

## **Making your Family Photos Digital**

by John McLuckie

*“After stone tablets, good paper and microfilm are the most durable media for recording information” \**

\*Quote from Mary Mannix, Maryland Room Librarian Manager at the C. Burr Artz Library, Frederick, Maryland

Every day millions of digital pictures are taken. Family historians have an interest in the preservation of the photos we inherited, and the photos of our present day family will be of interest to future generations. Digital media has only been on the scene for about 30 years, and the jury is still out on how long digital images will last. In the 1970's "magnetic" photo albums were produced, and we used them for our family pictures. Today those pictures are being damaged by the glue in the albums. Who knew??

Technology of digital photography continues to evolve. We use this technology to capture our ancestors' images, but we retain the paper originals. Digital images allow us to organize and share our images. We give these images to our children, our cousins, and other relatives, before attaching them to family histories. All of us hope that these pictures will survive us. Digital is for access. Pictures in archival photo albums are for preservation.

### **Current Archival Preservation**

The archival process of microfilm explains the steps of preserving photos today. One takes pictures of issues of a local newspaper for a year. The pictures are transferred to microfilm. One copy of the master film is made. From that copy the everyday usage copies are made. The original copy goes into a climate controlled archival environment where it may last up to 500 years. An archivist of my 3G grandson's generation will take the copy of the original film out of the vault and transfer the newspaper images to the current media of the year 2150. Hopefully, the images will be as clear as the day they were put into the vault. Archival paper with printed photo images we hope will last at least 100 years. I have now stored the most important images of my family in archival albums for storage. If I do not have a climate controlled archival area in my home, perhaps the local or state historical/ genealogy society does. They are interested in your family documents and photos.

### **Digital Scanning**

Modern picture scanning technology takes your photograph from the 1940's and turns it into a series of dots. A digital picture is made of thousands of these dots which are represented as dots per square inch or dpi. The more dots you have the better quality picture you create. The

home office flatbed scanner scans in the range of 300, 600 to 1200 dpi. Portable scanners such as Flip Pal scan in the range of 300 to 600 dpi.

## **Digital Storage**

We need to understand bytes.

A single text character = 1 byte

Typical text word = 10 bytes

One typewritten page = 2 kilobytes (200 bytes)

Low resolution photograph = 100 kilobytes

Short novel = 1 megabyte

The sentence "We need to understand bytes." = 60 bytes

The average scanned picture consumes about 2 megabytes of storage space. Digital photography has increased the need for larger storage on home computers. The hard drive on a home computer being manufactured today contains a hard drive of between 500 gigabytes to 1 terabyte. My laptop has a storage capacity of 750 gigabytes or 750 billion bytes of information.

Digital storage comes in many configurations.

1. The hard drive on your desktop or laptop computer.
2. A free standing hard drive, which is separate from the computer.
3. A USB (Universal Service Bus) flash drive. Think universal standard.
4. Archival DVD's, they have a capacity of 4.7 GB per DVD, a pack of 5 costs \$14.00, but make sure you put them in the vault with the archival paper and stone tablets.
5. The Cloud.
6. A relatives' house.

The 500 GB hard drive on your computer could hold 250,000 pictures theoretically, which is plenty of room for your photo collection.

Free standing hard drive 500 GB to 1 terabyte or more, has plenty of room for many pictures and you can take it from one computer to another.

A USB flash drive selling for about \$10.00 has a capacity of 8 gigabytes and can hold about 4000 pictures.

The Cloud is a hard drive based storage facility that one can remotely access through the internet. The storage capacity is unlimited, but you are charged a monthly fee to store. One terabyte at Dropbox costs about \$10.00 a month.

### **Problems with Digital Storage**

A hard drive is made of plastic and metal with electricity running through it. When it heats up and fails, we hear the term “my hard drive crashed.” You may be able to transfer your pictures to another hard drive, but it will take time and money. Hard drives have only been tested for operability up to 115 degrees, before signs of failure. The average residential house fire can sustain interior temperatures of 1800 degrees. Your computer and hard drive will be melted plastic and the color of burnt toast.

A free standing hard drive that will not power up with electricity is called a brick or a door stop. Your pictures are not coming out of it, even if you pry it open.

The 8 mb flash drive seems to be one of the more stable digital storage configurations. According to Brian K. Lewis from Slo Bytes USB Flash Drives, a USB flash drive contains a sturdy circuit board without any moving mechanisms. A silicone chip attached inside the flash drive is “nonvolatile memory.” Nonvolatile memory does not require a power source to function and to hold stored data, thus a USB flash drive keeps data indefinitely at least for 10 years, without any loss of information. Since a plastic casing surrounds the circuit board, dropping throwing or washing will not damage the USB flash drive.

The Cloud is a secure remote storage facility away from your location. Even the cloud can have its problems. For example, after Hurricane Sandy my local doctor’s office could not access or upload any patient records for 4 days due to the damage to the remote digital storage facility in New Jersey. None of the records were lost, but you could not access them for days. The doctor had to go back to pen and paper charts.

### **Digital Migration**

Digital migration is the process by which one can go back and check the status of the digital photo collection, and upgrade it to the current media. What is going to happen to the pictures you stored on floppy disks 20 years ago? The computers that can read floppy disks are hard to find.

### **Multiple Storage Places**

Remember this axiom, **A digital picture is not stored unless it is stored in at least 3 places.** At my house, they are on a free standing hard drive, USB flash drives, and in Dropbox in the cloud. My wife’s family photos are stored here in Maryland and at her sister’s home in Iowa.

Therefore, with multiple storage places, a local disaster will not destroy every copy of your collection.

Some of my original historic family pictures are now in archival storage at the Maryland Room in the C. Burr Artz Library in Frederick, Maryland waiting for my great-great grandchildren to come and view them. They may not need to travel to Frederick to see them. Hopefully they will have the digital copies.

Make certain that your survivors know where you have stored the pictures. A letter of instructions or genealogical will should be attached to your important documents for your heirs.

The Washington DC Family History Center has two state of the art digital photo scanners that are free to use. What are you waiting for? Go forth and digitize, but don't throw away your stone tablets.

*This document was saved on a computer hard drive and a USB flash Drive.*