Photo sharing for engineers

Agenda

Requirements analysis & tool selection

Process flow

Why "for engineers"?

- metadata, codecs, and Python scripts!

What are you doing now?

Initial conditions

Google Photos

- AWS Lambda to copy photos from an album via API to S3
- running low on (free) space
- tools for deleting old photos are painful to use; not supported through API

Apple Photos

- 2TB family share storage
- but hard to break photos out of Apple island

Amazon

- free photo storage with Prime
- previously: only uploaded a few at a time for prints

Dropbox, Flickr/SmugMug: $8-$10 month; evaluate if one of these doesn't work

Requirements: collect photos

- 2 iPhones
    - get photos from phones automatically
    - need an app to sync somewhere
- waterproof camera
    - copy photos from SD card
    - infrequent
- local file (not just online)
- full size, full metadata

Requirements: collect photos

- ✔️ Amazon Photos app on phone and Mac
  - phone uploads to Amazon storage, Mac downloads to filesystem
  - renamed with timestamp: 2021-09-14_15-33-05_489.jpeg
  - but what about the other iPhone?
- Apple
  - phones sync to iCloud family share
  - so private you can't even see your own stuff!
  - manual: Export unmodified original

Requirements: select photos to keep

- monthly review
- quick and easy: no upload/download, lots of clicking, etc
- keep about 30%
- delete others after a while (2 years?)

Requirements: select photos to keep

[ACDSee Photo Studio for Mac](#) (already using)

- "No uploading or importing your images" - works with filesystem
- Manage view - thumbnail grid
- Single photo with metadata, filmstrip navigation
- Metadata editing
- Photo editing

Requirements: share photos

- limited audience share
  - all kid pictures with Grandmas; subset with friends and extended family
  - Apple, Android, Windows; non-technical
  - full size for prints
  - ok: go to this website, create an account
  - not ok: get an iPhone, use these AWS keys
- public share
  - social media
  - trips website (security through obscurity)

Requirements: share photos

- ✔ Amazon Photos invite to album
  - accept share, view in browser
- Apple shared albums
  - dealbreaker: only available on iOS devices
  - or publish to web (public)
- trips website: static site hosted on S3 (already doing)

Sidebar: if the product is free…

"what began in 2013 as another cloud storage app has pivoted toward a far more lucrative business known as Ever AI — without telling the app's millions of users."

"Ever AI promises prospective military clients that it can "enhance surveillance capabilities" and "identify and act on threats." It offers law enforcement the ability to identify faces in body-cam recordings or live video feeds."

California Company Settles FTC Allegations It Deceived Consumers about use of Facial Recognition in Photo Storage App

January 11, 2021

[NBC News story](#), [FTC press release](#)

Requirements: archive good photos

- long term offsite storage
- only good photos
- easy to add
- about 18GB now
- consistent file naming conventions
  - year
  - year-destination
- original file size, full metadata

Requirements: archive good photos

- ✔ AWS S3 Standard - Infrequent Access
  - $0.0125 per GB, $0.01 per GB retrieval
  - Aug 2021: $0.40
  - copy from filesystem: `aws s3 sync local s3://bucket`
- Apple iCloud
  - 2TB family share $9.99/mo
  - add to "keep" album outside of Photos???
- Amazon Prime
  - free unlimited photos, 5GB video
  - auto sync with Amazon Photos Mac app

Requirements: clean up cruft

- delete photos that are bad, no longer needed, etc
- don't want to pay to store bad photos indefinitely
- automate based on age
  - start with delete > 2 years old

Requirements: clean up cruft

- ✔ Amazon Photos sync is 2 way
  - delete from local file system deletes from Amazon Photos site and phone app
  - timestamp file naming makes it easy to delete by date
- ? Apple iCloud
  - not all-in on Apple, this is too hard

Process flow

- Amazon Photos app sync photos from phone to Mac.
- Review photos with ACDSee and add a rating to the good ones.
- Copy rated photos to `~/Pictures/sync` directory.
- Share, archive, and clean up with a python script:
  - Standardize filenames to `datetime-index.ext`
  - Move to `~/Pictures/amazon-keep/`*year* to sync to Amazon Photos album.
  - Sync to `s3://`*photos-bucket*`/`*year* for archiving.
  - Delete photos over 2 years old from `~/Pictures/amazon-phone`

LivePhotos

3 second video clips stored as .MOV

Sync to iCloud but not other photo apps

Break these out of Apple island

- download to Mac with [icloudpd](#)
- re-encode to mp4, drop audio (now they'll play from HTML)
- flatten directory and add timestamp
  - 2021/09/09/IMG_3669.MOV -> 2021-09-09_3669.mp4
- review with [VLC](#)
- share, archive like photos