Photo library project - Users/task analysis
(1st DRAFT Catherine 10/12)

Users	Some characteristics
Average Families or Household (the less organized group)	Current practice: Take about 5-8 rolls a year, Often write mark rough annotation on the package (date/place/people) Try to keep the packages in order. Only a few photos per roll are really beautiful or important. Lots of repeat photos. Orders doubles to give copies to friends Only very occasionally will add names of places/people/events on individual photos. Hypothesis for Future Might switch to digital camera, but not very soon because it is to cumbersome to view, printing, manage the collection. Minimum activity will be to add a group of new photos (a roll or a group of photos downloaded from digital camera, or given by friends), send pictures to friends, show the newer rolls to others, and possibly do very simple albums. There are known set of classic events types (holidays, vacations, birthdays) and topics (babies, pets etc.), plus the need for a few special hobby topics (e.g. garden pictures, sailboat photos) of pictures that might traditionally be pulled out of the package and grouped in a special box of non chronological album. Finding photos is done by browsing. Once in a while, they will go back to find photos of a particular person or event when friends visit, when a new member joins the family or a person dies. Parents will review pictures of the children over the years. Often done with more than person at a time. The physical browsing of pictures is part of the pleasure of seeing those photos. Rudimentary metadata at the "roll" level (most likely in plain text form, not formal categories) A few individual photos also have metadata . Those users are more likely to annotate than classify. Users will typically have several cameras, so the rolls/downloads will overlap in time (some covering possibly 6 months or more)

Organized families (The families with at least one organized family member to actively manage the photo collection)	Current use: More extensive use of albums. Chronological order albums and special topics albums. Prepare special presentations for friends (e.g. on a recent trip to China, or the last school reunion) Often send copies of photos with special notes to friends. Will create metadata for many individual photos (typically in the form of free text accompanying photos in albums) Carefully keeps the negatives aside Future hypothesis May or may not have digital cameras. Those users are more likely to classify photos to be able to find them, but will favor classification of groups of pictures all at once just for speed reasons. They also will probably add more metadata later on while they look at photos. Not everyone is organized all the time so they will always be a lag in the metadata (e.g. the last 4 months of photos will not be annotated)
Technology savvy families	Will definitively get a digital camera but will keep the traditional ones in parallel because of the quality of the picture. Will actively create websites with some of their pictures (e.g. the best of X, or for special community events). Will expect high quality browsing and searching tools Annotations/classification might be done online with other people.
Children	All will want to look at themselves changing over time. Will want to make their own albums using copies of photos in the parents collections.
1) less that 6 (no or limited reading)	Shoulderware activities with parents might be used (e.g. an adult will browse pictures with the child, but also play with tools to make a family tree) Ironically classification might be used as an "educational game", e.g. put all the animal pictures together or all the forest pictures. Parents might like that!

2) 6-13 y.o.	Select photos for school projects (on travel destinations, holiday traditions, family). This is a classic elementary school assignement!
3) teenagers	Friends and secrets photos or albums. Privacy an issue.
Hobbyists (e.g. a bird watcher, a fan of civil war reenactments, an architecture professor collecting building photos)	<u>Today</u> They are doing a lot of systematic annotation already Fairly large collections Might acquire other people's collections (in a shoe box or already organized in a different way) Concerned with archival and security. <u>Future:</u> Ready to spend the time to do more classification at the group level and at the individual picture level. Will actually probably spend more time classifying than before because of the search capabilities. The type of questions will be very specific to the type of hobby, with special requirements for the database fields, and annotation techniques. Users will use their work in polished presentations, help others by answering specific needs (i.e. do you have a picture of x showing this and that).
Professional photograph or photography hobbyists	Similar to the hobbyists but will also be concerned by the photographic quality of the photo. Extensive collections Most likely to create extensive metadata There might be existing tools for them.
Professional photo finder e.g. journalist	Does not create but use photos. Copyright issues, price?
Librarian/Archivist (not really for the "personal" libraries, except when your personal libraries of famous people end up in a library...)	Help others find pictures Create highlights or special presentation of collections Will work with a variety of collections with no metadata or extensive metadata. Link to other relevant media (e.g. books or articles)
Detectives	Might be looking for things you never thought of

	classifying... in particular people (e.g. was Mr. X. at the CHI95 conference) If that person appears in a picture showing only its back or part of the body, you may not have entered it in the list of people, unless you know this kind of question is likely to be asked.

NOTE:

There is a clear separation of users according to the level of annotation and classification people will be willing to add to their photos.

We may want to limit our work to the "personal collections", i.e. including the home hobbyist but not the professionals?   The main characteristic of what we are working on might be:

- a **reasonable volume of photos** so browsing everything (or at least a sample of each group of pictures would take a reasonable time, e.g., less than 15 minutes), and in
- the existence of a **strong connection to the personal life experience** of the user (i.e. importance of the calendar and special events orchestrating the photo collection).

Similarly we will not work on:
- automatic classification techniques (face recognition, indoor/outdoor)or on
- automatic photo finding based on similarity (color, layout, classification or annotation)
Those techniques are useful but are not our specialty/strength.

Simple scenarios (to be extended!)

Hi Paul! Have you seen our latest vacation pictures? (the best ones only - or all of them)

Find some "good" pictures of a person to make a birthday present.
What is good? (fun, good technical quality, nice setting, given to a lot of people)

Find all the pictures with Pierre and make a special presentation. Could be a search is there is extensive annotation or classification. But could also be just browsing for all summer pictures or groups classified as "taken in France", or a quick reading of all the summer group annotations for locations in France (e.g. Auvergne, Paris, Alps) and then a browsing of the selected groups/rolls.

Find all Halloween costumes photos (e.g. search for Halloween, and browse all the neighboring rolls of groups of photos, or browse all the photos around or overlapping the end of October.

Find that Halloween Greek costume with the striking red cape.

When is the last time we went skiing in Colorado?
Search for ski, if not sure it covered everything, look at all winter groups of photos between 1990 and 1996

Send one photo to another person, to several, to all the people on that photo.
(a snap to the address book would be great)

Is there a negative for this great photo and where is it?

I am editing this photo for fun but I want to keep the original and be able to locate it easily.

Find the best picture with a lot of my French friends (groups, with quality award, around summer or Easter)

INTERFACE COMPONENTS

Overview presentation
for the whole collection (e.g. show 20 years of photos summarized on one screen...), or for a group of photos.
Could be an abstract overview, a calendar view, a collage of photos, sampling, or plain thumbnails if the group is small enough

Metadata generation
1) Annotation (free text, i.e. a few words for a group of pictures, or a paragraph description in an album)
2) Classification (building a database)
3) Attachment of special "awards" or "markers"
4) automatic classification (e.g. indoors, outdoors) - I don't think this is our chosen domain.

Metadata browsing
e.g. To read all the group annotations for the last 10 rolls, or the winter groups of the last 5 years.

Metadata searching
the traditional search! in text annotations, or in the database of classified metadata

Image browsing
for: 1) the real experience of enjoying images
2) when there is no metadata whatsoever
3) users can't read the metadata (e.g. young children)
Include preview of photos (same as overview)
Speed and enjoyment is the key
Different for small sets and large sets

Creative construction
From slide show, to story writing or history making
Includes manipulation (e.g. cut, crop), ordering, merging in groups, merging with other media, sharing and presenting
Simplicity and richness is the key

OBJECTS AND ACTIONS

photos   view full screen
                  flip
                  annotate
                  classify
                  delete
                  send to...
                  add to group x (or drag and drop to group)
                  add to pile of temporary pile of photos (by dragging)
                  select as highlight of group (
                  give award ...

group   preview
collection   annotate
roll   classify
set   name (title)
                  send to...

pile (an ephemeral grouping)
                  same as groups

Presentation order
Album   add special presentation annotations
                  make website

library   get overview
(the whole thing!) Backup
                  get stats of

Types of photo libraries
    No metadata at all
    Some metadata at collection level
    Extensive metadata

    Digital photos only
    Scanned old photos
    Mixed (digital and scanned)

    Single user / Personal library
    Multiple users: users might just share everything (e.g. a standard family, the hcil lab)
    or not! (e.g. share the classification but have different annotations in different
    personal albums)

                                 Catherine - 10/26/99