



What Do I Do With All These Family Photographs?

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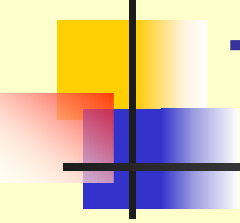
Silicon Valley PAF Users Group
monthly meeting

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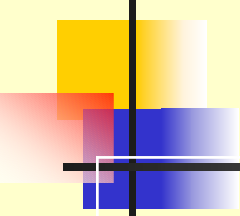
What is a Pixel?

- Basic building block of a digital image
- Pixel = Picture element
- Red, Green, Blue (RGB) values
- Scanner samples photograph at rate measured in dots per inch (dpi)
 - 6-inch photo at 100 dpi = 600 pixels
 - 1-inch photo at 600 dpi = 600 pixels



The 'Cost' of Memory

- Large images consume large memory
- Computers struggle with large images
- Slow and discouraging to use
- Photo detail rarely exceeds 300 dpi
- **6x4-inch photo at 150 dpi = 1.6M**
 $6(150) \times 4(150) = 900 \times 600 \text{ pixels} =$
 $900 \times 600 \times 3 = 1.6 \text{ million bytes (MB)}$



Memory size in Kbytes for
4x6 photo:

	<u>Color</u>	<u>Grayscale</u>
75 dpi	405K	135K
150 dpi	1,620K	540K
300 dpi	6,480K	2,160K
600 dpi	25,920K	8,640K



How Much Resolution?

Use only the amount of resolution you need.

- Computer's resources
- Printer's resources
- Storage issues
- Eventual use
- Genealogical value
- Original photo quality (rarely >300 dpi)

The more pixels you send to the printer,
the more it will discard; it may not
discard them well.

Printer Resolution

Optimal Scan Resolution

300 – 360 dpi printer

60 - 120 dpi image

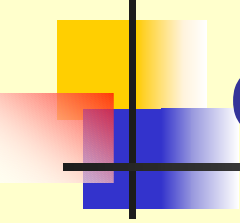
600 – 720 dpi printer

120 – 240 dpi image



Types of Digital Files

- .png (Portable Network Graphics)
- .tif (Tag Image File Format)
- .jpg (Joint Photographic Experts Group)
- .gif (Graphics Interchange Format)
- .bmp (Windows Bitmap)
- .pcx (Windows PaintBrush)
- PICT (Macintosh Quickdraw)



Comparison of File Sizes

■ TIFF	9.9 Mb	master	lossless
■ PCX	9.2 Mb	(~obsolete)	lossless
■ PNG	6.5 Mb	master	lossless
■ JPG	0.5 Mb	Web, e-mail	lossy
■ GIF		graphic art	lossless
■ PICT		Mac only	lossless
■ BMP	9.9 Mb	Windows graphics	lossless



Storage Media

	<u>Size</u>	<u>Images/disk</u>
Hard drive	Varies; limited	Varies/limited
3.5" floppy	1.4 MB	1-2
Zip disk	100 250 MB	50-100 100-500
CD-ROM	650-700 MB	500-1400



Stages of Digital Storage

- Consider the purpose and importance of preserving the photo
- Solution
 - Scan the whole photo for the **master**, and save in **.png** or **.tif** format
 - Crop and edit for printing; save **edited file** as **.png** or **.tif**
 - Save as **.jpg** file to **transmit** and **share** electronically, also **insert** in PAF database

	<u>Storage Needs</u>	<u>Storage System</u>
Master (.png, .tif)	Infrequent Access	Numbered; Database
Permanent Edited (.png, .tif)	More Frequent Access	Numbered; Database
Shared (.jpg)	Frequent Access	Labeled, keyed to Master
Most-Used Images (.jpg, .png, .tif)	Frequent, Rapid Access	Labeled, keyed to Master

	<u>Intermediate Storage</u>	<u>Permanent Storage</u>
Master (.png, .tif)	Hard drive or Zip	CD-ROM
Permanent Edited (.png, .tif)	Hard drive or Zip	CD-ROM (rewritable)
Edited Shared (.jpg)	Hard drive or Zip	Zip, Floppy, CD-ROM
Most-Used Images (copies) (.jpg, .png, .tif)	Hard drive, floppy, or Zip	Hard drive, floppy, Zip, CD-ROM



Planning Storage

- How big is the collection?
- How complicated is the collection?
- What types of images? People? Places?
- How can it be subdivided into manageable folders?
- How will it be accessed?
- Who will use it?
- How will you search and retrieve images?



How Big is the Collection?

- For <100 or <200 images, standard software may suffice (PhotoDeluxe, similar bundled programs) for storage
- Descriptions of images can be managed through numbering system and spreadsheet



Software for Processing and Storing Digital Images

- **Capturing** image (scanner, camera)
- **Editing** image (fixing color, imperfections)
- **Storing** master copy of images
- **Managing** edited versions of images
- **Sharing** images



Software for Capturing Images

- Specifies **type** of file to create, **size**, **qualities** of image
- Typically comes **bundled** with scanner, digital camera, video equipment, etc.
- Examples: “Canoscan” (Canon), “Epson Smart Panel” (Epson)
- Use what manufacturer provides for capturing images



Software for Editing Images

- Often bundled with scanners and cameras (e.g., Adobe PhotoDeluxe Home Edition 4.0)
- Can be purchased separately (e.g., Adobe Photoshop Elements)
- Allows **transformation** from one type of file to another (e.g., .tif to .jpg)



Software for Editing Images (Cont.)

- Provides ways of **altering** or **editing** digital image
 - Size of image
 - Size of file
 - Color, brightness, contrast correction
 - Repair flaws in image
- May create own type of file (.pdd, .psd)
- Has many bells and whistles



Software for Storing Images

- Also manages scanning and editing, perhaps not as well as dedicated software
- Has **search** functions
- Translates digital images into slide shows, Web pages, e-mail
- Not suited for serious archiving
- Suitable for casual use of limited images



Images as Family History

- Software suitable for low-end public use not designed for archiving thousands of images for family history purposes
- High-end archiving software is expensive, designed for medical and scientific applications
- Information **best stored in generic format**, not linked to single application



Building the Database You Need

- Identify information important for family history **documentation**
- Consider genealogical value, not just emotional value
- Collect information about the images

■ Information

- Identifying label (number; grouping optional)
- Type of image (slide, photograph, negative, etc.)
- Date
- Location
- Event
- Photographer
- Repository
- Text
- Description
- Subjects (decide how to list – grouped or individually)



Software for Total Management of Visual Family History

- **Capturing** image (bundled with scanner, camera, digital photo processing CD)
Editing image (bundled; midrange \$20-\$99)
Mac, Windows: Adobe PhotoDeluxe Home Edition, Adobe Photoshop Elements
Windows: Picture It!, MGI PhotoSuite, Jasc Paint Shop
- **Viewing, transforming, exporting** images, storing images
- **Database** (spreadsheet or relational database)
Spreadsheet: Lotus 1-2-3, Excel, Works
Relational database: Access, Foxpro, Approach

Free photo editing software

CNET download site, image editing freeware/shareware

<http://download.cnet.com/downloads/0-10077-100-5236933.html>

Adobe Photodeluxe Business Edition (trial)

<http://www.adobe.com/products/photodeluxebe/demodnld.html>

Photoshop Elements (30-day trial)

<http://www.adobe.com/products/photoshopel/demoregcnet.html>