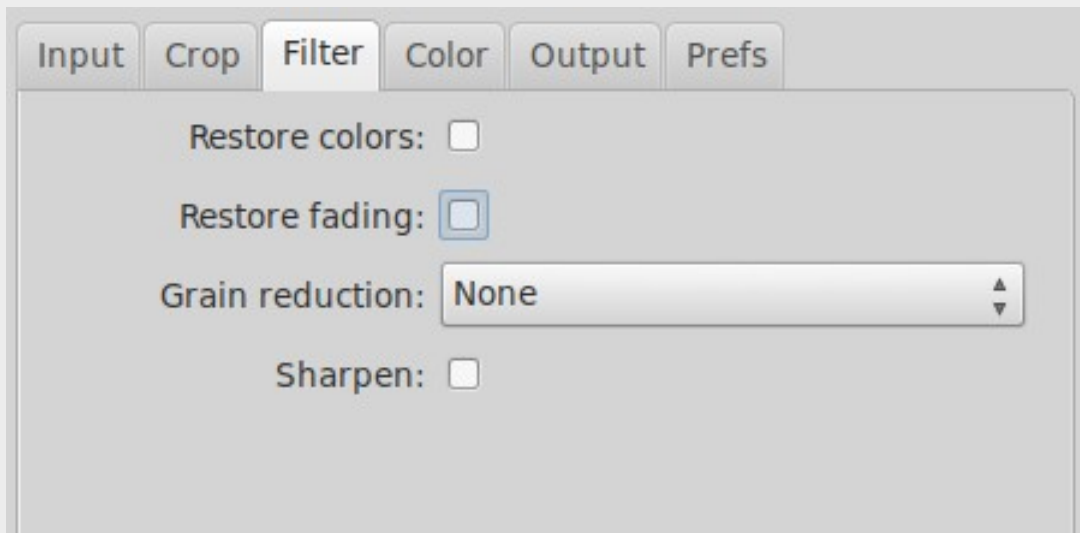
Preview area: Default

Default options:

Example shown is for a non-standard 2x2 slide that required manual crop area adjustment.

For standard 35 mm slides, crop size should be set to “auto.”

Configuration - filter



You can correct various problems here. For example, you could address fading here.

I eventually elected to do fading correction in large batches using digiKam.

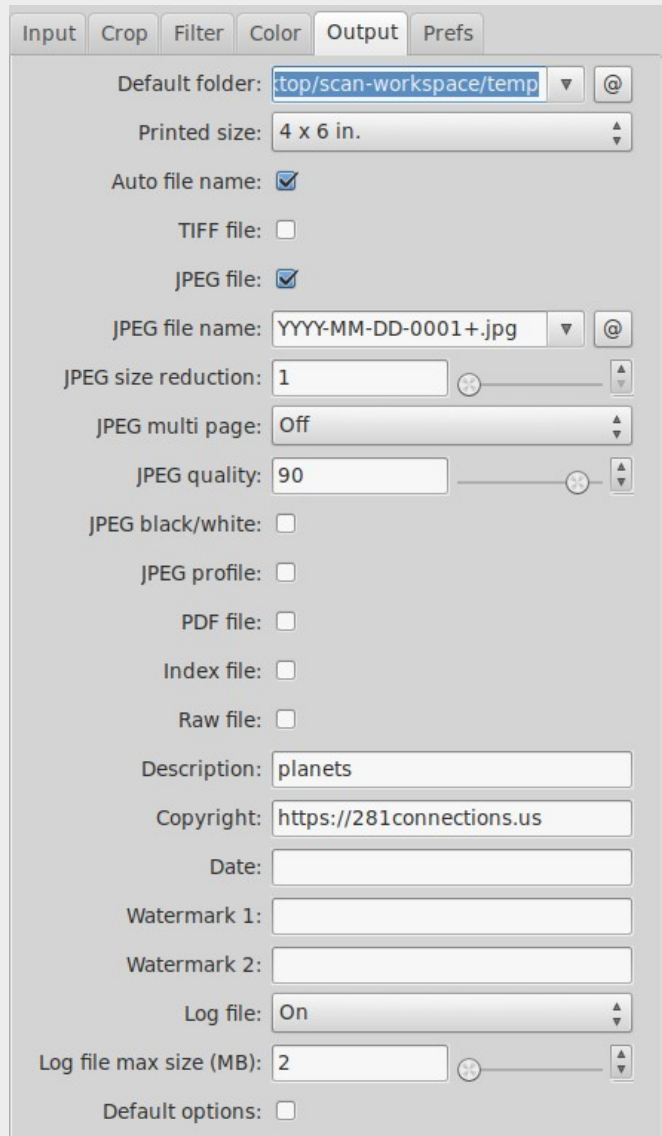
Configuration - color

The image shows a software configuration window with several tabs: Input, Crop, Filter, Color, Output, and Prefs. The 'Color' tab is selected. The settings are as follows:

- Color balance: Neutral
- Black point (%): 0
- White point (%): 1
- Curve low: 0.25
- Curve high: 0.75
- Brightness: 1
- Brightness red: 1
- Brightness green: 1
- Brightness blue: 1
- Slide vendor: GENERIC
- Slide brand: COLOR
- Slide type: SLIDE
- Scanner color space: Default
- Printer color space: sRGB
- Film color space: Default
- Show IT8 outline:
- Output color space: sRGB
- Monitor color space: sRGB
- View color: RGB
- Pixel colors:

Standard neutral setting(s) worked well.

Configuration - output



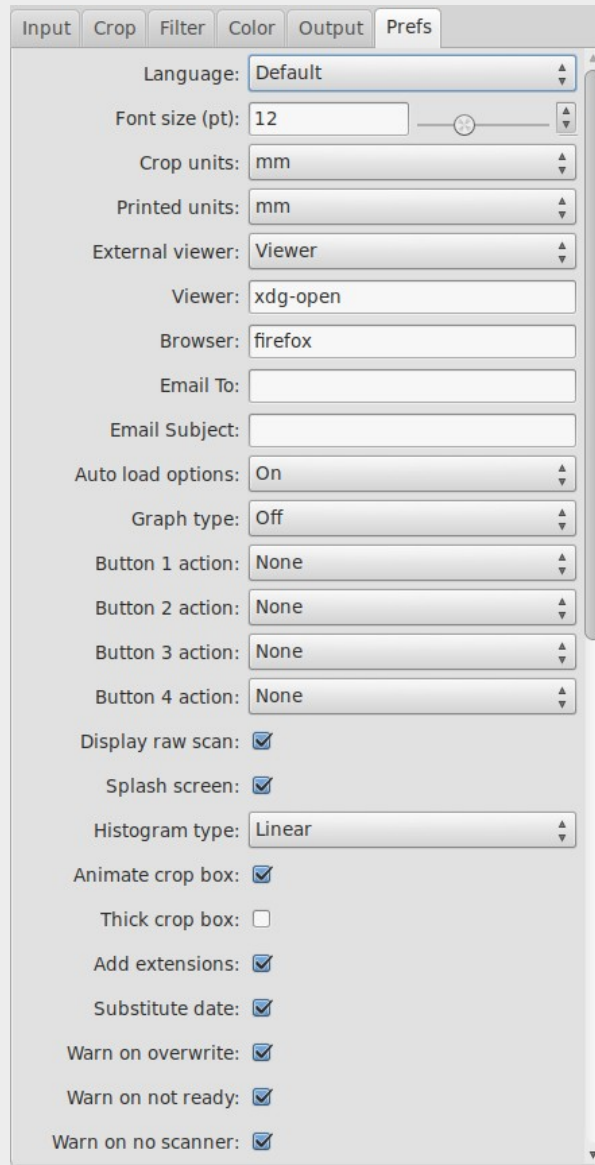
Define the folder where you want the scan results to be put.

I used auto file naming & used the default format shown here. (date plus a number)

Output format set to jpeg.

Use description & date & copyright fields if you want, but these can be changed in digiKam.

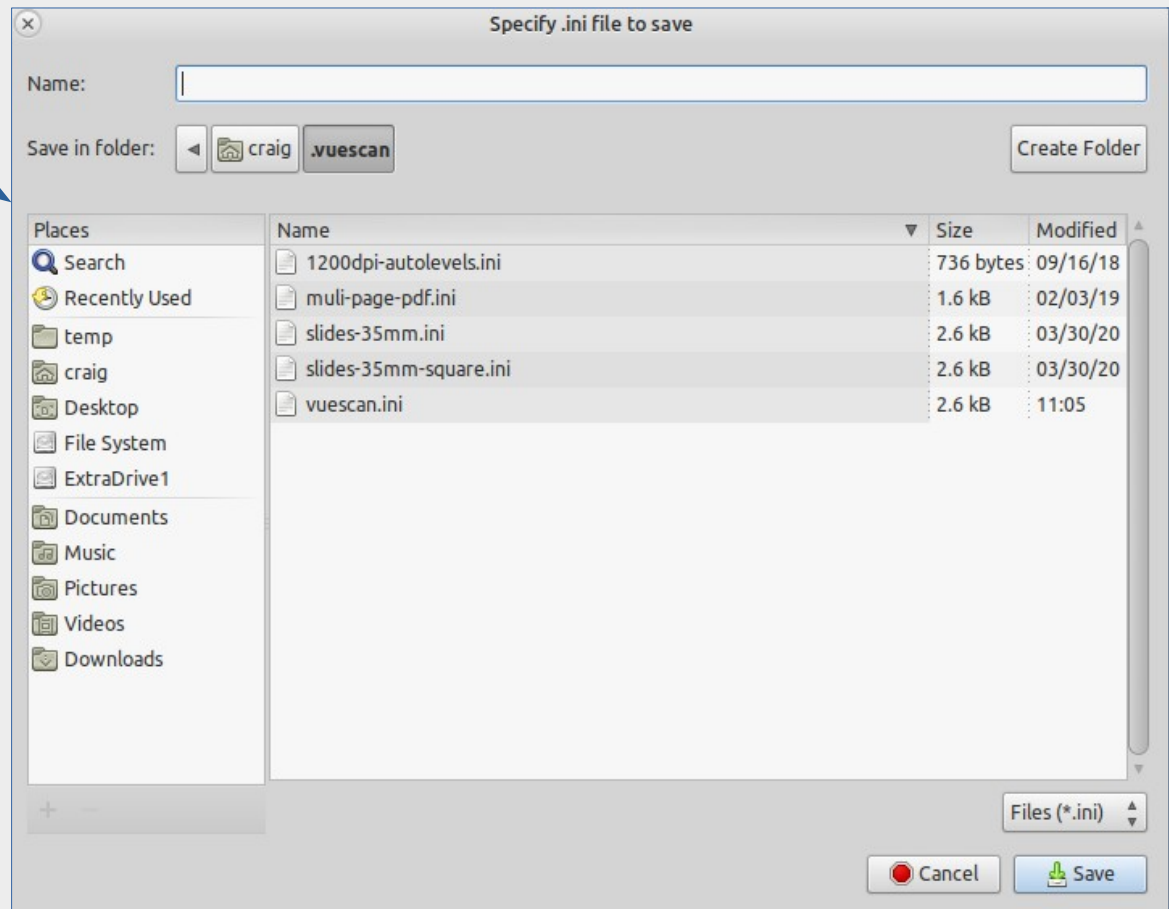
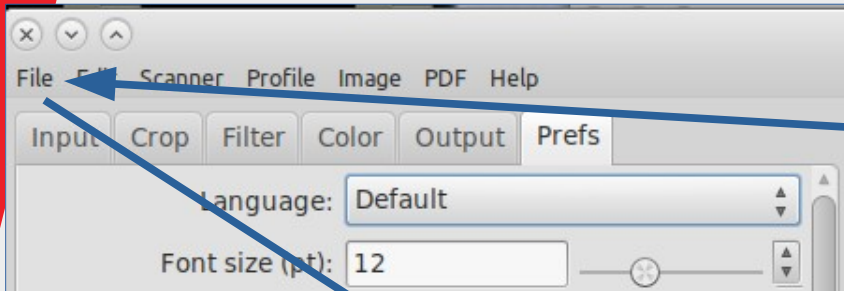
Configuration - prefs



I chose the system defaults.

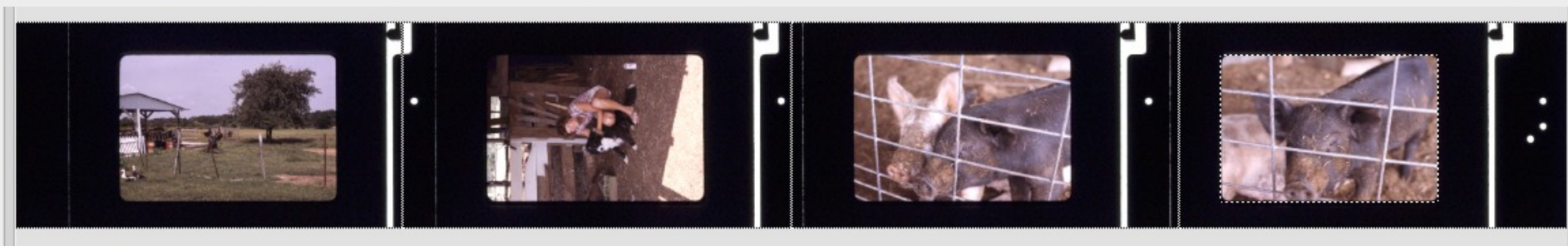
SAVE options settings!!!!

Use file menu to find way to save options that you have just set.



Preview

Preview scan is used to make sure all looks well, to adjust the crop window, and to decide on filter options (if you use them).

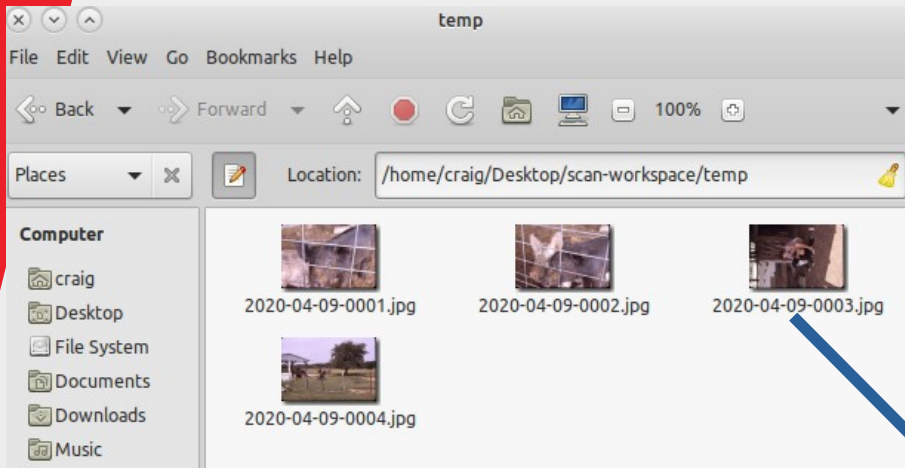


Scan

When you click the scan button, each slide is scanned in order automatically and saved.

You may notice that for each slide there is a calibration phase and then the final scan, after which the final image is revealed.

Review



Use your local image viewer to double-check the results and to correct rotation problems.

Save

- Move images to folder named for the batch that you are working on
- Move that to its final destination (in this case, the “presentation” folder)
- Do a backup to another medium (using a utility like grsync)
- You now have two copies of your work and a clean workspace

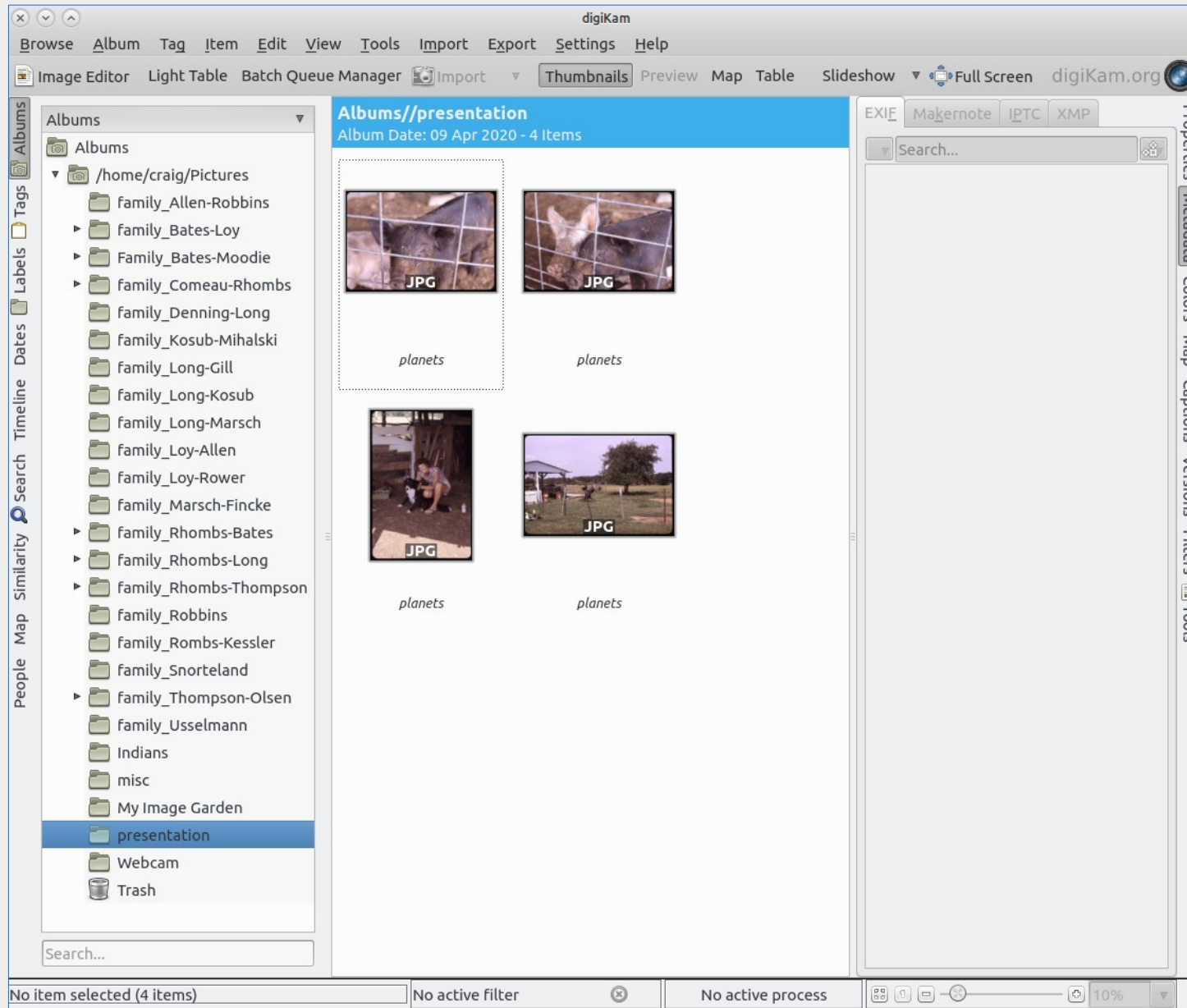
DigiKam Batch Processing (1)

- Note: NEVER work on original files; always work on copies unless you like working without a net
- Auto-correct colors that have changed with time
- Add metadata values (requires the creation of a template, which is easy)
- Demo using digiKam

DigiKam Batch Processing (2)

- Navigate to a folder of images
- Select the ones that you want to modify
- Define a workflow (and save it): e.g., auto color correction, add metadata, over-write the original image(?), etc.
- Execute the batch processing on the selected group.
- Repeat for every folder or select images in multiple folders at one time until done.
- Backup (again!)

Navigate to images



Batch Workflow

1

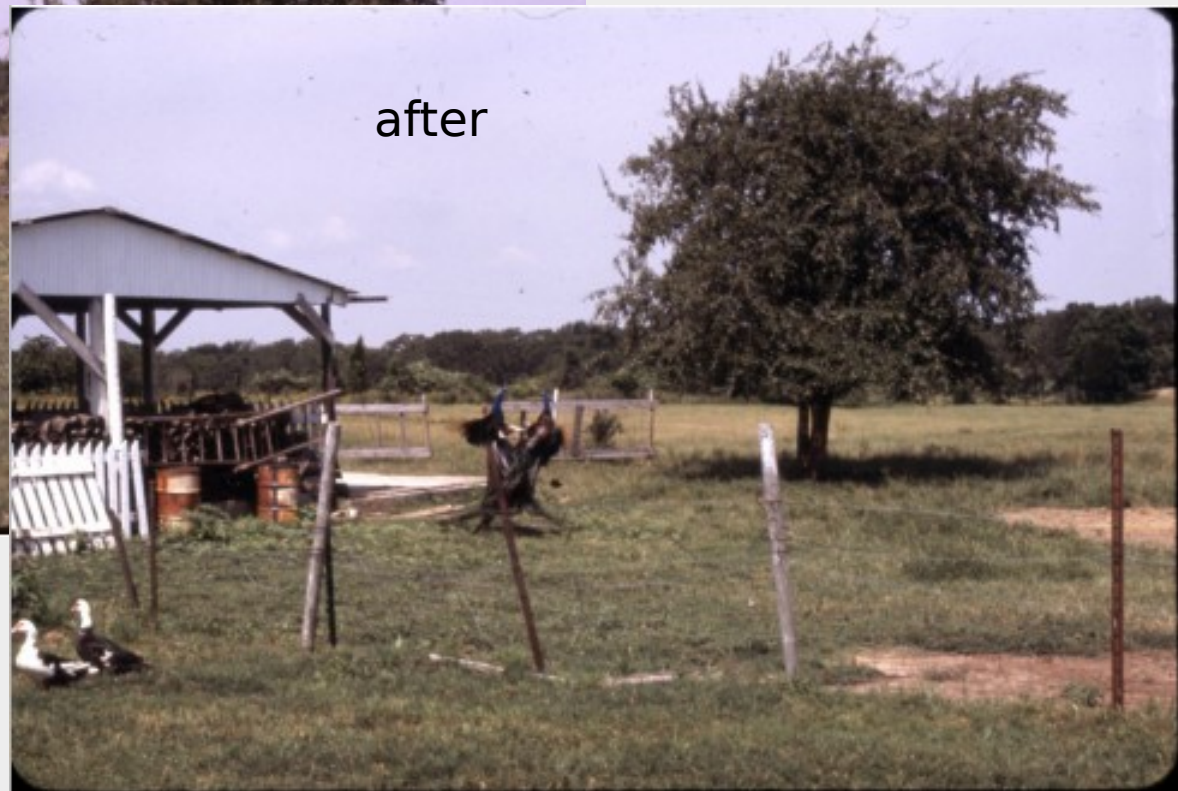
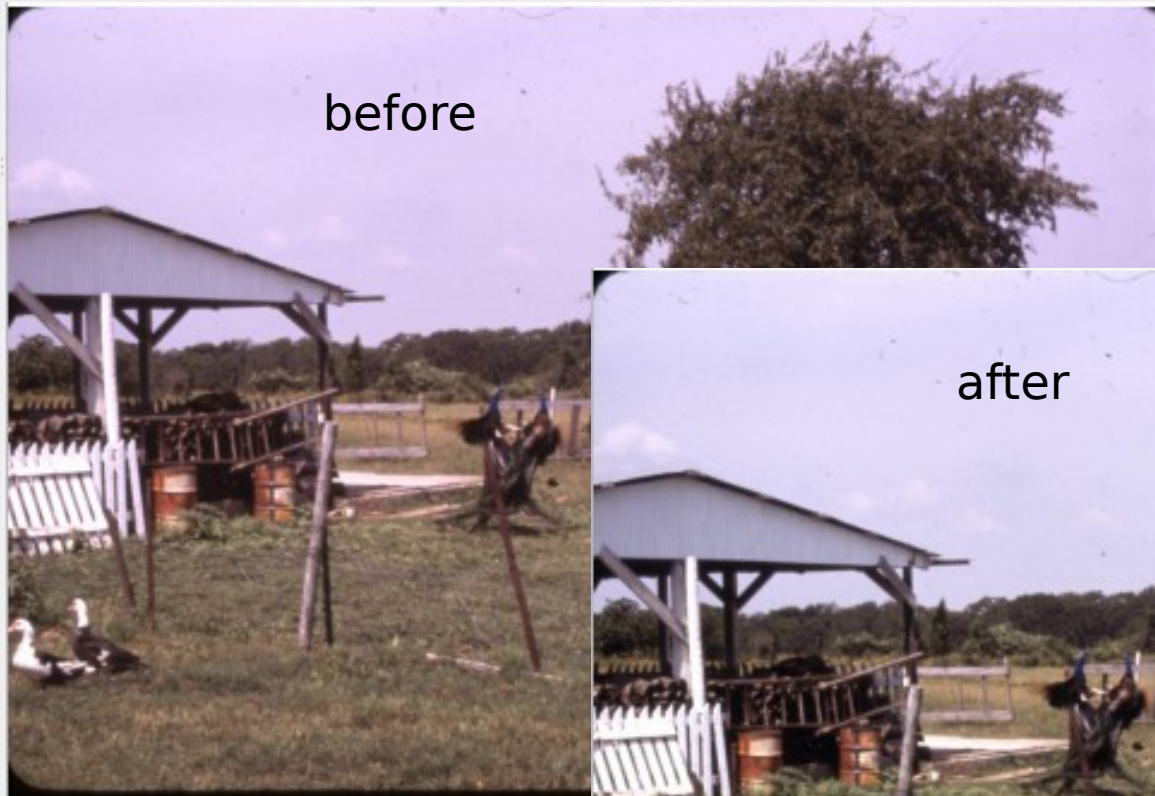
The screenshot shows the digiKam Batch Queue Manager interface. A red arrow labeled '1' points to the 'Edit' menu item in the top menu bar. The interface is divided into several panels:

- Alarms**: A sidebar on the left showing a tree view of folders under '/home/craig/Pictures'. Two folders, 'planets', are highlighted in blue.
- Alarms//presentation**: A central panel showing a preview of a photo with a grid overlay, labeled '1 planets'.
- Batch Queue Manager**: The main window with a menu bar (Queues, Tools, View, Settings, Help) and a toolbar (Run, Run all, Stop, New Queue, Remove Queue, Remove items, Move up, Move down). Below the toolbar is a table with columns 'Thumbnail', 'Original', and 'Target', containing four rows of image thumbnails and their corresponding file paths.
- Assianed Tools**: A panel on the right showing a list of tools: '1 Color Auto-correction' and '2 Apply Metadata Template'. A red '4' is placed over this panel.
- Tool Settings**: A panel on the far right showing settings for the 'Apply Metadata Template' tool, including a dropdown for 'Template: Base-cgr', a 'Rights' section with 'Names: Craig Rhombs', and fields for 'Position' and 'Credit'. A red '5' is placed over this panel.
- Queue Settings**: A panel at the bottom left with tabs for 'Target', 'File Renaming', 'Behavior', and 'Raw Decod'. It contains options for 'Raw Files Loading' (perform RAW demosaicing or extract embedded preview) and 'If Target File Exists' (store as a different name or overwrite automatically). A red '2' is placed over this panel.
- Control Panel**: A panel at the bottom right with tabs for 'Base Tools', 'Workflow', and 'History'. The 'Workflow' tab is active, showing a list of tools under 'Convert' and 'Metadata'. The 'Apply Metadata Template' tool is highlighted. A red '3' is placed over this panel.

Note: (1) files selected & batch manager invoked, (2) queue settings, (3) control panel, (4) workflow assigned tools, and (5) tool settings.

Execute and Check Results

Click “run” and inspect the results.




Repeat

- Backup results
- Repeat until you are done

Saving the Originals

- UMN suggestions:
<https://sites.google.com/a/umn.edu/preservation-resources/saving-your-personal-treasures/preservation-survey-results>
- Photo boxes, polypropylene sleeves, etc.
- Digital media need periodic attention to deal with physical aging and technological obsolescence
- Consult with a library archivist
- Don't save everything (ouch!)
- Who gets all this when you are gone?

Sharing the Results

- Using Google Photos (approach/avoidance) 
- Be mindful of privacy when sharing
- Log on and open “photos” in browser
- Optionally configure “photos” for free storage
- Create a shared album, name it, select processed photos, drag & drop them into the album
- Modify sharing options as appropriate; get link to album & save it
- Share link, not the photos themselves

Facial Recognition

- “Googs” is going to do this automatically!
- Your job is to add names and correct the results.
- You can define an album dedicated to pictures of a person if you want
- Share link(s) as appropriate

On-line Google Photos Demo

The image displays a browser window with the Google Photos interface. The main page shows a search for "hiking" with a "Yesterday Work" album highlighted. A red dashed arrow points from the search bar to the "Settings" panel on the right. Another red dashed arrow points from the "Yesterday Work" album to a second browser window showing the "albums" page. This second window shows a search for "Wyoming" and a grid of albums, with a red dashed arrow pointing to the "People &..." album category.

Settings Panel:

- UPLOAD SIZE FOR PHOTOS & VIDEOS
- Original (11.1 GB left)
Full resolution that counts against your quota
- High quality (free unlimited storage)
Great visual quality at reduced file size
- [Buy 100 GB for \\$1.99 / month](#)
- [Recover storage](#)

Albums Page:

- Search: "Wyoming"
- Categories: Favorites, People &..., Places, Things, Videos, Collages, Animations, Movies
- ALBUMS
- For you
- Sharing
- Print store
- Buttons: Create album (+), Add (+)
- Albums list:
 - 1968-72-vanderbilt-TN (42 items · Shared)
 - 1972-grandtour (106 items · Shared)
 - 1970-79-assorted-SD (64 items · Shared)
 - 1968-72-appalachiantrail-GA-... (56 items · Shared)





The image features a vibrant, abstract geometric composition. It consists of several overlapping triangles in various colors: a large red triangle in the upper left, a bright orange triangle in the upper right, a yellow triangle in the middle right, a teal triangle in the lower right, a dark blue triangle in the lower left, and a purple triangle on the left side. These triangles are separated by thin white borders. In the center, a white, irregularly shaped area contains the word "End" in a simple, dark grey, sans-serif font.

End