

Documentation for Photoshop Elements Study (ABCC Facial Recognition Project)

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Procedures tested & outcomes when taking image files from one computer and transferring them to another computer

1. Copying & Pasting image files from Dr. Schull's computer to external hard drive, and moving them to office Mac: the names of the people that Dr. Schull had tagged in the photos did not transfer over when image files were opened in Photoshop Elements on the office Mac
2. Before transferring files to an external hard drive, Dr. Schull's files were selected then the File > Export as New File(s) option was chosen: this allowed for facial tags to be saved as Keywords in the metadata, but when files were opened in Elements on office Mac, the image area tagging of the faces was removed. Additional metadata transferred over with the image files, but the facial area tagging was not retained. Names and faces would need to be re-associated in Elements using this method.
3. Backup and Restore Catalog option in Elements: This was tested on a sample selection of 27 public domain NASA photos downloaded from the internet found on Flickr, and on a small selection of Dr. Schull's photos that I personally tagged the faces of in Elements. I tagged the faces using Elements on a PC, then backed-up each catalog separately to an external hard-drive. I then restored the catalogs to Elements on the office Mac. The Backup & Restore Catalog process was successful in retaining the facial tagging and any other metadata added in Elements. This is the recommended process for donor's when submitting an image collection.

Procedures tested & outcomes for adding metadata to images

I used the NASA collection mentioned above to test metadata editing capabilities. Elements allows for adding & editing metadata on image files including Title, Creator, Description, Keywords, & Copyright info. These fields are easily editable in the Elements Editor workspace under File > File Info. There is also a metadata template feature that can be used to copy metadata info from one image to others. I tested the metadata template feature by adding basic metadata to one image that all of the images had in common: Creator, Description Writer, Copyright status, Copyright Notice, and Copyright Info URL. I exported this info to save it as a template. Then imported it back into the other image files using the "Keep original metadata, but append matching properties from template" option. This option retains any metadata you have already added to each image, such as keywords and title, while adding the new metadata you imported from the metadata template, such as copyright info. This tool is useful in automating some metadata editing, but can only be done one image at a time. All of the metadata I added to the images is embedded with the image file and stays with the image file if the image is moved to another computer.

Using Facial Recognition

I tested the facial recognition feature on the NASA collection and on a small sampling of Dr. Schull's image collection. The process of tagging faces in Elements is straightforward and easy to follow. Once a face is tagged on an image, Elements will try to recognize that same face in other images and ask if you want to tag the face with the same name. The analyzer is not always accurate in picking out an actual face from an image. Sometimes it will pick up on a portion of a face or another body part altogether, but in general it is accurate in finding faces. I found that the facial recognition works best

with born digital images, and does not work as well with older analog photos that have been scanned in, this assessment is based on the small group of 27 photos from NASA. The facial recognition feature also has limitations when it comes to different angles that a face is photographed at – full-face, profile, three-quarter, etc. It does not usually recognize the same person when photographed at different angles.

Procedures tested & outcomes for metadata extraction

Wanted a tool that would automatically extract metadata embedded in images to an XML format. We tried various open source tools:

1. Elements allows you to export Metadata Templates from files that you can later import and copy to the metadata fields on other image files, but this would not be efficient for a large volume of images since the export can only be done one image at a time.
2. Metadata Extractor, a free tool developed by the National Library of New Zealand to extract preservation metadata and output it to an XML format – we downloaded the program, but were unable to install or run it on a Mac, PC or Linux platform
3. Duke Data Accessioner – we were able to download, install, and run this program on a Mac and a PC but it did not extract any useful metadata for our purposes
4. ExifTool – Command-line application that extracts metadata from a wide variety of files including image files. This program was easy to download, install and run on both a Mac and PC. We were successful in using it to extract metadata from image files, and also use a command to get it to extract the metadata and display it in an XML format. The XML format being RDF.

Assessment of Photoshop Elements as a cataloging tool for internal and external use

A. Pros & Cons

1. Pros - Elements allows for easy adding and editing of metadata on images; Facial recognition software, and metadata templates can make the process of adding metadata to images more efficient; Provides many options for searching for images based on people and keyword tags;
2. Cons – Facial tagging data does not stay with the photo if it is moved to another computer, the only way to retain this data when photos are moved is to do a catalog backup and restore in Elements; Does not allow for batch automation for adding metadata to images

B. Evaluate how staff and researchers can use Photoshop Elements to discover and organize digital images

1. Elements makes it easy to organize digital images by adding keywords and other metadata to images in the Editor workspace. Elements creates keyword lists based on tags the user has added to images, the user can use these lists in the Organizer workspace to add additional keywords to images by dragging and dropping the keyword onto the image
2. Elements has many options to help a user find images under the Find menu. These options include selecting various keyword tags or any other metadata fields. These include advanced searches where you can use Boolean operators AND/OR to find a specific group of images. These searches can be saved as albums in which the images matching the search terms will be collected. You can also do visual searches where the user selects one image and has Elements search for visually similar images.

C. Recommended best use for Photoshop Elements

The best use for Photoshop Elements is in the case that a donor has already used Elements to organize his or her photo collection by using the facial tagging features and adding additional descriptive metadata, and the institution receiving the collection also has Photoshop Elements installed on its computers. This will save the staff a considerable amount of work researching and adding metadata to the images once the collection is given to the receiving institution.

Elements has many valuable features for organizing image collections and is user friendly, it serves the basic needs of managing an image collection.

D. List other tools available that are equivalent or better than Photoshop Elements that we should test

1. Picasa is a free image organizer and viewer available from Google. It allows for adding keyword tags and has facial recognition software

E. Evaluate Photoshop Elements as a viable option to collect metadata (according to an established schema) for digital collections

Descriptive metadata can be added to image files in Elements under File > File Info. The file info window has several metadata options, but most are not relevant for archival image collections. The “Description” tab has several useful fields for adding metadata and these fields are translated to Dublin Core properties under the “Advanced” tab, but the fields available in the “Description” tab are not as comprehensive as the Dublin Core properties, not all of the Dublin Core properties are reflected in the fields available under the “Description” tab. Elements allows for more extensive metadata under the “IPTC” tab. IPTC stands for International Press Telecommunications Council and is a metadata schema used primarily for news and stock photos.