



Preserving Digital Photos



Mark Schulman

The Promise of Digital Photography



The Way Things Used to Be



Rise of Digital Photos



- 2002 Digital cameras outsold film cameras
- 2004 Kodak announced it would no longer sell film cameras in developed world
- 2006 Nikon stops production of all but two models of film camera



Rise of Digital Photos

2010 World-wide camera phones exceeds
1 billion

2023 4.4 billion camera phones worldwide



Advantages of Digital Photos

- Costs almost nothing
- Easy to take thousands of photos
- Can make unlimited perfect copies
- Editable
- Huge capacity
- Can last forever
- Will never fade, smear, or tear

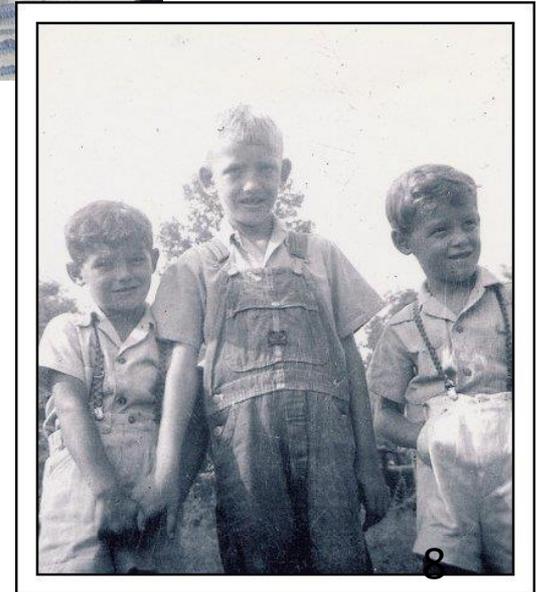


The Downside

- Intangible
- Millions of digital photos are taken every day ... but ...
- Countless digital photos are **lost** every day
- Most people don't know how to preserve them



The Box



Something to Think About



Our family history
ended the day we got
a digital camera.

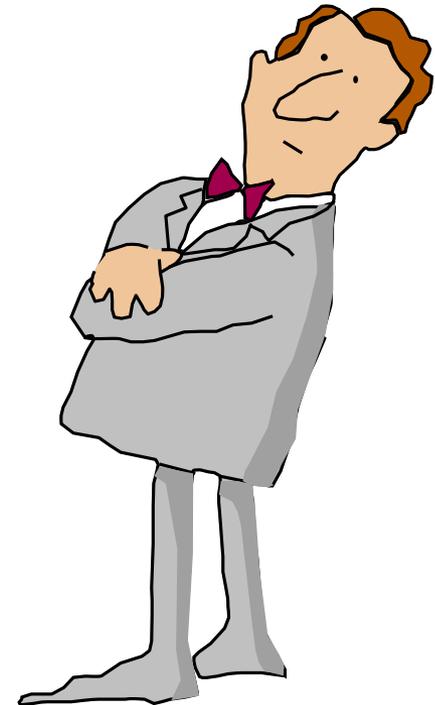


Preserving Your Photos



You want to make sure that ...

- your photos survive
- your photos are identifiable
- your photos are found



Making Sure Your Photos Survive



Copies Copies Copies!



- Your photos should never exist in only one place
- All hard drives eventually fail
- Easy to erase accidentally



Hard Drive Failures

- Test performed by BackBlaze.com:
 - Data center with 41,213 hard drives
 - Some drive models had a 26% annual failure rate

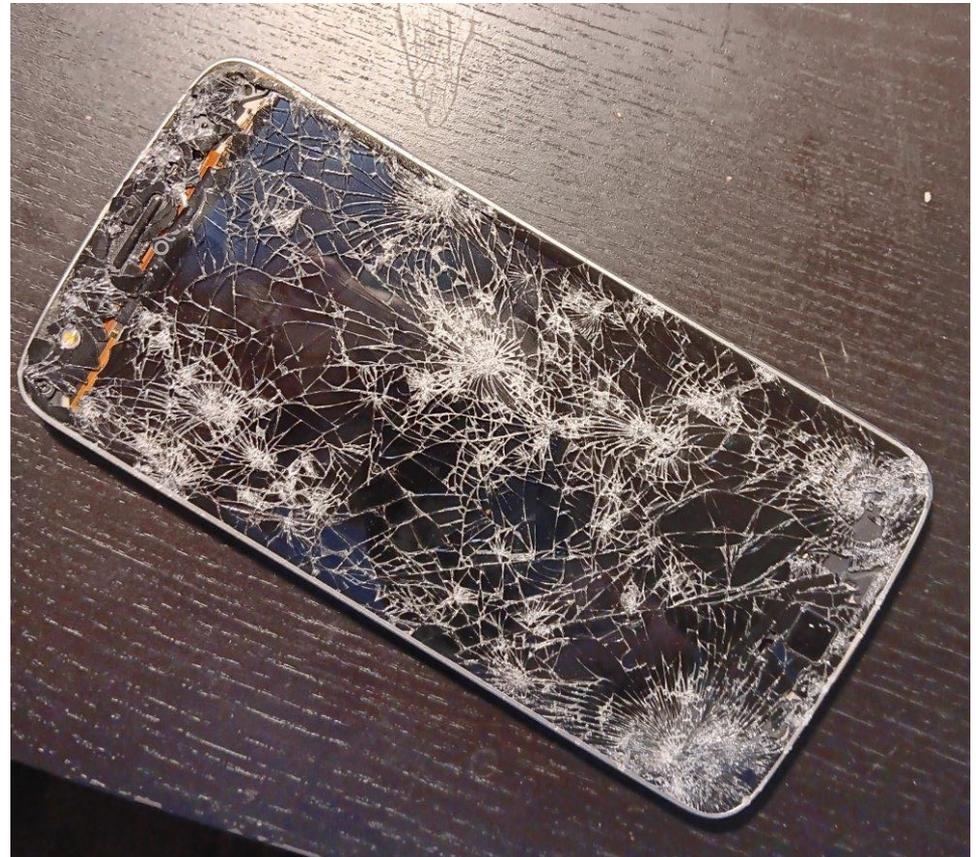


<https://www.backblaze.com/blog/best-hard-drive/>



Photos and Phones

- Phones have the only copy of many peoples' photos
- Millions of phones are lost, stolen, or broken each year



But Copy Onto What?

- Must physically last a long time
- Someone must be able to read it
- Reasonable size



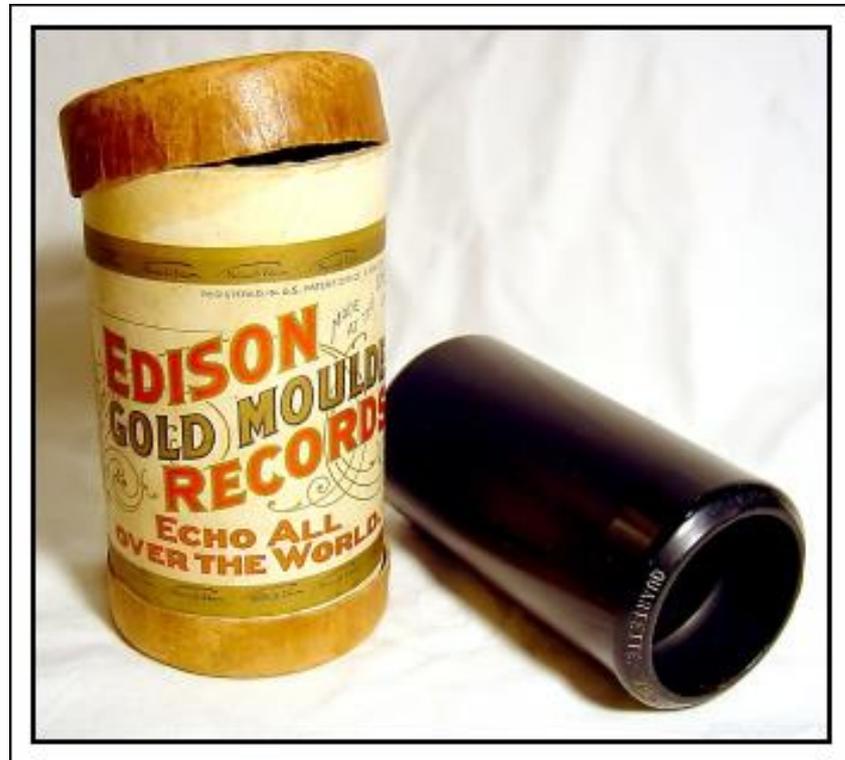
But Copy Onto What?



What Will Survive?

100 years from now ...

- What will physically survive?
- What will people be able to use?



We Thought They'd Last Forever



Poor Choices



Memory cards (limited life)



Flash drives (limited life)



Diskettes (obsolete)

The Right Track

- Good quality CDs or DVDs



Missing Optical Drive?

... but wait ...



?????

Optical Drive



External CD/DVD Drive for Laptop USB 3.0 Portable CD DVD +/-RW Burner DVD/CD Player or ROM Reader Rewriter Writer Disk Drive Compatible with Laptop Desktop PC Windows Apple Mac Pro MacBook Linux

[Visit the Rioddas Store](#)

4.3 ★★★★★ 35,746 ratings | 1000+ answered questions

~~39%~~ **\$19⁹⁹**

List Price: \$32.00

✓ **prime** One-Day

FREE Returns

Thank you for being a Prime member. Get a \$125 Gift Card: Pay \$0.00 upon approval for Prime Visa. No annual fee.

May be available at a lower price from other sellers, potentially without free Prime shipping.

Size: **USB 3.0**

Style: **USB 3.0 USB-A**

The Right Track

- Good quality CDs or DVDs



**CD-R
DVD-R
DVD+R**



**CD-RW
DVD-RW
DVD+RW
DVD-RAM
Blu-Ray**



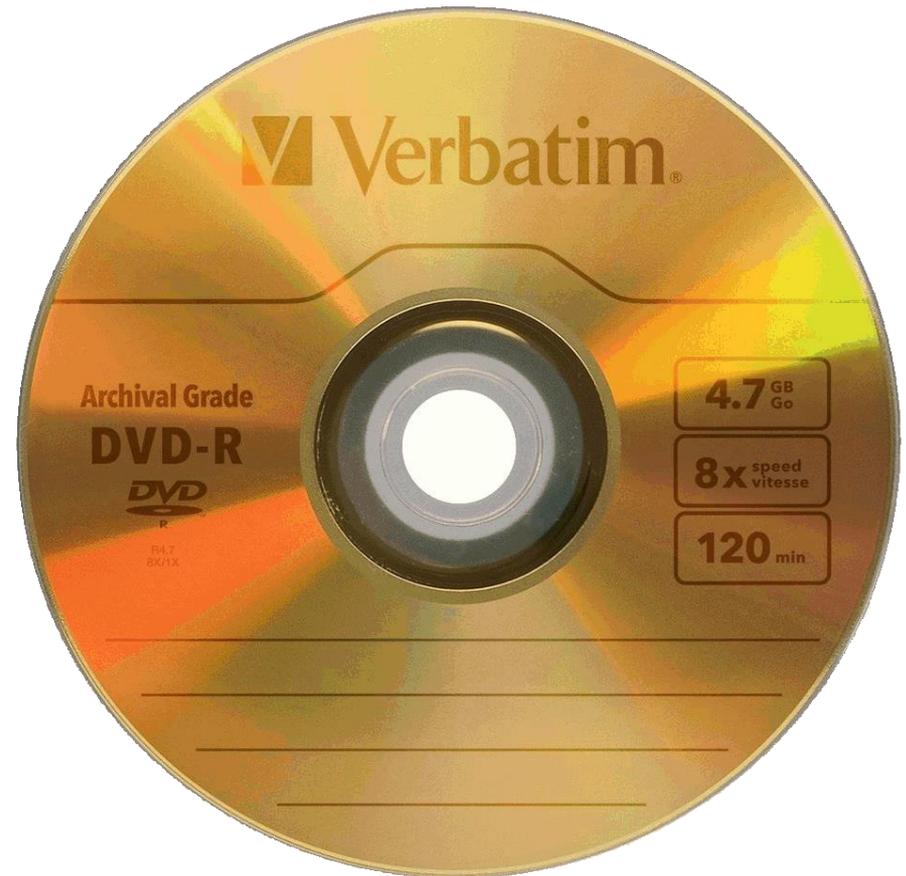
What Can Go Wrong?

- Aluminum reflective layer corrodes
- Dye degrades
- Physical damage



Archival CDs & DVDs

- Reflective layer is gold instead of aluminum
- Special long-lasting dyes
- 100+ years (?)



Archival DVDs

Verbatim UltraLife Gold Archival DVDs
5-pack with cases - \$12.07 on Amazon



Help Your CDs & DVDs Survive

- Store in a cool, dry, dark place
- Store in plastic cases
- Label the cases
- Don't write on the discs
- Don't use stick-on labels
- Buy name brand (JVC, TDK, Memorex, Maxell, Verbatim, Sony, others)

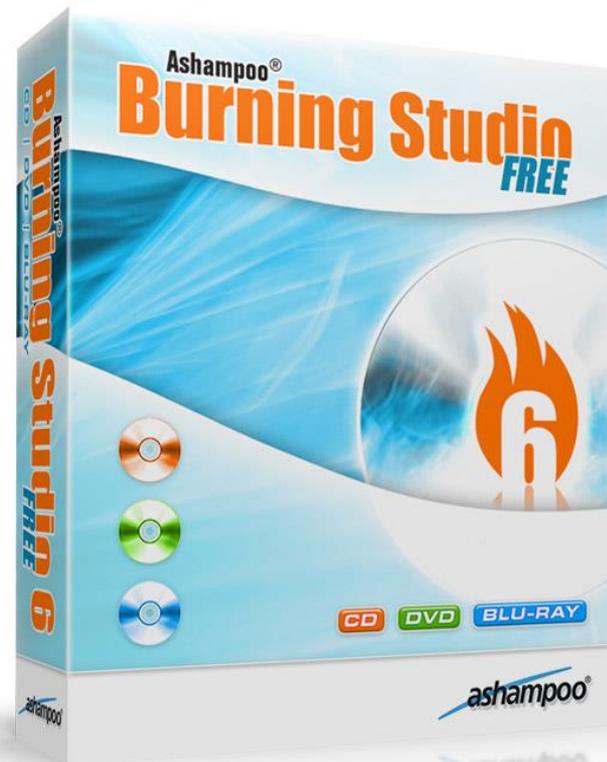


Make Copies!

- You can make endless perfect copies
- Keep copies elsewhere (work, friends)
- If you don't know how to make CDs or DVDs, learn!



What I Use



www.ashampoo.com

Other Option: External Hard Drives

- Spinning drive, *not SSD*
- Reliable brand name
- Choose lower capacity
- Stay away from the bleeding edge
- Store in a cool, dry place
- Spin up occasionally



External Hard Drives - What I Use

Western Digital Elements HDD

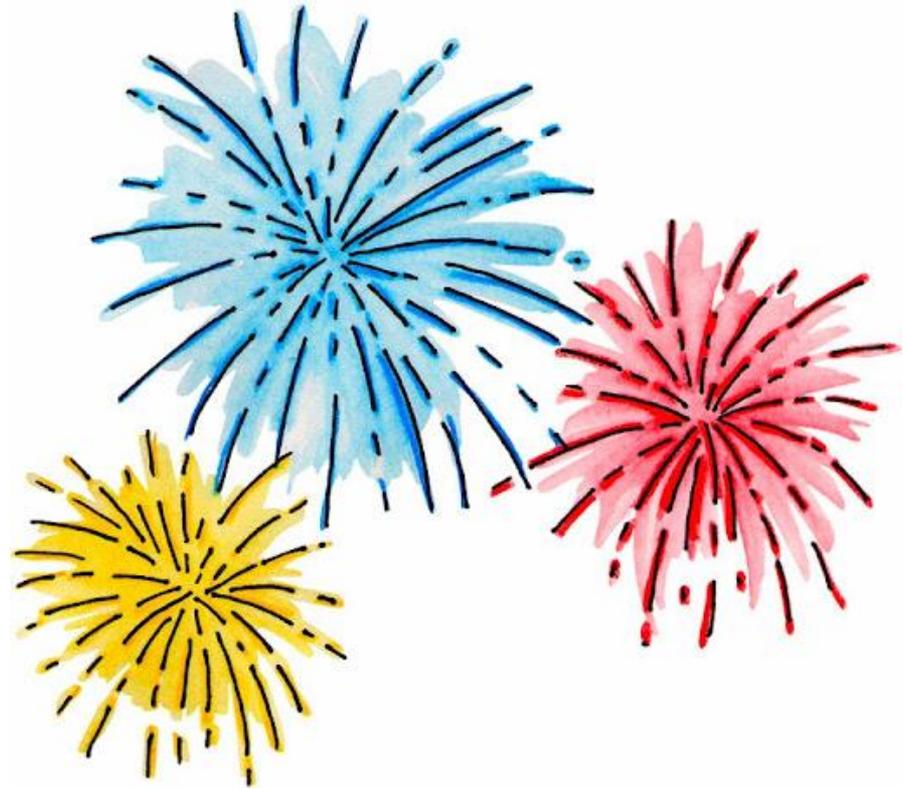
Amazon:

1 TB	\$54.99
2 TB	\$69.61



A New Years Tradition

- Copy DVDs and send copies to friends and family
- Spin up hard drives



Online Services



- Great for sharing photos
- Good for “yet another place” to store your photos
- Don’t count on them as permanent storage - not a backup service

Printed Photos

- How long do printed photos last?
 - A. It depends
 - B. Nobody knows



How Long will Prints Last?



In 20, 50, or 100 years,
we'll know what really
worked and what
didn't ... but until then
all we can do is guess.



— **Richard Seiling**

Photographer and owner of West Coast Imaging

Our Best Guess



Color prints and negatives	40 years
Inkjet photos under ideal circumstances	75+ years
Most inkjet photos	< 5 years



Making Prints Last

- Good photo printer
- Manufacturer's ink
- Premium photo paper (not fast dry)
- Keep out of direct sunlight
- If displayed, keep under glass

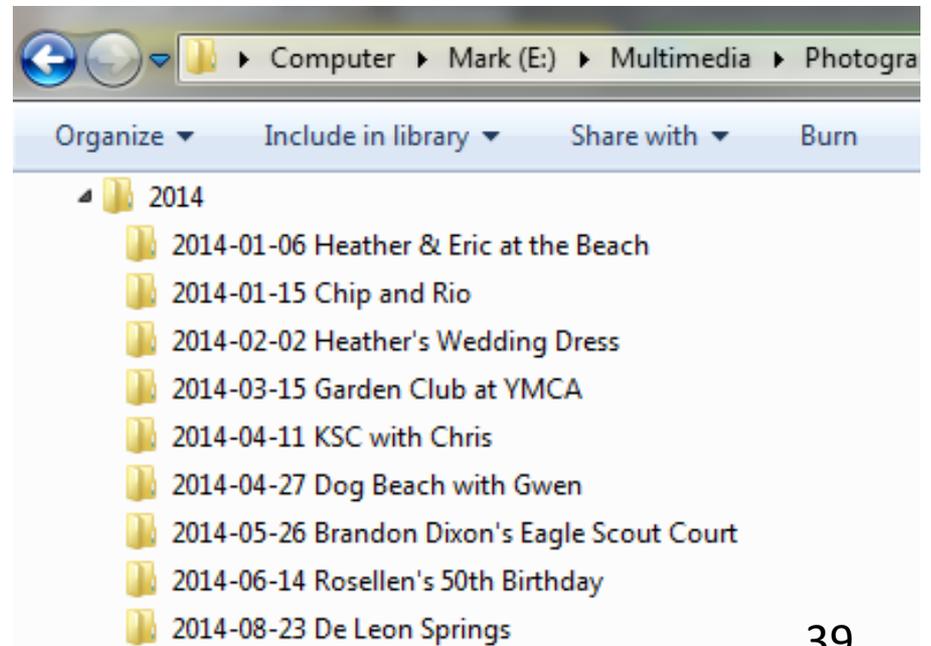


Making Sure Your Photos are Identified



Identifying Your Photos

- You can't write on the back of a digital photo
- Organize your photos into meaningful folders



Identifying Your Photos

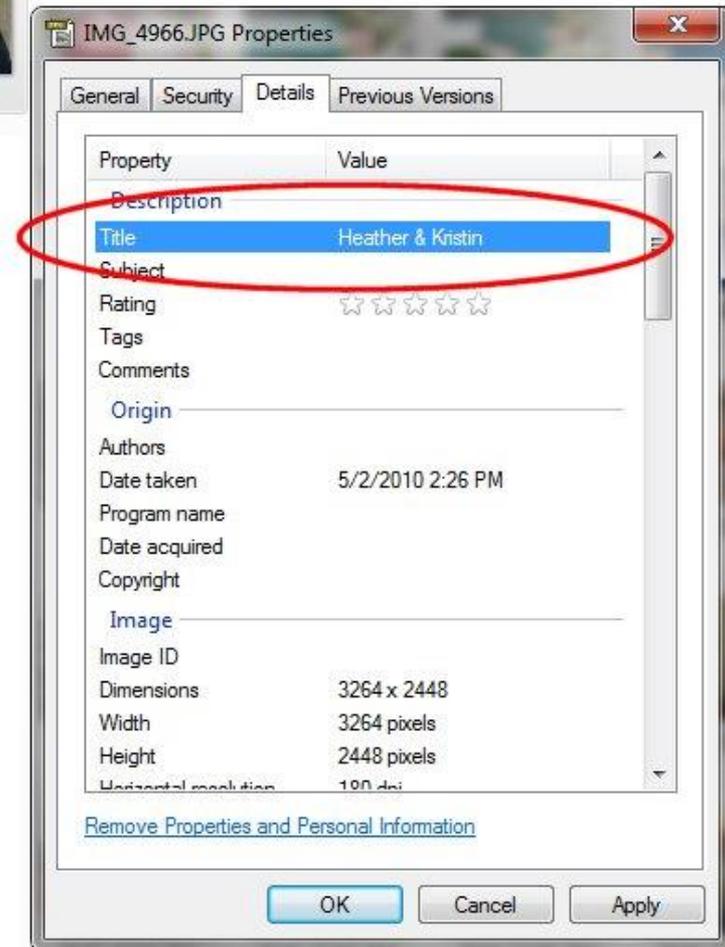


- Use Notepad (or something similar) to create text files with information about your photos
- Don't rely on Word documents or photo-organizing software

```
21 May 2021.txt x
1  IMG_5301.JPG
2  Aunt Millie on her birthday.
3
4  IMG_5302.JPG
5  Uncle Josh shows us his new company car.
```

Additional Option: EXIF* Data

- Embedded in the JPG file
- Can't be accidentally lost
- Obscure - might not be found



*Exchangeable Image File

Making Sure Your Photos Are Found



Losing Digital Photos



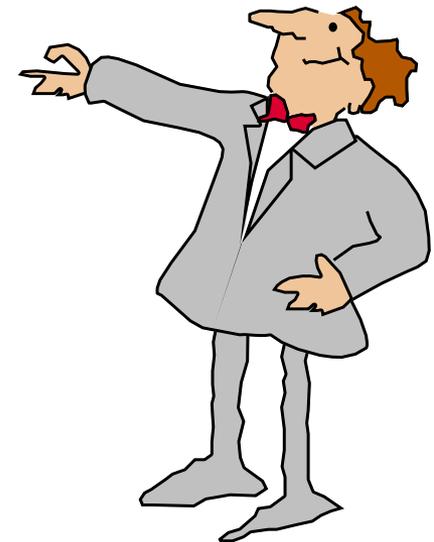
- Digital photos don't stand out like a box of printed photos does
- Photos stored only on your computer's hard drive are easy to lose
- An individual CD or memory card is too easy to miss



Make Your Photos Findable



- Put CDs, DVDs, and hard drives of photos with your important papers
- Tell people where they are, especially kids
- Label hard drives and CD/DVD *cases*
- Key point: Make sure people realize what they've found



Create a Book

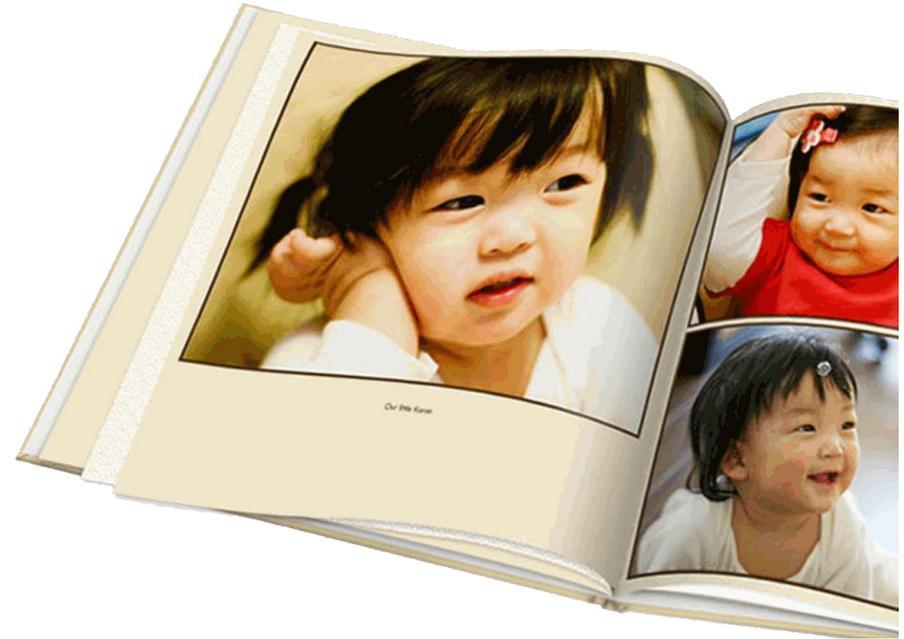
Create a photo book ...



... and put your DVD in the back of the book

A Few Book Publishers

- blurb.com
- shutterfly.com
- mixbook.com
- Pinhole Press



Deluxe hard-cover book with Groupon: \$10
+ shipping

Less Expensive ...

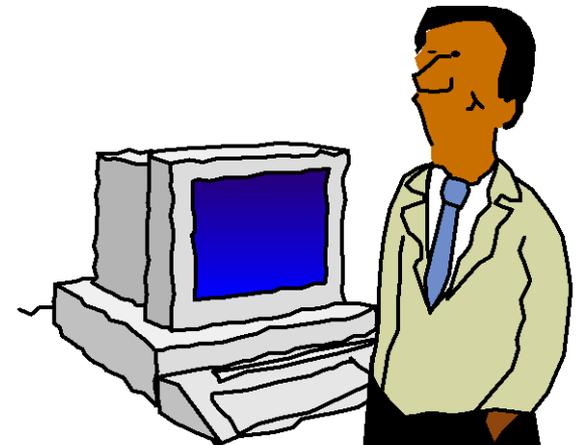
- Print a selection of photos and make a photo album
- Put your CD/DVD in the back



The Family Archivist



- Collects materials from family members
- Makes sure lots of copies exist
- Makes new “fresh” copies on a regular basis
- Watches for technology changes
 - file formats
 - storage media





Questions?

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