


Images and Scanning Part 1

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Interesting Genealogy Topics

**Images and Scanning Part 1:
The Poop, the Scoop, and the Skinny**



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Family History Jamboree
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So What Is this About

Everyone wants images in their genealogy documents

- Family Photos
- Historical Documents
- Paper Narratives
- Maps and Charts
- Graphic Treasures

Uncle Charlie

We are going to talk about what you need to know to capture and keep these items

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Agenda





- Introduction
- Scanning: Getting the Dots
- Scanning Machines
- Those Wonderful Images
- Types of Images
- So What about Density
- Fixing Images
- Batting Clean Up




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What is Scanning

Pixel Grabbing

Scanning: Using a device (a scanner) to detect and record the information, arrangement, color, or text characters contained in a document and storing this information in a computer graphics file of some format





→

→


Image Scanner Computer File



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Scanning Is Good for:

“Everybody Needs a Scanner, Sometime”


- Grabbing images to put in documents or on the web
- Adjusting, fixing, editing, or enhancing photos
- Spicing up newsletters and other publications
- Creating lively presentations and other visual aids
- Converting documents into editable text (w/ OCR software)


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Several Types of Scanning Machines




Combo Printer & Sheet Scanner




Book Scanner




Flat Bed Scanner



High-Speed Sheet Scanner



Hand Scanner



Portable Scanner

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How Scanners Work

1. Lay paper on the glass
2. Lights shine and reflects color to sensors on roller
3. Sensors detect the colors
4. Sensors report colors to the Computer
5. Computer creates an image file

Inside the Scanner

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What the Computer Does

1. Operates the Scanner
2. Records the Dots
3. Turns dots to computer code
4. Makes image files (jpg, png, etc) or text files (doc, txt, pdf, etc)

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We Scan for Dots per Inch (DPI)

Density: The number of dots in the space of an inch

Big Dots or Squares

15 dots per inch

Small Dots or Squares

40 dots per inch

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Density Example (Dots Per Inch = DPI)

Density: Number of dots in the space of a linear inch

50 DPI 170 KB	100 DPI 473 KB	300 DPI 2,798 KB	600 DPI 10,318 KB

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Scanning What ?

We take samples of what there is to see

Digest
4 1/4 x 5 1/2

Letter
8 1/2 x 11

Legal
8 1/2 x 14

Tablet
11 x 17

Electronic
12 x 18

35 mm Film

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Example Screen Capture from Online

Use Ctrl + Prnt Scrn
To get this image
Now use Ctrl + V to
poke into a
PowerPoint slide

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Example Passenger Ship Record using the Crop Tool

PASSENGER RECORD 1892-1924

Name: Porcello, Matteo
 Ethnicity: Italian
 Place of Residence: Naro, Sicily
 Date of Arrival: February 15, 1913
 Age on Arrival: 14y
 Gender: M
 Marital Status: S
 Ship of Travel: San Giorgio
 Port of Departure: Palermo, Sicily, Italy

The Castle Garden at <http://www.olivetreegenealogy.com/ships/nship19.shtml>
 World Vital Records at <http://www.worldvitalrecords.com/indexinfo.aspx?ix=ellisland>

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The Crop Tool ✂

Capture (Ctrl C), then use the Crop Tool ✂

So This becomes this

Don't need those words! Just the portrait

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The Magic Brush

This → Becomes → This

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Welcome to Images

Use images to enhance your genealogy

- IMAGE:** a visual representation of something:
 - as (1): a likeness of an object produced on a photographic material
 - (2): a picture produced on an electronic display (as a television or computer screen)

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There Are Four Popular Image Types

Each image type has different characteristics

- Raster:** Made of various dots
- Vector:** Made of various lines
- Character:** Made of a standard type-set (font) and size (points)
- Compound:** One or more of the above (images or characters)

ABC - # \$ & - 123

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Raster (also called bitmap)

Just a bunch of dots

- Popular Formats**
 - BMP (Bitmap)
 - Largest size file and best quality
 - JPEG (Joint Photographic Expert Group)
 - Small size and efficient
 - GIF (Graphics Interchange Format)
 - Good for animation
 - PNG (Portable Network Graphics)
 - Very special properties
 - TIFF (Tagged Image File Format)
 - Smaller than BMP and very good

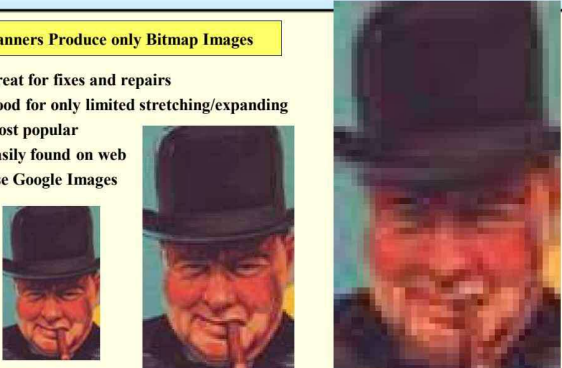
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More about Raster

Scanners Produce only Bitmap Images

- Great for fixes and repairs
- Good for only limited stretching/expanding
- Most popular
- Easily found on web
- Use Google Images



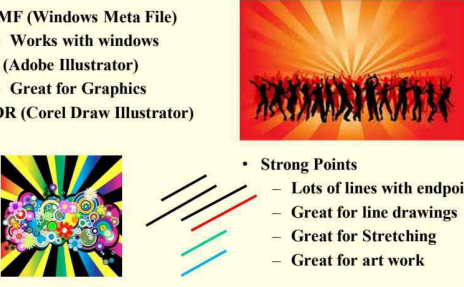
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Vector

Just a Bunch of Lines

- Popular Formats
 - WMF (Windows Meta File)
 - Works with windows
 - AI (Adobe Illustrator)
 - Great for Graphics
 - CDR (Corel Draw Illustrator)



- Strong Points
 - Lots of lines with endpoints
 - Great for line drawings
 - Great for Stretching
 - Great for art work

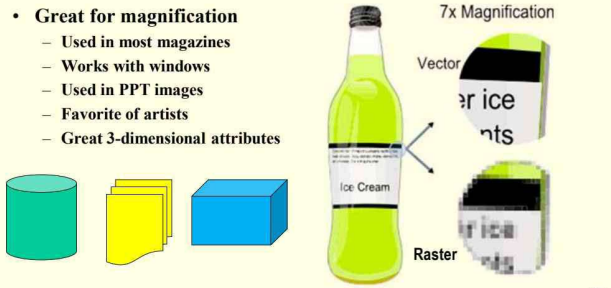
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More about Vector Images

Just move the end points

- Great for magnification
 - Used in most magazines
 - Works with windows
 - Used in PPT images
 - Favorite of artists
 - Great 3-dimensional attributes



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Character Codes, Text, and PDF

Each character has a symbol code

Example

This is text

- Character Files
 - .TXT (Text)
 - Works with windows
 - .DOCX (Word Files)
 - Great for graphics
- PDF (Portable Document File)
 - Can contain both text and images
 - Makes a very small file size

T =	Char (084)
h =	Char (104)
i =	Char (105)
s =	Char (115)
sp =	Char (032) a space
i =	Char (105)
s =	Char (115)
sp =	Char (032) a space
t =	Char (116)
e =	Char (101)
x =	Char (120)
t =	Char (116)
.	Char (046)

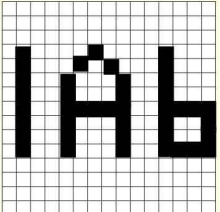
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Scanners can use an OCR (Optical Character Reader) program to change images to text

Scans a document and produces characters

It takes this image



Dots

OCR

and makes this text

1 A b


Characters

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What OCR Does for You

It takes words in this brochure



And makes this document

They're game pieces. Ancient Egyptians loved toys and games. The hounds and jackals were game pieces that fit into the holes on the shell of the wooden turtle. The rules of the game are unknown but researchers believed that the game gave magical powers to the player who won!

Think About: How do you think ancient Egyptians played this game?

To Do: At home create a board game using cardboard. Create rules for your game and make spaces on the board. You can use small toys or pop bottle lids for playing pieces.

You can edit and search

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Scanning Machine Software Settings


Item	Example Choices
What do you want to scan from?	Flat bed scanner, my printer
File type to create	PDF, OCR, BMP, JPG, TIFF, etc.
Scan Mode	Black and white, grayscale, color,
Image Quality	75, 150, 300, 600, 1200 DPI
Final Filename	Make one up (or save in date file)
Save Image to	Some folder name
Name of External Pgm	Photoshop, MS Paint, etc., to open

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Changing File Type and Density

This ➔ Becomes ➔ This



BMP, 640x480, 901 KB



JPEG, 640x480, 148 KB

Use PPT or PhotoShop Elements

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Names of Some Image Editors

Notable Editors	Things to do
<ul style="list-style-type: none"> Raster Graphics Editors <ul style="list-style-type: none"> Adobe Photoshop (CSS) Photoshop Elements MS Paint Paint Shop Pro Many others Vector Graphics Editors <ul style="list-style-type: none"> Adobe Illustrator CorelDraw Xara Xtreme Vector Software Many others Adobe Acrobat 	<ul style="list-style-type: none"> Open and save image files Crop an image Sharpen an image Resize an image Change colors Add special effects Add text or headers Fix different pixels Clone parts of an image Change contrast or brightness Add a picture frame Rotate an image Correct gamma levels Create a mirror or flip an image Remove a red eye Convert to grayscale Convert to another format


Combinations

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Passenger Ship Records

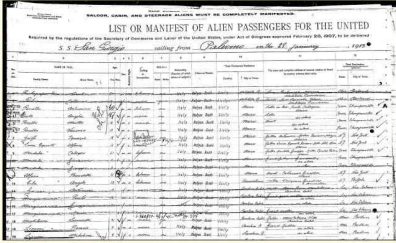
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS



Ellis Island Foundation

S. S. San Giorgio
Sailing from Palermo
28 Jan 1913
Arrived Port of New York
15 Feb 1913

They just didn't swim!



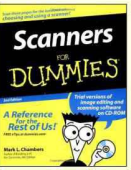
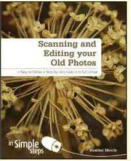
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- Image Scanner http://en.wikipedia.org/wiki/Image_scanner
- Optical Character Recognition http://en.wikipedia.org/wiki/Optical_character_recognition
- Laser Printing http://en.wikipedia.org/wiki/Laser_printing
- Scanners for Dummies
- Scanning and Editing Your Old Photos
- Official Scanner Handbook

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